

Tender Document

for

Supply, Installation & Commissioning of 1490 No's of Solar Lanterns, 235 No's of 12 Watt LED Based Solar Street lights, 6 No's of 5 HP Solar Water Pumping Systems, 2No's of 1HP Solar Water Pumping System, 1No of 2000 LPH Solar RO System, 3No's of 1000 LPH Solar RO System, 7 No's of 200 LPH Solar RO Systems and 4 No's of 5KW Solar Roof Top System at 9 villages of Durgi & Veldurthy Mandals in Guntur District.

NAME OF THE SUPPLIER / MANUFACTURER: -----

NREDCAP Registration No: _____ / 2018-19

Tender Notice No:

NREDCAP/SE/PFC-CSR/GNTR/2017-18

Dated: 26.11.2018

**NEW AND RENEWABLE ENERGY DEVELOPMENT CORPORATION OF A. P.
Ltd.**

(NREDCAP)

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GUNTUR DISTRICT- 522501

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TENDER NOTICE

S.No	Particulars	Details
1	Tender Notice No	NREDCAP/SE/PFC-CSR/GNTR/2017-18; Dated: 26.11.2018
2	Scope of the work	Supply, Installation & Commissioning of 1490 No's of Solar Lanterns, 235 No's of 12 Watt LED Based Solar Street lights, 6No's of 5 HP Solar Water Pumping Systems, 2No's of 1HP Solar Water Pumping System, 1No of 2000 LPH Solar RO System, 3No's of 1000 LPH Solar RO System, 7 No's of 200 LPH Solar RO Systems and 4 No's of 5KW Solar Roof Top System at 9 villages of Durgi & Veldurthy Mandals in Guntur District.
3	Eligibility for participation	Registered / Renewed Suppliers & Manufacturers with NREDCAP for the year 2018-19 as “SPV Solar System Integrators”
4	Processing fee of Tender Document	Rs. 25,000 + 4,500 (GST @ 18%) = Rs. 29,500/-
6	Amount of EMD	Rs. 2,50,000/- (Rupees Two lakh Fifty Thousand only) by way of Demand Draft drawn in favour of NREDCAP, payable at Tadepalli, Guntur District.
7	Last Date & Time for Submission of sealed Tenders	<u>10.12.2018</u> by 13:00 Hrs
8	Date & Time for Opening of Technical Bids	<u>10.12.2018</u> by 15:00 Hrs

- NOTE:** 1. The Tender Document can be downloaded from <http://www.nredcap.in>, through open tender and the processing fee of tender document shall be enclosed by way of demand draft for Rs:29,500/- drawn in favour of NREDCAP Ltd., payable at Tadepalli, Guntur District.
2. The Financial Bids shall be kept in a separate sealed cover and the Financial Bids of Technically qualified Bidders will only be opened.
3. The Valid NSIC certificate holders are exempted from payment of EMD amount only, which shall be enclosed to the tender document.

Sd/- on 23.11.2018
VC & Managing Director
NREDCAP, Tadepalli

Pre-Requisites for submission of Tender

Tenders are invited Supply, Installation & Commissioning of 1490 No's of Solar Lanterns, 235 No's of 12 Watt LED Based Solar Street lights, 6No's of 5 HP Solar Water Pumping Systems, 2No's of 1HP Solar Water Pumping System, 1No of 2000 LPH Solar RO Plant, 3No's of 1000 LPH Solar RO Plants, 7 No's of 200 LPH Solar RO Plants and 4 No's of 5KW Grid connected Solar Roof Top System at 9 villages of Durgi & Veldurthy Mandals in Guntur District from the **Registered / Renewed Suppliers & Manufacturers as "SPV Solar System Integrators"** with NREDCAP for the year 2018-19.

The Tenderers shall fulfill the following eligible criteria and submit the necessary documentary proofs along with Tender document.

1. The Suppliers & Manufacturer's shall have valid Test Certificates for all Components of Solar Gadgets from MNRE or MNRE authorized Test Centres as per Specifications enclosed.
2. The Suppliers & Manufacturers shall have experience in supply, Installation & Commissioning of cumulative of 1 MW Capacity under solar Off-grid Programmes in various capacities along with minimum 1000 LPH Capacity RO plant. The experience shall be either with NREDCAP or any other government departments during the last two years till today.
3. The Suppliers & Manufacturers annual turnover shall not be less than Rs: 20.00 Crores (Rupees Twenty Five Crores only) during last three years till today. Certificates issued by Chartered Accountant must be enclosed.
4. The Suppliers & Manufacturers have not been black listed at any time by NREDCAP as well as any of the Govt. Nodal Agencies in the country.
5. The Suppliers & Manufacturers who submits the tender without satisfying or deviating the above conditions will be rejected duly forfeiting the EMD amount.

