

(A)

e-TENDER DOCUMENT

FOR

**SUPPLY, INSTALLATION & COMMISSIONING AND 5 YEARS COMPREHENSIVE
WARRANTY & MAINTENANCE OF**

SOLAR PV PUMPS FOR IRRIGATION PURPOSES

4800 Wp AC Submersible

In

VARIOUS DISTRICTS OF UTTAR PRADESH

e-tender NO.- UPNEDA/Solar Pump/5 HP-AC Submersible/2018/1



Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA)

(Deptt. of Additional Sources of Energy, Govt. of U.P.)

Vibhuti Khand, Gomti Nagar, Lucknow, U. P.

Tel.No. 91-0522-2720652, TeleFax: 0522-2720779, 2720829

Mob No.9415609016

Website:<http://upneda.org.in> e-mail: compneda@rediffmail.com

TABLE OF CONTENTS

TOPIC	PAGE-NO.
PART-A	
PART-1	
e-tender Notice	3
Covering Letter	4
Checklist of Annexure	5
Particulars of e-tender	8
General Particulars of Bidder	9
Declaration by Bidder	10
PART-2 Instructions to Bidders	
Section –1 The e-tender document	11
Section -2 Eligibility condition	13
Section-3 Preparation of e-tender	14
Section-4 UPLOADING of e-tender	17
Section –5 e-tender opening and evaluation	18
Section -6: Procedure for Finalisation of BID	19
PART-3	21
General conditions of contract	
PART-4	28
Scope of work & Technical specification	
PART-5	34
Warranty And Maintenance	
PART-6	35
Technical Bid	
PART-B	37
Financial Bid	

e-tender Notice

Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA)

(Deptt. of Additional Sources of Energy, Govt. of U.P.)

Vibhuti Khand, Gomti Nagar, Lucknow U P

Tel.No. 91-0522-2720652, TeleFax: 0522-2720779, 2720829

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Website:<http://upneda.org.in> E-Mail: compneda@rediffmail.com

UPNEDA invites Online Bids from Prospective Bidders through e-tendering for the supply, installation and commissioning and 5 years comprehensive warranty & maintenance of following item at various sites in Uttar Pradesh as per the details given in e -tender document.

Item	e-tender No.	Quantity Required	Fee of etender Document (In Rs.25000/- and 18% GST)	Earnest Money
Solar PV Pumping System 4800 Wp 5 H.P (AC Submersible) supply, installation & commissioning and 05 years comprehensive warranty & maintenance in various districts of Uttar Pradesh	UPNEDA/Solar Pump/5 HP-AC Submersible/ 2018/1	Approximately 150 units	Rs. 29500/-	Rs.5.13 lakh (Five lakh thirteen thousand only) (waived off for Micro and Small entrepreneur registered in UP)

The tender document is available at e-Procurement website <http://etender.up.nic.in> and UP Electronics Corporation's website www.uplc.in from 22-11-2018. Interested bidders may view, download the e-Bid document, seek clarification and submit their e-Bid online up to the date and time mentioned in the table below:

(a)	Availability of tender document on website	22-11-2018 at e-Procurement web site http://etender.up.nic.in
(b)	e-Bid submission end date & Time	06-12-2018 up to 06.55 PM
(c)	Online technical e-Bid opening date & time	07-12-2018 at 11.30 AM
(d)	Online financial e-Bid opening date & time (Only of technically qualified bidders)	13-12-2018 at 12.30 PM
(e)	Venue of opening of technical & financial e-Bids	UPNEDA Head Office, Vibhuti Khand, Gomti Nagar, Lucknow-226010

The companies/firms who are registered at e-Procurement portal for e-tendering with U.P. Electronics Corporation Ltd. (UPLC), 10, Ashok Marg, Lucknow (UP) would only be eligible for participating in this e-tender. All companies/firms who have not registered themselves with UPLC for etendering till date can get their registration done. The companies/firms may contact U.P. Electronics Corporation Ltd. (UPLC), 10, Ashok Marg, Lucknow (UP) for their Registration. The bidders need to submit the proof/cost of e-Bid document fees and EMD as stated in the above table through Demand Draft as bid documents fees and bank guarantee as EMD in favour of Director Uttar Pradesh New and Renewable Energy Development Agency (UPNEDA), payable at LUCKNOW for those firms only who are not registered in MSME UP. The scanned copy of the Demand Draft and Bank guarantee must be enclosed along with the e-Bids. The original Demand Draft and bank guarantee along with the hard copy of the blank document with enclosures duly signed by bidders must reach the office of UPNEDA at Vibhuti Khand, Gomti Nagar Lucknow before opening date and time of technical e-Bid failing which, tender shall not be considered. Numbers of the system mentioned as above may increase or decrease. Director, Uttar Pradesh New and Renewable Energy Development Agency, (UPNEDA) reserves the right to reject any or all tenders without assigning any reason thereof. The decision of Director UPNEDA will be final and binding.

Director
UPNEDA

2. Covering Letter:

FROM:-

(Full name and address of the Bidder)

.....
.....

To:

The Director ,
Uttar Pradesh New and Renewable Energy
Development Agency (UPNEDA)
Vibhuti Khand, Gomti Nagar, Lucknow- U. P.

Subject: -Offer in response to e-tender specification No: UPNEDA/Solar Pump/5 HP-AC
Submersible/2018/1

Sir,

We hereby submit our offer in full compliance with terms & conditions of the above e-tender. A blank copy of the e-tender, duly signed on each page is also submitted as a proof of our acceptance of all specifications as well as terms/ Conditions.

We confirm that, we have the capability to supply, install and carryout 5 years comprehensive warranty maintenance of actual numbers of Solar PV Pumping Systems for Irrigation purposes. (4800 watt 5 H.P AC Submersible).....numbers in 4 months and.....numbers in a year
(Supporting document in proof of capacity should be attached)

The e-tender is to be uploaded in two separate files named Part-A for technical bid & Part-B for Financial Bid only.

(Signature of Bidder)
With Seal

3. Check list of Annexure

(The following information/documents are to be annexed and flagged by the Bidders along with the BID)

S.N	Annexure No	Particulars	Yes/No, Flag No.					
1.	Annexure-I (a) Annexure-I (b)	Details of Tender document fees (Demand Draft no, date, amount and bank name) Details of Earnest money (bank guarantee no. and date, (valid for four months)						
2.	Annexure-II	The bidder should be : A Registered Company with manufacturing facility in India for: - SPV Modules OR Motor-pump Sets OR Solar Pump Controller (Test Certificate for any one of the above components from a MNRE accredited Test lab is mandatory) OR A PV System Integrator						
3.	Annexure-III	At least 10 Solar Photovoltaic Water Pumping Systems should have been installed & commissioned by the bidder. Bidder's experience should be in supply/ installation/commissioning (contracts executed, completed and handed over) for MNRE supported Schemes / Programmes, OR Any Government Organisation / Agency/ SNA/PSU in India (A copy of the order and certificate indicating its successful execution to be enclosed						
4.	Annexure-IV IV(a) IV(b) IV(c)	<table border="1"> <tr> <td>Following Test Certificates & Reports for components specified in</td> </tr> <tr> <td>i. SPV Modules</td> </tr> <tr> <td>a) IEC 61215 edition II/ IS 14286 for Crystalline Modules</td> </tr> <tr> <td>b) IEC 61730 Part 1 & 2</td> </tr> <tr> <td>c) STC Performance Report –I V curve</td> </tr> </table>	Following Test Certificates & Reports for components specified in	i. SPV Modules	a) IEC 61215 edition II/ IS 14286 for Crystalline Modules	b) IEC 61730 Part 1 & 2	c) STC Performance Report –I V curve	
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i. SPV Modules								
a) IEC 61215 edition II/ IS 14286 for Crystalline Modules								
b) IEC 61730 Part 1 & 2								
c) STC Performance Report –I V curve								
5.	Annexure-V	Bidder should have Test Certificate for the tendered Solar PV Pumping System (complete system) from a MNRE authorized testing centre. (Test Certificate should have been issued as per MNRE specifications 2015-16)						
6.	Annexure-VI	A copy of valid GSTIN certificate						
7	Annexure-VII	A summarized sheet of turnover of last three years with average turnover certified by registered CA should be compulsorily enclosed						

