Sealed Quotations

for

Supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District.

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

NREDCAP Registration No: _____ / 2019-20

Notice No:

NREDCAP/SE/SPVHL/KKD/17/2019-20
Dated: 18.12.2019

NEW AND RENEWABLE ENERGY DEVELOPMENT CORPORATION OF A.P. Ltd (NREDCAP)
Regd Office: 12-464/5/1, River Oaks Apartments,
CSR Kalyana Mandapam Road, Tadepalli,
GUNTUR DISTRICT- 522 501
TEL: 08645-797162, 797163
Website: www.nredcap.in

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NOTICE

S.No	Particulars	Details
1	Notice No	NREDCAP/SE/SPVHL/KKD/17/2019-20, dated: 18.12.2019
2	Scope of the work	Supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District on turnkey basis.
3	Eligibility for participation	Registered / Renewed Suppliers & Manufacturers with NREDCAP for the year 2019-20 as "SPV Solar System Integrators" up to 30.11.2019.
4	Processing fee	Rs. 3,000/- + Rs. 540/- (GST @ 18%) = Rs. 3,540/- by way of Demand Draft drawn in favour of NREDCAP, payable at Tadepalli which is non-refundable
5	Amount of EMD	Rs. 25,000.00 (Rupees Twenty five thousand only) by way of Demand Draft drawn in favour of NREDCAP, payable at Tadepalli.
6	Last Date & Time for Submission of Sealed Quotations	24.12.2019, 13:00 Hrs
8	Date & Time for Opening of Sealed Quotations	24.12.2019, 15:00 Hrs

NOTE:

1. The Sealed Quotations document can be downloaded from http://www.nredcap.in and the processing fee shall be enclosed by way of demand draft for Rs: 3,540/- in favour of NREDCAP payable at Tadepalli, which is non refundable.
2. The Financial sealed quotations of Technically qualified will only be opened.
3. The Valid NSIC certificate holders are exempted from payment of EMD amount. The copy of the valid NSIC certificate shall be enclosed to the document.

Sd/-
VC & Managing Director
NREDCAP, Tadepalli

TECHNICAL SPECIFICATIONS OF SOLAR HOME LIGHTING SYSTEMS

Supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District in the State of Andhra Pradesh.

Name of the Component	Specifications
SPV Module	12Watt peak under STC
Battery	12.8V, 6Ah Lithium-Ferro Phosphate (LiFePO4) with 4 Nos of 3.2V, 1500 mAh connected in parallel / series.
Light Source	2Nos X 2.5Watts (max.) White Light Emitting Diode (W-LED)
Light Output	Minimum 15 Lux when measured at the periphery of 2.5 meter diameter from a height of 2.5 meter. At any point within area of 2.5 mtr diameter periphery the light level should not be more than three times of the periphery value. The illumination should be uniform without Dark Bands or abrupt variations and soothing to the eyes. Higher output would be preferred.
Multiple Light Levels	To take care of different lighting needs as per user's requirements. The lamp should have multiple levels of light (at least two levels) to take care of different lighting need during the night.
Mounting of Light	Wall or ceiling
Cable	Required length of cable for Solar Module & Luminaire
Electronics	Minimum 85% efficiency
Average Duty Cycle	5 hours a day under average daily insolation of 5.5 KWh/Sq.m on a horizontal surface.
Facility for Mobile Charging	USB port for Mobile Charging. However in case of mobile charging, the duty cycle for light to be reduced / adjusted accordingly.
Autonomy	Minimum 6 operating hours per permissible discharge at full light level.
Warranty	5 years for entire system including battery & 25 years for Module.

Signature of the Supplier / Manufacturer with seal

COMPONENT WISE MNRE TECHNICAL DETAILS

PV MODULE:

i) Indigenously manufactured PV modules should be used.

ii) The PV Modules up to 12Wp Capacity should have crystalline silicon solar cells and should have humidity, freeze and damp heat tests certificate conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.

iii) The PV Modules more than 12Wp Capacity should be made up of crystalline silicon solar cells and must have a certificate conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.

iv) The power output of the module(s) under STC should be a minimum of 6Wp or 12Wp or 24Wp or 40Wp.

v) The Load Voltage* of 16.40V for 12V battery or appropriate voltage for charging of battery used under the standard test conditions (STC) of measurement.

vi) The module efficiency for PV Module upto 12Wp capacity should not be less than 10%. The Module efficiency for PV Modules 24 Wp / 40 Wp capacity should not be less than 12%.

vii) The terminal box on the module should have a provision for opening, for replacing the cable, if required.

viii) There should be a Name Plate fixed inside the module which will give:

a. Name of the Manufacturer or Distinctive Logo.
b. Model Number
c. Serial Number
d. Year of manufacture

ix) 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 voltage conditions of the PV Modules are not applicable for the system having MPPT.