Signature of the Tenderer with seal

GENERAL CODITIONS OF THE TENDER DOCUMENT:

1. The rates are inclusive of all applicable taxes. The rates quoted shall also be inclusive of transportation charges. The Financial bid is to be submitted in the enclosed formats at **Annexure – A2,B2,C2,D2,E2,F2,G2,H2.**
2. The Work Orders will be issued to the bidder who quotes lowest price for the entire project consisting of 8 models of Solar Gadgets of different types in 9 villages as per Annexure-1 in Five (5) different spells covering 2 villages in 4 spells and one village in 5th spell.
3. The filled in Tender document duly signed on each page has to be submitted along with **EMD amount of Rs. 2,50,000/-** (Rupees Two Lakhs Fifty Thousand only) by way of Demand Draft drawn in favour of “NREDCAP” Payable at Tadepalli. In case of unsuccessful bidder, the EMD amount will be refunded immediately after finalization of the Tender. The successful bidder shall provide the **Security Deposit of Rs.5.00 Lakhs** (Rupees Five Lakhs only) either by DD in favour of NREDCAP or Bank Guarantee and will be released on successful completion of the supply, Installation & Commissioning of Solar Gadgets.
4. The Technical and Financial bids are to be submitted in separate sealed covers duly super scribing. These two covers shall be submitted in a separate sealed cover super scribing **“Tender for Supply of Installation & Commissioning of 1490 No’s of Solar Lanterns, 235 No’s of 12 Watt LED Based Solar Street lights, 6No’s of 5 HP Solar Water Pumping Systems, 2No’s of 1HP Solar Water Pumping System,1No of 2000 LPH Solar RO Plant, 3No’s of 1000 LPH Solar RO Plants, 7 No’s of 200 LPH Solar RO Plants and 4 No’s of 5KW Grid connected Solar Roof Top System at 9 villages of Durgi & Veldurthy Mandals in Guntur District.**
5. Good quality components shall be supplied. In case, if it is found that materials are not as per Specifications, such components are to be replaced at free of cost.
6. The complete Solar Gadgets including all the components should be under guarantee / warranty for a period of **Five years** from the date of supply. The successful bidder should establish service centre in Guntur District.
7. The bills are to be raised in favour of NREDCAP by suppliers / manufacturers with **GS TIN number as per GST Act in force w.e.f. 01.07.2017** and submit in triplicate after duly handing over the Solar Gadgets to the respective villages in Durgi & Veldurthy Mandals in Guntur District.

Signature of the Tenderer with seal

8. 90% Cost of the Solar Gadgets and RO Plants will be released on receipt of the certified bills from the District Manager NREDCAP, Guntur along with the handing over certificate issued by concerned authorities and the balance 10% Performance guarantee amount will be released after completion of guarantee / warranty period of 5 (five) years from the date of supply on receipt of funds from M/s. Power Finance Corporation , New Delhi.
9. The payments to the suppliers shall be made only after deduction of TDS under income Tax act against the invoices generated as per GST Act.
10. NREDCAP reserves the right to cancel the order partially or fully in case the material supplied are substandard / delay in progress of the works without any notice and forfeit the Security Deposit amount paid.
11. For the delayed supplies beyond the stipulated period, penalty @1% on the cost of the systems per week will be levied subject to the maximum of 5%. For valid reasons, if the supplier is not able to supply the systems within the time prescribed, the VC & Managing Director on receipt of representation from the supplier prior to due date, may grant extension of time. If the work is not completed within one month beyond scheduled date, the entire work will be cancelled and the Security Deposit paid will be forfeited.
12. The VC & Managing Director may relax any of the conditions for valid reasons and the decision of VC & Managing Director is final and binding.
13. In case of any dispute, the decision of VC & Managing Director, NREDCAP Ltd., Tadepalli shall be final and binding. All the legal disputes relating to the contract shall be subject to the jurisdiction of the judicial courts at Hyderabad. The NREDCAP reserves the right to accept or reject any or all offers fully or partly without assigning any reasons.

Signature of the Tenderer with seal

PROFILE OF SUPPLIERS / MANUFACTURERS

S.No	Particulars	Details		
1	Name of the Tenderer			
2	Postal Address			
3	Email address for communication			
4	Telephone, Fax No:			
5	Name, designation & Contact number of the representative of the Tenderer.			
6	Nature of the firm (Individual Partnership/Pvt. Ltd/ Public Ltd., Co. /Public Sector etc.,)			
7	Amount paid towards Tender processing fee with details			
8	Amount paid towards Earnest money deposited with details			
9	Annual Turnover for last Two financial years 2015-16, 2016-17& 2017-18 (Attach Certificate from registered Chartered Accountant)	2015-16 (Rs)	2016-17 (Rs)	2017-18 (Rs)
10	PAN Number, GS TIN Number along with Registration details (evidences are to be attached)			
11	Details of Test Certificate(s) issued by MNRE/MNRE authorized test centers. a. Name of the Test Center b. Valid Test Certificates for each Solar gadget.			

