

**TENDER FOR  
DESIGN, SUPPLY, INSTALLATION, TESTING  
& COMMISSIONING  
OF  
4 NOS. SPV STREET LIGHTS (LED BASED)  
AT  
OLD AGE HOME, PATIGAON, JORHAT-785001**

Tender Notice No. No. AEDA/481/2016/6/      Dtd. 07-12-2017



**Assam Energy Development Agency**  
Bigyan Bhawan, ABC, G.S. Road  
Guwahati-781005  
Tel-03 61-2450147/2450646/2464618 Fax-0361-2464617  
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**Assam Energy Development Agency Bigyan  
Bhawan, G.S. Road Guwahati – 5  
Ph 0361-2450147 / 2450646 / 2464618; Fax: 0361-2464617  
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**TENDER NOTICE**

**NO: AEDA/481/2016/6 / 1142**

**Dated 07.12.2017**

Sealed tenders are invited along with non refundable IPO of Rs. 20.00 or court fee of Rs.8.25 in favour of Director, Assam Energy Development Agency, payable at Guwahati for Design, Supply, Installation, Testing & Commissioning of 4 nos. of SPV Street Lights at Old Age Home, Jorhat, Assam with Five Years Warranty cum Mandatory Comprehensive Maintenance Contract (CMC) under TWO BID SYSTEM from eligible registered manufacturers/ or the authorized dealers/ agents as detailed below :

Name of the work	Estimated Cost per system	Earnest Money	Period of completion ( from the date of issue of work order)
Design, Supply, Installation, Testing & Commissioning of nos. of SPV Street Light at Old Age Home, Jorhat, Assam with Five Years Warranty cum Mandatory Comprehensive Maintenance Contract (CMC)	<b>17,500.00</b>	<b>2%</b>	<b>30 days</b>

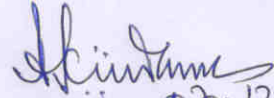
Date of publishing of the tender : 07/12/17  
Date of closing of the tender: : 22/12/17 at 12.00 noon  
Date of opening of Technical Bid : 22/12/17 at 1.00 p.m.  
Date of opening of Financial bid : 22/12/17 at 3.00 p.m:

The Earnest Money (EMD) shall be deposited in the form of Demand Draft issued from any Nationalized Bank, or its subsidiary banks in favour of Director, Assam Energy Development Agency payable at Guwahati. The DD is to be inserted into Technical Bid only. The master envelope containing both the sealed bids should be superscript with "Tender for Solar Street Lights for Old Age Home, Jorhat". The Tender notice is also available at [www.assamrenewable.org](http://www.assamrenewable.org).

Note : 1. In case of any Holiday on the scheduled day, same time on the next working day shall be considered unless notified.

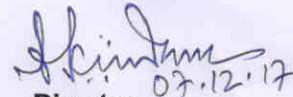
**Financial bids will be opened only of bidders who duly qualify in the Technical Bid.**

Technical details enclosed as Annexure.

  
Director 07.12.17

**Assam Energy Development Agency  
Bigyan Bhawan, G.S. Road, Guwahati – 5**

- Copy to:
1. The General Secretary, Akhil Bharatiya Sewa Ashram Sanstha, Patigaon, Jorhat, Assam, PIN-785001
  2. The Dy. General Manager(PA), Oil India Ltd., Duliajan, PIN-786602
  3. <https://assamtenders.gov.in./assamrenewable.org>
  4. Dy FAO, AEDA
  5. AEDA notice board.

