

**PIMPRI CHINCHWAD NEW TOWN
DEVELOPMENT
AUTHORITY, AKURDI, PUNE-411 044.**



DETAILS ELECTRICAL WORK E-TENDER

TENDER PAPER

FOR B-1, E-TENDER NOTICE NO. : FOR 2018-19 (3rd Call)

**TENDER PAPER
(E-Tender No. :)**

NAME OF WORK: - Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 kW capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years.

Estimate cost	:	Rs.	11,78,000/-
Tender form Fee	:	Rs.	3,300/-
Earnest Money Deposit	:	Rs.	55,000/-
Security Deposit	:	Rs.	55,000/-

Pimpri Chinchwad New Town Development Authority
Near Akurdi Railway station, Pune-411 044

NAME OF WORK: - Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 kW capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years.

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PIMPRI-CHINCHWAD NEW TOWN DEVELOPMENT AUTHORITY,

NEW ADMINISTRATIVE BUILDING, NEAR AKURDI RAILWAY STATION, PUNE-411 044. Phone No. (020)-27652934/35 (Extn:-1605)

E -Tender Notice No: for 2018-2019 (3rd call)

Sealed Online B-1, e-Tenders for the following work are invited by the Chief Executive officer from the contractors.

Sr. No	e-tender No.	Name of work	Estimated Cost Rs.	Type	Earnest Money (Rs.)	Security Deposit (Rs.)	Time Limit for completion (period of work)	e-tender form fees (Non Refundable) (Rs.)
1.		Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 kW capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years.	11,78,000/-	3 rd call	55,000/-	55,000/-	1 Month	3,300/-

e-Tender Processing Time Table :-

Sr.No	Details	Start Date	Hrs	End date	Hrs
1	Publication of Tender				
2	Document Download				
3	Pre bid meeting				
4	Bid submission start				
5	Opening of Bid (Technical cover)				
6	Note : All the payments towards EMD and cost of tender forms will be done through e-payment gateway by using Net banking only. Bidders who are using SB MOPS other banks Internet Banking are requested to make online payment 4 days in advance				

Note:-

1. All eligible/interested contractors who want to participate in tendering process should compulsorily get enrolled on e-tendering portal "<http://mahatenders.gov.in>" in the appropriate category applicable to them.
2. **Contractor shall contact for details or any difficulties in submission of online tenders if any to "The 24 x 7 Toll Free Telephonic Help Desk Nos. 1800-3070-2232 Mobile no. 91-7878007972 & 91-7878007973**
3. It is compulsory for all participants to submit all documents online. Bids will not be accepted by hand or by post. In case of failure online offer will not be opened.
4. Right to reject any or all online bids of work without assigning any reasons thereof are reserved with PCNTDA.
5. Detailed terms and condition are displayed on portal,
6. Above Tender Notice is displayed on www.pcntda.org.in

Chief Executive Officer,
PCNTDA, Akurdi

CHAPTER - I

DETAILED TENDER NOTICE

Sealed Online B-1, e-Tenders for the following work are invited by the Chief Executive Officer, PCNTDA from the contractors.

NAME OF WORK: Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 kW capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years.

BLANK TENDER FORM : **Rs. 3,300/-**

Tender Forms can be purchased from the e-Tendering Portal, "<http://mahatenders.gov.in>" after paying Tender Fees through online mode as per the Tender Schedule. Tender form, conditions of contract, specifications can be downloaded from the e-Tendering portal "<http://mahatenders.gov.in>" after entering the details, payment of Rs. 3,300/- (Rupees Three Thousand three hundred only) should be paid online using payment gateway. The fees of tender document will be nonrefundable. Further information regarding the work can be obtained from the above office.

1. EARNEST MONEY DEPOSIT (EMD) –

1.1. The EMD applicable amount shall be paid via online mode only.

1.2. a) Earnest money of minimum Rs. 55,000 /- shall be paid via online using NEFT/RTGS or payment gateway mode. After Tender opening, the EMD of the unsuccessful supplier will be returned to account provided by the supplier.

b) The amount will be refunded to the unsuccessful tenderers on deciding about the acceptance or otherwise of the tender. In case of successful tenderer, the EMD will be converted to security deposit. This security deposit will be refunded to the successful contractor after 30 days of agreement period.