Signature of the Tenderer with seal

A). Technical Specification of 3 Watts W-LED Solar Lanterns

Beneficiary Organization	Supply of 1490 Nos of 3 Watt W-LED Solar Lanterns to the households of Durgi & Veldurthy Mandals in Guntur District as per schedule-I which is enclosed to the Tender Document.
Hours of Operation	Minimum of 3 days or 12 operating hours per permissible discharge
SPV Modules	
SPV modules Capacity	5.00Wp under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Battery	
Battery Type	Rechargeable SMF Lead Acid Battery with C/20 rate of Discharge
Battery voltage& Capacity	6V, 4.5Ah Lead Acid
Light Source	
Capacity	3 Watt W-LED luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.
Out put	The lamp should have two levels of light (Operation at 100% power and 60% power) to take care-of the different lighting needs, as per the user requirements.
Other Accessories	
AC Charger	Suitable AC charger
Cables	20 feet length

B) COMPONENT WISE MNRE TECHNICAL DETAILS

PV MODULE:

- (i) Indigenously manufactured PV modules should be used in the Solar Lanterns.
- (ii) The PV module should have crystalline silicon solar cells, and should have humidity,freeze, thermal cycling and damp heat tests certificate conforming to IEC 61215 EditionII / BIS14286 from an NABL or IECQ accredited Laboratory.

Signature of the Tenderer with seal

- (iii) The PV module must have a minimum of 5.0 Wp at an appropriate voltage for charging of battery used, under the standard test conditions (STC) of measurement.
- (iv) The module efficiency should not be less than 10%
- (v) The terminal box on the module should have a provision of opening it for replacing the cable, if required.
- (vi) There should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun.
- (vii) A foil/ strip containing the following details should be fixed inside on the module so as to be clearly visible from the front side:-
 - a) Name of the Manufacturer and/ or distinctive Logo
 - b) Model and/ or Type No.
 - c) Serial No.
 - d) Year of manufacture
- (viii) A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

* The load conditions of the PV module are not applicable for the system having MPPT

BATTERY:

- i. Rechargeable SMF Lead Acid Battery C/20 rate of Discharge
- ii. Capacity: 6V, 4.5Ah Lead Acid battery.
- iii. Number of charge-discharge cycles: >2000
- iv. Permissible Depth of Discharge (D o D): Up to 85%
- v. Battery should conform to the latest BIS/ International standards.

LIGHT SOURCE:

- 1. The light source should be of 3 Watts capacity White Light Emitting Diode (W-LED) type.
- 2. The colour temperature of W-LED(s) used in the system should be in the range of 5500°K –6500°K.
- 3. W-LED(s) should not emit ultraviolet light.
- 4. The light output from the W - LED should be constant throughout the duty cycle.
- 5. The housing should be suitable for indoor as well as outdoor use.

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ELECTRONICS:

- i. Charging should be with 'MPPT' type micro controller based charger.
- ii. Efficiency of the electronic system should be at least 85%.
- iii. Electronics should have temperature compensation for proper charging of the battery throughout the year.
- iv. The idle current should be less than 1 mA
- v. The PCB containing the electronics should be capable of solder free installation and replacement.
- vi. Necessary Lengths of wires/ cables, switches suitable for DC use and other protections should be provided.

ELECTRONIC PROTECTIONS:

- I. Adequate protection is to be incorporated for "No Load" condition, e.g. when the lamp is removed and the Solar Lanterns is switched ON.
- II. The system should have protection against battery overcharge and deep discharge conditions.
- III. The load reconnect should be provided at around 80% of the battery capacity status.
- IV. Adequate protection should be provided against battery reverse polarity.
- V. A fuse should be provided to protect against short circuit conditions.
- VI. Protection for reverse flow of current through the PV module should be provided.
- VII. During the charging, lamp cannot be switched "ON".

INDICATORS:

- i. The system should have two indicators, green and red.
- ii. The green indicator should indicate the charging under progress and should glow only when the charging is taking place. It should stop glowing when the battery is fully charged.
- iii. Red indicator should indicate the battery "Load Cut Off" condition.

QUALITY AND WARRANTY:

- I. The complete Solar Lantern with W-LED will be warranted for five years.
- II. The battery must be warranted for a minimum period of 5 years.
- III. The Warrantee/ Guarantee Card to be supplied with the Solar Lantern must contain the details of the system supplied.

Signature of the Tenderer with seal

OPERATION AND MAINTENANCE MANUAL:

An Operation, Instruction and Maintenance Manual, in English and the local language, should be provided with the Solar Lantern. The following minimum details must be provided in the Manual:

- Basic principles of Photovoltaic's.
- A small write-up (with a block diagram) on Solar Lanterns - its components, PV module, battery, electronics and luminaire and expected performance.
- Significance of indicators.
- Type, Model number, Voltage, capacity of the battery, used in the system.
- The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system.
- Clear instructions on mounting, operation, regular maintenance and trouble shooting of the Solar Lanterns.
- Instructions on replacement of battery.
- DO's and DONT's.
- Name and Address of the contact person for repair and maintenance during the warranty.

Signature of the Tenderer with seal

Technical bid for 3 Watts W-LED Solar Lanterns

Beneficiary Organization	Supply of 1490 Nos of 3 Watt W-LED Solar Lanterns to the households of Durgi &Veldurthy Mandals in Guntur District as per schedule-I which is enclosed to the Tender Document.
Hours of Operation	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Battery	
Battery Type	
Battery voltage	
Battery capacity	
Light Source	
Capacity	
Out put	
Other Accessories	
AC Charger	
Cables	

Signature of the Tenderer with seal

Financial bid for 3 Watts W-LED Solar Lanterns

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply of 3watt W-LED based Solar Lanterns comprising of 5.00 Wp SPV module, 6V, 4.5Ah SMF Lead Acid Battery, Electronics along with the other Technical details as per MNRE Specifications with 20 feet cable including suitable AC charger with Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

NOTE: The Financial Bids shall be kept in a separate sealed cover and the Financial Bids of Technically qualified Bidders will only be opened.

