

Tender Document

for

Supply of around 10,000 Nos of 1.5 Watts LED Solar Study Lamps

to the P.O, ITDA's of West Godavari, East Godavari,

Visakhapatnam, Vizianagaram and Srikakulam Districts

in

APEPDCL, Visakhapatnam Jurisdiction

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

NREDCAP Registration No: _____ / 2017-18

Tender Notice No:

NREDCAP/SE/ APEPDCL/SOLAR STUDY LAMPS/2017-18

Dated: 02.01.2018

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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TENDER NOTICE

S.No	Particulars	Details
1	Tender Notice No	NREDCAP/SE/ APEPDCL/SOLAR STUDY LAMPS/2017-18 Dated: 02.01.2018
2	Scope of the work	Supply of around 10,000 Nos of 1.5 Watts LED Solar Study Lamps to the P.O, ITDA's of West Godavari, East Godavari, Visakhapatnam, Vizianagaram and Srikakulam Districts.
3	Eligibility for participation	Registered / Renewed Suppliers & Manufacturers with NREDCAP for the year 2017-18 as “SPV Solar System Integrators”
4	Processing fee of Tender Document	Rs. 20,000/- + 3,600/- (GST @ 18%) = Rs. 23,600/-
6	Amount of EMD	Rs. 1,00,000/- (Rupees One lakh 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	10.01.2018 by 13:00 Hrs
8	Date & Time for Opening of Technical Bids	10.01.2018 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: 23,600/- drawn in favor 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/-
VC & Managing Director
NREDCAP, Tadepalli

SCOPE & SPECIFICATIONS

Scope of the work

Supply of around 10,000 Nos of 1.5 Watts LED Solar Study Lamps to the Project Officer, ITDA's of West Godavari, East Godavari, Visakhapatnam, Vizianagaram and Srikakulam Districts in APEPDCL, Visakhapatnam jurisdiction for distribution to ST students of Govt Tribal Ashram Schools. The exact quantity allotted to each Project Officer will indicate in the Purchase order. The list of Project officers of ITDA's are given in the enclosed Annexure -I.

Definition

A 'Solar Study Lamp' is a lighting device consisting of a PV module, battery, lamp, A.C Charger and electronics. Battery, lamp, and electronics are placed in a suitable housing. The Solar Study Lamp is especially suitable for study purposes. The Lamp looks like a table lamp and its base is connected to LED with gooseneck type of arrangement

The PV module converts sun light into electricity, charges the battery which powers the luminaire. Luminaire consists of White Light Emitting Diode (W-LED), a solid state device which emits light when an electric current passes through it.

Specification of 1.5 Watts LED Solar Study Lamps

PV Module	3.0 Wp under STC
Battery	3.2V, 3000 mAh Capacity Rechargeable Lithium-Ferro Phosphate (LiFePo4)
Light Source	1.5 Watt W-LED luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.
Light Output	Study lamp should deliver minimum of 150 Lux at over an area of 1.5 feet Diameter from a height of 1.0 foot.
Run Time	5 hours per day under average daily insolation of 5.5 kWh/ sq.m. on a horizontal surface.
Cable	15 feet length

The study lamps shall be supplied as per the Technical Specifications enclosed at Annexure-A.

Signature of the Tenderer with seal

Pre-Requisites for submission of Tenders for Supply of 1.5 Watts LED Solar Study Lamps

Tenders are invited for Supply of around 10,000 Nos of 1.5 Watts LED Solar Study Lamps to the Project Officer, ITDA's of West Godavari, East Godavari, Visakhapatnam, Vizianagaram and Srikakulam Districts in APEPDCL, Visakhapatnam jurisdiction from the **Registered / Renewed Suppliers & Manufacturers as “SPV Solar System Integrators”** with NREDCAP for the year 2017-18 for distribution to ST students of Govt Tribal Ashram Schools.

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 Study Lamps from MNRE or MNRE authorized Test Centers as per Specifications enclosed at Annexure-A.
2. The Suppliers & Manufacturers shall have experience in supply & installation of at least 30 KWp Capacity cumulative installations of standalone Solar Lanterns, Solar Home Lights or Solar Power Packs with NREDCAP or any of the Govt. Nodal Agencies in the country during the last two years 2015-16 & 2016-17. Experience certificate issued by Govt. Departments / Govt. Nodal Agencies shall only be considered.
3. The Suppliers & Manufacturers annual turnover shall not be less than Rs: 50.00 Lakhs (Rupees Fifty Lakhs only) towards supply & installation of standalone Solar Lanterns, Solar Home Lights or solar power packs during last two years i.e., 2015-16 and 2016-17. Certificates issued by CA 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 GST @5% as per GST Act. The rates quoted shall also be inclusive of transportation charges up to the Office of Project Officer, ITDA. The Financial bid is to be submitted in the enclosed format at **Annexure – C**
2. All Solar Study Lamps are to be supplied to the respective Project Officers of ITDA's in the Districts within 30 days from the date of issue of work order.
3. The filled in Tender document duly signed on each page has to be submitted along with **EMD amount of Rs. 1,00,000/-** (Rupees one Lakh 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 of the Tender. The successful bidders EMD amount will be kept as **Security Deposit** and released on successful completion of the works allotted.
4. The filled in Tender document together with all enclosures should be submitted in a sealed cover super scribing "**Tender for Supply of Solar Study Lamps**"
5. Good quality components should 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 Study Lamp including Battery should be under guarantee / warranty for a period of **Five years** from the date of supply.
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 Study Lamps to the respective Project Officers of ITDA's in the Districts.