8	Annexure-VIII	A summarized sheet of cumulative experience in PV systems/power plants certified by registered CA	
9	Annexure-IX	Bidder's cumulative experience in supply and installation/commissioning of total number of Solar Water Pumping Systems: > 50 nos. >100 nos. > 150nos. >200 nos.	
10.	Annexure-X	Value of a "Single Order " executed by the Bidder of : Solar Water Pumping Systems OR Indigenous Motor Pump sets / Solar Motor Pump Controllers/ Inverters Valued more than Rs. 1.0 Crore Valued more than Rs. 2.0 Crores (A copy of the order indicating its value and certificate indicating its successful execution)	
10.	Annexure-XI	The Bidder has service centers: At least 02 in the State for which tender is issued At least 04 in the State for which tender is issued	
11.	Annexure-XII	Track Record of the Bidder (in Manufacturing Off-grid PV components): Number of years , bidder is in the Manufacturing of Offgrid PV components (PV modules/ Pumps / controllers), and has not been blacklisted by any Govt. Agency [for not honouring the order after bidding OR not supplying in time OR not providing after sales service]: More than 5 years More than 7 years	
12.	Annexure-XIII	Track Record of the Bidder (in the installation/commissioning of Solar Pumps): Number of years, bidder is in the installation/commissioning of Solar Pumps and has not been blacklisted by any Govt. Agency. [for not honouring the order after bidding OR not supplying in time OR not providing after sales service]: More than 5years More than 7 years	
13.	Annexure-XIV	The bidder has ISO 9001 certification.	
14.	Annexure-XV	The bidder has ISO 14001 certification.	

15.	Annexure-XVI	The bidder employs more than 20 people in India (as per its PF return) The bidder employs more than 50 people in India (as per its PF return) (A copy of its PF return should be enclosed as proof)	
	Annexure-XVII	Authorization letter of the Bidder, for the person Representing his firm, that he is authorized to discuss and with specific mention of this e-tender.	
16.	Annexure-XVIII	An undertaking that the service centres will be opened in allotted district and list will be submitted before supply and installation for verification.	
17	Annexure-XIX	Affidavit of not ever have been Blacklisted/ debarred by any Govt. Deptt.	

* Please flag the annexure and write flag number in the box.

Note:- Bids received without supporting documents for the various requirements mentioned in the tender document may be rejected.

(Signature of Bidder)
With Seal

4. Particulars of e-tender

1.	e-tender no.	UPNEDA/Solar Pump/5 HP-AC Submersible/2018/1
2.	Particulars of the work	supply, installation and commissioning of Solar PV Pumping System 4800 Wp 5 H.P (AC Submersible)for Irrigation purposes with 05 years warranty comprehensive maintenance at the identified sites by Uttar Pradesh New and Renewable Development Agency (UPNEDA)
3.	Period of work	Within 4 months from the date of award of work.
4.	Last date and time of uploading of e-tender on NIC website	06-12-2018 up to 06.55 PM
5.	Period of validity of rates for acceptance	3 months from opening of financial bid
6.	Date and Time of opening of e-tender (Technical bid.)	07-12-2018 at 11.30 AM
7.	Date and Time of opening of e-tender (Financial bid.)	13-12-2018 at 12.30 PM
7.	Place of opening of e-tender	UPNEDA, Head Office, Vibhuti Khand, Gomti Nagar, Lucknow, Uttar Pradesh.

1. Bidders are advised to study the tender Document carefully. Submission of e-Bid against this tender shall be deemed to have been done after careful study and examination of the procedures, terms and conditions of the tender Document with full understanding of its implications.
2. The e-Bid prepared in accordance with the procedures enumerated in ITB Clause 15 of Section-I should be submitted through e-Procurement website <http://etender.up.nic.in>.
3. The e-Bids will be electronically opened in the presence of bidder's representatives, who choose to attend at the venue, date and time mentioned in the above table. An authority letter of bidder's representative will be required to be produced.
4. In the event of date specified for e-Bids opening being declared a holiday for UPNEDA's office then the due date for opening of e-Bids shall be the following working day at the appointed time and place.
5. All the required documents including Price Schedule/BOQ should be uploaded by the e-Bidder electronically in the PDF/XLS format. The required electronic documents for each document label of Technical (Fee details, Qualification details, e-Bid Form and Technical Specification details) schedules/packets can be clubbed together to make single different files for each label. All the enclosures should be scanned and uploaded with bid.
6. The companies/firms who are registered at e-Procurement portal for e-tendering with U.P. Electronics Corporation Ltd. (UPLC), 10, Ashok Marg, Lucknow (UP) would only be eligible for participating in this e-tender. All companies/firms who have not registered themselves with UPLC for e-tendering till date can get their registration done. The companies/firms may contact the UPLC officials on phone numbers 0522-2286809, 0522-2288750 (O) 0522-4130303 (Extn: 303, 304 & 307), for their Registration/Digital Signature Certificate related queries.

(Signature of Bidder)
With Seal

5. GENERAL PARTICULARS OF BIDDER

1	Name of Bidder	
2	Postal Address	
3	Mobile no.	
4	Telephone, Telex, Fax No	
5	E-mail	
6	Web site	
7	Name, designation and Mobile Phone No. of the representative of the Bidder to whom all references shall be made	
9	Name and address of the Indian/foreign Collaboration if any	
10	Have anything/extra other than price of items (as mentioned in price Schedule) been written in the price schedule.	
11	Have the Bidder to pay arrears of income tax? If yes up to what amount?	
12	Have the Bidder ever been debarred By any Govt. Deptt./ Undertaking for undertaking any work? (Affidavit to be submitted)	
13	Monthly supply capacity (attach supporting document)	
14	Details of offer (please mention number of pages and number of Drawings in the hard copy)	
15	Reference of any other information attached by the tenderer (please Mention no. of pages & no. of drawings)	

(Signature of Bidder)
with Seal

6. DECLARATION BY THE BIDDER

(REGARDING e-tender NO. UPNEDA/Solar Pump/5 HP-AC Submersible/2018/1

I/We _____ (hereinafter referred to as the Bidder) being desirous of e-tendering for the work under the above mentioned e-tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the e-tender document,

DO HEREBY DECLARE THAT

1. The Bidder is fully aware of all the requirements of the e-tender document and agrees with all provisions of the e-tender document.
2. The Bidder is capable of executing and completing the work as required in the e-tender.
3. The Bidder accepts all risks and responsibilities directly or indirectly connected with the performance of the e-tender.
4. The Bidder has no collusion with other Bidders, any employee of UPNEDA or with any other person or firm in the preparation of the bid.
5. The Bidder has not been influenced by any statement or promises of UPNEDA or any of its employees, but only by the e-tender document.
6. The Bidder is financially solvent and sound to execute the work.
7. The Bidder is sufficiently experienced and competent to perform the contract to the satisfaction of UPNEDA.
8. The information and the statements submitted with the e-tender are true.
9. The Bidder is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
10. The Bidder has not been debarred from similar type of work by UPNEDA and or Government undertaking/ Department.
11. This offer shall remain valid for acceptance for 12 Months from the date of opening of financial bid of e-tender.
12. The Bidder gives the assurance to execute the e-tendered work as per specifications terms and conditions.
13. The Bidder confirms the capability to supply, install and carryout 5 years comprehensive warranty maintenance of actual numbers of Solar PV Pumping systems for irrigation purposes.(4800 Wp 5 H.P AC Submersible).....numbers in 4 months and.....numbers in a year

(Signature of Bidder)
with SEAL

PART-2 : INSTRUCTION TO BIDDERS

SECTION 1: THE TENDER DOCUMENT

1.1 CONTENT OF e-tender DOCUMENT

1.1.1 The e-tender procedure and contract terms are prescribed in the e-tender Documents. In addition to the e-tender Notice the Bidding documents include.

PART A

Part - 1

- 1 e-tender Notice
- 2 Covering Letter
- 3 Checklist of Annexures
- 4 Particulars of e-tender
- 5 General Particulars of Bidder
- 6 Declaration by Bidder

Part – 2 : Instruction to Bidders

- Section -1 Contents of e-tender document
- Section -2 Eligibility condition
- Section-3 Preparation of e-tender
- Section-4 Submission of e-tender
- Section -5 e-tender opening and evaluation
- Section-6 Procedure for Finalisation of Bid

Part – 3 : General Condition of Contract

Part – 4 : Scope of Work & Technical specifications

Part – 5 : Details of Warranty

Part – 6 : Technical Bid

PART B

Financial Bid

The Bidder is expected to examine all instructions, forms, terms and specifications as mentioned in the e-tender document. Failure to furnish all information required by the e-tender documents or submission of a bid not substantially responsive to the Bid Document in every respect will be at the Bidder's risk and is likely to result in out-right rejection of the e-tender

1.2 LOCAL CONDITIONS

It shall be imperative on each bidder to fully inform him of all local conditions and factors, which may have any effect on the execution of the works covered under these documents and specifications. UPNEDA shall not entertain any request for clarifications from the Bidder, regarding such local conditions.