1.3. Tender of those who do not deposit earnest money shall be summarily rejected.

2. The amount of earnest money will be refunded to the unsuccessful tenderer after 30 days after issuance of work order to successful contractor.

3. PERFORMANCE SECURITY DEPOSIT

The contractor should quote rate on total estimated cost both in words and figures. No alteration in the form of tender and in the Schedule of quantities and no addition in the shape of special stipulation will be permitted. Tender which do not fulfil all or any of the above conditions or are incomplete in any respect, is liable to summarily rejection.

The EMD will be converted to security deposit. This security deposit will be refunded to the successful contractor after 30 days of agreement period. . However, no interest shall be payable on security deposit.

4. Eligibility Criteria for Technical Experience for Bidder :-

A) The Bidder should be a body incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto. A copy of certificate of incorporations applicable and relevant, shall be enclosed

B) Bidder must have experience of successful installation, commissioning and maintenance of online grid inverter of at least 100kWp capacity and above during last 3 years;

C) The supplier should have supplied the online inverter of 100 kWp and above of amount not less than Rs. 3,50,000/- to government offices in Maharashtra in last 3 financial years.

5. ONLINE ENVELOPE NO. 1 : (Documents)

The First Online envelope "Envelope No. 1" shall contain the following documents:

- 1) Scanned copy of Details of Tenderer's PAN No. and complete postal address with Pin Code and telephone Numbers.
- 2) The bidder should be a licensed dealer of the product. Manufacturers' Authorization Form (MAF) shall be furnished.
- 3) Scanned copy of GST certificate
- 4) Scanned copy of turnover certificate, certified by the Chartered Accountant should be produced. The average annual turnover during last three financial years 17-18, 16-17, 15-16 should not be less than Rs. 12,00,000/-
- 5) Scanned copy of attested certificate of work experience in government sector. The Bidder should demonstrate having successfully supplied the online inverter of 100 kWp and above capacity of amount not less than Rs. 3,50,000/- to government offices in Maharashtra in last 3 financial years.
- 6) Income Tax Returns for last Three Financial Years (2017-18, 2016-17 and 2015-16)
- 7) Scan copy of certificate showing that the firm is incorporated in India under the Companies Act, 1956 or 2013 including any amendment thereto.
- 8) Scan copy of certificate that the firm has the experience of successful installation, commissioning and maintenance of online grid inverter of at least 100kWp capacity and above during last 3 years;

All the relevant documents showing and confirming the above shall be enclosed with the bid documents and shall be listed as per the enclosure.

Numbering should be done for all papers contained in Envelope No. 1 and indexed

6. ONLINE ENVELOPE No.2 TENDER (FINANCIAL BID)

The second online envelope "Envelope No.2" shall contain only the offer.

7. Post-Qualification

Supplier satisfying the above criteria shall be declared as post-qualified and considered for the further process of the bid. PCNTDA will reserve the right to qualify or disqualify supplier and open envelope no. 2.

8. Validity of terms of the BID

1) It is a firm and irrevocable offer, and shall remain valid and open for a period of not less than 120 days from the last date for submission of the Non-adherence to this requirement will be a ground for declaring the Proposal as non-responsive. In exceptional circumstances, PCNTDA may solicit the Bidder's consent for extension of the period of validity. The Bidder agrees to reasonably consider such a request. The request and response shall be in writing. A Bidder accepting PCNTDA's request for validity extension shall not be permitted to modify its offer.

2) The above work will be carried out under the supervision of the Engineer-in-charge of PCNTDA.

9. POWER OF ATTORNEY:

If the tenderer are a firm or company, they should in their forwarding letter mention the names of all the partners together with the name of the person who holds the power of Attorney, authorizing him to conduct all transactions on behalf of the firm/company, along with the tender. Clarifications, if any, can be sought from:

Chief Executive Officer

Pimpri Chinchwad New Town Development Authority
New Administrative Building, Near Akurdi Railway station,
Pune-411 044
Maharashtra State, INDIA

10. ONE BID PER BIDDER

Each contractor shall submit only one bid for the work. The contractor who submits or participates in more than one bid will cause all the bids with the Bidders participation to be disqualified.

