



# TENDER DOCUMENT

## **NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION**

Bagwani Bhawan, 47, Pankha Road, Institutional Area,  
Janakpuri, New Delhi – 110 058

Phones: 011-28524150, 28522211, 45136697

E: mail: [delhi@nhrdf.com](mailto:delhi@nhrdf.com) visit us at [www.nhrdf.org](http://www.nhrdf.org)

**Name of the work & EMD (Alongwith Tender Document) : Design, Supply, Installation, Commissioning, Operation and Maintenance of Grid Connected Rooftop Solar PV System at : -**

S.N.	Centre/place	Capacity	EMD (Rs.)
1	Chitegaon, Nashik (MS)	100 KWP	1,00,000/-
2	Indore (MP)	25 KWP	25,000/-
3	Rajkot (Gujarat)	25 KWP	25,000/-
4	Karnal (Haryana)	25 KWP	25,000/-

**Part-I (TECHNICAL BID)**

**Part-II (FINANCIAL BID)**

**Last date for receipt of tender : 15/03/2023 upto 2 PM**

**Date of opening the tenders : 15/03/2023 at 2.30 PM**

**Cost of tender documents : Rs. 2,000/- only (Non- refundable)**

**Address for submitting  
Tender documents**

**: N.H.R.D.F., Bagwani Bhawan,  
Plot No. 47, Pankha Road, Institutional  
Area, Janakpuri, New Delhi – 110 058  
(India)**

**E-mail: [delhi@nhrdf.com](mailto:delhi@nhrdf.com),**

**Website: [www.nhrdf.org](http://www.nhrdf.org) & [www.kvkdelhi.org](http://www.kvkdelhi.org)**

**TENDER DOCUMENT**

**PART – I**

**(TECHNICAL BID)**

**DESIGN, SUPPLY, INSTALLATION, COMMISSIONING, OPERATION & MAINTENANCE OF GRID CONNECTED ROOF TOP SOLAR PV SYSTEM AT**

S.N.	Locations	Capacity
1	Nasik (Maharashtra)	100 KWP
2	Indore (M.P.)	25 KWP
3	Rajkot (Gujarat)	25 KWP
4	Karnal (Haryana)	25 KWP



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## **SECTION – I**



### **NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION**

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Ref: NHRDF/HO/AD-51/2022-23/5450

23/02/2023

### **TENDER NOTICE FOR SETTING UP ROOF TOP SOLAR PV SYSTEM**

NHRDF is a National level Organization, invites sealed two bids (technical and financial) from well experienced and technically competent firms/companies to design, supply, installation, commissioning, operation and maintenance of grid interactive Rooftop Solar PV system at its following 4 centers of proposed capacity indicated against each:

S.N.	Locations	Capacity
1	Chitegaon, Nasik (Maharashtra)	100 KWPP
2	Indore (M.P.)	25 KWPP
3	Rajkot (Gujarat)	25 KWPP
4	Karnal (Haryana)	25 KWPP

Bidders have a choice to tender bids for any or all above stated locations.

Interested firms/companies are requested to submit the tender document in a sealed cover in prescribed application form(s) complete in all respect and duly signed by the authorized person and accompanied with non-refundable fee of Rs.2000/- by Demand Draft in favour of NHRDF payable at New Delhi to The Director, NHRDF at above mentioned address on or before 15/03/2023 up to 2 PM.

Technical bid will be opened on the same day at 2.30 PM in presence of authorised representatives of bidders/applicants. The financial bids will also be opened on the same day of tenderers whose bids are found to be technically qualified. Incomplete Bid proposals or with any overwriting/cutting and received without Earnest Money Deposit will be summarily rejected.

Detailed terms and conditions of the tender documents can be downloaded from NHRDF & KVK websites [www.nhrdf.org](http://www.nhrdf.org) & [www.kvkdelhi.org](http://www.kvkdelhi.org).

The Director, NHRDF reserves the right to accept or reject any or all tenders without assigning any reason.

DIRECTOR

**SECTION – II**  
**DETAILS OF NOTICE INVITING TENDERS**

NHRDF New Delhi invites in sealed tenders from eligible & experienced Firms/ Companies in "TWO BIDS CONCEPT" to design, supply, install, commission, Operate & Maintain of ON-GRID Rooftop Solar Photo Voltaic Power Plant with Net metering:

1. 1) Details of the Tender :

Name of the Work	Design, supply, install, commission, Operate & Maintain of ON-GRID Rooftop Solar Photo Voltaic Power Plant with Net metering:	
	<b>Place</b>	<b>Capacity</b>
	NHRDF Chitegaon (Nasik), Maharashtra	100 KWp
	NHRDF Rajkot (Gujarat), Karnal (Haryana) and Indore (Madhya Pradesh)	25 KWp each
Nature of Work	Solar Roof Top Power Plant with net metering	
Earnest Money deposit	<p style="text-align: center;"><b><u>The interested tenderer is required to deposit undermentioned EMD alongwith tender document:</u></b></p> <p>i) Rs.1.00 lakh for NHRDF Chitegaon (Nasik), Maharashtra.  ii) Rs.25,000/- for NHRDF Rajkot (Gujarat)  iii) Rs.25,000/- for NHRDF Karnal (Haryana)  iv) Rs.25,000/- for NHRDF Indore (Madhya Pradesh)</p> <p>Note:  a) <b>If the tenderer is interested in carrying out work at more than one location then the tenderer is required to deposit amount of EMD accordingly.</b>  b) <b>The amount of EMD may be put in a separate sealed envelope clearly superscribing the name of the site/location for which the EMD is submitted.</b>  c) <b>The amount of EMD must be submitted alongwith Technical and Financial Bids.</b>  d) <b>Technical and Financial Bids should be submitted in separate sealed envelope superscribing "Technical Bid" and "Financial Bid".</b></p>	
Downloading of tender document	25/02/2023	

Last date of submission of pre-bid queries	Upto 13/03/2023 till 5.00 PM
Pre-bid meeting	Upto 13/03/2023 at 5.00 PM
Concept of tender	Two Bids system
Last date and time for submission of the tender	<p>The Technical and Financial bids should be submitted in separate sealed envelopes superscribing on each by 2 PM on 15/03/2023.</p> <p>Offers shall be submitted to the office of:  <b>The Director</b>  <b>National Horticultural Research &amp; Development Foundation, Premises 47,</b>  <b>Pankha Road Institutional Area, Bagwani</b>  <b>Bhawan, New Delhi-110058</b>  <b>Tel: 011-28524150, 28522211</b>  <b>Email: <a href="mailto:delhi@nhrdf.com">delhi@nhrdf.com</a> visit us at <a href="http://www.nhrdf.org">www.nhrdf.org</a></b></p>
Opening of Technical bids	15/03/2023 at 2.30 pm
Opening of Financial bids	Date & time will be informed to the qualified Bidders through e-mail/ letter separately.
Commencement of work	15 <sup>th</sup> day from the date of issuing of Work Order
Period of completion	90 days from the date of issue of work order(including mobilization period)
Tender documents (soft copy)	Can be downloaded from the website of NHRDF <a href="https://www.nhrdf.org">https://www.nhrdf.org</a> and <a href="http://www.kvkdelhi.org">www.kvkdelhi.org</a> However, the prescribed tender fee of Rs.2000/- will have to be paid by the bidder.

**SECTION- III**  
**SALIENT FEATURES OF THE TENDER**

1.	Type of Contract	Lump sum contract
2.	Validity of offer	<b>90 days</b> from the date of opening of the offers. The same may be extended for a further period of 60 days with concurrence of the Tenderers.
3. i)	Earnest Money Deposit (Refundable)	<b>Rs. 1,00,000/-</b> by Demand Draft (DD) in case of Rooftop Solar PV system at <b>Nasik</b> (100 KWP) and Rs.25,000/- each for Rooftop solar PV system at <b>Indore, Rajkot and Karnal (25 KWP each)</b> to be drawn in favour of NHRDF, New Delhi Payable at New Delhi.
ii)	Cost of Tender documents (Non-refundable)	<b>Rs. 2000/-</b> by DD drawn in favour of NHRDF New Delhi.
4.	Eligibility	<b>As per Section IV</b>
5.	Place of submission / opening of bids	NHRDF New Delhi
6.	Mode of submission of Tender documents	May be submitted by hand or through Courier/post so as to reach on or before the stipulated due date & time.
8.	Period of completion	<b>90 Days</b> from the date of issue of Work Order.
9.	Payments Terms	a) 50% after delivery of materials, such as, Solar Panels, Array structure etc. at site.
		b) 30% of the total contract price on installation, testing, commissioning and handing over of the system.
		c. Balance <b>10 %</b> to be released within 21 days after completion, Supply, installation, testing, commissioning, and its connection with grid and handing over of the system to NHRDF.
		d) Balance 10% shall be released only after one month of handing over the system and its successful run.