1.3 CLARIFICATION:

A prospective Bidder requiring any clarification of the e-tender Documents may contact UPNEDA in writing or by Fax at the UPNEDA's mailing address indicated in the Invitation for e-tender.

.All are requested to remain updated with the website. No separate reply/ intimation will be given elsewhere. Verbal clarifications and information's given by the UPNEDA or its employees or its representatives shall not be in any way entertained

Enquiries/clarifications may be sought by the Bidder from:

Director,
Uttar Pradesh New & Renewable Energy Development Agency,
Vibhuti Khand, Gomti Nagar, Lucknow
Phone: 0522-2720652
Fax: 0522-2720779, 2720829
Mob no.9415609016
Email: compneda@rediffmail.com
Website: <http://upneda.org.in>

1.4 AMENDMENT OF e-tender DOCUMENTS

At any time prior to the submission of the e-tender the UPNEDA may for any reason, whether at its own initiative or in response to a clarification requested by the Bidder, modify the e-tender documents by amendments. Such document shall be made available on websites: <http://neda.up.nic.in>.; <http://etender.up.nic.in> and www.uplc.in. All are requested to remain updated with the website. No separate reply/ intimation will be given elsewhere.

SECTION 2: ELIGIBILITY CONDITIONS

A. **ELIGIBILITY CONDITIONS FOR ALL TENDERS UP TO 200 SOLAR PUMPS:**

I. The bidder should be :

A Registered Company with manufacturing facility in India for:

- SPV Modules OR Motor-pump Sets OR Solar Pump Controller

(Test Certificate for any one of the above components from a MNRE accredited Test lab is mandatory)

OR

A PV System Integrator

II. Bidder should not be blacklisted by any Govt. Agency.

III. At least 10 Solar Photovoltaic Water Pumping Systems should have been installed & commissioned by the bidder.

IV. Cumulative Experience of the Bidder in executing contracts of Off-Grid Solar Photovoltaic Systems/Power plants (Installed & Commissioned) should be at least 25% of the tender value. i.e. 1.28 Crore (Rs. One crore twenty eight lakh only)

OR

Cumulative Manufacture and supply of Motor-Pump sets / Solar Pump Controller/ Inverter (Tested & Certified by MNRE accredited lab) of the Bidder should be at least 25% of the tender value. i.e. 1.28 Crore (Rs. One crore twenty eight lakh only)

[Cumulative Experience may be relaxed to 15 % in case of MSMEs/ Start-ups in the field of manufacturing of Solar Pumping System components]

V. Bidder should have Test Certificate for the tendered Model of Solar Water Pumping System from a MNRE authorized testing center at the time of bidding. Test Certificate should have been issued on or after 1 January 2014.

VI. The Bidder should have valid GST registration certificate in the state. A copy of which should be enclosed.

VII. The Bidder should have valid Service Tax Registration Certificate. A copy of which should be enclosed.

VIII. If awarded contract, bidder will need to establish Service Centre (s) in the state of operation before supply. Till then, an undertaking to be given by the bidder.

SECTION 3: PREPARATION OF e-tender

3.1 LANGUAGE OF BID AND MEASURE

3.1.1 The e-tender prepared by the Bidder and all correspondence and documents relating to the bid exchanged by the Bidder and UPNEDA shall be written in the English provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages in which case, for purpose of interpretation units of measurement shall be MKS system.

3.2 DOCUMENTS COMPRISING THE BID

3.2.1 The e-tender prepared by the Bidder shall comprise the following components

- (a) Covering letter as provided in e-tender document.
- (b) General particulars of bidder, as provided in e-tender document.
- (c) Declaration by The Bidder, as provided in e-tender document
- (d) Documentary evidence establishing that the bidder is eligible to Tender and is qualified to perform the contract if its tender is accepted. Check list of Annexure as provided in e-tender document
- (e) A blank copy of the in e-tender document signed on each page, as a confirmation by the Bidder to accept all technical specifications / commercial conditions along with all necessary enclosures.
- (f) Authorization letter of the Bidder, for the person representing his Company/Firm/ Corporation, that he is authorized to discuss and with specific mention of this e-tender

3.3 BID PRICE

3.3.1 The Bidder shall indicate prices on the appropriate financial bid schedule.

3.3.2 DUTIES AND TAXES

The price quoted should include all taxes what so ever as applicable. A Bidder shall be entirely responsible for all taxes, duties, license fees, etc. All taxes payable as per Government income tax & GST norms will be payable by the Bidder. TDS of income Tax and GST as applicable will be deducted from the payment of the Bidder as per the prevalent laws and rules of Government of India and Government of Uttar Pradesh in this regard.

3.4 BID CURRENCIES

3.4.1 Prices shall be quoted in Indian Rupees (INR) only

3.5 SECURITY DEPOSIT/ PERFORMANCE GUARANTEE:

3.5.1 The successful Bidders, who execute the agreement with UPNEDA for the work, shall have to furnish a security amount equivalent to 10% of total value of the contract in the form of Bank Guarantee valid for a period of 18 months from the date of execution of agreement. The bank guarantee may be issued by a nationalized bank or State Bank of India or any schedule Bank in India refer to those Bank which have to included in the 2nd schedule of Reserve Bank of India Act 1934.. Bank Guarantee shall be in favour of "Director, UPNEDA". The aforesaid Bank Guarantee shall be furnished prior to the execution of agreement.

3.6 PERIOD OF VALIDITY OF e-tender

- 3.6.1 Validity of the offer should be 3 months from the date of opening of the financial bid of the e-tenders. Without this validity the e-tenders will be rejected.
- 3.6.2 In exceptional circumstances; the UPNEDA will solicit the Bidder's consent to an extension of the period of validity. The request and the response there of, shall be made in writing. The contract performance security provided under clause 3.5.1 above shall also be suitably extended.

3.7 **BID SECURITY (Earnest Money)**

- 3.7.1 The bidder shall furnish, as part of its bid, bid security of 1% (one percent) of tendered value i.e. Rs. 5.13 lakhs (Five lakhs and thirteen thousand only) in the form of Bank guarantee issued by in the form of Bank guarantee issued by a nationalized bank, The bank guarantee may be issued by a nationalized bank or State Bank of India or any schedule Bank in India refer to those Bank which have to included in the 2nd schedule of Reserve Bank of India Act 1934.The bank guarantee shall be valid for a period of 4 months from the opening of technical bid. **The Earnest Money Deposit (EMD) shall be waived off for Micro and Small enterprise registered in Uttar Pradesh. The certificate in this regard should be enclosed.**
- 3.7.2 Any bid not secured with the tender fee and earnest money will be rejected by the UPNEDA as non responsive.
- 3.7.3 No Interest shall be payable on the amount of earnest money. The same will be released after the e-tenders have been decided, to those Bidders who fail to get the contract.
- 3.7.4 The e-tender security (earnest money) may be forfeited:
- a) If a Tenderer withdraws its e-tender during the period of e-tender validity specified by the Bidder in the e-tender.
 - b) If the successful Bidder fails to sign the contract within stipulated period.
- 3.7.5 EMD of successful bidder shall only be released after signing of agreement and submission of 10% Security bank guarantee.
- ### 3.8 FORMAT AND SIGNING OF e-tender
- 3.8.1 The bid must contain the name, residence and places of business of the persons making the e-tender and must be signed and sealed by the Bidder with his usual signature. The name and designations of all persons signing should be typed or printed below the signature.
- 3.8.2 e-tender by corporation/ company must be signed with the legal name of the corporation/ company/firm by the 'President', Managing director or by the 'Secretary' or other designation or a person duly authorized.
- 3.8.3 The original copy of the e-tender shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to bid and bidder to the contract. The letter of authorization shall be submitted along with power-of-attorney. All the pages of the bid shall be initialed by the person or persons signing the e-tender.

3.8.4 The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder in which case such corrections shall be initialed by the person or persons signing the e-tender.