11. COST OF BIDDING

The tenderer shall bear all costs associated with the preparation and submission of the bid and PCNTDA will in no case, be responsible and liable for those costs.

12. SITE VISIT

The contractor at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the bid and entering into a contract for construction of the works. The costs of visiting the site and collecting the necessary information shall be borne by the bidder. No extra claim will be entertained in future on this account.

13. OPENING OF TENDER

The tenders will be opened on the date specified in the Tender Notice (if possible) in the presence of the intending bidders or their authorized representative to whom they may choose to remain present. Following procedure will be adopted for opening of the tender.

1.ENVELOPE No.1: -(Documents)

First of all Envelope No.1 of the tender will be opened online to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderer Envelope No. 2 will not be considered for further action and the same will be recorded. The decision of the tender opening authority in this regard will be final and binding on the contractors.

2.ENVELOPE No.2: (Financial Bid)

This envelope shall be opened online after opening of Envelope No.1, only if contents of Envelope No.1 are found to be acceptable to the Department. The tendered rates in offer shall then be read out. In the presence of bidders who remain present at the time of opening of Envelope No.2.

14. RIGHT RESERVED: -

Right to reject any or all tenders without assigning any reason therefore is reserved by the Hon. CEO, PCNTDA whose decision will be final and legally binding on all the tenderer.

1.The PCNTDA may extend the dead line for submission of tender by issuing a corrigendum.

2.The PCNTDA near Akurdi Railway station, PUNE – 44 shall have the right to revise or to amend the contract document prior to receipt of tender.

15. The law of jurisdiction for this work is Pune and Pimpri Chinchwad.

SCOPE OF WORK

1. DETAILS OF WORKS:

1.1 100kW power solar system is installed in new admin building of PCNTDA. This solar system presently consists of 357 No. of solar panels located in 3 places resulting in 32 circuits each consisting of 11 solar panels (82 panels on A wing of building, 22 panels on D wing of building and 253 panels on ground floor)

The rating of each solar panel is as follows

280WP

V_{oc} - 44.7 V

V_L - 36.75 V

I_L - 7.63 A

I_{oc} -8.17 A

The solar system consists of 1 No. of 100 kW solar inverter. This inverter is placed in the room near ground floor of building. The contractor has to replace the existing inverter with new one as per direction of PCNTDA.

1.2 Supply of 3 phase online Grid 50 kW solar inverter 2 numbers with associated accessories such as ACDB, DCDB panel, Isolator, reverse protection relay for protecting back flow of energy to grid, Generation Meter and other allied items for completing the work; Installation and Synchronization with the Grid and 5year comprehensive Maintenance of the System which comes under MSEDCL Net metering system.

2. THE SCOPE OF WORK SHALL ALSO INCLUDE THE FOLLOWING:

2.1. Detailed planning of time bound smooth execution of Project;

2.2. Contractor should study the existing solar generation system (Panel installed, Location of panels, location of inverter, Energy distribution and other allied equipments like DG set and synchronising panel) installed in PCNTDA. Contractor shall provide the design of the system with connection diagram of solar panels with the inverter, meter and connectivity of the system with the grid shall be approved by PCNTDA.

2.3. Performance Monitoring of the system to achieve minimum required CUF for the period of 5 years

2.4. Comprehensive Maintenance of the Solar Panel, Inverter, Meter, cabling of the solar system and Balance of System for five (5) year to assure faultless operation, and maintenance.

2.5. Coverage of risk liability of all personnel associated with implementation and realization of the Project;

2.6. Training of at least two persons to be nominated by user at the location, on the various aspects of design and maintenance of the System after Commissioning shall also submit the operation & maintenance manuals with Do's and Don'ts & troubleshooting/ remedies of minor fault related to the equipment as per applicable specifications/ norms/ security & safety code/ Procedure.

2.7. The Successful Bidder shall maintain sufficient inventory of the spare parts to ensure that the Project is functional during the period of warranty period.

2.8. Comprehensive O &M of the System, from the date of the Completion of Project has to be carried out by the Contractor. Comprehensive O &M of the System shall be for five (5) years from the date of Completion. It shall include Preventive/Routine Maintenance and Breakdown Maintenance.

nance. Whenever a fault/failure/breakdown/malfunctioning occurs, the Contractor has to rectify the fault within 48 hours from the time of occurrence of fault.