10.	Period of issuing of completion certificates	21 days from the date of joint verification by NHRDF officials and contractor's representative
11.	(a) Defect Liability period	12 months from the date of issue of virtual Completion certificate.
12.	(b) Warranty of Solar Panels	Manufacturer Warranty for Minimum 25 Years
13.	Liquidated Damages	0.5% per week or part thereof for delay beyond the stipulated completion period to the maximum of 5% of total Contract price.
14	Language for communication	English
15.	Insurance, Transportation, GST & any other applicable taxes	To be provided and paid by Contractor (price quoted during Tender submission to include all applicable taxes) i.e. net to the NHRDF. (Insurance of liquidated damage till installation of plant only)
16.	Assignment & Sub-letting	Not allowed
17.	Rates of B.O.Qs items	Rates to be quoted as basic cost and GST plus any other surcharge separately for all items
18.	Period of submitting final bill by Contractor	One (1) month from the date of completion
19.	Water and Electricity	Water & Electricity required for the Installation will be provided at single point by NHRDF, free of cost. The Contractor shall make his own arrangements for further distribution of water and electricity at his cost.
20	Income tax/TDS deduction	At prevailing rates from each bill
<p>Important Note:- Prospective Bidders are requested to remain updated for any notices/amendments/clarifications etc. to the Tender document through the website No separate notifications will be issued for such notices/amendments/clarification etc. in the print media or individually.</p>		



**SECTION- IV**  
**INSTRUCTIONS TO THE TENDERER**

Sealed Tenders are invited from eligible and experienced firms/companies for Designing, Supply, installation, commissioning, operation and maintenance Grid Connected Roof Top Solar PV System at **NHRDF Chitegon, Nasik, Indore (MP), Rajkot (Gujarat) and Karnal (Haryana)**. The last date of receipt of the offer is 15/03/2023 upto 2 PM in a sealed envelope addressed to

**The Director,**  
**NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION**  
Bagwani Bhawan, Plot No.47, Pankha Road, Institutional Area,  
Janakpuri, New Delhi – 110 058  
Ph.: 011-28524150, 28522211, 45136697  
E: mail: [delhi@nhrdf.com](mailto:delhi@nhrdf.com) visit us at [www.nhrdf.org](http://www.nhrdf.org)

Sealed tenders must accompany with prescribed Earnest Money Deposit (refundable) and cost of tender documents (non-refundable) as per the details mentioned in the tender documents.

The tender for the above works is on "Two Bid Concept" i.e. Technical Bid and Financial Bid.

**Envelope 1 – Technical Bid**

- Technical Bid (duly filled up, signed and stamped on each page).
- Prescribed EMD and Cost of Tender documents.
- Prescribed Enclosures.
- Documents showing relevant work experience in last 5 years.
- Authorization Letter of Signatory, as and if applicable.
- Credential from the parties for successful completion of works

**Envelope 2 – Financial Bid**

- Financial Bid – Duly filled up BOQ with sign and stamped on each page

**GENERAL INSTRUCTIONS**

1. Each of the page of the tender documents is required to be signed by the authorized person or persons submitting the tender in token of proof that such person (s) has/have acquainted himself/ themselves with all the conditions/ specifications, as laid down in the tender documents. If any tender is received unsigned or without the necessary supporting documents is liable to be rejected.
2. The clarification, if any required, may be obtained from the Deputy Director (Maint.) NHRDF (Ph. No. 011-28524150, 28522211, 45136697) on any working day during the working hours i.e. 10:00 AM to 5:00 PM.
3. The party submitting the tender must obtain at his own responsibility and expenses all the information, which may be necessary for the purpose of filling this tender and for entering into contract for the execution of the project and inspect the site of the work to get himself acquainted with all local conditions and matters pertaining thereto.

4. Any addition and alteration made in filling the tender must be attested and counter-signed by the tenderer. Over-writing of figures is not permitted. Failure to comply with either of these conditions will render the tender invalid. No request, advice or any change in rates or conditions after submission of the tender will be entertained.
5. The tenderers shall submit Earnest Money Deposit (EMD) of **Rs.1,00,000/-** by demand draft in case of Rooftop Solar PV system at **Nasik** and **Rs.25,000/-** each for Rooftop solar PV system at **Indore, Rajkot and Karnal** to be drawn in favour of NHRDF, New Delhi
6. The EMD of the unsuccessful tenderers will be refunded without any interest within 30 days, subsequent to decision of awarding the Contract. Any tender not accompanied by the requisite Earnest Money through Demand Draft will not be considered and shall stand rejected. It may be noted that conditional Tender shall be summarily rejected. The EMD of the Tenderer shall be forfeited in the following circumstances:-
  - (i) The Tenderer withdraws his bid ;
  - (ii) The Tenderer either fails to start the work within period of 15 calendar days or after the receipt of letter of acceptance of tender or the Work Order;
  - (iii) The Tenderer fails to supply materials / deliver services as per the terms and conditions of the Tender and Purchase / Work Order.
  - (iv) Any other unjustified reasons e.g. misleading or wrong information in the Bid, violation of the terms and conditions of the tender, involvement in forming ring / cartel, submission of multiple bids in different names etc.
7. The successful tenderers shall within 7 (working) days of the receipt of work order from the Foundation shall give written acceptance of the work-order and commence the work at site within 15 days of the same.
8. All compensations or other money payable by the Contractor to NHRDF under the terms of this contract may be deducted from the Security Deposit or from any sum that may be or may become due to the Contractor on any account whatsoever. In case amount of the Security Money gets reduced on account of above reason, the Contractor shall within 7 days of being asked, will make good the short fall in the Security money. If he fails to do so within 7 days, interest at the bank rate would be charged on the amount that falls short of prescribed security money.
9. In case, where the same item of work is mentioned at more than one place in the Schedule of quantities, the lowest of the rates quoted by the contractor for the item shall be taken for the payment of that item.
10. NHRDF shall have the right to assess the competencies and capabilities of the tenderer(s) by going through the credentials given in the Technical Bid. Further, NHRDF does not bind itself to accept the lowest tenderer and also reserves the right to accept or reject any or all tenders without assigning any reason and decision of the NHRDF shall be final. In such case(s) the Financial Bid shall not be opened for that particular tenderer. Such decisions by **NHRDF** shall be final and shall not attract any liability whatsoever consequent upon such decisions.

11. The Financial Bids of only those parties who qualify in the technical evaluation/scrutiny shall be opened and the schedule time and date for opening the Financial Bids shall be communicated separately to all qualified bidders.
12. NHRDF reserves the right of accepting the tender in whole or in part without assigning any reason and such decision shall be final. The part acceptance of the tender shall not violate the terms and conditions of the tender and contract and the tenderer shall execute the work at the specified rates without any extra charges or compensation within the stipulated period.

Director  
National Horticultural Research & Development Foundation  
New Delhi

## SECTION - V

### ELIGIBILITY CRITERIA FOR TENDERER

S.No	Criteria	Papers to be submitted
1	Bidder should be MNRE / SECI registered vendor.  (MNRE registration prior to discontinuation of empanelment of solar vendors by MNRE will be considered.)	Copy of the letter issued by MNRE / SECI regarding valid registration with them to confirm about the category of their registration.
2	The tenderer should have minimum 5 years' experience in the field of solar power plants in Government /Semi Government / PSUs / office buildings /commercial premises/ industrial houses as system integrator Prior to 31.03.2022.	Valid certificates, Order copies and satisfactory completion certificates prior to 31.03.2022(Need to submit all the above mentioned documents)
3	Minimum yearly turnover of Rs2.00 crore during the last 3 financial years.	Certificate issued by Chartered Accountant indicating turnover for the last three years i.e. 2019- 20,2020-21 and 2021-22 along With audited financial statement for the same period along with ACA membership no.
4	The firm should have carried out the works as follows: 1) At least three completed similar works each of Capacity more than 25 KWp and one work of 100 KWp capacity or more during the last 3 (Three) years ending with 31.03.2022.  <b>Similar work means supply and installation of solar power plants</b>	Copies of detailed work order clearly indicating nature and scope and value of works. Completion certificate for the qualifying works to be submitted. Written information with full details such as names, postal address, e-mail IDs, contact details (Landline and Mobile Nos.) to be furnished so that they can be contacted by the Bank if needed.
5	The firm must have Goods & Service tax registration Number and PAN number.	Copies of the GST registration certificate and PAN card Copy shall be enclosed.

**Only the Bidders who are found to meet the Eligibility Criteria detailed above shall be considered for Price bid evaluation.**

## **SECTION - VI**

### **GENERAL CONDITIONS OF CONTRACT**

#### **1. DEFINITIONS**

"Owner/Institute"	Shall mean National Horticultural Research & Development Foundation, New Delhi and shall include Its legal Representative(s) / assign(s) or authorized officer.
"Engineer-in Charge"	Shall mean the Technical representative of the NHRDF designated to supervise the work from time to time.
"Contractor"	Shall mean the individual or firm or company, undertaking the work and shall include legal representatives of such individual or the person comprising such firm or company or the successors of such individual or firm or company and the permitted assignee of such individual or firm or company.
"Contract"	Means the documents forming the tender (both Technical and Financial bid) and Work Order/ acceptance thereof and the formal agreement executed between the competent authority on behalf of NHRDF New Delhi and the contractor, together with the documents referred to there in including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in Charge/Architect and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
<b>"Bid"</b>	Shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachments annexure etc., in response to the Tender Notice and in accordance with the terms and conditions hereof.

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:

- The expression works or work shall, mean and include works mentioned under headScope of Work.
- The site shall mean NHRDF, Nasik, Karnal, Rajkot and Indore.
- Schedule(s) referred to in these conditions shall mean the relevant schedule(s).
- Tendered Value means the value of the entire work as stipulated in the letter ofIntent/award of work.

