

| Supply, Installation and commissioning of one (1) no of 12 Watt (LED) – Single Pole Solar Street Light System(For 1 to 2 nos) |   |  |    |     |            |          |                  |  |
|---|---|--|----|-----|------------|----------|------------------|--|
| SI/No   | Description   | Brand                                      | No | Qty | Unit       | Rate(rs) | Amount           |  |
| 1   | <p><b>Module- 74 WP ( ERTL and Flash Tested)</b></p> <p>I. The PV module shall contain crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition</p> <p>II. The power output of the module(s) under STC would be a minimum of 80 Wp at a load voltage* of 16.4 ± 0.2 V</p> <p>III. The open circuit voltage* of the PV modules under STC would be 21.0 Volts</p> <p>IV. The module efficiency would be 14.5%</p> <p>V. A bird spike shall be provided to avoid bird sitting on the solar module at the highest point of the array/module structure</p> <p>VI. SPV module shall be highly reliable, lightweight and shall have a service life of more than 25 years. SPV modules shall have a limited power loss of not more than 10% of nominal output at the end of 10 years and not more than 20% at the end of 25 years</p> <p>VII. The solar module shall be able to withstand the following environmental conditions normally encountered at site – Temp. extremes ranging from -100 C to +850 C Wind load – 200 km/h Maximum mean hourly rainfall of 40 mm Humidity level upto 95%, Lightning arrester VIII. Strip must contain the following details</p> <p>a) Name of Manufacturer<br/>b) Model or type number<br/>c) Serial No.<br/>d) Year of make</p> | Wesol / Emmvee / Vikram /Any MNRE Approved | 1  | 74  | Watt-Power | 65       | 4,810.00         |  |
| 2   | <p><b>Battery.</b></p> <p>12V/75 Ah @ c/10 Discharge Rate. Type; 6LMS 75L.</p>  | Exide/Amaron/Any MNRE Approved             | 1  | 75  | Amp-Hour   | 108      | 8,100.00         |  |
| 3   | <p><b>Dusk-to-Dawn Charge Controller with inverter &amp; electronics. ( ERTL and Flash Tested)</b></p> <p>I. Battery over charge cut off: 14.20V</p> <p>II. Battery deep discharge cut off: 11.65V</p> <p>III. Short circuit protection inbuilt with the system.</p> <p>IV. Protections against battery reverse polarity inbuilt with the system.</p> <p>V. Load reconnects facility inbuilt with the system</p>  | Any MNRE approved manufacturer             | 1  | 1   | No         | 700      | 700.00           |  |
| 4   | <p><b>Luminar-12Watt-(W) LED- Based ( ERTL and Flash Tested)</b></p> <p>I. LED Luminaries must be to prevent water seepage and entry of Insects.</p> <p>II. The light source will be of white LED type. The luminous performance of LEDs used should not be less than 30 lumen/watt. Use of LEDs, which emit ultraviolet light, must be avoided</p> <p>III. The light must be ERTL – Tested</p> <p>IV. The light output should remain constant with variations in the battery voltages.</p> <p>V. The make, model number and technical characteristics of LEDs should be furnished</p>  | Any MNRE approved manufacturer             | 1  | 1   | No         | 3500     | 3,500.00         |  |
| 5   | <p><b>Battery Box</b></p> <p>I. Battery box should be made to 20 SWG, MS sheet</p> <p>II. The battery box shall be painted with acid proof corrosion resistant paint. It shall be painted after chemical cleaning &amp; primer coating.</p> <p>III. The size of the box should be as per battery size</p> <p>IV. Arrangement for proper ventilation should be provided on each side except top</p> <p>V. Box should be provided with proper locking arrangement for anti theft arrangement</p> <p>VI. Two wooden battens should be fixed inside the battery box to avoid electrical contact with between battery and the box</p>  | Any MNRE approved manufacturer             | 1  | 1   | No         | 1000     | 1,000.00         |  |
| 6   | <p><b>GI Pole (Folding) with Module Mtg Structure, Luminaire bkt.</b></p> <p>I. A corrosion resistant metallic frame structure must be fixed on the pole to hold the SPV module.</p> <p>II. The frame structure must have provision to adjust its angle of inclination to the horizontal between 0 and 45, so that the module can be oriented at the specified tilt angle.</p> <p>III. Pole height: 5.5 Mtr. (Dia = 76 mm X 60 m) With grounding facility (Corrosion resistance) &amp; 3mm thickness</p>  | Any MNRE approved manufacturer             | 1  | 1   | No         | 4500     | 4,500.00         |  |
| 7   | <p><b>Cable.</b></p> <p>2C 2.5 Sq.mm for battery charging &amp; 2C 1.5 Sq.mm for load and others</p>  | any ISI brand                              | 1  | 8   | Mtr        | 40.25    | 322.00           |  |
| 8   | Display for description of works  | Local Made                                 | 1  | 1   | No         | 500      | 500.00           |  |
| 9   | <p><b>Civil Work</b></p> <p>Concreting of 300 mm column structure upto 1.8 mtr from bottom of the pole</p>  | As per calculation                         | 1  | 1   | No         | 1253     | 1,253.00         |  |
| 10  | Transportation, Installation, Testing & Commissioning of System   | On Road                                    |    | LS  |            |          | 2,000.00         |  |
| <b>Estimated Cost (A) :</b>   |   |  |    |     |            |          | 26,685.00        |  |
| 11  | <b>Maintenance Cost of Solar Lights for each year (upto five years)</b>   |  |    |     |            |          |                  |  |
| 11.a  | For 1st Year @ 2% of the estimated cost   |  |    |     |            |          | 534.00           |  |
| 11.b  | For 2nd Year @ 2% of the estimated cost   |  |    |     |            |          | 534.00           |  |
| 11.c  | For 3rd Year @ 2% of the estimated cost   |  |    |     |            |          | 534.00           |  |
| 11.d  | For 4th Year @ 2% of the estimated cost   |  |    |     |            |          | 534.00           |  |
| 11.e  | For 5th Year @ 2% of the estimated cost   |  |    |     |            |          | 534.00           |  |
| <b>Total maintenance Cost of each Solar Light for five years (B) :</b>  |   |  |    |     |            |          | 2,670.00         |  |
| <b>TOTAL ESTIMATED COST OF EACH SOLAR LIGHT (A + B)</b>   |   |  |    |     |            |          | <b>29,355.00</b> |  |

| Nt. |  |
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| 1   | All the system are manufactured as per MNRE specification and ERTL and Flash Tested, Govt. of India.   |
| 2   | Duty Cycle: <b>Dusk to Dawn</b>  |
| 3   | Autonomy: <b>3 days</b> or Minimum <b>42 operating hours</b> per permissible discharge.  |
| 4   | <b>The street lighting system (including the battery) will be warranted for a period of five years from the date of supply. (The PV modules would be warranted for their output peak watt capacity 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years.)</b> |
| 5   | The whole system shall be maintained at <b>free of cost for successive five years</b> from the year of installing. The <b>cost of AMC is included in the estimate.</b>   |
| 6   | Rates are inclusive of all taxes.  |
| 7   | S.D(10%) Money Deducted from Estimate Cost(A)  |