2.9. Any complaint related to unserviceability/improper functioning of the connected Supply, Installation of Solar Inverter and 5 Years Comprehensive maintenance of 100kWp System. equipment in the System, which is not attended and rectified within 48 hours, shall attract a penalty of Rs. 500/- per 24 hours, which shall be deducted from the security deposit.

2.10. If the Contractor is found unable to complete the rectification or maintenance work within 1 month of the fault, PCNTDA will be free to carry out the work, but at Contractor's cost and risk. Any loss or damage that PCNTDA may sustain due to such failure on the part of the Contractor, recovery of such loss or damage shall be made from any payment payable to the Contractor. On occurrence of such event PCNTDA will forfeit the security deposit of the contractor

2.11. The Contractor must maintain all the records pertaining to any faults / failure / defect / breakdown / malfunctioning and replacement of any spare or consumables from the inventory.

2.12. Any additional work, which is not covered above but is related and required to be done. These additional works shall have to be carried out by the contractor.

3. GRID CONNECTION:

3.1. The Contractor shall be responsible for synchronization of the Project with grid.

3.2. Connectivity of Project with the grid as per guidelines of MSEDCL. The contractor has to do the liasaning work to get NOC from Electrical inspector and MSEDCL authority for starting the inverter and solar generation system after installation of inverter.

3.3. Completion of the project, as per tender.

4. INSURANCE:

4.1. The Contractor shall also take insurance for third party liability covering loss of human life, engineers and workmen and also covering the risks of damage, theft to the third party/ material/ equipment/ properties after completion of the work(s).

Before commencement of the work, the Contractor will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work. Liquidation, Death, Bankruptcy etc., shall be the responsibility of Contractor.

5. WARRANTY AND GUARANTEES:

5.1. The Bidder shall warrant that the goods supplied under this Agreement are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials as per standards specified in the technical specifications of this tender. The Contractor shall provide warranty covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of five (5) years from the date of Completion.

5.2. The responsibility of operation of warranty and guarantee clauses and claims/Supply, Installation of Solar Inverter and 5 Years Comprehensive maintenance of 100kWp System

6. TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP:

6.1. The Bidder shall warrant that the goods supplied under this Agreement are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials as per standards specified in the technical specifications of this tender. The Contractor shall provide warranty covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of five (5) years from the date of Completion.

6.2. The design, engineering, manufacture, supply, installation, testing, commissioning and performance of the equipment shall be in accordance with latest/ appropriate IEC/Indian Standards as detailed in the technical specifications of this tender or its subsequent amendments. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE/ CEA/ electricity regulators/ MSEDCL shall be used. All the relevant test certifications must be kept valid up to the period of the contract (as applicable).

6.3. The specifications of the components should meet the technical specifications mentioned in this tender or its subsequent amendments.

6.4. Any supplies which have not been specifically mentioned in this tender but which are necessary during installation or Comprehensive O&M period shall be provided by the Contractor without any extra cost and within the time schedule for efficient and smooth installation, commissioning and Comprehensive O &M of the equipment.

7. REQUISITE CERTIFICATIONS:

7.1. Completion Certificate: When the Contractor fulfils his obligation under the Agreement, it shall obtain completion certificate from PCNTDA.

PIMPRI-CHINCHWAD NEW TOWN DEVELOPMENT AUTHORITY, AKURDI, PUNE.
CONTRACT AGREEMENT

(General rules and directions for the guidance to the contractors)

Definitions:

For the purpose of this contract unless there is anything repugnant the subject of the contract, The following words and phrases shall have the meaning specified herein below:-