## **2. SCOPE OF WORK**

Design, Supply, Installation, commissioning, operation and maintenance of Grid Connected Roof Top Solar PV System at NHRDF, Chitegaon (Nasik), NHRDF Karnal (Haryana), NHRDF, Rajkot (Gujarat) and NHRDF Indore (Madhya Pradesh)

The above mentioned scope of work shall include followings:

- a) Design (i.e. layout, orientation, single-line-diagram etc.) of Roof Top Solar PV System based on the feasibility study of the site and submitting the shop drawing for approval by NHRDF.
- b) Supply, installation, commissioning, operation and maintenance including warranty of Grid Connected Roof Top Solar PV System. (and/or subject availability to clear roof area excluding area to be left for circulation)
- c) The systems shall be complete with PV modules, inverter, metering, junction boxes, AC, DC distribution boards and cables, communication interface, and any other equipment necessary for safe and efficient operation of the system.
- d) The work shall also include interconnection of PV system with the existing grid supplying power to the building.
- e) The civil works for installation of complete system shall also be in scope of contractor.
- f) The equipment offered shall conform in all respects to high standards of engineering, design and workmanship and be capable of performing in commercial operation up to Bidder's guarantee in a manner acceptable to NHRDF, who will interpret the meaning of drawings and specifications and shall have the power to reject any work or materials, which in his judgment are not in full accordance therewith.
- g) It shall be the responsibility of the Bidder to ensure that all the works are completed as per scope of work and the prescribed specification to ensure safe and efficient working of the system
- h) Necessary co-ordination with regard to sub-contracted items (if any) shall be carried out by the Contractor. The NHRDF will communicate only with the Contractor for all matters pertaining to this contract.
- i) Considering the reliability of the grid, no electrical storage batteries are envisaged as excess electricity generated by the solar panels, which is not required by the equipment/devices in the building premises shall be exported to the grid.

## **3. CONTRACT VALUE**

The total Contract value for proposed work, mentioned under heading "Scope of Work", shall be the amount derived on the basis of the rates quoted by the Contractor in their Financial Bid.

The above contract amount is inclusive of all taxes (including GST and any applicable as per central & state government norms) and duties, mentioned here but not limited to, Customs, Excise, Countervailing duties with cess, overall cess on Duty component, Port Clearance charges, Transit Insurance, Inland transportation, Loading, Unloading, levies, royalties etc. all at the rates prevailing on the date of opening of tender.

#### **4. TIME OF COMPLETION:**

Time is the essence of the Contract. The overall period for completion of the works in all respect is 90 days of the date of issuance of Work Order. No extension of time will be allowed for the completion of works in all respect.

The contractor shall carry out and complete the work in accordance with the terms and conditions mentioned herein and contained in Contract, as per working drawings issued, and to the entire satisfaction of the Owner.

#### **5. ESCALATION:**

The rates quoted by the contractor shall be firm till completion of project & no escalation of prices in material, labor or other inputs including taxes shall be payable to the contractor during and after the validity period of the contract. However, quantities of items given in BOQ may vary and payment will be made as per actual quantity executed and the approved rates.

#### **6. LIQUIDATED DAMAGES**

In case of delay in completion of work beyond the scheduled period, contractor shall have to pay penalty amounting to 0.5% of total contract price per week or part thereof subject to a maximum of 5% of total Contract Price.

#### **7. SCHEDULE OF QUANTITIES**

The quantities of respective items mentioned in BOQ are indicative in nature. The payment will be made as per actual quantities executed for respective items.

#### **8. DISPATCH & TRANSIT INSURANCE:**

All the materials required for the above mentioned scope of work are to be dispatched and delivered at above mentioned sites by the contractor by making own arrangement of transportation including loading, unloading and transit insurance by the contractor. No extra cost will be paid in this regard

#### **9. MATERIALS:**

All material shall be as per the specifications mentioned in the tender documents and manufacturer's test certificates for the same shall be provided whenever required. A record of all tests should be duly entered in appropriate registers and shall be available at all times for inspection by NHRDF.

## 10. SCHEDULE OF PAYMENT

The payment will be released in accordance with the actual quantities executed, based on the measurements jointly taken by the contractor and the Engineer-in-Charge designated by NHRDF. The payment to contractor shall be made as per following schedule:

a) 50% after delivery of materials, such as, Solar Panels, Array structure etc. at site.
b) 30% of the total contract price on installation, testing, commissioning and handing over of the system.
c) Balance <b>10 %</b> to be released within 21 days after complete Supply, installation, testing, commissioning, and its connection with grid and handing over of the system to NHRDF.
d) Balance 10% shall be released only after one month of handing over the system and its successful run.

## 11. SECURITY OF MATERIALS:

The contractor shall make arrangements for safe storage of materials brought by him at the site. The contractor shall be solely responsible for the physical security of materials at site including the materials procured by NHRDF directly (if any) and issued to contractor. Any loss or damage to materials lying at site caused by theft, and riots, weather, accident, fire, rain, flood etc. will be entirely to contractor's account and the contractor shall make good, the value of such loss to the Owner. The contractor at their own cost shall take all necessary steps to ensure protection of material lying at site, provision of security guards, and appropriate storage space etc. the

## 12. NON-TENDERED ITEMS:

NHRDF shall have the right to add / change / delete any item at their absolute discretion. Payment for Non-Tender Items shall be made on the basis of Rate Analysis to be submitted by the contractor along with original proof of purchase for approval by NHRDF. The contractor would first take approval of NHRDF before using any non-tendered item at the project.

## 13. QUALITY ASSURANCE:

The contractor is expected to perform work of high standard and quality. The contractor shall perform quality checks as per standard engineering practice. Periodic reports, as required in adherence to good engineering practice shall be generated and / or as advised by NHRDF



All works shall be carried out as per specifications, B.O.Q and the drawings. In case of any ambiguity, decision given by NHRDF on the basis of IS codes shall be final and binding.

In case the works carried out by contractor are found to be of unacceptable quality, the NHRDF shall order dismantling of such defective works and advise contractor to carry out quality work to the entire satisfaction of the NHRDF without affecting the contract value or contract time. No payment will be made over and above the rates in the Bill of Quantities for such re-work. NHRDF reserves the right to get defective work removed or rectified through other agencies & recover the cost for the same from the contractor's dues.

#### **14.SAFETY:**

The contractor shall have to provide all required safety accessories i.e. safety helmet, safety belt etc. to his workers at his own cost and follow all safety rules, regulations and all statutory provisions etc. in force. The contractor shall be fully responsible for any accident, injury, negligence, losses due to any act or omission by his workers and he shall be liable to incur all the expenses in consequence thereof and NHRDF is in no way responsible for any damages/ compensation arising out of this work contractor.

The contractor shall indemnify and hold NHRDF harmless from and against any liability, penalty, cost or expense suffered or incurred as a result of Contractor failing to comply with any law, or regulation, or such permit or license relating to any part of the Work and Services.

#### **15. RECTIFICATION OF DEFECTS**

If, it shall appear to the NHRDF or his representative in-charge of the works that any work has been executed with unsound, imperfect or un-skillful workmanship or material or any inferior description, the contractor shall, on demand, in writing from the NHRDF, specifying the work material or articles complained of shall rectify or remove the defect so specified in part, as the case may require.

#### **16. DEFACEMENT**

If the contractor or his staff, or labors shall break, deface, injure, or destroy any part of a building, or interiors, then the contractor has to rectify the same damaged part at his own expenses to the satisfaction of the NHRDF.

#### **17. EMERGENCIES:**

In any emergency affecting the safety of persons or property, the contractor shall act, at their discretion to prevent threatened damage, injury or loss but at the same time safeguarding the interest of the NHRDF and the project.

## **18. SUB-LETTING/ASSIGNMENT:**

The contractor shall not sublet or assign the whole or part of the works except where otherwise provided, by the contract and even then only with the prior written consent of the NHRDF and such consent if given shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults or neglects of any sub-contractor, his agents, workman as full as if they were the acts, defaults or neglects of the contractor, his agent, workman provided always that the provision of labour on piece work basis shall not be deemed to be a subletting under this clause. However, nothing in the foregoing shall be affected in the event of there being a merger, amalgamation or takeover of the business/ management of a party. In such an eventuality all the rights and obligations shall automatically be vested with the entity with which such party has been merged or is taken over.

## **19. WATER SUPPLY & ELECTRICITY**

Water & Electricity required for the Installation will be provided at single point by NHRDF free of cost. The Contractor shall make his own arrangements for further required distribution for work meeting the safety regulation as per statutory requirement.

## **20. SECURITY DEPOSIT**

### **a. Earnest Money Deposit as Retention Money**

The Earnest Money deposited will be treated as Security Deposit/Retention money and the same will be retained till completion of defect liability period of 1 year. The total security deposit shall be released within one month after the completion of warranty period of one year.

Whenever under the agreement/contract, any sum of money is recoverable from and payable by the contractor, the NHRDF shall have right to recover such sum by appropriating in part or in whole from the security deposits. In the event of the security deposit being insufficient, the balance or the total sum recoverable, as may be, shall be deducted from any sum due to the Contractor or which at any time thereafter may become due to the Contractor under this or any other agreement with the NHRDF. If this sum is not sufficient to cover the full amount recoverable, the Contractor shall pay the NHRDF on demand the remaining amount.

### **b. Forfeiture of Security Deposit**

The above said security deposit shall be liable to forfeiture wholly or in part at the sole discretion of the NHRDF if the Contractor fails to carry out the work or perform or discharge its obligation or observe any of the terms/conditions/clauses of the contract or tender document.