(Signature of Bidder)
with SEAL

SECTION: 4: UPLOADING OF e-tender

- 4.1 Uploading of e-tender: The bid shall be uploaded online as per guide lines of U P Electronics Corporation Ltd. (UPLC), 10, Ashok Marg, Lucknow (UP).
- 4.1.1 The tender must be complete in all technical and commercial respect and should contain requisite certificate, drawings, informative literature etc. as required in the specification.
- 4.1.2 First part **(PART-A)** should contain technical specification, brochure literature etc. All parts of tender documents except financial bid should be uploaded as per e-procurement mode in due date and time. Scanned copy of Requisite earnest money in the form of Bank Guarantee should be enclosed.
- 4.1.3 The Bidder should submit price bid in Second part. Second part **(PART-B)** should contain financial bid only should be uploaded as per e-procurement mode in due date and time.
Anything in regard of financial condition, payment terms, rebate etc. mentioned in financial bid may make the tender invalid. Therefore, it is in the interest of the Bidder not to write anything extra in part-II except price.
- 4.1.4 The original copy of uploaded document i.e. First part **(Part-1)** is to be submitted by Post /courier/by hand to UPNEDA HQ before opening of Technical bid. . However for purpose of evaluation uploaded documents will be considered only.
- 4.2 EXPENSES OF AGREEMENT: A formal agreement for a period of 01 (one) year shall be entered into between UPNEDA and the contractor/ bidder for the proper fulfillment of the contract. The expenses of completing and stamping of the agreement shall be paid by the successful bidder. In case Solar Pumping systems for irrigation purpose are to be supplied, installed and commissioned at farmers sites selected in various districts by U.P Agriculture department against the work orders placed by UPNEDA, a separate tripartite agreement shall be entered amongst UPNEDA, contractor/ bidder and the U.P. Agriculture Department for the proper fulfillment of the contract. The expenses of completing and stamping of the agreement shall be paid by the successful bidder
- 4.3 DEADLINE FOR SUBMISSION OF BIDS: Bids must be uploaded by the tenderer in the date; time and address specified in the e-tender notice/ tender documents.

(Signature of Bidder)
with SEAL

SECTION 5: e-tender OPENING AND EVALUATION

5.1 OPENING OF e-tender

The procedure of opening of the e-tender shall be as under:

- 5.1.1 First part (PART-A) uploaded having e-tender specification no. and super scribed as “**Technical bid**” shall be opened at the time and date mentioned in the e-tender notice by UPNEDA’s representatives in the presence of Bidders, who choose to be present.
- 5.1.2 Second part (PART-B) containing Financial Bid shall be opened (after obtaining clarifications and establishing technical suitability of the offer) as per schedule. Second part of only those Bidders shall be opened whose first part (PART-A) shall be found commercially clear and technically suitable.

CLARIFICATION OF e-tender

- 5.2.1 To assist in the examination, evaluation and comparison of bids the UPNEDA may at its discretion ask the bidder for a clarification of its bid. The request for clarification and the response shall be in writing.
- 5.3 UPNEDA reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of this document and make its own judgment regarding the interpretation of the same. In this regard UPNEDA shall have no liability towards any Bidder and no Bidder shall have any recourse to UPNEDA with respect to the selection process. UPNEDA shall evaluate the Bids using the evaluation process specified in this document or as amended, at its sole discretion. UPNEDA’s decision in this regard shall be final and binding on the Bidders.

Signature of Bidder
with seal

SECTION-6: PROCEDURE FOR FINALIZATION OF BID

6.0 The Procedure for Finalization of BID would be as follows:

6.1 Finalization of BID:

- First the Technical bids shall be opened and evaluated.
- Then the price bid of technically qualified bidders shall be opened.
- The lowest rate (i.e. L-1) shall be the party to be awarded the contract.

6.2 Finalization of Empanelment:

- The lowest rate (L-1) received (and in turn approved by competent authority) would be the "Approved Rate".
- "Approved Lowest Rate" would be offered to those lowest bidder (i.e. to L-2, L-3 and so on) having price not more than 15% of lowest approved rates (L-1) if the agree to work at L-1 approved rate will be empanelled.
- Maximum 20% of the total quantity purchased in three years has to distributed equally amongst successful micro and small industries/firms bidders. Therefore 6.5% of the total order quantity for this for this year shall be awarded amongst the micro and small industries qualified firm/firm at the lowest approved rate subject to their consent at to work on lowest rate and their capacity. If MSME category bidder will be lowest one (L-1) then L-1 will be awarded 50% of 6.5% of MSME work order. The remaining 50% of 6.5% of MSME quantity shall be awarded among other qualified MSME firms.
- The bidder other than MSME will be awarded in remaining of 93.5% of total bid quantity. The lowest bidder other than MSME firms qualified and agreed on approved rate L-1 shall be awarded 50% of 93.5% as per capacity given in the bid, whichever is lower and remaining 50% of 93.5% shall be awarded in other empanelled bidder.
- If other than MSME category bidder will be L-1 then L-1 will be awarded 50% of 93.5% of work order. The remaining quantity shall be awarded among others qualified other than MSME firm.
- UPNEDA will assign district to the short listed contractor/bidder/supplier as and when districts are ready to take supplies. UPNEDA will place orders on the contractor/bidder. UPNEDA may stagger supplies in a district depending on readiness of each village.
- Training of users and entrepreneurs/operators will be arranged by the contractor/bidder at their own cost.
- After work order is placed for work, should be executed within the time schedule stipulated in work order. In case of delay (for any reason other than due to Force Majeure conditions or any extension thereof granted to him by UPNEDA) a penalty equal to 1.0% of the price of the unperformed services for each week (For the purposes of calculation of delay, part of week shall be treated as week) of delay until actual performance up to a maximum deduction of 10% of the delayed services and GST as applicable

6.3 If required UPNEDA reserves the right to negotiate with (lowest) L-1 bidder before finalization of the tender.

6.4 UPNEDA reserves the right at the time of awarding the contract to increase or decrease the quantity of goods and locations of supply without any change in price or other terms and conditions.

6.5 UPNEDA reserves the right to accept any bid and to reject any or all bids.

6.6 NOTIFICATION OF AWARDING THE CONTRACT:

List of successful Bidder(s) for contract shall be displayed on UPNEDA's website and shall be intimated in writing to the contractor.

6.7 CONTRACT

Before execution of the work, a contract agreement for execution of the work shall be signed by the Bidder with UPNEDA within 07 days of communication from UPNEDA. In case agreement is not executed within the stipulated time, the earnest money will be forfeited.

Signature of Bidder
with seal

PART 3 : GENERAL CONDITIONS OF CONTRACT

- 1.0 In the deed of contract unless the context otherwise requires:-
- 1.1 UPNEDA shall short list the successful bidder (s) on “Rate Contract” basis after verifying their capacity (or may choose one party i.e. L1, to execute the order). The Project shall be executed by UPNEDA. The successful bidder (s) shall have to sign the Contract with Uttar Pradesh New and Renewable Energy Development Agency, U.P. (UPNEDA).

DEFINITIONS

- 1.2. “UPNEDA’ shall mean The Director of UPNEDA or his representative and shall also include its successors in interest and assignees. The “Contractor” shall mean (successful bidder) i.e. the person whose e-tender has been accepted by UPNEDA and shall include his legal representatives and successors in interest.
- 1.3 The agreement shall be on Rate contract basis. The work shall be completed within four months from the date of placement of work order. However “UPNEDA” may in case of urgency ask the bidder to complete the work earlier, with the mutual consent of the contractor/ bidder. In case the contractor/ bidder fails to execute the said work within stipulated time, “UPNEDA” will be at liberty to get the work executed from the open market without calling any tender/ e-tender and without any notice to the contractor/ bidder, at the risk and cost of the contractor/ bidder. Any additional cost incurred by “UPNEDA” shall be recovered from the contractor/ bidder. If the cost of executing the work as aforesaid shall exceed the balance due to the contractor/ bidder, and the contractor/ bidder fails to make good the additional cost, “UPNEDA” may recover it from the contractor/ bidders’ pending claims against any work in “UPNEDA” or in any lawful manner.
- 1.4 That on the request of the contractor/ bidder and also in the interest of the organization the “UPNEDA” is authorized to extend the validity of the agreement, subject to that the request of the contractor/ bidder is received before the expiry of the agreement period, or any extended period granted to the contractor/ bidder. Maximum period of extension shall be 2 months on the same terms and conditions as contained in this agreement.
- 1.5 The agreement shall be deemed to be extended till the date of completion of last work order subject to the completion period as provided in the clause 1.3.
- 1.6 The contractor/ bidder, (i.e. the successful bidder), may operate in the State of Uttar Pradesh through a single authorized dealer for execution of the orders placed on authorized dealer. It will be the sole responsibility of the contractor/ bidder, to execute orders placed as per time schedule, and to ensure quality parameters, specifications and other requirements provided in the e-tender document and as per agreement.
- 1.7 In the interest of the work and the programme, agreement executed between the contractor/bidder and the “UPNEDA” may be extended to a mutually agreed period, if the need so arises. It shall be sole responsibility of the contractor/ bidder to get verified the quality & quantity of the supplied material at the site of delivery.