Signature of the Tenderer with seal

8. 90% Cost of the Solar Study Lamps will be released on receipt of the certified bills from the concerned District Manager of NREDCAP along with the handing over certificate issued by the officials of ITDA concerned. The balance 10% Performance guarantee amount will be released against Bank guarantee (or) after completion of guarantee / warranty period of 5 (five) years.
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 EMD 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 EMD 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. **The Suppliers & Manufacturers mandatorily shall submit two numbers of working models of Solar Study Lamps as per specifications given in the Tender along with the Tender Document.**
14. In case of any dispute, the decision of VC & Managing Director, NREDCAP Ltd., Hyderabad 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 (Attach balance sheets from certified Chartered Accountant)	2015-16 (Rs)	2016-17 (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 Certificate for the following components i) SPV Module ii) Battery iii) Luminaire		

Signature of the Tenderer with seal

A) Technical Specification of 1.5 Watts LED Solar Study Lamps

Beneficiary Organization	Supply of around 10,000 nos of 1.5 Watts LED Solar Study Lamps to the P.O, ITDA's of West Godavari, East Godavari, Visakhapatnam, Vizainagaram and Srikakulam Districts in APEPDCL, Visakhapatnam jurisdiction for distribution to ST students of Govt Tribal Ashram Schools.
Hours of Operation	4 to 5 hrs per day
SPV Modules	
SPV modules Capacity	3.00 Wp under STC
Type of Modules	Crystalline silicon - IEC/MNRE approved
Battery	
Battery Type	Rechargeable Lithium-Ferro Phosphate (LiFePO4)
Battery voltage	3.2V
Battery capacity	3000 mAh
Light Source	
Capacity	1.5 Watt W-LED luminaire, dispersed beam, soothing to eyes with the use of proper optics and diffuser.
Out put	Minimum of 150 Lux at over an area of 1.5feet diameter from a height of 1.00 feet.
Other Accessories	
AC Charger	Suitable AC charger
Cables	15 feet length

B) COMPONENT WISE MNRE TECHNICAL DETAILS**PV MODULE:**

- (i) Indigenously manufactured PV modules should be used in the Solar Study Lamp.
- (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 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.

Signature of the Tenderer with seal

- (iii) The PV module must have a minimum of 3.0 Wp at an appropriate voltage for charging of battery used, under the standard test conditions (STC) of measurement.
- (iv) There should preferably be an arrangement (stand) for mounting the module at an optimum angle in the direction facing the sun.
- (v) 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

VI. 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.

BATTERY:

- i. Rechargeable Lithium-Ferro Phosphate (LiFePO₄)
- ii. Capacity: 3.2V, 3000 mAh
- 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:

- I. The light source should be 1.5 Watts (max.) luminaire based on White Light Emitting Diode (W-LED).
- II. It should be dispersed beam, soothing to eyes with the use of proper optics and diffuser.
- III. Illuminance:
 - Minimum 150 Lux* over an area of 1.5 feet diameter(when the height of Luminaire is kept 1 feet above the table)
(* At the time of test, Luminaire would be horizontal and is kept 1 feet above the test bench such that there is no shadow of the lamp body)
- V. The colour temperature of W-LED(s) used in the system should be in the range of 5500°K –6500°K.
- VI. W-LED(s) should not emit ultraviolet light.
- VII. The light output from the W - LED should be constant throughout the duty cycle.

Signature of the Tenderer with seal

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.
- V. The PCB containing the electronics should be capable of solder free installation and replacement.
- VI. Good quality of wires/ cables, switches suitable for usage 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 Study Lamp 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 Study Lamp will be warranted for five years.
- II. The battery should be warranted for a period of 5 years.
- III. The Warrantee/ Guarantee Card to be supplied with the Solar Study Lamp 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 Study Lamp. The following minimum details must be provided in the Manual:

- Basic principles of Photovoltaics.
- A small write-up (with a block diagram) on Solar Study Lamp - 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 Study Lamp.
- Instructions on replacement of battery.
- DO's and DONT's.

Signature of the Tenderer with seal

Technical bid for 1.5 Watts LED Solar Study Lamps

Beneficiary Organization	Supply of around 10,000 nos of 1.5 Watts LED Solar Study Lamps to the P.O, ITDA's of West Godavari, East Godavari, Visakhapatnam, Vizainagaram and Srikakulam Districts in APEPDCL, Visakhapatnam jurisdiction for distribution to ST students of Govt Tribal Ashram Schools.
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

Annexure-C

Financial bid for 1.5 Watts LED Solar Study Lamps

S.No.	Name of the Item	Rate (Rs) (In words)
1	Supply of 1.5 watts LED based Solar Study Lamp comprising of 3.00 Wp SPV module, 3.2V, 3000mAh LiFePo4 battery, Electronics along with the other Technical Items as per MNRE Specifications with 15 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

District wise Project Officers, ITDA

S.No	Name of the District	Address of the Project Officer, ITDA
1	Visakhapatnam	The Project Officer, ITDA Paderu, M: 09490957002
2	Vizianagaram	The Project Officer, ITDA Parvathipuram, M: 09491309822
3	Srikakulam	The Project Officer, ITDA Seethampeta, M: 08941258331
4	East Godavari	The Project Officer, ITDA Chintoor, M: 09490957000
5	West Godavari	The Project Officer, ITDA Rampachodavaram, M: 09490957004

Signature of the Tenderer with seal