### **c. Interest on the Security Deposit.**

No interest would be payable by the NHRDF to the Contractor on the security

held in Deposit.

## **21. COMPLIANCE OF LABOUR REGULATIONS:**

The Contractor shall comply with all centre/State laws applicable to workmen employed by them. The NHRDF shall in no event and under no circumstances, be liable or responsible for any default by way of non-observance/compliance of the said law/rules on the contractor's part and contractor shall further indemnify NHRDF against any liabilities and costs/expenses from all proceedings in respect thereof. The contractor shall obtain at his cost all permissions and licenses under various statutes for carrying on their activities and any default in the same would render this contract void apart from making contractor liable to NHRDF towards all costs.

## **22 . COMPLIANCE WITH STATUTORY REGULATIONS & WORK RULES:**

The contractor shall be responsible for complying with the applicable laws/bye laws/Regulations in force from time to time. The contractor shall have to bear all statutory liabilities (including safety of its workers / personnel) as applicable to workers/personnel engaged for the job. Nothing will be paid extra in this regard. If any amount is paid by NHRDF in this regard, the same amount will be deducted from contractor's bill. The contractor shall have to arrange insurance cover for the workers/personnel engaged by him for carrying out the project. The contractor shall be responsible for all the dues of the workers/personnel engaged including the liabilities, if any, towards workmen compensation or under any other law.

## **23. DISPUTE RESOLUTION:-**

Any dispute, difference, controversy or claim ('Dispute') arising between the Parties out of or in relation to or in connection with this Contract / Agreement, or the breach, termination, effect, validity, interpretation or application of this Contract / Agreement or as to their rights, duties or liabilities hereunder, shall be addressed for mutual resolution by the authorized officials of the parties. If, for any reason, such dispute cannot be resolved amicably by the Parties, the same shall be referred to the Sole Arbitrator appointed by the Director, NHRDF, New Delhi. The provisions of the Arbitration and Conciliation Act, 1996 or any statutory modifications on re-enactment thereof as in force will be applicable to the arbitration proceedings. The venue of the arbitration shall be at New Delhi. The cost of the Arbitration proceedings shall be shared equally by both the parties. The language of the arbitration and the award shall be English. The decision / award of the arbitrator shall be final and binding.

**SECTION - VII**  
**SPECIAL CONDITIONS OF CONTRACT**

**1. Notice of Operation**

The work is to be executed in the fully operational building, thus the work shall be executed in co-ordination with the Incharge of the concerned office/centre of NHRDF in order to ensure trouble free functioning of the Office. The contractor shall not carry out any important operation without the consent in writing of the NHRDF. The contractor shall ensure that no hindrance to be created in normal functioning of the Foundation while execution of its work.

**2. Safety of adjacent Structures**

The contractor shall efficiently carry out at the site and exercise due care to ensure safety and security of existing all building structures by taking all required safety measures. Any damage caused to the NHRDF building structures due to the negligence of the contractor or by the workers engaged by him, the contractor shall be under an obligation to get the same repaired at his cost.

**3. Office Accommodation for Contractor**

The contractor shall provide & maintain all necessary site office space, stores for his own use and their staff at Project site with the approval of the NHRDF.

**4. Facilities for Contractor's Employees**

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water and sanitary facilities. The contractor shall also make his own arrangements at his own cost for transporting his staff and workmen wherever required for carrying out work at site.

**5. Lighting for Works**

The Contractor shall at all times provide adequate and approved lighting as required for the proper execution and supervision & inspection of the works.

**6. Disposal of Refuse etc.**

The contractor shall cart away from site all accumulated refuse/malba/ waste material, etc. arising from the works periodically or on completion of the Works or at the direction of the NHRDF.

**7. Contractor to verify site Measurements**

The contractor shall check and verify all site measurements whenever requested by other specialists, contractors or by nominated or other sub-contractors to enable them to prepare their own shop drawings and pass on the information with sufficient promptness, as will not in any way delay the works. A copy of all such information passed on shall be given to the Owner.

## **8. Approved Makes / Agencies**

The contractor shall provide all materials from the list of approved makes. NHRDF will approve make / agency as selected by the contractors within the approved list after inspection of their samples / and there compliance to Technical Specifications / B.O.Q. items and after ascertaining their spare capacities and recent past performances. In case the materials are not in conformity with BOQ & Technical Specification though it is in approved list or for Aesthetic reason, NHRDF may select the other approved makes

## **9. As Built Drawings / Documents / Shop Drawing**

(a) Shop drawings prepared by the contractor:

The contractor shall prepare the shop-drawings based on the design prepared on the feasibility study of the site and obtain approval from the NHRDF for implementation of the same. After the completion of work, the contractor is required to submit "As Built Drawings" alongwith details wherever changes were made consequent upon decision taken at site etc. and, as approved, by the NHRDF.

(b) Documents:

The contractor shall submit documents like As Built Drawings, Maintenance and Operation Manuals, Literatures of various equipments, Guarantee etc. in bound form in triplicate to NHRDF on completion of work, which will be construed as a condition for certifying Final Bill.

## **10. Warranty Certificates**

The Original Manufacturer's Warranty Certificates shall be in the name of NHRDF in respect of all the supplied & installed items for which Warranty is applicable, such as, Solar Panels etc.

## **11. Procurement of Materials.**

The contractor shall make his own arrangement to procure all materials required for the work.

## **12. Taxes**

The contractor shall pay and be responsible for payment of all taxes, duties, levies, royalties, fees or charges in respect of the works including but not limited to GST, excise duties and octroi, payable in respect of materials, equipment, plant and other things required under the contract. All of the aforesaid taxes, duties, levies fees and charges shall be to the contractor's account and NHRDF shall not be required to pay any additional or extra amount on this account.

## **13. Non-Assignability**

This Contract & Benefits and Obligations thereof shall be strictly personal to the bidder bidding the bid and shall not on any account be assignable or transferable by the Bidder. Also, the Bidder will not be allowed to get the work executed on back to back basis through any other agency except for specialized works.

## 14. Scope of Work of Comprehensive Annual Maintenance Contract

### 14.1. Scheduled/ Preventive maintenance

14.1.1. The contractor shall ensure trouble free operation of the solar PV plant system by undertaking scheduled maintenance of the plant as per the recommendations of the respective OEMs/vendors of component items. The components of the solar PV plant shall be checked for loose connection/heating and the same shall be rectified. Troubleshooting and repair of the solar PV plant shall be done by the contractor. The contractor shall submit a detailed PM schedule of the plant within 15 days of placement of PO. The schedule shall be approved by NHRDF before signing the contract.

14.1.2. During the inspection/maintenance schedule, the equipment in the solar PV plant will be thoroughly checked for proper operation, cleaned and serviced.

14.1.3. Scope of regular maintenance work:

Periodicity of maintenance: Every month Maintenance work to be carried out

- a) Cleaning of solar PV modules/arrays monthly with water\*
- b) Checking and tightening all wiring connections in PV arrays and electrical cables in PCU, Earthing and lightning protection system
- c) Checking of proper functioning of PCU and recording all parameters, including any fault/incipient fault.
  - d) Measurement of solar irradiation
- e) Troubleshoot faults, if any, and rectify the same- if the fault cannot be rectified, the maintenance team will inform NHRDF and the contractor. The contractor will arrange for rectification of the fault with the help of OEM/expert. Spares for regular/breakdown maintenance will be in contractor's scope of work.

#### **\* Note :**

- a. If the weather is dusty, cleaning of PV arrays shall be done more than twice every month as per instruction of engineer-in-charge of NHRDF. No extra charge can be claimed for this.
- b. Water will be available free of cost from the installation. Any equipment viz. hose pipe, mops, pressure washer etc. will be in contractor's scope of work.

14.1.4. In case of any faults/ other problems not directly connected to the solar PV plant, (for example, non-functioning of a light fitting in a room supplied with solar power), the same shall be reported to concerned electrical engineer/Junior Engineer/supervisor.

14.1.5. The contractor shall check the solar PV plant for any damage and ingress of water.

Following reports shall be submitted by the contractor during the periodical visits in hard copy during the periodical visits:

- a) Healthiness/problems of solar PV plant (as per solar PV plant OEM(s))

Guidelines)

- b) Operation checked status (of all components of the solar PV plant, changeover system etc.)
- c) Report attended and action taken (in details) for malfunctioning solar PV plant.
- d) Any other relevant point

14.1.6. The starting date for annual maintenance service shall be the date on which the plant shall be handed over to NHRDF to their full satisfaction.

14.1.7. Any other point specifically not mentioned in the supply, installation and commissioning and annual maintenance services, but required for successful operation shall be in the scope of the contractor.

Any spares/serviceable parts/replacement parts required to put the defective plant back into service shall have to be supplied by the contractor without any cost to Institute.

#### **15. Contractor to co-ordinate with other Contractors:**

The contractor shall have to co-ordinate with other contractors (if any) employed by the NHRDF for other works. In case of any dispute or disagreement, the same may be brought to the notice of NHRDF.

#### **16. Suppliers / sub-contractors:**

The contractor shall provide the details of suppliers to the NHRDF as requested for any queries regarding quality aspects.

#### **17. Mode of Measurements:**

The contractor will be entitled for payment as per actual measurement upto mm accuracy only. If any discrepancy observed in the Bill of quantities, the same may be highlighted while filling up the tender. Bills are admitted only by Joint Measurement Sheets only.