  
Director 07.12.17

**Assam Energy Development Agency  
Bigyan Bhawan, G.S. Road, Guwahati – 5**

## **1. TERMS AND CONDITIONS**

- 1.1 The following particulars should be inserted in the techno-commercial bid—A report on testing and manufacturing facilities available along with pictures and an undertaking that if the details provided by the manufacturer are in deviation with provision of the scheme they may be disqualified.
- a) Technical specifications of each item mentioning the name of manufacturers (enclosing all relevant certificates).
  - b) Attested copy of latest valid test certificates for all components issued by SEC/other MNRE, GOI approved organization.
  - c) Terms of supply and installation.
  - d) Details of local authorized office with service facilities including nos. of staff with service contact point at Jorhat.
  - e) IPO of Rs.20.00. or Court Fee of Rs. 8.25 p
  - f) PAN No. and GST No.
  - g) Experience of similar work completed successfully in last 3 years.
  - h) Turnover of the supplier in last three years (ITCC/Tax returns)
- 1.2 If the Techno-commercial bid does not accompany the above documents and is not found satisfactory the financial Bid will not be opened.
- 1.3 The Director, AEDA reserves the right to place order either in part or in full of all or any items.
- 1.4 Any dispute whatsoever, will be under the jurisdiction of Court of AEDA only.
- 1.5 During installation of the systems the supplier must take adequate measures for safety and security of the systems.

## **2. SUPPLY OF MATERIALS**

Materials are to be delivered within 30 days from the date of placing firm order and installation & commissioning should be completed within that time. Materials found to be of low/substandard qualities would be out rightly rejected.

## **3. PAYMENT AND OTHER FINANCIAL TERMS**

- i. 75% payment shall be made on receipt of satisfactory installation & commissioning certificate from beneficiary organization i.e. Old Age Home, Jorhat.
- ii. Balance 15% payment shall be released after 3 months of satisfactory performance of systems and inspection report from AEDA.
- iii. Remaining 10% payment shall be made in 5 equal installments beginning from end of 1st year for 5 years. This part of payment would be released against submission of quarterly report on satisfactory working of the systems. Certificate from Old Age Home, Jorhat should be enclosed.

## **4. TECHNICAL DETAILS OF WHITE-LED (W-LED) BASED SOLAR STREET LIGHTING SYSTEM**

### **4.1 PV MODULE**

- (i) The power output of the module under STC should be a minimum of 35 Wp.
- (ii) The PV module should be made up of crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.
- (iii) The Load voltage\* of 16.40 V for 12 V battery or appropriate voltage for charging of battery used, under the standard test conditions (STC) of measurement.
- (iv) The terminal box on the module should have a provision for opening, for replacing the cable, if required.

- (v) 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

#### **4.2 BATTERY**

- (i) 14.8 Volts, 5.2AH Lithium Ion battery with inbuilt battery management system (BMS)
- (ii) Battery cells should conform to BIS/International standards and be of Samsung/LG/Panasonic or equivalent make

#### **4.3 LIGHT SOURCE**

- i. The light source will be of white LED high wattage (>140lumen/W and atleast 4W rating) type and LM80 certified.
- ii. The colour temperature of W-LEDs used in the system should be 5500°K–6500°K.
- iii. LEDs should not emit ultraviolet light
- iv. The lamps should be housed in an assembly suitable for outdoor use.

#### **4.4 ELECTRONICS**

- a) The total electronic efficiency should be at least 90%.
- b) The idle current should be less than 10mA.
- c) The voltage drop from module terminals to the battery terminals should not exceed 0.8 volts including the drop across the diode and the cable when measured at maximum charging current.
- d) The PCB containing the electronics should be capable of solder free installation and replacement.

#### **4.5 ELECTRONIC PROTECTIONS**

- a. The system should have protection against battery overcharge, deep discharge condition.
- b. Adequate protection should be provided against battery reverse polarity.
- c. Fuses should be provided to protect against short circuit conditions. Fuse is not mandatory, in case, over current protection is provided in the driver circuit.
- d. Protection for reverse flow of current through the PV module(s) should be provided.