- 1) The word "Development Authority" means the "Pimpri-Chinchwad New Town Development Authority".
- 2) The word "Chairman" means the "Chairman of the Development Authority".
- 3) The word "Chief Executive Officer" means "Chief Executive Officer of the Development Authority OF PCNTDA".
- 4) The "Executive Engineer" means the "Executive Engineer (Electrical) of the Development Authority of PCNTDA".
- 5) Engineer-in-charge means the Executive Engineer in-charge of the work or such other subordinate who may have been specially appointed to hold charge of such work.
- 6) The expression "Work" or "Works" when used in those conditions shall unless there is something either in the subject or context repugnant to such construction be construed and taken to mean the works by or by the virtue by contractor be executed whether temporarily or permanently or whether original, altered, substituted or additional and shall be held to comprise not only works of constructions but all access there to and all matters and things connected there-with or incidental there to be executed, carried out and done under the contract in every respect.
- 7) Receipts for payments made on account of work, when executed by firm, must also be signed by Power of Attorney Holders, except where the contractors are described in the tender form in which case the receipts must be signed in the name of firm by one of the partners or by some other persons having authority to give effectual receipts for the firm; which is made known to PCNTDA in advance.
- 8) Any person who submits a tender shall fill up printed form stating the rate at which he is willing to undertake the work or in case of item Rate Tenders each item of the work. Tenders that propose any alteration in the work specified in the said Tender Form, or in the time allowed for carrying out the work or which contain any other condition of any sort, will be liable to rejection. No single tender shall include more than one work. Tender shall have the name of work to which they refer, should be shown on the documents being submitted.
- 9) The Chief Executive officer or his authorized representative will open the e-tender in the presence of tender committee and such e-Bidder or their representative who may intent to be present at the time. PCNTDA will enter the rate of several tenders in comparative statement in a suitable form. In the event of a e-tender being rejected, the earnest Money deposited shall be returned to the contractor concerned.
- 10) The receipt of a clerk for any money paid by the contractor will not be considered as an acknowledgement of payment and the contractor shall be responsible for seeing that the he procures the receipts from the Chief Executive Officer or any other person duly authorized by him in this respect.

- 11) The Servicesö means those services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Purchase Contract;
- 12) The öContractö shall mean The agreement entered into between the owner and the contractor As recorded in the contract form signed by the parties include all attachment the notice of tender, the sealed quotation and the tender documents including the tender and acceptance thereof together with the documents referred to therein, and the accepted conditions with annexure mentioned therein including any special conditions, specifications, designs, drawings, priced schedule / bill of quantities and schedule of rates. All these documents taken together shall be deemed to form one contract and shall be complementary to one another. Contract is deed of contract together with its entire accompaniment and those later incorporated in it by internal consent.
- 13) The öContract Priceö shall mean the amount of the work as per accepted tender plus amount of work which is increased from time to time due to cropping of additional work as ordered by the Engineer-in-charge.
- 14) A öLanguageö Correspondence language should be only Marathi & English.
- 15) öThe Goodsö means all of the equipment, machinery, and/or other materials which the Supplier is required to supply to the Trust under the Contract;
- 16) The price means the price of the each computer quoted by the supplier in the offer.
- 17) **“Agreement”** shall mean the terms and condition agreed and signed between Contractor and Nodal Agency
- 18) **B.I.S** shall mean specifications of Bureau of Indian Standards (BIS);
- 19) **“Bid”** shall mean the Technical and Financial proposal submitted by the Bidder along with all documents/credentials/attachments annexure etc., in response to this tender, in accordance with the terms and conditions hereof;
- 20) **“Competent Authority”** shall mean Hon. CEO, PCNTDA, himself and/or a person or group of persons nominated by him for the mentioned purpose herein
- 21) **“Contract”** shall mean the supply, installation of the Inverter, connection of the existing solar panels with Inverter, synchronisation of the Inverter with the grid along with Generation Meter and 5 year operation & maintenance of the system at new admin building of PCNTDA.
- 22) **“Contractor”** shall mean the Successful Bidder or Project Company who has accepted the Terms and condition of tender and accepted the Work Order with the defined time period.
- 23) **Eligibility Criteria** shall mean the Eligibility Criteria as set forth in this tender;
- 24) **Generation Meter** means meter used for accounting of energy generated from Solar PV System.
- 25) **Qualified Bidder(s)** shall mean, for given scope of work, the Eligible Bidder having quoted minimum Financial Bid.