#### **18. Housekeeping:**

Workmen are not allowed to take-up the work or leave the work without cleaning the site. The workers engaged by the contractor should not spit on walls and floors.

## SECTION - VIII

### TECHNICAL SPECIFICATIONS

1. It has been proposed to setup grid interactive solar photovoltaic power plant (without battery back-up) at the Rooftop of National Horticultural Research & Development Foundation (NHRDF) Chitegaon, Nasik (Maharashtra), Karnal (Haryana), Rajkot (Gujarat) and Indore (Madhya Pradesh). The proposed projects shall be commissioned as per the technical specifications given below.

**Grid tied with Fixed Tilt system:** - A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. The PV modules used should be made in India. The PV modules used must qualify to the latest edition of IEC PV module qualification test. The total solar PV array capacity should not be less than allocated capacity (KWpp) and should comprise of solar crystalline modules of minimum 300 Wp and above wattage.

The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. Owners shall allow only minor changes at the time of execution.

Roof type	-	RCC and Tin shed only
Structure Type	-	Dip Galvanization / Pre- galvanized
Solar Inverter	-	As per requirement
Accessorie	-	AC/ DC cables like ACDB / DCDB, LA, Earthing, Cable Tie MC 4 Connector, PVC pipe, etc. As per Design

#### 2. **Warranties:**

PV Modules	-	Modules Carry output power warranty of 90% guaranteed at the end of 10 yrs and 85% in 25 yrs.
Modules:		Warranty 25 years
Inverters	-	8 yrs warranty against manufacturing defect (From the date of invoice)
Structure	-	5 yrs. Warranty against manufacturing defects (from the date of Invoice.
Breakdown maintenance	-	(Call Basis) - (Optional)

#### 3. **METERING:**

The tendering authority shall take approval/NOC from the concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant but

#### 4. **SOLAR METER**

As per specification and approval of State DISCOM, approval from State DISCOM and payment of fees, if any, shall be the responsibility of the tendering authority.



## SECTION IX

### **LIST OF MAKES / BRANDS**

Only the indigenous (Indian) brands of components will be used in the solar cell/panel system. Makes of various items will be as under:

- |   |  |
|---|--|
| A. Poly-crystalline solar panel :-  | Vikram Solar /Adani/Waaree/or Equivalent   |
| B. Inverter/filter on-grid :-   | Sungrow / Delta/ Solis / Equivalent  |
| C. AC/ DC cables like ACDB / DCDB , LA, Earthling, Cable Tie MC 4 Connector, PVCpipe, etc. :- | Standard Make as per design  |
| D. ARRAY STRUCTURE :-   | Hot dip galvanized MS mounting Structures may be used for mounting the modules/ panels/arrays. |
-

# PART-II

## Section X

### NATIONAL HORTICULTURAL RESEARCH AND DEVELOPMENT FOUNDATION, NEW DELHI

#### Financial Bid

(Amount in Rs.)

S.No.	Item Description	Unit 1 Set	Project Cost- Basic Cost	GST	Total
1	FOR DESIGNING, SUPPLYING, INSTALLATION & IMPLEMENTATION OF 25 KWP ONGRID (GRID CONNECTED) ROOF TOP SOLAR PV SYSTEM AT <b>INDORE (MP)</b>				
2	FOR DESIGNING, SUPPLYING, INSTALLATION & IMPLEMENTATION OF 25 KWP ONGRID (GRID CONNECTED) ROOF TOP SOLAR PV SYSTEM AT <b>KARNAL (HARYANA)</b>				
3	FOR DESIGNING, SUPPLYING, INSTALLATION & IMPLEMENTATION OF 25 KWP ONGRID (GRID CONNECTED) ROOF TOP SOLAR PV SYSTEM AT <b>RAJKOT (GUJARAT)</b>				
4	FOR DESIGNING, SUPPLYING, INSTALLATION & IMPLEMENTATION OF 100 KWP ONGRID (GRID CONNECTED) ROOF TOP SOLAR PV SYSTEM AT <b>CHITEGAON, NASIK (MAHARASHTRA)</b>				
Grand Total (Rs.)					

In words Rs. \_\_\_\_\_

(Contractor's Signatures and seal of office)

NOTE : BIDDERS HAVE THE DISCRETION TO FILL UP TENDER FOR ONE OR FOR ALL LOCATIONS.

## NHRDF 25KWp Solar Project at Indore (Madhya Pradesh)

Sr. No.	Component	Standard	Make	Rating / Description	Quantity	Unit	Rate	Amount
<b>Module:</b>								
1	Multicrystalline module (Domestic Cell)	IEC 61215 Ed2, IEC 61730, IEC 61701 , IEC 62716, MCS,PV Cycle	SAATVIK / PIXON / WAAREE	335wp	75	nos.		
2	SPV module mono rail structure				1	lot		
<b>Inverter:</b>								
1	Grid tied inverter	IP 65 , IEC61683/IS6168 3, IEC60068-2(1,2,14,30),IEC5 29	/POLYCAB /WAAREE/ SOFAR	25KWp	1	nos.		
2	Inverter Mounting Stand		Local	Fabricated	1	nos.		
3	Anchor Fastner		Local	8x100MM long	5	Nos		
<b>Cable:</b>								
1	DC Cable -String connection to inverter	IEC 60227/IS694,IEC6 0502/IS1554	Sichem	1C x 4 sq.mm. UV resistant, PVC sheathed , PVC insulated flexible 1000V DC Copper flexible cable	As per site	Mtr.		
2	AC Cable - Inverter to MJB	IEC60227/IS694,I EC60502/IS1554	Polycab	4C x 35Sqmm PVC insulated, XLPE Armoured 1100 V AC Copper cable	As per site	Mtr.		

3	AC Cable - Solar MJB Panel to LT Panel	IEC 60227/IS694,IEC60502/IS 7098	Polycab	3.5C x 150Sqmm XLPE insulated, PVC sheathed flat Armoured 1100 V AC Aluminium cable	As per site	Mtr.		
4	AC Cable - Earthing Cable For Inverter		Polycab	1C x 6 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
5	LA Cable		Polycab	1C x 35 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
<b>Solar MJB Panel:</b>								
1	IP65 Powder coated sheet enclosure		Local	IP 65 Box with mounting stand with Nut Bolt	As per site	Nos.		
2	4P, MCCB		Schneider	100A,26KA MCCB	As per site	Nos.		
2	4P, MCCB		Schneider	400A, 36KA MCCB	As per site	Nos.		
3	Power plug socket		Anchor	3 pin with Switch Inside the panel	As per site	Nos.		
4	R indication lamps		Schneider	LED	As per site	Set		
5	Al. Bus bar		Reputed	400A, 415V TPN, Al. Bus Bar	As per site	set		
6	CT		Starlite	250/5A, class - 0.2 type,15VA	As per site	set		
7	MFM meter		Schneider	Model 6400, class-0.2type	As per site	Nos.		
8	SPD			Type-II,40KA	As per site	Nos.		
9	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (R colour)	As per site	Mtr.		
10	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Y colour)	As per site	Mtr.		
11	1.5 sq mm PVC insulated Cu		Polycab	Flexible 1.5 Sqmm	As per	Mtr.		

	cable			copper cable for CT connection (B colour)	site			
12	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Black colour)	As per site	Mtr.		
<b>Lugs &amp; Glands:</b>								
1	Ring Type Lug		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
2	Ring Type Lug		Dowells	for 3.5Cx120sqmm Al. cable	As per site	Nos.		
3	Ring Type Lug		Dowells	for half core of 70sqmm aluminum cable	As per site	Nos.		
4	Metallic Gland Double compression		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
5	Metallic Gland double compression		Dowells	for 3.5Cx120 sqmm Al. cable	As per site	Nos.		
<b>Earthing Material -</b>								
1	Earthing Rod	IS:3043 -1987	JMV	GI Pipe earthing-Maintainace free (25mm dia X 3Mtr)	As per site	nos.		
2	Earthing Chamber with cover		Fabricated	450mm x 450mm Metal type	As per site	Nos.		
3	Bentonyte powder bag	IS:3043 -1987	Gravin	bentonyte powder bags	As per site	nos.		
4	INVERTER Earthing strip	IS:3043 -1987	Local	25x3mm GI Earth Strip	As per site	Mtr.		
7	Insulator for <b>25x3mm GI Strip</b> (with nuts and bolts)		Local	18mm Dia, suitable for 25x3mm GI Earth Strip	As per site	Nos.		
8	Wall mounted screw with		Local	2.5 Inch, GI coating	As per	PKT		

	rawal plug				site			
9	Clamp with Nut Bolts for earthing rod		Local	SS, M10 nut bolts for ring type lug 12mm dia hole, 55mm length	As per site	Nos.		
10	Lighting Arrestor		Oney	70mtr. Radius For Protection of solar system	As per site	Set		
11	Ring type Lug		Dowells	50 Sqmm, copper cable - For LA Cable	As per site	No.		
13	lugs		Dowells	6 sqmm Cable lugs	As per site	nos.		
<b>Other Accessories</b>								
1	MC4 type DC connectors suitable for 4 sqmm cable, Male		Bizlink	MC4 connector For Male	As per site	nos.		
2	MC4 type DC connectors suitable for 4 sqmm cable, Female		Bizlink	MC4 connector For Female	As per site	nos.		
3	Insulation Tape		Steelgrip	R/Y/B/G Each	As per site	nos.		
4	Cable Ties- Black colour			Weather Proof - 5mm X 250mm	As per site	Packs		
5	Foam		Pdilite	750ml bottle	As per site	Nos.		
6	CABLE TRAY MODULE TO INVERTER with stand			4X2 INCH	As per site	MTR		
7	CABLE TRAY INVERTER TO LT PANNEL			6x3 INCH	As per site	MTR		
<b>Data Logging -</b>								
1	Data logging box		Relyon	GridSol	As per site	Nos.		
2	Current Transformer		Strlite		As per site	Set.		
3	MFM		Schneider	EM 6459 (Additional)	As per site	Nos.		