#### **4.6 GSM CONTROL**

- (i) Remote monitoring of solar panel charging (voltage and current), battery state of charge, previous night runtime and current light status using mobile (android, IOS) and desktop interface
- (ii) Remotely turn light ON/OFF and dim from 10% to 100% via mobile and desktop app
- (iii) SMS based communication for reliable and low cost monitoring and control
- (iv) Multiple light ON/OFF control module

#### **4.7 MECHANICAL COMPONENTS**

- a. A corrosion resistant metallic frame structure should be fixed on the pole to hold the SPV module.
- b. The frame structure should have provision so that the module can be oriented at the suitable tilt angle.
- c. The pole should be made of Galvanized Iron (GI) pipe.
- d. The height of the pole should be 4 meters above the ground level, after grouting and final installation on a concrete pedestal of 1 foot or more above the ground
- e. The pole should have the provision to hold the luminaire along with the solar panel.
- f. The Luminaire housing should be of aluminum die cast with inbuilt heatsink, water proof (IP65) painted with a corrosion resistant paint and should be housing the battery.

## **5. QUALITY AND WARRANTY**

- (i) The complete Solar Street Lighting System (2 years on 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 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 LED should be LM80 certified and warranted for a minimum of 10 years (as per L70 estimate)
- (iv) The battery would be BIS/International certified and provide a minimum of 1000 cycles with not less than 70% capacity at the end of 2 years
- (v) 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.
- (vi) The complete system or its equivalent should have MNRE approved lab (UL or NABL) certification.

## **6. OPERATION AND MAINTENANCE MANUAL**

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

- a. Basic principles of Photovoltaics.
- b. A small write-up (with a block diagram) on Solar Street Lighting System-its components, PV module, battery, electronics, luminaire and expected performance.
- c. Type, Model number, voltage & capacity of the battery, used in the system.
- d. 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.
- e. Installation instructions about mounting of PV module(s) and luminary on pole.
- f. Clear instructions on regular maintenance and trouble shooting of the Solar Streetlight System.
- g. DO's and DON'T's

## **7. TEST CERTIFICATES**

Manufacturers are required to submit latest test certificates for Solar Street Lights from SEC or one of the authorized testing laboratories/centres of MNRE, GOI subject to meeting other conditions of the Technical Specifications for LED based Solar Photovoltaic Lighting Systems.

## **8. TAXES AND DUTIES**

Rates are to be quoted in Indian rupees inclusive of all applicable taxes and duties (i.e. Income Tax, GST). AEDA is not responsible for arrangement of Road Permit. If required, selected bidder has to obtain the Road Permit of their own.

**ANNEXURE- I**  
**Warranty Card to be supplied with each Solar System**

1. Name & Address of the manufacturer/ Supplier of the system .....
2. Name & Address of the Purchasing Agency .....
3. Date of supply of the system .....
4. Details of PV Module(s) supplied in the system  
Make (Name of the manufacturer) .....
- Model .....
- Serial No(s) .....
- Wattage of the PV Module(s) under STC .....
- Warranty valid up to .....
5. Details of Battery  
Make (Name of the manufacturer) .....
- Model .....
- Batch / Serial No(s) .....
- Rated V & AH capacity at C/20 or C/10 rate at 20 C .....
- Warranty valid up to .....
6. Details of Electronics & other BOS items  
Make (Name of the manufacturer) .....
- Model .....
- Serial No (s). .....
- Warranty valid up to .....
7. Designation & Address of the person to be contacted  
for claiming warranty obligations .....

(Signature)  
Name & Designation  
Name & Address of the Manufacturer/ Supplier  
(SEAL)

Place & Date:

(During the warranty period, MNRE / AEDA/ users reserve the right to cross check the performance of the system with the minimum performance level specified in the MNRE specifications).

**This format should be inserted in Financial Bid only**  
**FORMAT-I**  
**System cost, installation & commissioning (per system) including CMC**

<b>Sl. No.</b>	<b>Location/site</b>	<b>Rate for SPV Street Light</b>			
		<b>System cost (A)</b>	<b>Installation &amp; commissioning charge (B)</b>	<b>CMC charges (C)</b>	<b>Total (A+B+C)</b>
	SPV Street Lights at Akhil Bharatiya Sewa Ashram Sanstha (Old Age Home), Patigaon, Jorhat, Assam-785001				