Signature of the Tenderer with seal

A). Technical Specification of 12WattsW-LED Solar Street Lighting system

Beneficiary Organization	Supply, installation & Commissioning of 235 Nos of 12 Watt W-LED Solar Street Lighting System in 9 villages of Durgi &Veldurthy Mandals of Guntur District as per schedule-I which is enclosed to the Tender Document.
Hours of Operation	Minimum of 3 days or 42 operating hours per permissible discharge
SPV Modules	
SPV modules Capacity	75.00Wp under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Battery	
Battery Type	Lead Acid Tubular Flooded or Tubular Gel/VRLA
Battery voltage& Capacity	12V, 75Ah Lead Acid Battery
Light Source	
Capacity	12 Watt W-LED luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.
Out put	Minimum 16 Lux when measured at the periphery of 4 Meter diameter from a height of 4 Meter. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher Light output will be preferred.
Other Accessories	
Mounting of Light	Pole Mounted, Minimum 4 Meters above the ground level
Electronics Efficiency	Minimum 85% total
Duty Cycle	Dusk to dawn at full Brightness

Signature of the Tenderer with seal

Technical bid for 12Watts W-LED Solar Street Lighting System

Beneficiary Organization	Supply, installation & Commissioning of 235 Nos of 12 Watt W-LED Solar Street Lighting System in 9 villages of Durgi & Veldurthy Mandals of Guntur District as per schedule-I which is enclosed to the Tender Document.
Hours of Operation	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Battery	
Battery Type	
Battery voltage & Capacity	
Light Source	
Capacity	
Out put	
Other Accessories	
Mounting of Light	
Electronics Efficiency	
Duty Cycle	

Signature of the Tenderer with seal

Financial bid for 12Watts W-LED Solar Street Lighting System

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 12 watts W-LED based Solar Street lighting Systems comprising of 75.00 Wp SPV module, 75Ah Lead Acid battery, Electronics along with the other Technical details as per MNRE Specifications and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A). Technical Specification of 5HP Solar Water Pumping Systems

Beneficiary Organization	Supply, installation & Commissioning of 6 Nos of 5 HP Solar Water Pumping Systems in 5 villages of Durgi &Veldurthy Mandals of Guntur District as per schedule-I which is enclosed to the Tender Document.
Water Output	91,200 Litres Per Day
SPV Modules	
SPV modules Capacity	4800Wp(16No's of 300Wp)under STC
Type of Modules	Crystalline silicon – IEC/MNRE approved
Motor –Pump Set for AC model	
Motor Type	Submersible AC,
Motor Capacity	5Hp
Solar Pump Controller(VFD)	
Capacity	5HP
Out put	3 Phase, 415 V with remote monitoring System
Mounting Structure	1.Hot dip galvanized iron with minimum 80 micron thickness& should withstand high wind velocities up to 150 km per hour. 2. For manual tracking, arrangement for seasonal tilt angle adjustment and three times manual tracking in a day should be provided
Other Accessories	
HDPE pipes of	10Kg/Sq.cm, 63mmOD-PE 100 Grade of required length
Cables	3 core 2.5sq mm flat cable of required length

Signature of the Tenderer with seal

Technical Bid for 5 HP Solar Water Pumping Systems

Beneficiary Organization	Supply, installation & Commissioning of 6 Nos of 5 HP Solar Water Pumping Systems in 5 villages of Durgi &Veldurthy Mandals of Guntur District as per schedule-I which is enclosed to the Tender Document.
Water Output	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Motor –Pump Set for AC model	
Motor Type	
Motor Capacity	
Solar Pump Controller(VFD)	
Capacity	
Out put	
Mounting Structure	
Other Accessories	
HDPE pipes of	
Cables	

Signature of the Tenderer with seal

Financial bid for 5HP Solar Water Pumping Systems

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 5HP Solar Water Pumping System comprising of 4800 (16 No's of 300Wp) SPV module, 5 HP Submersible Pump & Motor, Solar Pump Controller (VFD), Mounting Structure & Electronics along with the other Technical details as per MNRE Specifications and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A). Technical Specification of 1HP Solar Water Pumping Systems

Beneficiary Organization	Supply, installation & Commissioning of 2 Nos of 1 HP Solar Water Pumping Systems along with 500 Litres Capacity Sintex tank with suitable MS Structure in 2 villages of Durgi & Veldurthy Mandals in Guntur District as per schedule-I which is enclosed to the Tender Document.
Water Output	38,400 Litres Per Day
SPV Modules	
SPV modules Capacity	1000Wp (4No's of 250Wp) under STC
Type of Modules	Crystalline silicon – IEC/MNRE approved
Motor – Pump Set for AC model	
Motor Type	Submersible AC,
Motor Capacity	1Hp
Solar Pump Controller(VFD)	
Capacity	1HP
Out put	Single Phase, 230 V with remote monitoring System
Mounting Structure	1. Hot dip galvanized iron with minimum 80 micron thickness & should withstand high wind velocities up to 150 km per hour. 2. For manual tracking, arrangement for seasonal tilt angle adjustment and three times manual tracking in a day should be provided
Other Accessories	
HDPE pipes of	6Kg/Sq.cm, 32mmOD-PE 100 Grade of required length
Cables	3 core 2.5sq mm flat cable with required length