4	Router		Dlink	4 Port	As per site	Nos.		
5	Adapter		Reputed	12Vdc, 2Amp, Adapter for GridSol Supply & Sensor Supply	As per site	Nos.		
6	Pen drive		Sandisk	4GB Pen Drive	As per site	Nos.		
7	1 Sq.mm. Cable		PolyCab	1sqmm,2core, cu, Armoured cable for DG Sync(from DG supply to Relay NO,NC)	As per site	Mtr.		
8	Lugs for 1Sqmm Flexible cable		Dowells	round type lugs 1 sqmm	As per site	Nos.		
9	Metalic gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
10	LAN		Cat6	Router to GridSol & INV Looping ,Metal sheiled	As per site	Mtr.		
11	LAN Switch		Dlink	4 port	As per site	Nos.		
12	Lugs for CAT 6 cable			Metal RJ45 Connector	As per site	Nos.		
13	RS-485cable		PolyCab	1 sqmm, 2pair, metal screened, armoured, pvc insulated Cu. Cable	As per site	Mtr.		
14	Lugs for RS485 cable		Dowells	Round type lugs 0.5 sqmm	As per site	Nos.		
16	FO to eathernet converter				As per site	Nos.		
17	Mettalic Gland for RS485		Dowells	PG11	As per site	Nos.		
18	PG gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
<b>Meteorology</b>								
1	Pyranometer for Plane of		Sevara		As per	Set		

	Array				site			
2	Temperature sensors ( 1 for ambient and 1 for module)		Sevara		As per site	Set		
3	Mounting Plate for Pyranometer		Sevara		As per site	Set		
4	Pyranometer and temp sensor Communication Cable		Polycab	0.5sqmm 5 core PVC Armoured Cu. Cable	As per site	Mtr		
5	Pyranometer Communication Cable lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
6	Temprature sensor cable Lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
7	Spiral Conduit		Local		As per site	Mtr		
							Total	
							GST @ _____%	
							Grand Total for Indore	

n words (Rs. \_\_\_\_\_)

**Signature of the Contractor with Seal**



## NHRDF 25KWp Solar Project at Karnal (Haryana)

Sr. No.	Component	Standard	Make	Rating / Description	Quantity	Unit	Rate	Amount
<b>Module:</b>								
1	Multicrystalline module (Domestic Cell)	IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, MCS,PV Cycle	SAATVIK / PIXON/ WAAREE	335wp	75	nos.		
2	SPV module mono rail structure				1	lot		
<b>Inverter:</b>								
1	Grid tied inverter	IP 65, IEC61683/IS61683, IEC60068-2(1,2,14,30),IEC529	POLICAB / WAAREE/ SOFAR	25KWp	1	nos.		
2	Inverter Mounting Stand		Local	Fabricated	1	nos.		
3	Anchor Fastner		Local	8x100MM long	5	Nos		
<b>Cable:</b>								
1	DC Cable -String connection to inverter	IEC 60227/IS694,IEC60502/IS1554	Sichem	1C x 4 sq.mm. UV resistant, PVC sheathed, PVC insulated flexible 1000V DC Copper flexible cable	As per site	Mtr.		
2	AC Cable - Inverter to MJB	IEC60227/IS694,IEC60502/IS1554	Polycab	4C x 35Sqmm PVC insulated, XLPE Armoured 1100 V AC Copper cable	As per site	Mtr.		
3	AC Cable - Solar MJB Panel to LT Panel	IEC 60227/IS694,IEC60502/IS 7098	Polycab	3.5C x 150Sqmm XLPE insulated, PVC sheathed flat	As per site	Mtr.		

				Armoured 1100 V AC Aluminium cable				
4	AC Cable - Earthing Cable For Inverter		Polycab	1C x 6 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
5	LA Cable		Polycab	1C x 35 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
<b>Solar MJB Panel:</b>								
1	IP65 Powder coated sheet enclosure		Local	IP 65 Box with mounting stand with Nut Bolt	As per site	Nos.		
2	4P, MCCB		Schneider	100A,26KA MCCB	As per site	Nos.		
2	4P, MCCB		Schneider	400A, 36KA MCCB	As per site	Nos.		
3	Power plug socket		Anchor	3 pin with Switch Inside the panel	As per site	Nos.		
4	R indication lamps		Schneider	LED	As per site	Set		
5	Al. Bus bar		Reputed	400A, 415V TPN, Al. Bus Bar	As per site	set		
6	CT		Starlite	250/5A, class - 0.2 type,15VA	As per site	set		
7	MFM meter		Schneider	Model 6400, class-0.2type	As per site	Nos.		
8	SPD			Type-II,40KA	As per site	Nos.		
9	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (R colour)	As per site	Mtr.		
10	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Y colour)	As per site	Mtr.		
11	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT	As per site	Mtr.		

				connection (B colour)				
12	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Black colour)	As per site	Mtr.		
<b>Lugs &amp; Glands:</b>								
1	Ring Type Lug		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
2	Ring Type Lug		Dowells	for 3.5Cx120sqmm Al. cable	As per site	Nos.		
3	Ring Type Lug		Dowells	for half core of 70sqmm aluminum cable	As per site	Nos.		
4	Metallic Gland Double compression		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
5	Metallic Gland double compression		Dowells	for 3.5Cx120 sqmm Al. cable	As per site	Nos.		
<b>Earthing Material -</b>								
1	Earthing Rod	IS:3043 -1987	JMV	GI Pipe earthing-Maintainace free (25mm dia X 3Mtr)	As per site	nos.		
2	Earthing Chamber with cover		Fabricated	450mm x 450mm Metal type	As per site	Nos.		
3	Bentonyte powder bag	IS:3043 -1987	Gravin	bentonyte powder bags	As per site	nos.		
4	INVERTER Earthing strip	IS:3043 -1987	Local	25x3mm GI Earth Strip	As per site	Mtr.		
7	Insulator for <b>25x3mm GI Strip</b> (with nuts and bolts)		Local	18mm Dia, suitable for 25x3mm GI Earth Strip	As per site	Nos.		
8	Wall mounted screw with rawal plug		Local	2.5 Inch, GI coating	As per site	PKT		

9	Clamp with Nut Bolts for earthing rod		Local	SS, M10 nut bolts for ring type lug 12mm dia hole, 55mm length	As per site	Nos.		
10	Lighting Arrestor		Oney	70mtr. Radius For Protection of solar system	As per site	Set		
11	Ring type Lug		Dowells	50 Sqmm, copper cable - For LA Cable	As per site	No.		
13	lugs		Dowells	6 sqmm Cable lugs	As per site	nos.		
<b>Other Accessories</b>								
1	MC4 type DC connectors suitable for 4 sqmm cable, Male		Bizlink	MC4 connector For Male	As per site	nos.		
2	MC4 type DC connectors suitable for 4 sqmm cable, Female		Bizlink	MC4 connector For Female	As per site	nos.		
3	Insulation Tape		Steelgrip	R/Y/B/G Each	As per site	nos.		
4	Cable Ties- Black colour			Weather Proof - 5mm X 250mm	As per site	Packs		
5	Foam		Pdilite	750ml bottle	As per site	Nos.		
6	CABLE TRAY MODULE TO INVERTER with stand			4X2 INCH	As per site	MTR		
7	CABLE TRAY INVERTER TO LT PANNEL			6x3 INCH	As per site	MTR		
<b>Data Logging -</b>								
1	Data logging box		Relyon	GridSol	As per site	Nos.		
2	Current Transformer		Strlite		As per site	Set.		
3	MFM		Schneider	EM 6459 (Additional)	As per site	Nos.		
4	Router		Dlink	4 Port	As per site	Nos.		