BATTERY:

i) For Model-I, sealed maintenance free lead acid battery with a capacity of up to 7Ah, at voltage of up to 12V @ C/20 rate of discharge or NiMH or Lithium Ion Battery of requisite capacity.

ii) For Model-I-A, Lithium Ferro Phosphate of 3 X 3.2V, 1800 mAh (or requisite) capacity.

iii) For Models- II,III,IV&V battery should have a minimum rating of 12V, 12Ah or 12V, 20Ah at C/20 rate of discharge or 12V,40Ah at C/10 rate of discgharge depending on the Model.

iv) 90% of the rated capacity of the battery should be between fully charged & load cut off conditions in case of Model-I. for other models, 75% of the rated capacity of the battery should be between fully charged & load cut off conditions.

v) Battery should conform to the latest MNRE/ BIS/ International standards.

Signature of the Supplier / Manufacturer with seal

LIGHT SOURCE:

i) The light source will be of white LED type.
ii) The colour temperature of white LEDs used in the system should be in the range of 5500^{o} K – 6500^{o}K.
iii) LEDs should not emit ultraviolet light.
iv) The light output from the white LED light source should be constant through-out the operation of the lights.
v) The lamps should be housed in an assembly suitable for indoor use.

ELECTRONICS:

i) The total electronic efficiency should be at least 85%.
ii) Electronics should have temperature compensation for propoer charging og the battery throughout the year. the idle current should be less than 2 mA.
iii) The voltage drop from module terminals to the battery terminals should not exceeed 0.8 volts including the drop across the diode and the cable when measured at maximum charging unit.
iv) The PCB containing the electronics should be capable of solder free installation and replacement.
v) Necessary lengths of wires / cables, switches suitable for DC use and fuses should be provided.
vi) The system should be have a USB port for mobile charging.

ELECTRONIC PROTECTIONS

i) Adequate protection is to be incorporated under "No Load" condition, e.g. when the lamps are removed and the system is switched ON.
ii) The system should have protection against battery overcharge, deep discharge condition.
iii) Load reconnect should be provided at 80 % of the battery capacity status.
iv) Adequate protection should be provided against battery reverse polarity.
v) Fuses should be provided to protect against short circuit conditions.
vi) Protection for reverse flow of current through the PV module(s) should be provided.

MECHANICAL COMPONENTS

i) Corrosion resistant frame structure should be provided to hold the SPV module.
ii) The frame structure should have provision to adjust its angle of inclination to the horizontal, so that it can be installed at the specified tilt angle.
iii) Light source should be either for wall mounted or ceiling mounted or can be hung from the ceiling in a stable manner, as per site requirements.
iv) A vented plastic/ wooden/ metallic box with acid proof corrosion resistant paint for housing the storage battery indoors should be provided.

Signature of the Supplier / Manufacturer with seal

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 Solar home lighting system including Battery will be warranted for a period of five years from the date of supply.
ii) The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. PV modules used in Solar Home Lighting System must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years.
iii) The battery for Model-I should be warranted for a period of at least two years. The battery for Models - IA, II, III, IV and V should be warranted for a period of 5 years.
iv) The Warranty Card to be supplied with the system must contain the details of the system**.** The manufacturers can also provide additional information about the system and conditions of warranty as necessary.

OPERATION and MAINTENANCE MANUAL:

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

i) Basic principles of Photovoltaics.
ii) A small write-up (with a block diagram) on Solar Home Lighting System - its components, PV module, battery, electronics and luminaire and expected performance.
iii) Significance of indicators.
iv) Type, Model number, voltage & capacity of the battery, used in the system.
v) The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system must be indicated in the manual.
vi) Clear instructions about mounting of PV module(s).
vii) Clear instructions on regular maintenance and trouble shooting of the Solar Home Lighting System.
viii) DO's and DONT's.
ix) Name and address of the contact person for repair and maintenance.

Signature of the Supplier / Manufacturer with seal

Pre-Requisites for submission of Sealed Quotations Supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District

Sealed Quotations are invited for supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District from the **Registered / Renewed Suppliers & Manufacturers** with NREDCAP for the year 2019-20 as **"SPV Solar System Integrators" up to 30.11.2019**.

The Suppliers / Manufacturers shall fulfill the following eligible criteria and submit the necessary documentary proofs along with document.