- 26) **Financial Bid** shall mean online financial Bid, containing the Bidder's quoted Price as per tender format;
- 27) **IEC** shall mean specifications of International Electrotechnical Commission;
- 28) **Liquidate Damages** shall mean a predetermined amount of money that must be paid as damages for failure to perform within the timelines as mentioned in this tender.
- 29) **MNRE** shall mean Ministry of New and Renewable Energy, Government of India;
- 30) **Successful Bidder(s)** shall mean the Qualified Bidder(s) selected by PCNTDA pursuant to this tender for implementation of Project as per the terms and condition of the tender Documents, and to whom Work Order has been issued;
- 31) **System** shall mean a Solar rooftop plant comprises of Solar Panels, Cables, Inverter, Generation meter, and all other accessories which are associated with the 100 kWp Solar PV System, as of now as also that after the completion of the Work Order.
- 32) **kWp** shall mean KiloWatt Peak;
- 33) **Capacity Utilisation Factor (CUF)** in a year shall mean the ratio of the total generation from the Solar PV System in a year versus installed Project capacity x 365 x 24.
($CUF = \text{Total Project Generation in kWh} / (\text{installed Project capacity in kW} \times 24 \times 365)$);
However, for demonstration of successful completion, CUF shall mean the ratio of the output of the SPV Power Plant in a day versus installed Project capacity x 1 x 24

Contractor

Executive Engineer (Elect.)

Chief Executive officer

OFFER
TENDER FOR WORKS

I/we hereby tender for the execution of work for the Pimpri-Chinchwad New Town Development Authority, the work specified in the Tender with Memorandum within the time specified in such memorandum at above % / below % the estimated amount (or in case of item, Rate Tenders at the rates specified therein) in accordance, in all respects, with the specifications, designs, drawings and instructions in writing referred to in rule Condition of Schedule ~~0A0~~ and with materials as are provided for, by and in all other respects in accordance with such conditions as applicable.

Memorandum

Name of work: Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 Kw capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years

- | | | |
|---------------------|-----|----------|
| 1. Earnest Money | Rs. | 55,000/- |
| 2. Security Deposit | Rs. | 55,000/- |
- (EMD will be converted to security deposit)**

6. Time allowed for the work from the date of
Written order to complete the work ----- 01 **(one)** Month.

I/ we have paid online a sum of Rs 55,000/- in name of Pimpri-Chinchwad New Town Development Authority, as Earnest Money and agree to its absolute forfeiture for any default, as provided for in 1st para of the detailed tender notice.

I/ We agree that this offer shall remain open for acceptance for a minimum period of 120 days from the date of opening the same and thereafter until it is withdrawn by me/us by notice in writing duly addressed to the authority opening the tenders and sent by registered Post A.D. or otherwise delivered at the office of such authority.

Should this tender be accepted, I/We abide by and fulfil all items and provisions of the said conditions of the contract annexed hereto as far as applicable or in default thereof, forfeit and pay to the Development Authority the sum of money mentioned in the conditions.

Dated the _____ day of _____ 2018.
Address:

Contractor's Signature (with seal)

The Above contract agreement is here signed by me after acceptance of the Tender by the C.E.O. on behalf of the Pimpri - Chinchwad New Town Development Authority, Nigdi, Pune 411 044.

Chief Executive Officer,
Pimpri-Chinchwad New Town
Development Authority, Nigdi.

**PIMPRI-CHINCHWAD NEW TOWN DEVELOPMENT AUTHORITY
AKURDI, PUNE.**

SCHEDULE 'A'

1. Name of work: Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 Kw capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years

Schedule showing (approximately) the materials to be supplied from Pimpri-Chinchwad New Town Development Authority, stores for the work contracted to be executed and preliminary and ancillary works and the rates at which they are to be charged for.

Sr. No.	Name of Material	Approximate Quantity	Unit	Rate at which material will be issued to the contractor		Place of delivery
				In figures 5	In figures 6	
1	2	3	4			7
		NIL				

Contractor

Executive Engineer (Elect.)

Chief Executive officer

Contractor

No. of Corrections

Executive Engineer (ELECT)16

SCHEDULE “B”
Memorandum showing items of work to be carried out

Sr. No.	Description of Items	Units	Qty	Rate		Amount
				In figure	In words	
1	Supply & installation of 2 numbers of 50 kW online solar inverter for solar system of 100 Kw capacity installed in new admin building of PCNTDA including maintenance of inverter, installed solar panels, cabling work of solar system and other allied material for the period of 5 years.	Each	2	5,89,000/-	Rs. Five lacks, eighty nine thousand only	11,78,000/-

Note 1: All work shall be carried out as per specifications of the division or as directed.