5	Adapter		Reputed	12Vdc, 2Amp, Adapter for GridSol Supply & Sensor Supply	As per site	Nos.		
6	Pen drive		Sandisk	4GB Pen Dirve	As per site	Nos.		
7	1 Sq.mm. Cable		PolyCab	1sqmm,2core, cu, Armoured cable for DG Sync(from DG supply to Relay NO,NC)	As per site	Mtr.		
8	Lugs for 1Sqmm Flexible cable		Dowells	round type lugs 1 sqmm	As per site	Nos.		
9	Metalic gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
10	LAN		Cat6	Router to GridSol & INV Looping ,Metal sheiled	As per site	Mtr.		
11	LAN Switch		Dlink	4 port	As per site	Nos.		
12	Lugs for CAT 6 cable			Metal RJ45 Connector	As per site	Nos.		
13	RS-485cable		PolyCab	1 sqmm, 2pair, metal screened, armoured, pvc insulated Cu. Cable	As per site	Mtr.		
14	Lugs for RS485 cable		Dowells	Round type lugs 0.5 sqmm	As per site	Nos.		
16	FO to eathernet converter				As per site	Nos.		
17	Mettalic Gland for RS485		Dowells	PG11	As per site	Nos.		
18	PG gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
<b>Meteorology</b>								

1	Pyranometer for Plane of Array		Sevara		As per site	Set		
2	Temperature sensors ( 1 for ambient and 1 for module)		Sevara		As per site	Set		
3	Mounting Plate for Pyranometer		Sevara		As per site	Set		
4	Pyranometer and temp sensor Communication Cable		Polycab	0.5sqmm 5 core PVC Armoured Cu. Cable	As per site	Mtr		
5	Pyranometer Communication Cable lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
6	Temprature sensor cable Lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
7	Spiral Conduit		Local		As per site	Mtr		
							Total	
							GST @ _____%	
							Grand Total for Karnal	

In words (Rs. \_\_\_\_\_ )

**Signature of the Contractor with Seal**

## NHRDF 25KWp Solar Project at Rajkot (Gujarat)

Sr. No.	Component	Standard	Make	Rating / Description	Quantity	Unit	Rate	Amount
<b>Module:</b>								
1	Multicrystalline module (Domestic Cell)	IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, MCS,PV Cycle	SAATVIK / PIXON/ WAAREE	335wp	75	nos.		
2	SPV module mono rail structure				1	lot		
<b>Inverter:</b>								
1	Grid tied inverter	IP 65, IEC61683/IS61683, IEC60068-2(1,2,14,30),IEC529	POLICAB / WAAREE/ SOFAR	25KWp	1	nos.		
2	Inverter Mounting Stand		Local	Fabricated	1	nos.		
3	Anchor Fastner		Local	8x100MM long	5	Nos		
<b>Cable:</b>								
1	DC Cable -String connection to inverter	IEC 60227/IS694,IEC60502/IS1554	Sichem	1C x 4 sq.mm. UV resistant, PVC sheathed, PVC insulated flexible 1000V DC Copper flexible cable	As per site	Mtr.		
2	AC Cable - Inverter to MJB	IEC60227/IS694,IEC60502/IS1554	Polycab	4C x 35sqmm PVC insulated, XLPE Armoured 1100 V AC Copper cable	As per site	Mtr.		

3	AC Cable - Solar MJB Panel to LT Panel	IEC 60227/IS694,IEC60502/IS 7098	Polycab	3.5C x 150Sqmm XLPE insulated, PVC sheathed flat Armoured 1100 V AC Aluminium cable	As per site	Mtr.		
4	AC Cable - Earthing Cable For Inverter		Polycab	1C x 6 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
5	LA Cable		Polycab	1C x 35 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
<b>Solar MJB Panel:</b>								
1	IP65 Powder coated sheet enclosure		Local	IP 65 Box with mounting stand with Nut Bolt	As per site	Nos.		
2	4P, MCCB		Schneider	100A,26KA MCCB	As per site	Nos.		
2	4P, MCCB		Schneider	400A, 36KA MCCB	As per site	Nos.		
3	Power plug socket		Anchor	3 pin with Switch Inside the panel	As per site	Nos.		
4	R indication lamps		Schneider	LED	As per site	Set		
5	Al. Bus bar		Reputed	400A, 415V TPN, Al. Bus Bar	As per site	set		
6	CT		Starlite	250/5A, class - 0.2 type,15VA	As per site	set		
7	MFM meter		Schneider	Model 6400, class-0.2type	As per site	Nos.		
8	SPD			Type-II,40KA	As per site	Nos.		
9	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (R colour)	As per site	Mtr.		
10	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Y colour)	As per site	Mtr.		
11	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (B colour)	As per site	Mtr.		



12	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Black colour)	As per site	Mtr.		
<b>Lugs &amp; Glands:</b>								
1	Ring Type Lug		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
2	Ring Type Lug		Dowells	for 3.5Cx120sqmm Al. cable	As per site	Nos.		
3	Ring Type Lug		Dowells	for half core of 70sqmm aluminum cable	As per site	Nos.		
4	Metallic Gland Double compression		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
5	Metallic Gland double compression		Dowells	for 3.5Cx120 sqmm Al. cable	As per site	Nos.		
<b>Earthing Material -</b>								
1	Earthing Rod	IS:3043 -1987	JMV	GI Pipe earthing-Maintainace free (25mm dia X 3Mtr)	As per site	nos.		
2	Earthing Chamber with cover		Fabricated	450mm x 450mm Metal type	As per site	Nos.		
3	Bentonyte powder bag	IS:3043 -1987	Gravin	bentonyte powder bags	As per site	nos.		
4	INVERTER Earthing strip	IS:3043 -1987	Local	25x3mm GI Earth Strip	As per site	Mtr.		
7	Insulator for <b>25x3mm GI Strip</b> (with nuts and bolts)		Local	18mm Dia, suitable for 25x3mm GI Earth Strip	As per site	Nos.		
8	Wall mounted screw with rawal plug		Local	2.5 Inch, GI coating	As per site	PKT		
9	Clamp with Nut Bolts for		Local	SS, M10 nut bolts for	As per site	Nos.		

	earthing rod			ring type lug 12mm dia hole, 55mm length				
10	Lighting Arrestor		Oney	70mtr. Radius For Protection of solar system	As per site	Set		
11	Ring type Lug		Dowells	50 Sqmm, copper cable - For LA Cable	As per site	No.		
13	lugs		Dowells	6 sqmm Cable lugs	As per site	nos.		
<b>Other Accessories</b>								
1	MC4 type DC connectors suitable for 4 sqmm cable, Male		Bizlink	MC4 connector For Male	As per site	nos.		
2	MC4 type DC connectors suitable for 4 sqmm cable, Female		Bizlink	MC4 connector For Female	As per site	nos.		
3	Insulation Tape		Steelgrip	R/Y/B/G Each	As per site	nos.		
4	Cable Ties- Black colour			Weather Proof - 5mm X 250mm	As per site	Packs		
5	Foam		Pdilite	750ml bottle	As per site	Nos.		
6	CABLE TRAY MODULE TO INVERTER with stand			4X2 INCH	As per site	MTR		
7	CABLE TRAY INVERTER TO LT PANNEL			6x3 INCH	As per site	MTR		
<b>Data Logging -</b>								
1	Data logging box		Relyon	GridSol	As per site	Nos.		
2	Current Transformer		Strlite		As per site	Set.		
3	MFM		Schneider	EM 6459 (Additional)	As per site	Nos.		
4	Router		Dlink	4 Port	As per site	Nos.		
5	Adapter		Reputed	12Vdc, 2Amp, Adapter for GridSol Supply & Sensor Supply	As per site	Nos.		
6	Pen drive		Sandisk	4GB Pen Dirve	As per site	Nos.		

7	1 Sq.mm. Cable		PolyCab	1sqmm,2core, cu, Armoured cable for DG Sync(from DG supply to Relay NO,NC)	As per site	Mtr.		
8	Lugs for 1Sqmm Flexible cable		Dowells	round type lugs 1 sqmm	As per site	Nos.		
9	Metallic gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
10	LAN		Cat6	Router to GridSol & INV Looping ,Metal sheiled	As per site	Mtr.		
11	LAN Switch		Dlink	4 port	As per site	Nos.		
12	Lugs for CAT 6 cable			Metal RJ45 Connector	As per site	Nos.		
13	RS-485cable		PolyCab	1 sqmm, 2pair, metal screened, armoured, pvc insulated Cu. Cable	As per site	Mtr.		
14	Lugs for RS485 cable		Dowells	Round type lugs 0.5 sqmm	As per site	Nos.		
16	FO to Ethernet converter				As per site	Nos.		
17	Metallic Gland for RS485		Dowells	PG11	As per site	Nos.		
18	PG gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
<b>Meteorology</b>								
1	Pyranometer for Plane of Array		Sevara		As per site	Set		
2	Temperature sensors ( 1 for ambient and 1 for module)		Sevara		As per site	Set		
3	Mounting Plate for Pyranometer		Sevara		As per site	Set		
4	Pyranometer and temp sensor Communication		Polycab	0.5sqmm 5 core PVC Armoured Cu. Cable	As per site	Mtr		

	Cable							
5	Pyranometer Communication Cable lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
6	Temperature sensor cable Lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
7	Spiral Conduit		Local		As per site	Mtr		
							Total	
							GST @ _____%	
							Grand Total for Rajkot	

In words (Rs. \_\_\_\_\_)

**Signature of the Contractor with Seal**

## NHRDF 100KWp Solar Project at Chitegaon, Nasik (Maharashtra)

Sr. No.	Component	Standard	Make	Rating / Description	Quantity	Unit	Rate	Amount
<b>Module:</b>								
1	Multicrystalline module (Domestic Cell)	IEC 61215 Ed2, IEC 61730, IEC 61701, IEC 62716, MCS,PV Cycle	SAATVIK/PIXON/WAAREE	335wp	298	nos.		
2	SPV module mono rail structure				1	lot		
<b>Inverter:</b>								
1	Grid tied inverter	IP 65, IEC61683/IS61683, IEC60068-2(1,2,14,30),IEC529	POLYCAB/WAAREE/ SOFAR	50KWp	2	nos.		
2	Inverter Mounting Stand		Local	Fabricated	2	nos.		
3	Anchor Fastner		Local	8x100MM long	10	Nos		
<b>Cable:</b>								
1	DC Cable -String connection to inverter	IEC 60227/IS694,IEC60502/IS1554	Sichem	1C x 4 sq.mm. UV resistant, PVC sheathed, PVC insulated flexible 1000V DC Copper flexible cable	As per site	Mtr.		
2	AC Cable - Inverter to MJB	IEC60227/IS694,IEC 60502/IS1554	Polycab	4C x 35Sqmm PVC insulated, XLPE Armoured 1100 V AC Copper cable	As per site	Mtr.		
3	AC Cable - Solar MJB Panel to LT Panel	IEC 60227/IS694,IEC60502/IS 7098	Polycab	3.5C x 150Sqmm XLPE insulated, PVC sheathed flat Armoured 1100 V	As per site	Mtr.		