2 LIQUIDATED DAMAGES

- 2.1 If the contractor/ bidder fails to perform the services within the time periods specified in the contract (In case of delay for any reason other than due to Force Majeure conditions or any extension thereof granted to him by UPNEDA) the “UPNEDA” shall without prejudice

to its other remedies under the contract deduct from the contract price as liquidated damage, a sum equivalent to 1.0% of the price of the unperformed services for each week (For the purposes as calculation of delay, part of week shall be treated as week) of delay until actual performance up to a maximum deduction of 10% of the delayed services. Once the maximum is reached, the "UPNEDA" may consider termination of the contract. In the case of violation of contract, UPNEDA may confiscate pending payments/ dues of the contractor/ bidder assigning specific reasons and shall also have the power to debar/ blacklist the contractor/ bidder in similar circumstances. UPNEDA may also invoke performance/security bank guarantee of 10% together with any other tax levied by the State and Central Government.

3 The contractor/ bidder shall have to comply with all the rules, regulations, laws and by-laws for the time being in force and the instructions if any, of the organization, in whose premises the work has to be done. "UPNEDA" shall have no liability in this regard.

4 FORCE MAJEURE

4.1 Notwithstanding the provisions of clauses contained in this deed; the contractor/ bidder shall not be liable for forfeiture of its performance security, liquidated damages, termination for default, if he is unable to fulfill his obligation under this deed due to event of force majeure circumstances.

4.2 For purpose of this clause, "Force majeure" means an event beyond the control of the contractor/ bidder and not involving the contractor/ bidder's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of Government either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes

4.3 However, If a force majeure situation arises, the contractor/ bidder shall immediately notify the "UPNEDA" in writing. The decision of the competent authority of UPNEDA in above conditions shall be final.

5 The High court of Judicature at Allahabad and Courts subordinate thereto, at Lucknow, shall alone have jurisdictions to the exclusion of all other courts.

6 The contractor/ bidder shall not, without the consent in writing of "UPNEDA", transfer, assign or sublet the work under the contract or any substantial part thereof to any other party.

7 "UPNEDA" shall have at all reasonable time access to the works being carried out by the contractor/ bidder under the contract. All the work shall be carried out by the contractor/bidder to the satisfaction of "UPNEDA".

8 If any question, dispute or difference what so ever shall arises between "UPNEDA" and the contractor/ bidder, in the connection with the agreement except as to matters, the decisions for which have been specifically provided, either party may forthwith give to the other notice in writing of existence of such question, dispute or difference and the same shall be referred to the sole arbitration of the Principal Secretary/Secretary of the Uttar Pradesh or a person nominated by him not below the rank of Secretary. This reference shall be governed by the Indian Arbitration and Conciliation Act 1996, and the rules made there under. The award in such arbitration shall be final and binding on both the parties. Work under the agreement shall

be continuing during the arbitration proceedings unless the “UPNEDA” or the arbitrator directs otherwise

- 9 “UPNEDA” may at any time by notice in writing to the contractor/ bidder either stops the work all together or reduces or cut it down. If the work is stopped all together, the contractor/bidder will only be paid for work done and expenses distinctly incurred by him as on preparation or the execution of the work up to the date on which such notice is received by him. Such expenses shall be assessed by “UPNEDA”, whose decision shall be final and bidding on the contractor/ bidder. If the work is cut down the contractor/ bidder will not be paid any compensation what so ever for the loss or profit which he might have made if he had been allowed to complete all the work included in the contract.

10 INSPECTION AND TESTS

- 10.1 The following inspection procedures and tests are required by the “UPNEDA” in the presence of “UPNEDA”'s representative if so desired by “UPNEDA”.

- 10.2 The “UPNEDA” or its representative shall have the right to inspect and / or to test the goods to confirm their conformity to the contract. The special conditions of contract and/ or the Technical specifications shall specify what inspections and test the “UPNEDA” required.

10.3 INSPECTION AT WORKS.

- 10.3.1 The “UPNEDA”, his duly authorized representative shall have at all reasonable times access to the contractor/ bidders premises or works and shall have the power at all reasonable time to inspect and examine the materials and workmanship of the works during its manufacture.

- 10.3.2 The contractor/ bidder shall give the “UPNEDA”, 15 day's written notice of any material being ready for testing. It shall be mandatory that such notice should reach “UPNEDA” within 30 days of placement of work order. Such tests shall be on the contractor/ bidder's accounts/ expenses except for the expenses of the inspector. “UPNEDA” reserves the full rights, to waive off inspection of material.

- 10.3.3 The contractor/ bidder are required to get the entire lot of the ordered material inspected at one time, before the supply of the materials. In case the contractor/ bidder fails to get the entire lot inspected at one time, the total expenses of the further inspection will be borne by the supplier/contractor/ bidder.

- 10.3.4 UPNEDA will bear the inspector cost at only one manufacturing plant. If a component is produced in more than one location, then the cost of positioning the inspection in the second and subsequent plants would be borne by the successful Bidder at their cost.

- 10.3.5 The inspection by “UPNEDA” and issue of dispatch instruction there on shall in no way limit the liabilities and responsibilities of the contractor/ bidder in respect of the agreed quality assurance programme forming a part of the contract.

11. WARRANTY

- 11.1 The contractor/ bidder shall warrant as per standards for quality that anything to be furnished shall be new, free from all defects and faults in material, workmanship and

manufacture, shall be of the highest grade and consistent with established and generally accepted standards for material of the type ordered, shall be in full conformity with the specifications, drawing or samples, if any and shall if operable, operate properly. Nothing in clause 10 above shall in any way release the contractor/ bidder from any guarantee or other obligations under this contract.

- 11.2 Performance of Equipment: In addition to the warranty as already provided, the contractor/bidder shall guarantee satisfactory performance of the equipment and shall be responsible for the period or up to the date specified in clause 11.3 hereof after the equipment has been accepted by the "UPNEDA" to the extent for any defects that may develop such defects shall be removed at his own cost when called upon to do so by the "UPNEDA"
- 11.3 The Warranty period shall be 25 Years for the PV modules and 5 years for complete system including pump from the date of commissioning and handing over of the system. The contractor/ bidder shall rectify defects developed in the system within Warranty period promptly. In case the defects are not rectified within a week of the receipt of the complain tby the contractor/ bidder "UPNEDA" shall have full liberty to restore the system in working condition. The expenditure so incurred by "UPNEDA" shall be deducted from the contractor/ bidder pending claims, security/performance guarantee deposit or in other law full manner. **It would be the duty of the bidder/contractor to obtain necessary warranty documents from the original manufacturer and provide the same to UPNEDA at the time of supply and for any breach of warranty the bidder/contractor would be liable.**
- 11.4 Since the maintenance of the system may also be taken up by the contractor/ bidder after expiry of 05 years of warranty period if the end user/"UPNEDA" so desires, the contractor/bidder shall take up annual maintenance of the installed system.
- 11.5 The contractor/ bidder shall maintain the system under annual maintenance contract with the end user.
12. Notice statement and other communication send by "UPNEDA" through registered post or telegram or fax or Email to the contractor/ bidder at his specified addresses shall be deemed to have been delivered to the contractor/ bidder.
13. Any work which is not covered under this contract but is essential required for the completion of job (To the satisfaction of UPNEDA) shall be carried out by the contractor as extra item or which payment shall be made separately at the rates decided by UPNEDA
14. The work shall be carried out by the contractor/ bidder as per design and drawings approved by "UPNEDA", wherever, necessary, the contractor/ bidder shall submit relevant designs and drawings for approval of "UPNEDA", well in advance. Work carried out without "UPNEDA"'s approval shall not be accepted and the "UPNEDA" shall have right to get it removed and to recover the cost so incurred from the contractor/ bidder.
15. The contractor/ bidder shall provide one copy system manual containing instruction manual/ routine maintenance manual and maintenance record of the systems with each unit supplied or installed, this shall be both in English and Hindi language. (The draft of pass book shall be approved by UPNEDA)

The following minimum details must be provided with manual:

- (a) About the complete Solar PV Pumping system including PV modules, Pump and electronics
- (b) Do's and Don'ts
- (c) Clear instructions on regular maintenance and trouble shooting of the system
- (d) Name & address of the contact person in case of non-functioning of the system.