Signature of the Tenderer with seal

Technical Bid of 1HP Solar Water Pumping Systems

Beneficiary Organization	Supply, installation & Commissioning of 2 Nos of 1 HP Solar Water Pumping Systems along with 500 Litres Capacity Sintex tank with suitable MS Structure in 2 villages of Durgi &Veldurthy Mandals in Guntur District as per schedule-I which is enclosed to the Tender Document.
Water Output	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Motor –Pump Set for AC model	
Motor Type	
Motor Capacity	
Solar Pump Controller(VFD)	
Capacity	
Out put	
Mounting Structure	
Other Accessories	
HDPE pipes of	
Cables	

Signature of the Tenderer with seal

Financial bid for 1 HP Solar Water Pumping Systems

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 1HP Solar Water Pumping System comprising of 1000 (4 No's of 250Wp) SPV module, 1 HP Submersible Pump & Motor, Solar Pump Controller (VFD), Mounting Structure & Electronics along with 500 Liters Capacity Sintex tank with suitable MS Structure with the other Technical details as per MNRE Specifications and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A). Technical Specification of 5 KW Solar Roof Top System

Beneficiary Organization	Supply, installation & Commissioning of 4 No's of 5KW Grid connected Solar Roof Top System including net meter at 4 schools in villages of Veldurthy Mandal of Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of units Generation per day	Minimum 20 Units
SPV Modules	
SPV modules Capacity	5000Wp(20 No's of 250Wp) under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Inverter	
Type	On-Grid
Capacity	5KVA
Mounting Structure	Hot dip galvanized iron with minimum 80 micron thickness& should withstand high wind velocities up to 150 km per hour.
Other Accessories	
Cables	4 Sq mm single core PVC Cable
Earthing Kit	50mm G.I pipe with 2.5 mm Thickness
Lightning Arrestor	As per IEC 62305 standard.

Signature of the Tenderer with seal

Technical Bid of 5 KW Solar Roof Top System

Beneficiary Organization	Supply, installation & Commissioning of 4 No's of 5KW Grid connected Solar Roof Top System including net meter at 4 schools in villages of Veldurthy Mandal of Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of units Generation per day	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Inverter	
Type	
Capacity	
Mounting Structure	
Other Accessories	
Cables	
Earthing Kit	
Lightning Arrestor	

Signature of the Tenderer with seal

Financial bid for 5 KW Solar Roof Top System

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 4 No's of 5KW Grid connected Solar Roof Top System including net meter of 5000Wp(20 No's of 250Wp) SPV modules, 5KVA inverter, Cables, Mounting Structure, Earthing Kit, Lightning Arrestor & Electronics along with the other Technical details as per MNRE Specifications and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A).Technical Specification of 2000LPH Solar RO Plant

Beneficiary Organization	Supply, installation & Commissioning of 1 No of 2000LPH Solar RO Plant at Kothapullareddygudem village of Veldurthy Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	Minimum 2000 Litres
SPV Modules	
SPV modules Capacity	5000Wp (20 No's of 250Wp) under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Inverter	
Type	On-Grid
Capacity	5 KVA
Mounting Structure	Hot dip galvanized iron with minimum 80 micron thickness& should withstand high wind velocities up to 150 km per hour.
Other Accessories	
Cables	4 Sq mm single core PVC Cable
Earthing Kit	50mm G.I pipe with 2.5 mm Thickness
Lightning Arrestor	As per IEC 62305 standard.

Signature of the Tenderer with seal

Technical Specifications of 2000LPH RO Plant

LIST OF EQUIPMENTS AND THEIR SPECIFICATIONS:

FEED PUMP

Quantity	:	1 No
Capacity	:	4.0 m ³ /hr @ 25 m Head
Material Of Construction	:	CI
Type Of Pump	:	Centrifugal Monoblock Pump
Power	:	0.875 KW,1.5 HP.1 Phase

MULTIGRADE FILTER

Quantity	:	1 No
Flow	:	4.0 m ³ /hr
Material Of Construction	:	FRP
Size-Diameter	:	16 INCH
Height On Straight	:	65 INCH
Frontal Pipelines	:	1 Lot –CPVC
Moc of Valve	:	Multi Port Valve
Size of Valve	:	40 NB
Pressure Gauge	:	1 Nos- 0-7 Kg/cm ²
Type of Media	:	Pebbles,Gravels,Silex,CorseSand,Fine sand

ACTIVATED CARBON FILTER:

Quantity	:	1 No
Flow	:	4.0 m ³ /hr
Material Of Construction	:	FRP
Size-Diameter	:	16 INCH
Height On Straight	:	65 INCH
Frontal Pipelines	:	1 Lot –CPVC
Moc of Valve	:	Multi Port Valve PP/HDPE
Size of Valve	:	40 NB
Pressure Gauge	:	1 Nos- 0-5 Kg/cm ²
Type of Media	:	Pebbles,Gravels& Activated Carbon IV Valve 900