1. The Suppliers / Manufacturer's shall have valid Test Certificates for SPV Module & Battery from MNRE or any other MNRE authorized Test Centers to install Solar Home Lighting Systems as per MNRE Specifications.
2. The Suppliers / Manufacturers cumulative turnover shall not be less than Rs: 40.00 Lakhs (Rupees Forty lakhs only) during last two years i.e., 2017-18 and 2018-19. (Valid certificate from the Chartered Accountant on their letter head shall be enclosed).
3. 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.
4. The Suppliers / Manufacturers who submits the sealed quotation without satisfying or deviating the above conditions will be rejected duly forfeiting the EMD amount.

Signature of the Supplier / Manufacturer with seal

GENERAL CODITIONS

1. The Specifications of the proposed Solar Home Lighting System are to be mentioned in the enclosed format of **Annexure-'A'**.
2. The rates are inclusive of all latest prevailing taxes and duties etc., of Govt. of Andhra Pradesh as well as Govt. of India. The rates quoted shall also be inclusive of all the charges such as transportation, Installation of the systems and to be submitted in the enclosed format of **Annexure–'B' (Financial Offer).**
3. All the Systems are to be supplied, installed as per the directions of **District Manager, NREDCAP, Kakinda** within 45 days from the date of work order.
4. The filled in document duly signed on each page has to be submitted along with **EMD amount of Rs. 25,000/-** (Rupees Twenty five thousand only) by way of Demand Draft in favour of "NREDCAP" Payable at Tadepalli. In case of unsuccessful bidder, the EMD amount will be refunded immediately after finalization.
5. The successful supplier / manufacturer shall pay the **Security Deposit** of 2.5% of the total project cost and will be released on successful completion of the works allotted.
6. The filled in document together with all enclosures shall be submitted in a sealed cover super scribing **"Sealed Quotations for supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II of MNRE) to the weaver members of Uppada & Kothapally villages in East Godavari District".**
7. Good quality components should be supplied. In case if it is found that materials are not as per MNRE Specifications, such components are to be replaced at free of cost.
8. All the Systems including Battery should be under guarantee / warranty for a period of **Five years** from the date of commissioning against all defects.
9. After completion of project, the supplier / manufacturer has to submit the Installation certificate containing the details of the components installed.
10. 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 systems to the concerned Households.

Signature of the Supplier / Manufacturer with seal

11. 90% Cost of the Solar Home Lighting Systems installed will be released on receipt of the bills and handing over certificate from concerned. The balance 10% Performance guarantee amount will be released against Bank guarantee (or) after completion of guarantee / warranty period of 5 (five) years from the date of supply & installation.
12. 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.
13. 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 EMD/ Security deposit amount paid.
14. For the delayed installation 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 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 EMD paid will be forfeited.

15. The VC & Managing Director may relax any of the conditions for valid reasons and the decision of VC & Managing Director is final and binding.

Signature of the Supplier / Manufacturer with seal

Annexure – A

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS FOR SUPPLY & INSTALLATION OF AROUND 336 NOS OF SOLAR HOME LIGHTING SYSTEMS (MODEL-II OF MNRE)

Beneficiary Organization	Supply & installation of around 336 Nos of Solar Home Lighting Systems (Model-II) to the weaver members of Uppada & Kothapally villages in East Godavari District
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 Supplier / Manufacturer with seal

Annexure-B

FINANCIAL OFFER

FINANCIAL OFFER FOR SUPPLY & INSTALLATION OF AROUND 336 NOS OF SOLAR HOME LIGHTING SYSTEMS (MODEL-II of MNRE) SHALL BE IN A SEPERATE SEALED COVER AND KEPT IN THE MAIN COVER

S.No.	Name of the Item	Unit Rate (Rs) (In words)
1	Supply & installation of W-LED based Solar Home Lighting system with the following components as per MNRE Specifications inclusive transport and installation charges on turnkey basis. i) 12Wp under STC SPV Module ii) 12.8 Volts, 6 Ah LiFePO4 (Lithium Ferro Phosphate) Battery iii) 2.5Watt X 2 Nos W-LED Light iv) Cable - Required length of cable for Solar Module & Luminaire v) Average Duty Cycle -5 hours per day. vi) Autonomy - Minimum 6 Operating Hours per permissible discharge. **Warranty**: 5 years for entire system including battery & 25 years for SPV Module.	
2	GST @5% on 70% of item no: 01	
3	GST @18% on 30% of item no: 01	
4	**Grand Total - (1+2+3)**	

Signature of the Supplier / Manufacturer with seal