16. The contractor/ bidder shall not display the photographs of the work and not take advantage through publicity of the work without written permission of "UPNEDA".

17. PATENT RIGHT AND ROYALTIES.

The Contractor/ bidder shall indemnify the "UPNEDA" against all third party claims of Infringement of patent, royalty's trademark or industrial design rights arising from use to the goods or any part thereof.

18. PACKING FORWARDING

18.1 Contractor/ bidders, wherever applicable, shall after proper painting, pack and crate all the equipment in such manner as to protect them from deterioration and damage during rail and road transportation to the site and storage at the site till time of installation. Contractor/bidder shall be held responsible for all damage due to improper packing.

18.2 The contractor/ bidder shall inform the "UPNEDA" of the date of each shipment from his works, and the expected date of arrival at the site for the information of the "UPNEDA" project offices at least 7 days in advance.

19. DEMURRAGE WHARF AGE, ETC

All demurrage, wharf age and other expenses incurred due to delayed clearance of the material or any other reason shall be to the account of the contractor/ bidder.

20. INSURANCE

The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage during transportation shall be included in the bid price.

21. TRANSPORTATION

The contractor/ bidder is required under the contract to deliver the goods to the site. Transportation, storage, safety and security of the supplied material, issuance of road permit etc. shall be the sole responsibility of the contractor/bidder.

22. TERMINATION FOR INSOLVENCY

"UPNEDA" may at any time terminate the contract by giving written notice to the contractor/bidder without compensation to the contractor/ bidder, if it becomes bankrupt or

otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy, which has accrued or will accrue thereafter to the “UPNEDA”.

23. TERMINATION FOR CONVENIENCE

The “UPNEDA”, may by written notice sent to the contractor/ bidder, terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify that termination is for the purchaser’s convenience in the interest of “UPNEDA”.

24. APPLICABLE LAW

The contractor/ bidder shall be interpreted in accordance with the laws of the purchaser’s country i.e. India. The station of “UPNEDA” Headquarter shall have exclusive jurisdiction in all matters arising under this contract.

25. NOTICE

25.1 Any notice given by one party to the other pursuant to the contract shall be sent in writing or by telegram or telex/ cable or Email and confirmed in writing to the address specified for that purpose in the special condition of contract.

25.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

26. TAXES DUTIES AND INSURANCE:

The price quoted should include all taxes, duties and Insurance expenditure, custom duty, excise duty, GST, Income Tax, Surcharge on income tax etc. if any. A supplier/ contractor/bidder shall be entirely responsible for all taxes, duties, license fees, etc. All taxes payable as per Government income tax norms will be payable by the contractor/ bidder. If any new tax/duty is levied during the contract period the same will be borne by the contractor exclusively. TDS will be deducted from the payment of the contractor/ bidder as per the prevalent laws and rules of Government of India and Government of the Uttar Pradesh in this regard.

27. OTHERS:

27.1 I-V curve of the each module technical details such as Voc, Isc, , FF, cell efficiency and Pmax etc shall be supplied along-with each consignment and copy should be sent to “UPNEDA” HQ for records.

27.2 The Contractor/ bidder in consultation with concerned Project Officer of “UPNEDA”/District Agriculture Officer will conduct training programme for users, focusing on main features, operation and maintenance of the systems.

27.3 The Contractor/ bidder shall continue to provide spare parts after the expiry of warranty period at the users cost. If the contractor/ bidder fail to continue to supply spare parts and services to users “UPNEDA” shall take appropriate action against the Contractor/ bidder.

27.4 After successful supply/commissioning of the system and training, the system will be handed over to the person/beneficiary farmer identified by the Agriculture department/UPNEDA.

27.5 It shall be the sole responsibility of the contractor/ bidder to get verified the quality & quantity of the supplied material at the site of delivery.

- 27.6 In case of required Quantity of Solar PV Pumping systems in the tender/bid is to be supplied installed and commissioned at various sites in districts of the State as per U.P. Agriculture department for which only Work order will be placed by UPNEDA., Systems will be implemented as per terms and conditions of the agreement under Agriculture Department .For this Contractor/Bidder will be required to enter into a separate tripartite agreement with UPNEDA, and the U.P. Agriculture Department for the proper fulfillment of the contract.
- 27.7 Successful bidder/contractor shall establish office in Lucknow.
28. PAYMENTS:
- The payments shall be made as per the following terms and conditions:
- i) 60% of the ordered value after the supply of the complete system at site and duly certified by the concerned district officer of UPNEDA/ District Agriculture officer as designated by U.P. Agriculture department as per the technical specification and terms and conditions specified in the contract.
 - ii. 30% of the ordered value after installation and commissioning of the system along-with the handing over certificate, indicating bill of material and successful commissioning duly countersigned by the designated officer and end user.
 - iii) The balance 10% payment shall be kept as security deposit and will be released @2% at the end of each year for 5 years, on satisfactory performance and timely submission of quarterly performance report. However this can be released immediately after installation and commissioning of the system against bank guarantee of 2 % each valid respectively for 1,2,3,4 & 5 years.
- Note: In situation as mentioned in clause 27.6 payments shall be made by U.P. Agriculture department.**
29. In case of any ambiguity in interpretation of any of the provisions of the tender, the decision of "UPNEDA" shall be final.
30. Survival of Provisions:
The following provisions of this agreement shall survive the termination of this agreement.
- The clause 11 of the agreement shall survive the termination of agreement for the stipulated period.
 - clause 2,5,8 and 11 and all the provisions of this agreement that by their nature extend beyond the termination of this agreement.
31. Draft of Bank Guarantee and Bank details of UPNEDA is on annexure- 1
32. Format of quarterly visit / maintenance is on annexure-2

(Signature of Bidder)
with seal

PART -4

SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

SCOPE OF WORK

The scope of work includes design, supply, installation, commissioning of 4800 Wp 5 h.p AC Submersible Solar PV Pumping System including 05 years comprehensive warranty maintenance at various sites in villages/ hamlets, institutions, individuals etc of various districts of Uttar Pradesh as directed by UPNEDA at sites identified by UPNEDA/Agriculture department as per the following specifications.

GENERAL TECHNICAL SPECIFICATION:

The solar photovoltaic (SPV) water pumping system consists of :

PV array :

- Capacity in the range of 4800Wp
- Should be mounted on a suitable structure with a provision of tracking the sun

Motor Pump Set (Submersible):

- A.C Induction Motor Pump Set with a suitable Invertor/VFD

Electronics :

- Maximum Power Point Tracker (MPPT)
- Inverter/VFD
- Electronic Protections.

Interconnect Cables and “On-Off” switch.

Indicative Technical Specifications of (Submersible) Solar Pumping Systems with A.C Induction Motor Pump Set with a suitable Invertor/Drive

S N	PV array capacity	Motor Capacity	Motor pump set type	Maximum total Dynamic Head	Module Mounting Structure	Water Output*
1	4800 Wp	5 HP	Submersible with controller	70 /100 meters	MS hot dipped galvanized, at least three times manual tracking facility	91200 liters per day from a total head of 50 meters./62400 litres per day from a total head of 70 meters

*Water output figures are on a clear sunny day with three times tracking of SPV panel when solar radiation on horizontal surface is: 7.15 KWH/sq.m/day

Notes:

1. For higher or lower head / PV capacity, or in between various models; water output could be decided as per the clause II. (i.e. performance specifications and requirements) specified below.

II. PERFORMANCE SPECIFICATIONS AND REQUIREMENTS (DUTY CYCLE)

Solar PV Water Pumps with PV array capacity in the range of 4800 Wp could be installed on a suitable bore-well, open well, Water Reservoir, Water stream, etc.