Signature of the Tenderer with seal

ANTISCALANT DOSING:

Quantity	:	1 No
Capacity	:	6 lph @ 4 Kg/cm ²
Material Of Construction	:	PP
Type Of Pump	:	Electronic Metering Pump
Power	:	40 Watts,1 Phase,AC 50 Hz
Tank Capacity	:	1 No-50 Ltrs-HDPE

MICRON FILTERS:

Quantity	:	1 No
Capacity	:	4.0 m ³ /hr
Material Of Construction	:	PP
Micron Rating	:	5 micron
Size	:	2Nos-20 " Jumbo

RO HIGH PRESSURE PUMPS:

Quantity	:	1 No
Capacity	:	4.0 m ³ /hr @ 15 Kg/cm ²
Material Of Construction	:	SS 304
Type Of Pump	:	Vertical Multi Stage Centrifugal Monoblock Pump
Power Approximate	:	1.5 KW,2.0 HP.3 Phase /1

RO MEMBRANES:

Quantity	:	2 Nos
Size	:	8080
Material Of Construction	:	TFC

MEMBRANE HOUSING:

Quantity	:	2 Nos
Size	:	8080- 1 Element Long
Material Of Construction	:	FRP
Pressure Rating	:	300 Psig-End Port

Electrical Control Panel- Microsoft Astral:

Quantity	:	1 No
Material Of Construction	:	MS Powder coated
Starters offered Coil	:	2 Nos

Signature of the Tenderer with seal

Cables:

Quantity	:	1 lot
Material Of Construction- Power	:	Under water Flexible
Material Of Construction- Instruments	:	Flexible

Instruments:

Pressure Gauge	:	4 Nos- 0-7 Kg/cm2
Pressure Switch	:	2 Nos
Float Switch	:	2 Nos

Pipelines & RO Skid:

Pipelines	:	1 Lot- Low Pressure Pipeline-CPVC
	:	1 Lot- High Pressure Pipeline-SS
RO Skid	:	1 No- SS 304

UV Systems:

Quantity	:	1 No
Capacity	:	2.0 m3/hr
Material Of Construction	:	SS 304
UV Rating	:	200 Watts

STORAGE TANK:

Quantity	:	2 Nos
Capacity	:	5000 Ltrs – 1 No, Raw Water
Capacity	:	2000 Ltrs – 1 No, Treated
Type	:	Cylindrical

Signature of the Tenderer with seal

Technical Bid for 2000LPH Solar RO Plant

Beneficiary Organization	Supply, installation & Commissioning of 1 No of 2000LPH Solar RO Plant at Kothapullareddygudem village of Veldurthy Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Inverter	
Type	
Capacity	
Mounting Structure	
Other Accessories	
Cables	
Earthing Kit	
Lightning Arrestor	

Signature of the Tenderer with seal

Financial bid for 2000 LPH Solar RO Plant

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 1 No of 2000LPH Solar RO Plant comprising of 5000 Wp (20 No's of 250Wp) SPV module, 5KVA inverter, Cables, Mounting Structure, Earthing Kit, Lightning Arrestor, RO Equipment &Electronics along with the other Technical Items and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A).Technical Specification of 1000LPH Solar RO Plant

Beneficiary Organization	Supply, installation & Commissioning of 3 No's of 1000LPH Solar RO plant at Morispenta village of Veldurthy Mandal & Minchalapadu and Kakirala villages of Durgi Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	Minimum 1000 Litres
SPV Modules	
SPV modules Capacity	2000Wp (8 No's of 250Wp) under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Inverter	
Type	On-Grid
Capacity	2 KVA
Mounting Structure	Hot dip galvanized iron with minimum 80 micron thickness& should withstand high wind velocities up to 150 km per hour.
Other Accessories	
Cables	4 Sq mm single core PVC Cable
Earthing Kit	50mm G.I pipe with 2.5 mm Thickness
Lightning Arrestor	As per IEC 62305 standard.

Signature of the Tenderer with seal

Technical Specifications of 1000LPH Solar RO Plant

LIST OF EQUIPMENTS AND THEIR SPECIFICATION:

FEED PUMP

Quantity	:	1 No
Capacity	:	3.0 m3/hr @ 25 m Head
Material Of Construction	:	CI
Type Of Pump	:	Centrifugal Monoblock Pump
Power	:	0.875 KW,1.5 HP.1 Phase

MULTIGRADE FILTER

Quantity	:	1 No
Flow	:	2.0 m3/hr
Material Of Construction	:	FRP
Size-Diameter	:	13 INCH
Height On Straight	:	54 INCH
Frontal Pipelines	:	1 Lot –CPVC
Moc of Valve	:	Multi Port Valve
Size of Valve	:	25 NB
Pressure Gauge	:	1 Nos- 0-7 Kg/cm2
Type of Media	:	Pebbles,Gravels,Silex,CorseSand,Fine sand

ACTIVATED CARBON FILTER:

Quantity	:	1 No
Flow	:	2.0 m3/hr
Material Of Construction	:	SS304
Size-Diameter	:	13 INCH
Height On Straight	:	54 INCH
Frontal Pipelines	:	1 Lot –CPVC
Moc of Valve	:	Multi Port Valve PP/HDPE
Size of Valve	:	25 NB
Pressure Gauge	:	1 Nos- 0-5 Kg/cm2
Type of Media	:	Pebbles,Gravels& Activated Carbon IV Valve 900