Signature of Contractor

Signature of Executive Engineer (Elect.)

Payment Terms:-

- 1) 85% payment will be released after successful installation and commissioning of inverter in PCNTDA office.
- 2) 3% payment will be released every year from the date of completion.

Term & conditions

- 1) Supplier should supply, Install, Test and commissioning of 50 kW 2 No. of online inverter with all required accessories and components and allied work for solar system installed in new admin building of Pimpri Chichwad New Town Development Authority.
- 2) Supplier has to provide the ISI/BIS authenticated (ISI/BSI marked) inverter as per the specifications mentioned in tender document.
3. The time limit for the supply of the inverter will be 1 Month from the date of supply order given by PCNTDA.
4. Orders once placed should be delivered within the given time period and item should be door delivered including labour.
5. No extra charge for packing, forwarding and insurance etc. will be paid on the rates quoted.
6. The amount of Earnest Money paid by the tenderer(s) online whose tenders are not accepted will be returned to respective tenderer after 1 month of issuance of the work order to successful tenderer.
7. The supplies, materials etc. of inferior quality standard or of different specifications, etc. other than that ordered specified and/or incomplete or broken articles will not be accepted. The supplier has to replace the same at his own cost and risk.
8. In case of failure to replace the accepted and rejected articles from the supplies made, as mentioned in the conditions the loss undergone by the Government will be recovered from the suppliers Security Deposit/Earnest Money or payment due of any bill(s) to the extent required.
9. Extension of time limit for supplies shall be considered by the Tender Inviting Officer. The extension so granted may be with levy of compensation for delay in execution of supply order up to Rs. 1000/day.
10. Supplier may ensure the goods at his own cost to safeguard the delivery of such goods dispatched by him to the consignee; the department will not be responsible for the damages or pilferage of goods during transit.
11. Rates should be quoted in the forms issued from the department and as per the requirement asked for.
12. The tenderer should attached copies of documents as per list mentioned in the tender to be duly stamped and signed, etc. with the tender documents. It may please be noted that the tender received without document referred above shall not be considered.
13. All bills should be in TRIPLICATE and should invariably mention the number and date of supply order.
- 16) The rates both in words and figures without any corrections or over writing should be quoted in offer and in Schedule-B. Any over writing or rewriting should be duly countersigned.
- 17) The CEO PCNTDA reserves the right either to accept or reject any part or items found inferior in quality or workmanship.
- 18) Undersigned will reserve full rights to open/consider the second envelop if and only if PCNTDA is satisfied with information contents in envelop No.1. The decision of the CEO PCNTDA regarding this will be final and shall be binding on tenderer.
- 19) The specimen of Agreement Bond will be provided along with letter of acceptance to the tenderer whose rates are accepted by the PCNTDA. The tenderer shall have to execute

agreement in the prescribed form on stamp paper of appropriate value which should be submitted to the Electrical Section, PCNTDA within specified time. The agreement received under seal and signature of tenderer will become a legal agreement between the tenderer and the PCNTDA, which will be binding on tenderer within Pune jurisdiction.