Under the “Average Daily Solar Radiation” condition of 7.15 KWh/ sq.m.on the surface of PV array (i.e. coplanar with the PV Modules), the minimum water output from a Solar PV Water Pumping System at different “Total Dynamic Heads” should be as specified below:

For A.C. Induction Motor Pump Set with a suitable Invertor :

- a. 90 liters of water per watt peak of PV array, from a Total Dynamic Head of 10 metres (Suction head, if applicable, minimum of 7 metres) and with the shut off head being at least 12 metres.
- b. 45 liters of water per watt peak of PV array, from a Total Dynamic Head of 20 metres (Suction head, if applicable, up to a maximum of 7 metres) and with the shut off head being at least 25 metres.
- c. 32 liters of water per watt peak of PV array, from a Total Dynamic Head of 30 metres and the shut off head being at least 45 meters.
- d. 19 liters of water per watt peak of PV array, from a Total Dynamic Head of 50 meters and the shut off head being at least 70 meters.
- e. 13 liters of water per watt peak of PV array, from a Total Dynamic Head of 70 meters and the shut off head being at least 100 meters.
- f. 8.5 liters of water per watt peak of PV array, from a Total Dynamic Head of 100 meters and the shut off head being at least 150 meters.

The actual duration of pumping of water on a particular day and the quantity of water pumped could vary depending on the solar intensity, location, season, etc.

III MINIMUM TECHNICAL REQUIREMENTS / STANDARDS

A. PV ARRAY

The SPV water pumping system should be operated with a PV array of 4800Wp capacity, measured under Standard Test Conditions (STC). Sufficient number of modules in series and parallel could be used to obtain the required PV array power output. The power output of individual PV modules used in the PV array, under STC, should be a minimum of 125 Watts peak, with adequate provision for measurement tolerances. Use of PV modules with higher power output is preferred.

PV module (s) containing mono/ multi crystalline silicon solar cells shall be used in the Solar Photovoltaic module

The module efficiency should not be less than 14% and fill factor should be more than 70%.

Only Indigenously produced PV module (s) of reputed brand (IEC Tested) shall only be used in the project.

- i The open circuit voltage of the PV modules under STC should be at least 21.0 Volts.
- ii PV module must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.
- iii The terminal box on the module shall be designed for long life out door operation in harsh environment should have a provision for opening for replacing the cable, if required.
- iv The offered module shall be in accordance with the requirements of MNRE.
- v Latest edition of IEC 61215 edition II / IS 14286 for Crystalline and shall be certified by MNRE authorized test Centre. The bidder shall submit appropriate certificates.
- vi PV modules must quality to IEC 61730 Part 1- requirements for construction & Part 2 – requirements for testing, for safety qualification.
- vii Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided and if required, blocking diode(s) may also be provided.
- viii IDENTIFICATION AND TRACEABILITY

Each PV module must use a RF identification tag (RFID), which must contain the following information:

- (i) Name of the manufacturer of PV Module
- (ii) Name of the Manufacturer of Solar cells
- (iii) Month and year of the manufacture (separately for solar cells and module)
- (iv) Country of origin (separately for solar cells and module)
- (v) I-V curve for the module
- (vi) Peak Wattage, I_m , V_m and FF for the module
- (vii) Unique Serial No and Model No of the module
- (viii) Date and year of obtaining IEC PV module qualification certificate
- (ix) Name of the test lab issuing IEC certificate
- (x) Other relevant information on traceability of solar cells and module as per ISO 9000 series.
- (xi) The RFID should be inside the module laminate.

B MOTOR PUMP-SET

The SPV water pumping systems may use any of the following types of motor pump sets:

1. AC Submersible motor pump set

The **“Motor Pump Set”** should have capacity of **5 HP-** and have the following features:

- (i) The mono block AC centrifugal motor pump set with the impeller mounted directly on the motor shaft, and with appropriate mechanical seals which ensure zero leakage.
- (ii) All parts of the pump and the motor of the submersible pumps should be made of stainless steel.

-A certificate from the manufacturer of pump that, the pump and all external parts of motor used in submersible pump which are in contact with water, will be made of stainless steel should be attached . The pumps supplied will have a 5 years warranty so it is essential that the construction of the pump be made using parts which have a much higher durability and do not need replacement or corrode for at least 5 years .

- iii HDPE Pipes of 6 Kg/Sq cm – 63 mm OD- PE 100 Grade of required length should be used.
- (iv) Submersible cable should be 4 sq mm flat as per ISI standards of required length.
- v) Floating assembly, civil work and other fittings required to install the system.

□ The following details should be marked indelibly on the **motor pump set**

- Name of the Manufacturer or Distinctive Logo.
- Model Number.
- Serial Number.

Only Pumps of reputed brand should only be used in the project

As specified in MNRE technical specifications for Solar PV Pumping systems (2015-16) Bidder must provide for remote monitoring of the installed pumps by provisions in the controllers or the inverters either through an integral arrangement or through an externally fitted arrangement. It should be possible to ascertain the daily water output, the power generated by the PV array, the UP TIME of the pump during the year, Number of days the pump was unused or under breakdown/repairs.

C MOUNTING STRUCTURES and TRACKING SYSTEM.

The PV modules should be mounted on metallic structures of adequate strength and appropriate design, which can withstand load of modules and high wind velocities up to 150 km per hour. The support structure used in the pumping system should be hot dip galvanized iron with minimum 80 micron thickness.

To enhance the performance of SPV water pumping systems, provision should be provided for **manual tracking system**. (or passive or auto preferred). For manual tracking, arrangement for seasonal tilt angle adjustment and **three times manual tracking** in a day should be provided.

D ELECTRONICS AND PROTECTIONS

- Maximum Power Point Tracker (MPPT) should be included to optimally use the Solar panel and maximize the water discharge.
- Inverter/VFD could be used if required ,to operate an AC pump .

- The inverter/VFD must have IP 54 protection or must be housed in a cabinet having at least IP 54 protection
- Adequate protections should be incorporated against dry operation of motor pump set, lightning, hails and storms.
- Full protection against open circuit, accidental short circuit and reverse polarity should be provided

E Earthing and Lightning Protection:

The array structure of the PV yard shall be grounded properly using adequate number of earthing kits. All metal casing or shielding of the pumping system shall be thoroughly grounded to ensure safety of the solar pumping systems.

F ON/OFF SWITCH

A good suitable reliable switch is to be provided with the motor pump set. Sufficient length of cable should be provided for inter-connection between the PV array and the motor pump set

IV OPERATION AND MAINTENANCE MANUAL

- **An Operation and Maintenance Manual, in English and Hindi language**, should be provided with the solar PV pumping system. The Manual should have information about solar energy, photovoltaic, modules, AC motor pump set, tracking system, mounting structures, electronics and switches.
- It should also have clear instructions about mounting of PV module, DO's and DONT's and on regular maintenance and Trouble Shooting of the pumping system.
- Name and address of the person or Centre whom so to be contacted in case of failure or complaint should also be provided.
- A warranty card for the modules and the motor pump set should also be provided to the beneficiary.

V NOTES

- **The type of pump set used must match the total dynamic head requirement of the site (i.e. the location at which it is installed).**
- **The entire system should be appropriately tested and certified by the AUTHORIZED TEST CENTRES OF THE MNRE to meet the performance and water discharge norms specified in section II above .**
- **Test certificate shall be furnished mandatorily with the tender document for entire SPV Pumping System as per MNRE Specifications 2015-16.**
- **The same make of Solar Panels, pumps, VFD for which the test report is submitted in the bid document should be supplied by the bidder**

VIII. OTHER FEATURES

A toll free number (i.e. 1800 180 0005) of IVRS of UPNEDA and 14 digit UID number of minimum computer font size 72 or 13 mm (issued/provided by UPNEDA) is to be embossed/ punch at a suitable place in front of System by contractor/ bidder, which in case of non-working/ operational problems etc of system will be dialed by the beneficiary etc to lodge a complaint in respect of system problems. The IVRS will divert the complaint to Contractor/ bidder through E mail, SMS etc. The contractor/ bidder will have to rectify the same to make/ restore the system to working position within 72 hours in the warrantee period of 5 years, failing which the system may be get rectified on contractor/ bidder cost and the cost will be recovered by contractor/ bidders pending claims what so ever and appropriate action as per noncompliance etc of agreement will be considered/taken.

IX AUTHORIZED TESTING LABORATORIES/ CENTERS

Test certificates / reports for the BOS items/ components can be from any of the NABL/ IEC Accredited Testing Laboratories or MNRE approved test centers. The list of MNRE approved test centers will be reviewed and updated from time to time.