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ANTISCALANT DOSING:

Quantity	:	1 No
Capacity	:	6 lph @ 4 Kg/cm ²
Material Of Construction	:	PP
Type Of Pump	:	Electronic Metering Pump
Power	:	40 Watts,1 Phase,AC 50 Hz
Tank Capacity	:	1 No-50 Ltrs-HDPE

MICRON FILTERS:

Quantity	:	1 No
Capacity	:	3.0 m ³ /hr
Material Of Construction	:	PP
Micron Rating	:	5 micron
Size	:	1Nos-20 " Jumbo

RO HIGH PRESSURE PUMPS:

Quantity	:	1 No
Capacity	:	2.0 m ³ /hr @ 15 Kg/cm ²
Material Of Construction	:	SS 304
Type Of Pump	:	Vertical Multi Stage Centrifugal Monoblock Pump
Power Approximate	:	1.5 KW,2.0 HP.3 Phase /1

RO MEMBRANES:

Quantity	:	1 No
Size	:	8040
Material Of Construction	:	TFC

MEMBRANE HOUSING:

Quantity	:	1 No
Size	:	8040- 1 Element Long
Material Of Construction	:	FRP
Pressure Rating	:	300 Psig-End Port

Electrical Control Panel- Microsoft Astral:

Quantity	:	1 No
Material Of Construction	:	MS Powder coated
Starters offered Coil	:	2 Nos

Signature of the Tenderer with seal

Cables:

Quantity	:	1 lot
Material Of Construction- Power	:	Under water Flexible
Material Of Construction- Instruments	:	Flexible

Instruments:

Pressure Gauge	:	4 Nos- 0-7 Kg/cm2
Pressure Switch	:	2 Nos
Float Switch	:	2 Nos

Pipelines & RO Skid:

Pipelines	:	1 Lot- Low Pressure Pipeline-CPVC
	:	1 Lot- High Pressure Pipeline-SS
RO Skid	:	1 No- SS 304

UV Systems:

Quantity	:	1 No
Capacity	:	1.0 m3/hr
Material Of Construction	:	SS 304
UV Rating	:	200 Watts

STORAGE TANK:

Quantity	:	1 No
Capacity	:	2000 Ltrs – 1 No, Raw Water
Capacity	:	1000 Ltrs – 1 No, Treated
Type	:	Cylindrical

Signature of the Tenderer with seal

Technical Bid for 1000LPH Solar RO Plants

Beneficiary Organization	Supply, installation & Commissioning of 3 No's of 1000LPH Solar RO plant at Morispenta village of Veldurthy Mandal & Minchalapadu and Kakirala villages of Durgi Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Inverter	
Type	
Capacity	
Mounting Structure	
Other Accessories	
Cables	
Earthing Kit	
Lightning Arrestor	

Signature of the Tenderer with seal

Financial bid for 1000 LPH Solar RO Plant

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 3 No's of 1000LPH Solar RO plant comprising of 2000 (8 No's of 250Wp) SPV module, 2KVA inverter, Cables, Mounting Structure, Earthing Kit, Lightning Arrestor, RO Equipment & Electronics along with the other Technical Items and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

Signature of the Tenderer with seal

A).Technical Specification of 200LPH Solar RO Plant

Beneficiary Organization	Supply, installation & Commissioning of 7 No's of 200LPH Solar RO plants at 5 schools and 2 villages in Veldurthy & Durgi Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	Minimum 200 Litres
SPV Modules	
SPV modules Capacity	1000Wp (4 No's of 250Wp) under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Inverter	
Type	On-Grid
Capacity	1.2 KVA
Mounting Structure	Hot dip galvanized iron with minimum 80 micron thickness& should withstand high wind velocities up to 150 km per hour.
Other Accessories	
Cables	4 Sq mm single core PVC Cable
Earthing Kit	50mm G.I pipe with 2.5 mm Thickness
Lightning Arrestor	As per IEC 62305 standard.

Signature of the Tenderer with seal

Technical Specifications of 200LPH Solar RO Plant

LIST OF EQUIPMENTS AND THEIR SPECIFICATION:

FEED PUMP

Quantity	:	1 No
Capacity	:	0.7 m ³ /hr @ 25 m Head
Material Of Construction	:	CI
Type Of Pump	:	Centrifugal Monoblock Pump
Power	:	0.75 KW,1.0 HP.1 Phase

SAND &ACTIVATED CARBON FILTER:

Quantity	:	1 No
Flow	:	1.0 m ³ /hr
Material Of Construction	:	FRP
Size-Diameter	:	12 INCH
Height On Straight	:	54 INCH
Frontal Pipelines	:	1 Lot –CPVC
Moc of Valve	:	Multi Port Valve PP/HDPE
Size of Valve	:	25 NB
Pressure Gauge	:	1 Nos- 0-5 Kg/cm ²
Type of Media	:	Pebbles,Gravels& Activated Carbon IV Valve 900

ANTISCALANT DOSING:

Quantity	:	1 No
Capacity	:	6 lph @ 4 Kg/cm ²
Material Of Construction	:	PP
Type Of Pump	:	Electronic Metering Pump
Power	:	40 Watts,1 Phase,AC 50 Hz
Tank Capacity	:	1 No-50 Ltrs-HDPE

MICRON FILTERS:

Quantity	:	1 No
Capacity	:	1.0 m ³ /hr
Material Of Construction	:	PP
Micron Rating	:	5 micron
Size	:	2Nos-20 " Jumbo

RO HIGH PRESSURE PUMPS:

Quantity	:	1 No
Capacity	:	1.0 m ³ /hr @ 15 Kg/cm ²
Material Of Construction	:	SS 304
Type Of Pump	:	Vertical Multi Stage Centrifugal Monoblock Pump
Power Approximate	:	0.75 KW,1.0 HP.3 Phase /1

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RO MEMBRANES:

Quantity	:	1 No
Size	:	4040
Material Of Construction	:	TFC

MEMBRANE HOUSING:

Quantity	:	1 No
Size	:	4040- 1 Element Long
Material Of Construction	:	FRP
Pressure Rating	:	300 Psig-End Port

Electrical Control Panel- Microsoft Astral:

Quantity	:	1 No
Material Of Construction	:	MS Powder coated
Starters offered Coil	:	2 Nos

Cables:

Quantity	:	1 lot
Material Of Construction- Power	:	Under water Flexible
Material Of Construction- Instruments	:	Flexible

Instruments:

Pressure Gauge	:	4 Nos- 0-7 Kg/cm ²
Pressure Switch	:	2 Nos
Float Switch	:	2 Nos

Pipelines & RO Skid:

Pipelines	:	1 Lot- Low Pressure Pipeline-CPVC
	:	1 Lot- High Pressure Pipeline-SS
RO Skid	:	1 No- SS 304

UV Systems:

Quantity	:	1 No
Capacity	:	1.0 m ³ /hr
Material Of Construction	:	SS 304
UV Rating	:	200 Watts

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Technical Bid for 200LPH Solar RO Plant

Beneficiary Organization	Supply, installation & Commissioning of 7 No's of 200LPH Solar RO plants at 5 schools and 2 villages in Veldurthy & Durgi Mandal in Guntur District as per schedule-I which is enclosed to the Tender Document.
Number of Litres Generation per Hour	
SPV Modules	
SPV modules Capacity	
Type of Modules	
Inverter	
Type	
Capacity	
Mounting Structure	
Other Accessories	
Cables	
Earthing Kit	
Lightning Arrestor	

Signature of the Tenderer with seal

Financial bid for 200 LPH Solar RO Plant

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply, installation & Commissioning of 7 No's of 200LPH Solar RO Plant comprising of 1000 (4 No's of 250Wp) SPV module, 1.2KVA inverter, Cables, Mounting Structure, Earthing Kit, Lightning Arrestor, RO Equipment & Electronics along with the other Technical Items and Transportation charges on FOR destination basis.	
2	Add GST on item - 1	
3	Total (Item - 1 + Item - 2)	

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Schedule-I

Interventions	VeldurthyMandal				DurgiMandal					Total
	Kooha Pulla Reddy Gudem	Morispenta	Jandapenta	Bangarupenta	ChandraKunta Tanda	Minchalapadu	Kakirala	Vutukuru PHC	Durgi PHC	
Systems to be provided in Villages										
Supply & Installation of 3W and 4.5Ah LED Solar Lanterns for each House Holds	720	300	40	30	50	200	150	0	0	1490
Supply and Installation of 12W LED Solar Street Lights	55	35	25	25	25	25	25	10	10	235
Supply & Installation of 5HP Solar Pumps	2	0	0	1	1	1	1	0	0	6
Supply & installation of 1HP Solar Pump consisting of 1000 W Module, 1 HP VFD and 1 HP Pump & Motor and 500 litres syntax tank with MS steel Structure	0	0	0	0	0	0	0	1	1	2
Supply & Installation of 2000 LPH Solar RO System	1	0	0	0	0	0	0	0	0	1
Supply & Installation of 1000 LPH Solar RO System	0	1	0	0	0	1	1	0	0	3
Supply & Installation of 200 LPH Solar RO System	0	0	0	0	0	0	0	1	1	2
Systems to be provided in Schools										
Supply & Installation of 200 LPH Solar RO System	1	0	1	1	1	0	1	0	0	5
5 KWp Hybrid Solar Roof top System	1	1	1	1	0	0	0	0	0	4

Signature of the Tenderer with seal

ABSTRACT OF FINANCIAL BIDS FOR THE WHOLE PROJECT

Sl. No	Name of the Solar Gadget	Tender Quantity (No's)	Basic Price (Rs)	GST applicable (Rs)	Total Unit Cost (Rs)	Total Value (Rs)
1	3 Watt LED Solar Lantern	1490				
2	12 Watt LED Solar Street Lights	235				
3	5HP Solar Pumping System	6				
4	1HP Solar Pumping System	2				
5	5 KW Grid connected Solar Roof Top System with net meter	4				
6	2000 LPH Solar RO Plant	1				
7	1000 LPH Solar RO Plant	3				
8	200 LPH Solar RO Plant	7				
9	Total Project Cost					

(Rupees _____ only)

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