				AC Aluminium cable				
4	AC Cable - Earthing Cable For Inverter		Polycab	1C x 6 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
5	LA Cable		Polycab	1C x 35 sqmm Copper flexible PVC insulated, Green colour	As per site	Mtr.		
<b>Solar MJB Panel:</b>								
1	IP65 Powder coated sheet enclosure		Local	IP 65 Box with mounting stand with Nut Bolt	As per site	Nos.		
2	4P, MCCB		Schneider	100A,26KA MCCB	As per site	Nos.		
2	4P, MCCB		Schneider	400A, 36KA MCCB	As per site	Nos.		
3	Power plug socket		Anchor	3 pin with Switch Inside the panel	As per site	Nos.		
4	R indication lamps		Schneider	LED	As per site	Set		
5	Al. Bus bar		Reputed	400A, 415V TPN, Al. Bus Bar	As per site	set		
6	CT		Starlite	250/5A, class - 0.2 type,15VA	As per site	set		
7	MFM meter		Schneider	Model 6400, class-0.2type	As per site	Nos.		
8	SPD			Type-II,40KA	As per site	Nos.		
9	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (R colour)	As per site	Mtr.		
10	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for	As per site	Mtr.		

				CT connection (Y colour)				
11	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (B colour)	As per site	Mtr.		
12	1.5 sq mm PVC insulated Cu cable		Polycab	Flexible 1.5 Sqmm copper cable for CT connection (Black colour)	As per site	Mtr.		
<b>Lugs &amp; Glands:</b>								
1	Ring Type Lug		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
2	Ring Type Lug		Dowells	for 3.5Cx120sqmm Al. cable	As per site	Nos.		
3	Ring Type Lug		Dowells	for half core of 70sqmm aluminum cable	As per site	Nos.		
4	Metallic Gland Double compression		Dowells	for 4Cx35sqmm Cu. cable	As per site	Nos.		
5	Metallic Gland double compression		Dowells	for 3.5Cx120 sqmm Al. cable	As per site	Nos.		
<b>Earthing Material -</b>								
1	Earthing Rod	IS:3043 -1987	JMV	GI Pipe earthing-Maintainace free (25mm dia X 3Mtr)	As per site	nos.		
2	Earthing Chamber with cover		Fabricated	450mm x 450mm Metal type	As per site	Nos.		
3	Bentonyte powder bag	IS:3043 -1987	Gravin	bentonyte powder bags	As per site	nos.		

4	INVERTER Earthing strip	IS:3043 -1987	Local	25x3mm GI Earth Strip	As per site	Mtr.		
7	Insulator for <b>25x3mm GI Strip</b> (with nuts and bolts)		Local	18mm Dia, suitable for 25x3mm GI Earth Strip	As per site	Nos.		
8	Wall mounted screw with rawal plug		Local	2.5 Inch, GI coating	As per site	PKT		
9	Clamp with Nut Bolts for earthing rod		Local	SS, M10 nut bolts for ring type lug 12mm dia hole, 55mm length	As per site	Nos.		
10	Lighting Arrestor		Oney	70mtr. Radius For Protection of solar system	As per site	Set		
11	Ring type Lug		Dowells	50 Sqmm, copper cable - For LA Cable	As per site	No.		
13	lugs		Dowells	6 sqmm Cable lugs	As per site	nos.		
<b>Other Accessories</b>								
1	MC4 type DC connectors suitable for 4 sqmm cable, Male		Bizlink	MC4 connector For Male	As per site	nos.		
2	MC4 type DC connectors suitable for 4 sqmm cable, Female		Bizlink	MC4 connector For Female	As per site	nos.		
3	Insulation Tape		Steelgrip	R/Y/B/G Each	As per site	nos.		
4	Cable Ties- Black colour			Weather Proof - 5mm X 250mm	As per site	Packs		
5	Foam		Pdilite	750ml bottle	As per site	Nos.		
6	CABLE TRAY MODULE TO INVERTER with stand			4X2 INCH	As per site	MTR		
7	CABLE TRAY INVERTER TO LT PANNEL			6x3 INCH	As per site	MTR		



Data Logging -								
1	Data logging box		Relyon	GridSol	As per site	Nos.		
2	Current Transformer		Strlite		As per site	Set.		
3	MFM		Schneider	EM 6459 (Additional)	As per site	Nos.		
4	Router		Dlink	4 Port	As per site	Nos.		
5	Adapter		Reputed	12Vdc, 2Amp, Adapter for GridSol Supply & Sensor Supply	As per site	Nos.		
6	Pen drive		Sandisk	4GB Pen Dirve	As per site	Nos.		
7	1 Sq.mm. Cable		PolyCab	1sqmm,2core, cu, Armoured cable for DG Sync(from DG supply to Relay NO,NC)	As per site	Mtr.		
8	Lugs for 1Sqmm Flexible cable		Dowells	round type lugs 1 sqmm	As per site	Nos.		
9	Metalic gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
10	LAN		Cat6	Router to GridSol & INV Looping ,Metal sheiled	As per site	Mtr.		
11	LAN Switch		Dlink	4 port	As per site	Nos.		
12	Lugs for CAT 6 cable			Metal RJ45 Connector	As per site	Nos.		
13	RS-485cable		PolyCab	1 sqmm, 2pair, metal screened, armoured, pvc insulated Cu. Cable	As per site	Mtr.		
14	Lugs for RS485 cable		Dowells	Round type lugs 0.5 sqmm	As per site	Nos.		

16	FO to eathernet converter				As per site	Nos.		
17	Mettalic Gland for RS485		Dowells	PG11	As per site	Nos.		
18	PG gland for 1sqmm cable		Dowells	PG7	As per site	Nos.		
<b>Meteorology</b>								
1	Pyranometer for Plane of Array		Sevara		As per site	Set		
2	Temperature sensors ( 1 for ambient and 1 for module)		Sevara		As per site	Set		
3	Mounting Plate for Pyranometer		Sevara		As per site	Set		
4	Pyranometer and temp sensor Communication Cable		Polycab	0.5sqmm 5 core PVC Armoured Cu. Cable	As per site	Mtr		
5	Pyranometer Communication Cable lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
6	Temprature sensor cable Lugs		Dowells	0.5 sqmm lugs	As per site	Nos		
7	Spiral Conduit		Local		As per site	Mtr		
							Total	
							GST@_____%	
							Grand total for Chitegaon, Nashik	

In Words (Rs \_\_\_\_\_ )

**Signature of the Contractor with Seal**

## SECTION - XI

### Checklist for Enclosures (Bidder should fill up YES or NO without fail)

SNo	Bid Enclosures	YES or NO
1.	Whether the Tender is submitted in sealed covers Separately for Technical Bid and Financial Bid?	
2.	Whether Technical Bid contains the following	
2.1	Checklist for meeting Eligibility Criteria with all documentation as detailed	
2.2	"Tender Offer" as per this Tender document in Bidder's Letter Head shall be signed by the authority, stamped and Submitted.	
2.3	"Profile of the Bidder" as per this Tender Document to be filled up, signed and stamped	
2.4	Signed and stamped Letter of Authorization or Power of Attorney for signing the Tender document shall be submitted.	
2.5	All sections covered in the Tender document in full shall be signed by the authority, stamped and submitted	
2.6	Whether Earnest Money Deposit (EMD) amount as specified in the Tender is submitted	
2.7	Declaration on Letterhead that all items used shall be as permitted under "Approved list of Makes and Materials " issued by Ministry of New and Renewable Energy vide latest Notification.	
2.9	Following Test Certificates & Reports as per ' Technical Specifications'	
	<b>i. SPV Modules</b>	
	a) IEC 61215 / IS 14286 for Crystalline Silicon Terrestrial PV Modules	
	b) IEC 61730 Part 1 & 2	
	c) IEC 61701	
	d) STC performance certificate	
	<b>ii. System Components (for PV Power Plants)</b>	
	a) Power Conditioners/Inverters –IEC 61683 & IEC 60083-2(1,2,14,30),IEC62116,IEC62109/Equivalent standards	
	b) Cables- IS: 1554/IEC 60502 AND IS 694/IEC 60227 or Equivalent IS standard	

<b>S.No</b>	<b>Bid Enclosures</b>	<b>YES or NO</b>
	c) Switches/Circuit Breakers/ Connectors – IS/IEC 60947Part I,II,III & EN 50521	
	d) Junction Boxes / Enclosures of Inverters- IP 65 & IEC 62208	
2.10	Technical Data Sheets as per this Tender Document are fully filled up and enclosed	
<b>3.</b>	<b>Whether Price Bid contains the following</b>	
3.1	Whether submitted in a separate sealed envelope with name of the works and bidder's details super scribed on the envelope?	
3.2	Whether corrections or overwriting if any is attested?	
3.3	Whether write up on present Tax structure applicable is enclosed? (refer to Clause 8 of General Conditions of Contract)	

**SIGNATURE OF THE CONTRACTOR WITH SEAL**