X WARRANTY

- The PV Modules must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.
- The whole system including AC pumps shall be warranted for 5 years. Solar Pumping Systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.
- Required Spares for trouble free operation during the Warrantee period should be provided along with the system

XI. TRACEABILITY OF THE PRODUCT TO BE SUPPLIED

In order to prevent the misuse of the product such as unauthorized sale or diversion to the open market, the following incorporation shall be made in the product.

- a) Engraving (or) Screen printing of UPNEDA at a suitable place on the main components viz., SPV Panel, Pump to be used in the installation of the solar Pumping systems.
- b) The unique system ID number as provided by UPNEDA shall be permanently pasted (or) marked on the system.

PART -5

WARRANTY AND MAINTENANCE

- The PV modules will be warranted for a minimum period of 25 years from the date of supply. (Output wattage should not be less than 90% at the end of 10 years and 80% at the end of 25 years).
- The mechanical structures, electrical components including pumps and overall workmanship of the Solar PV Pumping system must be warranted for a minimum of 5 years from the date of commissioning and handing over of the system..
- The Comprehensive Maintenance (within warranty period) shall be executed by the firm themselves or through the authorized dealer/ service centre of the firm in the concerned district.
- It is mandatory for the contractor/ bidder to open an authorized service centre in the concerned district before the supply/installation of the system.
- Necessary maintenance spares for five years trouble free operation shall also be supplied with the system.
- The contractor/ bidder shall be responsible to replace free of cost (including transportation and insurance expenses) to the purchaser whole or any part of supply which under normal and proper use become dysfunctional within one month of issue of any such complaint by the purchaser.
- The service personnel of the Successful Bidder will make routine quarterly maintenance visits. The maintenance shall include thorough testing & replacement of any damaged parts Apart from this any complaint registered/ service calls received / faults notified in the report generated by the IVRS should be attended to and the system should be repaired/ restored/ replaced within 4 days.
- Normal and preventive maintenance of the SPV Pumping systems will also be the duties of the deputed personnel during quarterly maintenance visits.
- During operation and maintenance period of the SPV Pumping systems, if there is any loss or damage of any component due to miss management/miss handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/rectification. The damaged component may be repaired or replaced by new component

PART- 6
e-tender No: UPNEDA/Solar Pump/5 HP-AC Submersible/2018/1
Technical BID

	Description	To be furnished by the Tenderer
A.	Solar PV Module	
1.	Type of Module	
2.	Make	
3.	Availability of RFID tag	
4.	Max power at STC Pmax (W)	
5.	Max power voltage Vmp(V)	
6.	Max power current Imp(A)	
7.	Open circuit voltage Voc (V)	
8.	Short circuit current Isc (A)	
9.	Load current at 16.4 Volt I _{load}	
10.	Conversion Efficiency	
11.	No of cells per module	
12.	bypass diodes	
13.	Solar module frame material	
14.	Module Dimension	
15.	Module Weight	
16.	Fill factor	
B.	Motor-pump Set for AC model	
1.	Make & Type	
2.	Rating(voltage and Horse Power)	
C.	Solar Pump Controller/Pump Drive	
1.	Make & Type	
2.	Rating	
3.	a)HDPE Pipes of 6 Kg/Sqcm – 63 mm OD-PE 100 Grade of minimum 100 ft length b) Submersible cable 4sqmm flat cable as per ISI standards minimum of 120 ft length	A B

D.	Tracking Mechanism	
1	Auto/Manual Give details	
E.	Min. Water Output at various heads as specified when solar radiation on horizontal surface is 7.15 KWH/Sqm/day .	

(Signature of Bidder)
with seal

PART B (Financial Bid)

e-tender No: UPNEDA/Solar Pump/5 HP-AC Submersible/2018/1
FINANCIAL BID

Name of the Firm: -----

Supply, installation & commissioning and 5 years Warranty & comprehensive maintenance of Complete Solar PV Pumping system at identified sites of Uttar Pradesh as per Technical specifications, Terms and Conditions of the tender document.

S. N.	Particulars	Rates of Solar pumping System with Solar Module,Solar Pump,Controller,M.M.s tructure,Earthing , Cable,PVC Pipe and other required BOS and with five years warrantee, System insurance and COMC Excluding GST. (A)	GST 5% (B)	Rates of Civil work, installation, commissioning and testing Excluding GST.(C)	GST 18% (D)	Total Rate E= (A+B+C+D)
1	4800Wp SPV Module & 5HP AC submersible Pump					

NOTES:

1. Certified that rates quoted above are as per the requirement, specification terms & condition mentioned in the e-tender document.
2. Above rates are FOR anywhere in the State of Uttar Pradesh inclusive of roadworthy packing, loading, unloading, all types if incidental expenses with 05 years warrantee, insurance and COM as mentioned in the tender document. GST applicable on (A) and (B) shall be paid in addition to the above quoted rates at rates applicable at time. No other cost will be claimed other than above quotes price & the applicable GST.

(Signature of Bidder)
With seal

To be uploaded in Part B.
Other document / condition, terms if enclosed will liable to be rejection of bid.

FORMAT FOR EMD

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Ref. _____

Bank Guarantee No. _____

Date: _____

In consideration of the -----[Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to tender document issued by UPNEDA considering such response to the tender document of[insert the name of the Bidder] as per the terms of the tender document, the _____ [*insert name & address of bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to UPNEDA at [*Insert Name of the Place from the address of UPNEDA*] forthwith on demand in writing from UPNEDA or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees ----- only, on behalf of M/s. _____ [*Insert name of the Bidder*].

This guarantee shall be valid and binding on this Bank up to 04 months from the date of issue and including _____ [*insert date of validity in accordance with the relevant Clause of this tender document*] and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only). Our Guarantee shall remain in force until _____ [*insert date of validity in accordance with the relevant Clause of this tender document*]. UPNEDA shall be entitled to invoke this Guarantee till _____ [*Insert date which is 30 days after the date in the preceding sentence*].

The Guarantor Bank hereby agrees and acknowledges that the UPNEDA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by UPNEDA, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to UPNEDA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ----- [*Insert name of the Bidder*] and/or any other person. The Guarantor Bank shall not require UPNEDA to justify the invocation of this BANK

GUARANTEE, nor shall the Guarantor Bank have any recourse against UPNEDA in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Lucknow shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly UPNEDA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by UPNEDA or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in force until _____ [*Date to be inserted on the basis of relevant Clause of this tender document*] with an additional claim period of thirty (30) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if UPNEDA serves upon us a written claim or demand.

Signature _____

Name _____

For
_____ [Insert Name of the Bank] _____

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

BANK DETAILS
CENTRAL BANK OF INDIA
NCED AGENCY LUCKNOW
PREMISES OF NEDA VIBHUTI KHAND
GOMTI NAGAR, LUCKNOW
ACCOUNT NO.2185286335
IFSC-CBIN0283946
GSTIN 09AAACC2498P3ZZ

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

In consideration of the ----- [Insert name of the Bidder] (hereinafter referred to as selected Solar Power Developer') submitting the response to tender document issued by Solar Energy Corporation of India Limited (hereinafter referred to as UPNEDA) and UPNEDA considering such response to the tender document of SPV Pumps.

..... (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and selecting the SPV Pump as per terms of tender documents and the same having been accepted by the selected bidders M/s ----- As per the terms of the tender document, the _____ [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to UPNEDA at forthwith on demand in writing from UPNEDA or any Officer authorised by it in this behalf, any amount upto and not exceeding Rupees----- [Total Value] only, on behalf of M/s _____ [Insert name of the selected bidder]

This guarantee shall be valid and binding on this Bank up to and including..... and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to Rs. _____

Our Guarantee shall remain in force until..... UPNEDA shall be entitled to invoke this Guarantee till

The Guarantor Bank hereby agrees and acknowledges that UPNEDA shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by UPNEDA, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to UPNEDA.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by -----[Insert name of the selected bidder]. The Guarantor Bank shall not require UPNEDA to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against UPNEDA in respect of any payment made hereunder

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at Lucknow shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly UPNEDA shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected bidder to make any claim against or any demand on the Successful bidder or to give any notice to the selected bidders or to enforce any security held by UPNEDA or to exercise, levy or enforce any distress, diligence or other process against the selected bidders .

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ (Rs. _____ only) and it shall remain in force until We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if UPNEDA serves upon us a written claim or demand.

Signature _____

Name _____

Power of Attorney No. _____

For

_____ [Insert Name of the Bank] _____

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

Witness:

1.

Signature

Name and Address

2.

Signature

Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.