- 20) Every page of tender should be numbered and signed with seal by the tenderer
- 21) The right to accept or reject whole or part of the tender or all tenders without assigning any reasons thereof is reserved by the CEO,PCNTDA.
- 22) **Successful supplier should provide the warranty of 5 years from Manufacturer for Inverter. The supplier should submit the respective warranty certificate by manufacturer only, from the date of commissioning of Inverter.** During the warranty period, the supplier should replace the material free of cost in case of any defect in any of Inverter.
- 23) After receiving the supply order, successful supplier has to take approval of inverter from the Executive Engineer electrical PCNTDA before the supply of Inverter to PCNTDA.
- 24) Inverter supplied should be in good working condition and delivery challan which will be required to be given separately at the time of supply and Bills for payment.
- 25) The installation & commissioning of the Inverter should be done by the supplier only. No extra payment will be given to supplier for installation & commissioning.
- 26) If supplier supplied the faulty Inverter, then supplier should replace the faulty Inverter within 3 working days. And penalty of Rs. 5,000/- per day will be imposed to supplier if he fails to make the replacement of faulty Inverter within 3 days.
- 27) In case of Dispute or difference arising between the supplier and PCNTDA relating to any matter arising out of or connected with this supply of Inverter to PCNTDA, such disputes or difference shall be settled in front and by Hon. Chairman, PCNTDA.
- 28) The details of Inverter supply and/or other documents to be furnished by the Supplier are specified hereunder.
 - a) Original copy of Supplier's invoices showing contract number, goods, description, quantity, unit price and total amount;
 - b) Manufacturer's / Supplier's warranty certificate;
- 29) Supplier has to provide the user manual from the manufacturer with all the technical details with product specification.
- 30) Supplier has to provide the single line diagram of the system and as built drawing of the Inverter system to be installed.
- 31) Supplier has to provide the inverter which is easy to move from one place to other. Preferably with wheels.
- 32) Successful bidder has to do the cabling work if required for the installation of 2 No. of inverter as per site conditions. No extra payment will be made by PCNTDA for such work.
- 33) Successful bidder has to do the excavation for laying the cable, any foundation if required, and any other related civil work for the completion of the work on its own as per site condition and requirement. No extra payment will be made by PCNTDA for such work.
- 34) Monthly report of the solar system performance should be submitted by successful bidder to PCNTDA which will include Daily generation of solar energy units, exported units to MSEDCL grid, Inverter efficiency etc.

TECHNICAL PARAMETERS

1. Online Grid Inverter:

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. In addition, the Inverter shall also house MPPT (Maximum Power Point Tracker). Inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

- Switching devices: IGBT/MOSFET
- Control Microprocessor /DSP
- Nominal AC output voltage and frequency: 440V (Line Voltage), 3 Phase, 50 Hz
- Output frequency: 50 Hz
- Grid Frequency Synchronization range: + 3 Hz or more
- Ambient temperature considered: -20 to 50 degree Celsius
- Humidity: 95 % Non-condensing
- Protection of Enclosure: IP-20(Minimum) for indoor: IP-65(Minimum) for outdoor.
- Grid Frequency Tolerance range: + 3 or more
- Grid Voltage tolerance: - 20% & + 15 %
- No-load losses: Less than 1% of rated power
- Inverter efficiency(minimum): >93% (In case of 10kWp or above)
- Inverter efficiency (minimum) : > 90% (In case of less than 10 kWp)
- THD: < 3%
- PF: > 0.9

a. Inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.

b. The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power; inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.

c. Built-in meter, data logger and remote monitoring system to monitor Project performance retrievable through remote computer/server shall be provided.

d. The power conditioning units/inverters should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC/Equivalent BIS Std.

e. The inverters should be tested from the MNRE approved test centres/NABL/BIS/IEC accredited testing-calibration laboratories or any other government lab .

2. INTEGRATION OF PV POWER WITH GRID:

Contractor shall connect the output from the Inverter with the existing grid interface system.

3.GENERATION METER:

Digital Generation meter should log the actual value of AC/DC Voltage, Current and Energy generated by the Solar PV system provided. It should also provide the energy supplied to grid. The standards of the Generation Meter should be as per the provisions mentioned in MP Rooftop Renewable Energy Policy, 2016 or as amended by MPERC/CEA. The data logger system in the meter should store the data of all the display parameters at least for 1 year on hourly basis.

4. TOOLS & TACKLES AND SPARES:

4.1.The requirement of maintaining tools, tackles and spares at site or at service center is left to the discretion of the bidder with a condition that the same would be made available immediately as and when required.

4.2.The bidders are advised to ensure a response time as mentioned in Clause (under special circumstances, additional time limit may be considered).

4.3.Minimum requisite spares to be maintained by the Contractor, in case of Inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes, fuses, MOVs / arrestors, MCCBs etc. shall be maintained at site or at nearest service centre for the entire period of Comprehensive O&M.

5. DANGER BOARDS AND SIGNAGES:

Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date.

6. DRAWINGS & MANUALS:

6.1.Two sets of Engineering, electrical drawings and Installation and Comprehensive O&M manuals are to be supplied. Contractor shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid with basic design of the Project and power evacuation, synchronization as also protection equipment.

6.2.Approved ISI and reputed makes for equipment be used.

6.3.For complete electro-mechanical works, Contractor shall supply complete design, details and drawings to PCNTDA.

7. SAFETY MEASURES:

7.1.The Contractor shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations.