



**G.O.(MS).NO.105, RURAL DEVELOPMENT AND PANCHAYAT RAJ**  
**(SGS-1) DEPARTMENT, DATED 01.08.2019**

**ANNEXURE**

|  |   |
|--|---|
|   | <h1 align="center">Government of<br/>Tamil Nadu</h1>  |
|  | <p><b>Tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems in <b>168</b> Houses in Vellore District of Tamil Nadu under Chief Minister's Solar Powered Green House Scheme (CMSPGHS)</b></p> <p align="center"><b>Package No.GH/SL/2019/RD/VLR /01</b><br/> <b>Tender Reference: Lr.No.40179/2019/RHS 1-1, Dated : 08.01.2021</b></p> <p align="center"><b>Bidding Document</b></p> |
|  | <p align="center"><b>District Rural Development Agency</b><br/> Vellore District (INDIA)</p> <p align="center">Phone: 0416-2258199<br/> Email: drdavel@nic.in<br/> Website : www.tntenders.gov.in</p>   |

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| 1.              | AC               | Alternating Current   |
| 2.              | BIS              | Bureau of Indian Standard   |
| 3.              | BoS              | Balance of System   |
| 4.              | CCU              | Charge Control Unit   |
| 5.              | CRI              | Colour Rendering Index  |
| 6.              | DC               | Direct Current  |
| 7.              | DOD              | Depth Of Discharge  |
| 8.              | IEC              | International Electro Technical Commission                            |
| 9.              | IGBT             | Insulated Gate Bipolar Transistor                                     |
| 10.             | LED              | Light Emitting Diode  |
| 11.             | MPPT             | Maximum Power Point Tracking  |
| 12.             | NABL             | National Accreditation Board for testing and calibration Laboratories |
| 13.             | PCU              | Power Conditioning Unit   |
| 14.             | PWM              | Pulse Width Modulation  |
| 15.             | RFID             | Radio Frequency Identification  |
| 16.             | SPV              | Solar Photo Voltaic   |
| 17.             | STC              | Standard Testing Conditions   |
| 18.             | THD              | Total Harmonic Distortion   |
| 19.             | VRLA             | Valve Regulated Lead Acid   |
| 20.             | RD&PR            | Rural Development and Panchayat Raj Department                        |

|   |
|---|
| <b>SHORT TITLES USED IN THE TENDER DOCUMENT</b> |
|---|

|                                     |  |
|-------------------------------------|--|
| <b>1. Bidder</b>                    | Bidder means the party/firm who makes a formal offer in pursuance of the Tender floated.   |
| <b>2. Successful Bidder</b>         | Successful Bidder means the bidder who has been selected for carrying out the work intended through the Tender process.  |
| <b>3. Day</b>                       | A day means a calendar day.  |
| <b>4. Service Centre</b>            | Service Centre means the centre or place, wherein the successful Bidder, inter-alia undertakes and performs the service activities relating to the solar home lighting systems indicated in the Tender and shall include a Direct service centre or Authorised service centre. |
| <b>5. Authorised Service Centre</b> | Authorised Service Centre means a Service Centre run by the successful Bidder through another party by entering into a valid commercial agreement.   |
| <b>6. Testing Agency</b>            | Testing Agency notified by the RD&PR department for the purpose of sample testing.   |
| <b>7. Cost</b>                      | Cost means the total cost to be incurred towards the supply, installation, commissioning and 5 years comprehensive maintenance of LED based SPV home lighting systems.   |
| <b>8. Purchaser</b>                 | Purchaser means the Government of Tamil Nadu for whom the procurement is made through this Tender.   |
| <b>9. DRDA</b>                      | District Rural Development Agency - the Procurement agency on behalf of Government of Tamil Nadu   |
| <b>10. Commissioning</b>            | Commissioning means the home lights will have to be energised through SPV system and the functioning has to be tested.   |
| <b>11. End user</b>                 | End user means the beneficiary to whom the solar home lighting system is provided.   |

## **Applicability of Tamil Nadu Transparency in Tenders Act 1998 and Rules, 2000**

This Tender process will be governed by The Tamil Nadu Transparency in Tenders Act, 1998 and The Tamil Nadu Transparency in Tenders Rules, 2000 (<http://www.tn.gov.in/gorders/fin446-e.htm>) as amended from time to time.

### **CHECKLIST FOR ENCLOSURES**

| #          | Bid Enclosures   | YES or NO | Page No. |
|------------|--|-----------|----------|
| 1.         | Whether the Tender is submitted in <b>Two parts (Techno Commercial Bid and Price Bid)?</b>   |           |          |
| <b>3.</b>  | <b>Whether Technical Bid contains the following</b>  |           |          |
| 3.1        | Earnest Money Deposit (EMD) amount as specified in the Tender or undertaking in lieu of EMD as per Format F7.                                    |           |          |
| 3.2        | Bidder's undertaking covering letter as per Format F3 in the Letter Head signed by the authority & stamped.                                      |           |          |
| 3.3        | Signed and stamped Letter of Authorisation (or) Power of Attorney for signing the Tender document.   |           |          |
| 3.4        | All pages of the blank Tender document is signed by the authority & stamped.   |           |          |
| 3.5        | Filled up Technical Bid signed by the authority & stamped  |           |          |
| <b>3.6</b> | <b>Supporting documents to meet the Eligibility Criteria</b><br>All documents shall be in English only.  |           |          |
|            | a) Bidder's Certificate of Incorporation / Registration or In case of partnership Certificate of Incorporation/ Registration of all the partners |           |          |
|            | b) Bidder's undertaking for using indigenous SPV modules   |           |          |
|            | c) Bidder's undertaking for minimum quantity offered as per Format F4.   |           |          |
|            | d) Balance Sheet and Profit & Loss accounts for three audited year from 2017-18 to 2019-20 towards meeting the annual turnover criteria.         |           |          |
|            | e) Copy of Work Orders along with proof for satisfactory completion of that work.  |           |          |
|            | f) Bidder's undertaking letter for not having blacklisted  |           |          |
| 3.7        | Following Test Certificates/Reports as per clause 15(May be a part of techno commercial bid)   |           |          |

| #         | Bid Enclosures  | YES or NO | Page No. |
|-----------|---|-----------|----------|
|           | <b>i) SPV MODULES</b>   |           |          |
|           | a) IEC 61215 / IS 14286   |           |          |
|           | b) IEC 61730 Part 1 & 2   |           |          |
|           | c) IEC 61701  |           |          |
|           | d) STC Performance Report from accredited laboratories  |           |          |
|           | <b>ii) CHARGE CONTROLLER</b><br>Charge controller / MPPT – IEC 62093 IEC 60068- 2 (1,2,14,30)                               |           |          |
|           | <b>iii) BATTERIES</b><br><b>Batteries</b> - IEC 61427<br>Tubular Lead Acid – IS 1651/ IS 13369/ JIS 8702<br>VRLA – IS 15549 |           |          |
|           | <b>iv) LED LUMINARIE</b><br>LM 80-08 & LM 79-08 for LED Luminaire   |           |          |
|           | <b>v) BALANCE OF SYSTEM(Certificates or Letter of Undertaking)</b>  |           |          |
|           | a) Cables- IEC 60189, IS 694/ IS 1554 & IS/IEC 69947  |           |          |
|           | b) Switches / Circuit Breakers/ Connectors – IS/IEC 60947 part I,II,III & EN 50521  |           |          |
|           | c) Junction Boxes - IP 65<br>CCU- IP 21<br>LED Luminaire - IP 40<br>IEC 62208   |           |          |
| <b>4.</b> | <b>Whether Price Bid contains the following</b>   |           |          |
|           | Filled Price Bid digitally signed.  |           |          |

#### **IMPORTANT NOTE:**

Bidders must ensure that they submit all the required documents indicated in the Tender document without fail. e-Bids received without supporting documents for the various requirements mentioned in the tender document or test certificate are liable to be rejected. The data sheet for the critical components shall be submitted by the Bidder for the scrutiny.



## **SECTION-A**

### **TENDER ELIGIBILITY & INSTRUCTIONS**

#### **1. INTRODUCTION**

The Government of Tamil Nadu has issued orders vide G.O.Ms. No.105 RD & PR (SGS-1) Dt.01.08.2019, for the implementation of “Chief Minister’s Solar Powered Green House Scheme”. Under this scheme ,455 houses will be constructed in Vellore District for the benefit of the poor in rural areas, during the year 2016-17 to 2018-19.

The Project Director, DRDA therefore calls for e-bids for Supply, Installation, Commissioning and 5 years comprehensive maintenance of LED based standalone SPV Home lighting systems in 455 houses, following the procedures stipulated in the Tamil Nadu Transparency in Tenders Act, 1998 and Rules, 2000.

Bidder shall quote for the Supply, Installation, Commissioning and 5 years comprehensive maintenance of LED based standalone SPV Home lighting systems for the tentative quantities in each block indicated in Annexure A1.

The Successful bidder(s) will be required to set up Office cum service & repair centres in the district. The Successful Bidder(s) shall work closely with the DRDA in implementing the above work and ensure success of the programme within the stipulated time **of 6 months** from date of handing over of ready to install houses.

The project pertains to a clean/RE project (Solar Energy) intended to reduce carbon emissions. The project is not viable without consideration of the Clean Development Mechanism (CDM) revenue. The CDM benefit will be availed by the RD&PR department.

## 2. TENDER DATA SHEET

|           |  |  |
|-----------|--|--|
| <b>1.</b> | Tender inviting Authority, Designation and Address                 | The Project Director, District Rural Development Agency, Vellore District  |
| <b>2.</b> | a) Name of the Work  | Tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems in 168 Houses in Vellore District of Tamil Nadu under CMSPGH scheme.   |
|           | b) Tender Reference  | As per Advt No.40179/2019/RHS 1-1, Dated : 08.01.2021  |
|           | c) Place of execution  | Vellore District in Tamil Nadu   |
| <b>3.</b> | Tender documents available place and due date for obtaining tender | Tender documents can be downloaded free of cost from <a href="http://www.tntenders.gov.in">www.tntenders.gov.in</a>  |
| <b>4.</b> | Earnest Money Deposit (EMD) per Segment                            | Rs.51,000/- (1% of the value of tender)<br>EMD has to be paid in Indian Rupees by way of Demand Draft or Banker's Cheque only, from any of the Nationalized/ Scheduled banks, drawn in favour of "District Collector/Chairman, DRDA" and payable at Vellore only.<br>EMD submitted in any other forms will be SUMMARILY REJECTED |
| <b>5.</b> | Pre-Bid meeting date, time and place                               | On 02.02.2021 @ 11.00 am. at the address mentioned against sl.no (1) above   |
| <b>6.</b> | Due Date, Time and Place of submission of Tender                   | On 10.02.2021 upto 3.00 P.M. by online submission.   |
| <b>7.</b> | Date, Time and Place of Tender opening                             | On 10.02.2021, 4.00 P.M. onwards at the address mentioned against sl.no (1) above  |
| <b>8.</b> | Date, Time and Place of opening of Price Bids                      | Will be intimated only to the bidders qualified in Techno commercial bid.  |

### 3. TENDER COST AND EMD

#### 3.1 Cost of Bidding

The Bidders shall bear all costs associated with the preparation and submission of Bids. The Project Director, DRDA will in no way be responsible or liable for these charges/costs incurred regardless of the conduct or outcome of the bidding process.

#### 3.2 Tender Document Fee

The Tender document can be downloaded free of cost from the website [www.tntenders.gov.in](http://www.tntenders.gov.in).

#### 3.3 Earnest Money Deposit (EMD)

- a) An EMD amount as specified in the Tender shall be paid in Indian Rupees by way of Demand Draft or Banker's Cheque only, from any of the Nationalized/ Scheduled banks, drawn in favour of **“District Collector/Chairman, DRDA” payable at Vellore only**. EMD submitted in any other forms will be SUMMARILY REJECTED.
- b) The EMD shall be scanned and submitted along with the Techno Commercial Bid.
- c) The EMD amount of the bidders not qualified in the Techno commercial bid will be refunded within 7 working days after rejection of their techno-commercial bid. The EMD amount of the bidders qualified in the techno-commercial bid will be refunded after finalisation and signing of agreement with the successful bidder. The EMD amount held by Project Director, DRDA till it is refunded to the Bidders will not earn any interest thereof.
- d) The EMD amount paid by the Successful Bidder(s) will be adjusted towards Security Deposit payable by them. If the successful Bidder submits Security Deposit for the stipulated value in full in the form of DD/Banker's Cheque by way of Bank Guarantee, the EMD will be refunded.

e) The EMD amount will be forfeited by the District Collector, DRDA, if the Bidder withdraws the bid during the period of its validity specified in the tender or if the successful Bidder fails to sign the contract or the successful Bidder fails to remit Security Deposit within the respective due dates.

**f) The bids received without the specified EMD amount will be SUMMARILY REJECTED.**

**For the categories of industries exempted from payment of Earnest Money Deposit see Annexure -2.**

g) Industries exempted from payment of EMD shall enclose duly attested Photostat copy of their Registration Certificate showing the materials viz., SPV Panels, Battery, PV System Electronics they are permitted to manufacture / to do services as a system integrator of solar rooftops and the period of validity of the certificate as proof of eligibility for exemption from payment of EMD.

h) Those Bidders who are exempted from payment of E.M.D shall furnish in lieu of EMD an under taking in a non-judicial stamp paper of value not less than Rs. 100 (Rupees Hundred only) as per Format-7, to the effect to pay penalty an amount equivalent to EMD in the event of non-fulfillment or non-observance of any of the conditions stipulated in the contract consequent to such breach of contract.

**i) Undertaking and proof of exemption of EMD shall be submitted as specified in clause- A2. TENDERS RECEIVED WITHOUT PROOF FOR EXEMPTION OF EMD AND UNDERTAKING WILL NOT BE READOUT AND WILL BE REJECTED SUMMARILY.**

#### 4. TENDER ELIGIBILITY CRITERIA

The Bidder(s) shall meet the following Eligibility Criteria to participate in the Tender and shall enclose documentary proof for fulfilling the Eligibility criteria in the Techno commercial Bid.

| S.No | Minimum Eligibility Criteria  | Proof to be submitted for fulfilling the Eligibility Criteria  |
|------|---|--|
| 1.   | The Bidder /its wholly owned subsidiary shall be a registered manufacturer of solar PV system<br><b>OR</b><br><b>A PV System Integrator</b> in existence for atleast past three audited year.   | Certificate of Incorporation or Registration and relevant proof shall be submitted.  |
| 2.   | The Bidder shall use only SPV modules manufactured in India   | Necessary undertaking letter shall be submitted from the module manufacturer.  |
| 3.   | Bidder shall have a minimum turnover of Rs.3Cr in any one of the last three audited years from 2015-16.<br>Turnover of Parent Company is allowed.   | a) Balance Sheet<br>b) Profit & Loss accounts<br><br><b>All the three</b> audited years from <b>2017-18</b> shall be submitted.            |
| 4.   | Bidder shall have supply and installation experience of 150 Solar Home Lighting systems in the last three years in India (SPV systems installed minimum 3 months prior to the date of bid submission will only be considered) & these systems shall be working satisfactorily.(Lanterns not allowed). | Copy of Work Orders and performance certificate for satisfactory function of those SPV systems obtained from the agency issuing work order |
| 5.   | Various components of the SPV system shall conform to the MNRE standards as per clause "15"   | Copy of test certificates along with reports for each component shall be submitted.  |

| S.No | Minimum Eligibility Criteria  | Proof to be submitted for fulfilling the Eligibility Criteria |
|------|---|---|
| 6.   | Bidder(s) shall not be currently blacklisted by any of the State or Central Government or organizations of the State or Central Government as on date of submission of tender | Necessary Undertaking letter shall be furnished.              |

**Note:**

1. Test reports for integrated Home Lighting System as well as individual component certificates as per clauses 14 &15 from MNRE approved test centres shall be submitted within 30 days from the date of issue of LOA.Beyond which the LOA issued will be cancelled.

**5.INSTRUCTIONS TO THE BIDDER****5.1 General Instructions**

- a) It will be imperative for each Bidder to familiarise himself with the prevailing legal situations for the execution of contract. The Project Director, Vellore District,shall not entertain any request for clarification from the Bidder regarding such legal aspects of submission of the Bids.
- b) It will be the responsibility of the Bidder that all factors have been investigated and considered while submitting the Bids and no claim whatsoever including those of financial adjustments to the contract awarded under this tender will be entertained bythe Project Director, Vellore District,. Neither any time schedule nor financial adjustments arising thereof shall be permitted on account of failure by the Bidder to appraise themselves.
- c) The Bidder shall be deemed to have satisfied himself fully before Bidding as to the correctness and sufficiency of its Bids for the contract and price quoted in the Bid to cover all obligations under this Tender.

- d) It must be clearly understood that the Terms and Conditions and specifications are intended to be strictly enforced. No escalation of cost in the Tender by the Bidder will be permitted throughout the period of Agreement or throughout the period of completion of contract whichever is later on account of any reasons whatsoever.
- e) The Bidder shall make all arrangements as part of the contract for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting systems and train the beneficiaries at various locations at their own cost.
- f) The details of the tentative quantity in Vellore district is indicated in Annexure -1.
- g) The Bidder shall be fully and completely responsible to District Collector/Project Director, DRDA for all the deliveries and deliverables. The bidder shall be responsible for the proper functioning of the finally erected systems.
- h) Statutory obligations/liabilities like Salary, ESI, P.F., as per Labour Laws for the persons employed for this contract will be the responsibility of the Bidder. The District Collector/Project Director, DRDA will not make any direct payment thereof and will not be responsible for any lapses by the Bidder.
- i) The successful Bidder shall agree to accept the entire quantity that is finally allotted to him.
- j) The successful bidder shall provide procurement source with details.

## **5.2 Language of the Bids**

The bid prepared by the Bidder as well as all correspondence and documents relating to the bid shall be in English only.

## **5.3 Bid Currency**

Price shall be quoted in Indian Rupees (INR) only and Payment shall be made in Indian Rupees only.

## 5.4 Goods and Service Tax (GST)

When there is a combined supply of many goods / services, it has to be determined whether it is a Composite supply or mixed supply of goods or services

(a) **COMPOSITE SUPPLY:** A composite supply is one where all the goods or services or a combination has to be supplied together i.e., naturally bundled and there would be a Principal Supply that could be identified (Ex. Supply of Machinery with packaging, insurance and freight the principal supply is machinery). In this case, the rate of principal supply will be applied on entire value.

(b) **MIXED SUPPLY:** A mixed supply is one where the goods or services or a combination thereof which could be individually supplied (like Pizza and Coke) but sold together at a single price. In this case, the highest rate to the good in that mix is applied on all the goods. The GST shall be applicable at appropriate prevailing rates as notified by GST Act. In the event of delay in execution of contract, the GST rate prevailing on the scheduled period or on the actual date of execution, whichever is less only will be admitted. The bidders should have registered under GST Act and furnish GSTIN. In the event of contractor is within TN, SGST & CGST shall apply and if the contractor is outside TN, IGST shall apply.

### **5.4.1 Goods and Service Tax:**

1. The contractor should be required to indicate their GST registration number under the Goods and Services tax Act 2017 in the tender form and produce current GST return filed before state / Central authorities before final settlement of bills.
2. The Contractor shall be deemed to quote the basic rates (inclusive of packaging & forwarding charges, Freight & Insurance charges) of each item and corresponding GST (as applicable) separately.



3. In case of delayed delivery the GST prevailing on the date of dispatch or on the last day of the contractual delivery period whichever less will be admitted for both the cases, the supplier shall furnish documentary evidence while submitting the bills for payment.
4. It is the responsibility of the tenderer to make sure about the correct rates of duty leviable on the material at the time of tendering. If the rates assumed by the tenderer are less than the current rates prevailing at the time of tendering, the department will not be responsible for the mistake and relevant GO's/Letters will be followed for evaluation. If the rates assumed by the tenderer are higher than the current rates prevailing at the time of tendering, the GST prevailing at the time of tendering will only be paid.

#### **5.4.2 INSURANCE:**

Contracting firms shall arrange insurance for the equipment and all its accessories being supplied by them, through any of the Nationalised Insurance Companies. The materials shall be insured to cover transport (from warehouse to site).

The damages if any during transit will be reported within 30 days of receipt of materials. It will be the responsibility of the supplier to replace the defective/damaged materials and make good the shortages and other losses in transit, free of cost, lodge and recover claim from insurance Under-writers/Carriers.

### **5.4.3 PACKING AND FORWARDING**

The packing shall conform to relevant packing standards. The contractor should however, ensure that the packing is such that the materials reach their destination without damage/loss during transit by Rail or Road and subsequent storage. The words "Handle with care" should be printed. The equipment/materials and all its accessories shall be securely packed and despatched, freight paid, duly insured, at supplier's risk and cost. The packing may be in accordance with the manufacturer's standard practice. The supplier is responsible for ascertaining the facilities that exist for Road Transport to site. Each package shall be clearly marked and contain detailed packing list, such as gross weight, net weight etc. The supplier is solely responsible for any loss or damage during transport. The despatch of materials shall be made only after the approval of routine test certificates. The equipment/ Materials shall be unloaded at Destination Sites (as instructed by the Project Director, DRDA) by the supplier.

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| <h3><b>5.5 Clarifications and Amendments</b></h3> |
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- a) The electronic bidding system provides for online clarification. A prospective bidder requiring any clarification of the bidding documents may notify online the authority inviting the bid. The authority inviting bid will respond to any request(s) for clarification received earlier than 48 hours prior to the deadline for submission of bids. Description of clarification sought and the response of the authority inviting the bid will be uploaded for information of the public or other bidders without identifying the source of request for clarification.
- b) A Pre-bid meeting will be held in the office of the Project Director, DRDA, Vellore District. Clarification can also be obtained during the meeting. The bidders should submit their queries in writing (both hard copy and soft copy) on their letterhead.
- c) The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

- d) Minutes of the meeting, including the text of the questions raised (without identifying the source of the enquiry) and the responses given will be uploaded for information of the public or other bidders. Any modifications of the bidding documents, which may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum and not through the minutes of the pre-bid meeting.
- e) Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.
- f) Before the deadline for submission of bids, the purchaser may modify the bidding documents by issuing online corrigendum. The corrigendum will appear on the web page of the website [www.tntenders.gov.in](http://www.tntenders.gov.in) under “Latest Corrigendum” and email notification is also automatically sent to those bidders who have moved this tender to their “My Tenders” area.
- g) Any addendum thus issued shall be part of the bidding documents and shall be deemed to have been communicated to all the bidders who have moved this tender to their “My Tenders” area. In case of any addendum/corrigendum, the system will automatically send e-mails to all bidders who have downloaded the bidding document.
- h) To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the purchaser shall extend, as necessary, the deadline for submission of bids, in accordance with Clause 7.3 (c).
- i) The Project Director, Vellore District, is not responsible for any misinterpretation of the provisions of this tender document on account of the Bidders failure to update the Bid documents based on changes announced through website.

## **5.6 Contacting Tender Inviting Authority**

- a) Bidders shall not make attempts to establish unsolicited and unauthorised contact with the Tender Inviting Authority/Tender Evaluation Committee / Tender Accepting Authority after the opening of the Tender and prior to the notification of the Award and any attempt by any Bidder to bring to bear extraneous pressures on the Tender Inviting/Evaluation/Accepting Authority may lead to disqualification of the Bidder.
- b) Notwithstanding anything mentioned above, the Tender Inviting Authority/Tender Evaluation Committee / Tender Accepting Authority may seek bona-fide clarifications from Bidders relating to the tenders submitted by them during the evaluation of tenders.

## **5.7 Force Majeure**

Neither District Collector/Project Director, DRDA nor the Successful Bidder shall be liable to the other for any delay or failure in the performance of their respective obligations due to causes or contingencies beyond their reasonable control such as:

- Natural phenomena including but not limited to earthquakes, floods and epidemics.
- Acts of any Government authority, domestic or foreign including but not limited to war declared or undeclared, priorities and quarantine restrictions.
- Accidents or disruptions including, but not limited to fire, explosions, breakdown of essential machinery or equipment, power and water shortages.

**5.8 Arbitration**

In case of any dispute, the matter will be referred to a sole Arbitrator to be **appointed by the District Collector** under the "Arbitration and Conciliation Act 1996". The arbitration shall be held in Vellore District, Tamilnadu and the language shall be English only. Subject to the above, the High Court of Madras alone shall have jurisdiction in the matter.

**5.9 Bar of jurisdiction**

Save as otherwise provided in Tamil Nadu Transparency in Tender Act 1998 no order passed or proceeding taken by any officer or authority under this act shall be called in question in any Court and no injunction shall be granted by any court in respect of any action taken or to be taken by such officer or authority in pursuance of any power conferred by or under the above Act.

## **SECTION-B**

### **BID SUBMISSION & EVALUATION**

#### **6 BID PREPARATION**

Bidders shall examine all Instructions, Terms and Conditions and Technical specifications as given in the e-Tender documents. Failure to furnish information required by the Bid or submission of Bids not substantially responsive or viable in every respect will be at the Bidder's risk and may result in rejection of Bids. Bidders shall strictly submit the Bid as specified in the Tender, failing which the bids will be held as non-responsive and will be rejected.

##### **6.1 Letter of Authorisation**

A letter of Authorisation from the Board of Directors or Managing Director or CEO of Bidder organisation authorising the Tender submitting authority or a Power of Attorney shall be submitted in the Techno commercial Bid. The Bids received without the Letter of Authorisation or Power of Attorney will be summarily rejected.

##### **6.2 Submission of Test Certificates / Reports & Samples**

1. The bidder shall submit the test certificates /reports for LED based Home Lighting Systems from thenotified testing agencies as per clause 15.Test Reports for integrated Home Lighting System as well as individual component certificatesas per “clauses 14 & 15”from MNRE approved test centresmay be submitted along with the bid orshall be submitted within 30 days from the date of issue of LOA. Beyond which the LOA issued will be cancelled.
2. Bidders have to make their own arrangements for the testing of their product as per the Standards given in the Tender through the notified Testing Agencies.
3. Cost towards testing the samples shall be borne by the Bidders.

4. The Bidders shall take utmost care to submit the sample which shall meet the technical specifications given in the Tender documents. The supplies and the BRANDS will be allowed as per approved sample only, if the Bidder is selected.
5. Any modification in the BRAND of the components to be used shall be allowed only with the written permission of the District Collector. Any such change of components shall be allowed provided those components have been certified by any MNRE/NABL accredited laboratories for compliance to the stipulated technical specifications as per clauses 14 & 15 of this tender as well as on submission of complete system testing certificate as stipulated in the tender.
6. Bidders are requested to submit the sample of their product to Testing Agency well in advance.

## **7 BID SUBMISSION**

The Bids shall be submitted in two parts namely viz. (1) Techno commercial Bid and (2) Price Bid. The Techno commercial Bid and Price Bid shall be submitted in two separate files.

(Both the above category of documents should be uploaded as prescribed for e-submission).

The bidding under this contract is electronic bid submission through website [www.tntenders.gov.in](http://www.tntenders.gov.in). Detailed guidelines for viewing bids and submission of online bids are given on the website. The Invitation for Bids is published on this website. Any citizen or prospective bidder can logon to this website and view the Invitation for Bids and can view the details of works for which bids are invited. The prospective bidder can submit bids on line; however, the bidder is required to have enrolment/registration in the website and should have valid Digital Signature Certificate (DSC) in the form of smart card/e-token. The DSC can be obtained from any authorised certifying agencies. The bidder should register in the web site [www.tntenders.gov.in](http://www.tntenders.gov.in) using the relevant option available. Then the Digital Signature registration has to be done with the e-token, after logging into the site. After this, the

bidder can login the site through the secured login by entering the password of the e-token & the user id/ password chosen during registration.

After getting the bid schedules, the Bidder should go through them carefully and then submit the documents as asked, otherwise, the bid will be rejected.

The completed bid comprising of documents indicated in the Bid document, should be uploaded on the website given above through e-tendering along with scanned copies of requisite certificates as are mentioned in different sections in the bidding document and scanned copies of the signed Bid Document and EMD in approved form.

### **7.1 Technocommercial Bid**

- a) The Techno commercial Bid enables Project Director, DRDA to evaluate whether the Bidder is techno commercially competent and capable of executing the order. Only those Bids which qualify in the Techno commercial stage will be eligible for the Price bid opening. The Price Bids of Bidders who failed in the Techno commercial stage will not be opened.
- b) The Techno commercial Bid format as given in the Tender shall be filled, signed and stamped in all pages. DRDA will not be responsible for the errors committed in the Bids by the Bidders.
- c) The Techno commercial Bid shall strictly not contain any Price indications or otherwise the Bid will be summarily rejected.

#### **7.1.1 Details to be furnished in the Techno Commercial Bid**

- a) The EMD amount shall be submitted in the prescribed form.  
The scanned copy of EMD / EMD exemption document shall be uploaded along with the other techno commercial bid. The hard copy of the EMD / EMD exemption document shall be submitted at the time of opening of the techno Commercial bid.



In addition to the identification required as above, the EMD envelope shall indicate the name and address of the bidder to enable the bid to be returned unopened in case it is declared late.

If the envelope is not sealed and marked as above, the Tender Inviting Authority will assume no responsibility for the misplacement or premature opening of the bid.

- b) Authorisation letter from the Board of Directors/ Managing Director or CEO or Power of Attorney to sign the Tender documents shall be submitted.
- c) The blank Tender document in full shall be printed, signed by the authorised person and stamped in all pages and shall be uploaded along with the techno Commercial bid as a token of accepting the conditions.
- d) The Techno Commercial Bid shall be duly filled, signed by the authorised person and stamped in all the pages and shall be submitted.
- e) The supporting documents to prove Bidder's eligibility shall be duly attested and shall be submitted.
- f) Test certificates / reports shall be submitted for components/ Home Lighting system from notified testing agencies, as per "clauses 14 & 15".
- g) Balance Sheet and Profit and Loss Accounts shall be signed by the authorised person and stamped in all pages and shall be submitted.
- h) All the required documents insisted in the Tender shall be enclosed in the Techno Commercial Bid.
- i) The documentary evidence shall establish Bidder's qualifications to the satisfaction of the District Collector.

The hard copies of the all above documents shall be submitted at the time of opening of Techno Commercial bid. In case of the original EMD/EMD exemption document is not submitted at the time of opening of bids, then such bids will be summarily rejected.

## **7.2 Price Bid**

### **7.2.1 Details to be furnished**

- a) All the Price items as asked in the Tender shall be filled in the Price Bid format. The Tender is liable for rejection if Price Bid contains conditional offers or partial offers
- b) The price quoted by the Bidder shall include the breakup cost of the Solar Home Lighting System viz., PV panel, Battery, Inverter, LED lamp etc.,
- c) All the prices quoted shall be inclusive of packing forwarding, freighting and insurance, installation commissioning charges and, comprehensive maintenance charges for 5 years (basic price) and applicable GST separately.
- d) The price quoted by the Bidder shall be valid for a period specified in Clause 8.2 of the tender document.
- e) The final negotiated prices offered by the successful Bidder shall be kept firm during the period of Contract including the period of extension of time if any. The Bidders shall particularly take note of this factor before submitting the Bids.

## **7.3 Mode of Submission of Bids**

- a) The bidder shall submit online two separate files. Part I, marked as Part I: Techno Commercial Bid and Part II; marked as Part II: Price Bid.
- b) The contents of the Techno Commercial Bid and Price bid shall be as specified in Bid document. All the documents are required to be signed digitally by the bidder. After electronic on line bid submission, the system generates a unique bid identification number which is time stamped. This shall be treated as acknowledgement of bid submission.
- c) e-Bids and EMD cover must be received by the Tender Inviting Authority (The Project Director, DRDA, Vellore District) at the address specified above not later than time and date of bid submission. In the

event of the specified date for the submission of bids is declared a holiday, the Bids will be opened on the next working day.

- d) The Tender Inviting Authority (The Project Director, DRDA, Vellore District) may extend the deadline for submission of bids by issuing an amendment in accordance with Clause 5.4(h), in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.
- e) No e-bids can be submitted after the prescribed deadline in Clause 7.3 (c). Any EMD covers received by the Tender Inviting Authority (The Project Director, DRDA, Vellore District ) after the deadline prescribed in Clause 7.3 (c) will be returned unopened to the bidder.

#### **7.4 Modification and withdrawal of Bids**

Bidders may modify their bids by uploading their request for modification before the deadline for submission of bids. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. For this purpose, modifications by other means will not be accepted. In online system of bid submission, the modification and consequential re-submission of bids is allowed any number of times.

- No bidder shall be allowed to withdraw the tenders after submitting the tender.
- A bidder may submit a modified tender before the last date of receipt of tender, provided that when more than one tender is submitted by the same bidder the lowest eligible financial tender shall be considered for evaluation.
- No bid shall be modified after the deadline of submission of bids.
- Modification of a bid between the deadline for submission of bids and the expiration of the original period of bid validity may result in the forfeiture of the bid security.

## 8 BID OPENING

### 8.1 Techno Commercial Bid Opening

The Tender Inviting Authority (The Project Director, DRDA, Vellore District) will open all the TechnoCommercial Bids received and EMD covers received (except those received late), in the presence of the Bidders or their authorised representatives at the time and due date of tender opening at the office of The Project Director, DRDA,Vellore District . In the event of the specified date of Bid opening being declared a holiday, the Bids will be opened at the appointed time and location on the next working day.

The representative(s) of the Bidder who choose(s) to attend Tender opening shall bring an authorization letter from the Bidder. A maximum of two representatives for each Bidder will be allowed to attend the Tender opening. **On opening the Techno Commercial bid cover, if EMD in the prescribed form is not found, the bid will be summarily rejected.**

The Project Director, DRDA or his authorized representatives will open the bids online and this could be viewed by the Bidders also online.

The file containing the Part I of the bid will be opened first. Bids for which original EMD/EMD exemption document have not been received at the time opening of bids will be rejected and the technical bids of such bids will not be opened.

In all cases, the amount of EMD and validity of the bid shall be scrutinized. Thereafter, the Bidders' name and such other details as the Employer may consider appropriate, will be notified as Part I bid opening summary by the authority inviting bids at the online opening. A separate electronic summary of the opening is generated and kept online.

The Employer will also prepare minutes of the Bid opening, including the information disclosed in accordance with the para above and upload the same for viewing online.

Evaluation of Part I of bids with respect to bid security, qualification information and other information furnished in Part I of the bid in pursuant to the conditions of the bid document, shall be taken up and completed within five working days of the date of bid opening, and a list will be drawn up of the qualified Bidders whose Part II of bids will be eligible for opening.

The result of evaluation of Part I of the Bids shall be made public on e-procurement following which there will be a period of 5 working days during which any Bidder may submit complaint which shall be considered for resolution before opening of Part II of the bid. Any complaint shall be dealt with in accordance with complaint handling protocol as available on the e-procurement portal, [www.tntenders.gov.in](http://www.tntenders.gov.in).

### 8.2 Tender Validity

- a) Bids submitted shall remain valid for a period of 90 days from the date of Tender opening. If the bid validity is lesser than 90 days, the Bid will be rejected as non-responsive.
- b) In exceptional circumstances, the District Collector may solicit the Bidders to extend the validity in accordance with the provisions of the Tamil Nadu Transparency in Tenders Act, 1998 and Rules, 2000. The Bidder shall extend price validity and Bid security validity.

### 8.3 Initial

Initial Bid scrutiny will be held and Tenders as given below will be treated as non-responsive.

- Tender received **without** EMD amount
- Tender **not** submitted in two parts as specified in the Tender and signed and stamped in all pages of the Bid
- Tender received **without** the Letter of Authorization as specified in the Tender
- Tender found with **suppression of facts/details**
- Tender with **incomplete** information, subjective, conditional offers and partial offers

- Tender submitted **without** supporting documents to prove Eligibility criteria and Evaluation
- Tender **not** complying with any of the clauses stipulated in the Tender
- Tender with **lesser** validity period

All responsive Bids will be considered for further evaluation. The decision of the District Collector will be final in this regard.

#### **8.4 Clarifications by DRDA**

When deemed necessary, the Project Director/ the District Collector, Vellore District, may seek bona-fide clarifications on any aspect from the Bidder. However, that will not entitle the Bidder to change or cause any change in the substance of the Bid or price quoted. During the course of Techno commercial Bid evaluation, the Project Director/ the District Collector, Vellore District, may seek additional information or historical documents for verification to facilitate decision making. In case the Bidder failed to comply with the requirements of the Project Director/ the District Collector, Vellore District, as stated above, such Bids may at the discretion of the District Collector, shall be rejected as technically non-responsive.

#### **8.5 Price Bid Opening**

Bidders who are qualified in Techno commercial Bid only will be called for Price Bid opening. The Price Bids will be opened in the presence of the Bidders at DRDA of the District. The Bidders or their authorized representatives (maximum two) will be allowed to take part in the Price Bid opening.

The Employer shall inform, the Bidders, who have qualified during evaluation of Part I of bids, of the date, time of online opening of Part II of the bid, if the specified date of opening of financial bid is changed. In the event of the specified date being declared a holiday for the Employer, the bids will be opened at the appointed time and location on the next working day.

The Bidders' names, the Bid prices, the total amount of each bid, and such other details as the Employer may consider appropriate will be notified online by the Employer at the time of bid opening. Any Bid price, which is not declared and recorded, will not be taken into account in Bid Evaluation.

The Employer shall prepare the minutes of the online opening of Part II of Bids and upload the same for viewing online.

## **9 BID EVALUATION**

### **9.1 Suppression of facts and misleading information**

- a) During the Bid evaluation, if any suppression or misrepresentation of information is brought to the notice of the Project Director/ the District Collector, Vellore District, the District Collector shall have the right to reject the Bid and if it is after selection, will terminate the contract as the case may be and without any compensation to the Bidder and the EMD/ Security Deposit as the case may be, shall be forfeited.
- b) Bidders shall note that any figures in the proof documents submitted by the Bidders for proving their eligibility is found suppressed or erased, the Project Director/ the District Collector, Vellore District, shall have the right to seek the correct facts and figures or reject such Bids.
- c) It is up to the Bidders to submit the full copies of the proof documents to meet out the criteria. Otherwise, the Project Director/ the District Collector, Vellore District, at his discretion may or may not consider such documents.
- d) The Tender calls for full copies of documents to prove the Bidder's experience, capacity and other requirements to undertake the project.

### **9.2 Techno Commercial Bid Evaluation**

- a) The tenders of the Bidders which have duly complied with the Eligibility Criteria will be eligible for further processing.
- b) The tenders, which do not conform to the technical specifications or tender conditions or the tenders from bidders without adequate capabilities for supply & installation, will be rejected. The tenders of the Eligible Bidders alone will be considered for further evaluation.

### 9.3 Price Bid Evaluation

- 1) The Price Bid evaluation will be conducted as stipulated in the Tamil Nadu Transparency in Tenders Act 1998 and Tamil Nadu Transparency in Tenders Rules 2000. The Price evaluation will include all Duties and Taxes as given below.
  - a. In cases of discrepancy between the cost quoted in Words and in Figures, the lower of the two will be considered.
  - b. In case of discrepancy between the actual total of price break up and the total mentioned in the bid, the lower of the two will be considered.
  - ii. All the prices quoted shall be inclusive of packing forwarding , freighting and insurance, installation commissioning charges and, comprehensive maintenance charges for 5 years (basic price) and applicable GST separately.
- 3) The lowest cost as per the above evaluation will be adjudged as L<sub>1</sub>. The Project Director/The District Collector, Vellore District will not be responsible for any erroneous calculation of tax rates or any subsequent changes in rates or structure of applicable taxes. All differences arising out as above shall be fully borne by the Successful Bidder.
- 4) The tender accepting Authority may negotiate with the Lowest Cost offered Bidder (L1) for further reduction of the price. The District Collector reserves the right to ask other Bidders to match **L<sub>1</sub>** price.
- 5) Under no circumstances shall a tender increase his price or refuse to accept the entire quantity that is finally allotted to him during the validity period after tenders are opened. Any Bidder who does so, resulting in re-allotment of the tendered quantity to another bidder or recalling of tenders by DRDA or additional expenditure to DRDA, shall not only lose his EMD but it will also be being Black listed by the District Collector. The District Collector also reserves the right under the law to recover damages in addition to forfeiture of EMD.



#### **9.4 Award of Contract**

- 1) The District Collector shall award the bid L1 bidder and also taking into consideration the responsiveness of the bid. A substantially responsive bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or specification of the Materials; (b) which limits in any substantial way, inconsistent with the bidding documents, the tendering authority's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other Bidders presenting substantially responsive bids.
- 2) In case if the L1 Bidder offers less than 100% of the quantity put to tender, the District Collector after placing orders with the lowest evaluated Bidder for the entire quantity offered by such Bidder subject to his ability to supply, may negotiate with the next lowest Bidders in strict ascending order of evaluated price and require them to match the price offered by the lowest evaluated Bidder and empanel the list of successful Bidders for the rate contract as per the provisions in Rule 31 of Tamilnadu Transparency in Tenders Rules, 2000.
- 3) No dispute can be raised by any Bidder whose Bid has been rejected and no claims will be entertained or paid on this account.

#### **9.5 Negotiation and other conditions**

- 1) Negotiate with the Bidder whose offer is the lowest evaluated price for further reduction of prices.
- 2) Modify, reduce or increase the quantity requirements to an extent of 25% of the Tendered quantity as per the provisions of Tamil Nadu Transparency in Tenders Act 1998 and Tamil Nadu Transparency in Tenders Rules, 2000.
- 3) Change the list of areas of installation locations from time to time based on the requirement.
- 4) Ask other qualified Bidders to match **L<sub>1</sub>** price.

- 5) Reallocate the quantity to other Bidder, if performance of the Bidder is not as per the completion Schedule.
- 6) Inspect the bidder's factory/office premises and those of major component manufacturers from whom bidder proposes to purchase, before or after placement of orders and based on the inspection, the District Collector reserves a right to modify the quantity ordered.
- 7) Withhold any amount for the deficiencies in the service aspect of SPV systems installed at the identified location.
- 8) Notwithstanding anything contained in any of the contract documents, the District Collector shall have the right to relax or waive any of the conditions of the contract wherever deemed necessary in the interest of the District Collector.

#### **9.6. Banning of Business Deal**

The bidder/ firm will be banned from business with DRDA if any of the particulars produced by the bidder such as Auditor Certificate, Annual account, GST returns Clearance Certificate, Test certificate, etc. are found to be incorrect, or if there is breach of any of the conditions in the contract which leads to delay or leads to incurring any additional cost by the DRDA to complete the awarded contract.

## SECTION-C

### AWARD & EXECUTION

#### 10 AWARD OF WORK

##### 10.1 Acceptance of the Tender

The final acceptance of the Tender is entirely vested with the District Collector who reserves the right to accept or reject any or all of the Tenders in full or in part. The Tender accepting authority may also reject any tender for reasons such as change in the technology, court orders, accidents or calamities and other unforeseen circumstances. After acceptance of the Tender by the District Collector, the Bidder shall have no right to withdraw their Tender or claim higher price. In the event of doing so, the bidder will be blacklisted and further deemed fit action will be taken against the bidder.

##### 10.2 Letter of Acceptance (LOA)

After acceptance of the Tender by the District Collector, a Letter of Acceptance (LOA) will be issued only to the Successful Bidder(s). The District Collector has the right to issue LOA to more than one bidder.

##### 10.3 Payment of Security Deposit (SD)

**a)** The Successful Bidders will be required to remit the Security Deposit equivalent to 5% (Five percent) of the value of the Work Order excluding AMC charges. The SD shall be paid by way of Demand Draft /Banker's Cheque drawn in **favour of "Collector/Chairman , DRDA" payable at Vellore District. The SD shall be paid within 15 days** from the date of issue of **Letter of Acceptance by the District Collector. If SD is paid beyond 15 days then a penalty will be levied on daily basis.**

**b)** The Security Deposit will be refunded to the Successful Bidder only on completion of 5 years comprehensive maintenance period from the date of completion of entire work involving supply, installation & commissioning of SPV Home Lighting Systems to the satisfaction of the District Collector. The Security Deposit held by the District Collector till it is refunded to the Successful Bidder will not earn any interest thereof.

c) The Security Deposit/EMD will be forfeited if the Successful Bidder(s) withdraw(s) the Bid during the period of Bid validity specified in the Tender or if the Bidder fails to sign the contract (or) if the contract is not fulfilled as per the agreement.

#### **10.4 Execution of Agreement**

- a) The Successful Bidder shall execute a Contract in the INR 100 non-judicial stamp paper bought in Tamil Nadu only in the name of the Bidder, within 10 days from the date of Letter of Acceptance issued by the District Collector.
- b) The Successful Bidder shall not assign or make over the contract, the benefit or burden thereof to any other person or persons or body corporate for the execution of the contract or any part thereof without the prior written consent of the District Collector. The District Collector reserves its right to cancel the work order either in part or full, if this condition is violated.
- c) In case of the successful bidder fails to execute necessary agreements as prescribed, within the stipulated period, then his EMD will be forfeited and his tender held as non-responsive.

#### **10.5 Release of Firm Work Order**

After execution of the Contract, payment of Security Deposit acceptance of test reports and test certificates as specified in clauses 14&15 **“Firm Work Order”** for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems will be issued to the Successful bidder by the District Collector.

#### **10.6 Installation & Completion Schedule**

- a) The SPV Home Lighting Systems shall be installed and commissioned in the Houses of identified beneficiaries in the villages allotted to the bidder, in the Vellore district.

- b) The entire work involving Supply, Installation and Commissioning of SPV Home Lighting Systems shall be completed **within 6 months** from the date of hand over of the houses (houses with the ready condition for installation).
- c) **The supplier shall complete 20% of work within 2 months, 40% of work within next 2 months and the balance 40% of work in next 2 months.**

## **10.7 Release of SD**

The Security Deposit will be refunded to the Successful Bidder only on completion of 5 years comprehensive maintenance period from the date of completion of entire work involving Supply, Installation, Commissioning of SPV Home Lighting Systemsto the satisfaction of the District Collector. Such completion will be arrived at when the entire work as stated above is completed by the Bidder as per the contract agreement and as per Work Order (s) issued by the District Collector from time to time.

## **10.8 Termination of Contract**

### **10.8.1 Termination for default**

- a) The District Collector may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of 7 days, sent to the Successful Bidder, terminate the contract in whole or part, (i) if the Successful Bidder fails to install and commission the solar home lighting systems within the time period(s) specified in the Contract, or fails to fulfil the requirements as per the Installation and Completion Schedule or within any extension thereof granted by the District Collector; or (ii) if the Successful Bidder fails to perform any of the obligation(s) under the contract; or (iii) if the Successful Bidder, in the judgment of the District Collector, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract. The Bidder shall observe highest standard of ethics during bidding process and execution of the project. The Tender accepting authority will reject

a proposal for award or terminate the contract, if it determines in the judgment of the District Collector, the Bidder recommended for award, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract.

- b) In the event the District Collector terminates the Contract in whole or in part, the District Collector may opt upon terms and in such manner as it deems appropriate, the services of the other bidders and the Successful Bidder shall be liable to DRDA for any additional costs due to this. However, the Successful Bidder shall continue the performance of the contract to the extent not terminated.

### **10.8.2 Termination for Insolvency**

The District Collector may at any time terminate the Contract by giving written notice with a notice period of 7 days to the Successful Bidder, if the Successful Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Successful Bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to DRDA.

### **10.8.3 Termination for Convenience**

The District Collector may, by written notice, with a notice period of seven days sent to the Successful Bidder, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the District Collector's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. On termination, the successful Bidder is not entitled to any compensation whatsoever.

## **11 EXECUTION OF WORK**

### **11.1 Pre-Despatch Inspection**

#### **11.1.1 Components manufactured in India**

- a) Successful Bidder shall conduct 100% pre-despatch inspection on all the components (including those purchased from others) to be supplied in the installation & commissioning of SPV Home lighting systems as per the tender specification, at the manufacturing plants. In-house testing facility for Quality Assurance shall be available at the manufacturing plants.
- b) The District Collector will nominate third party agencies who will conduct independent pre-dispatch inspection (PDI) and specification conformity of the product(s) manufactured by the successful bidder or of the major components purchased from other manufacturers on random sample basis, at the manufacturer's plant. The successful bidder shall make necessary arrangements for inspection of components purchased from others by third party agencies at the respective manufacturing plants. The infrastructure for testing the components as called for in the specifications must be available at the manufacturing plants. Calibrated equipments certified by NABL accredited labs shall be available at the manufacturing plants for testing.
- c) Size of each lot shall be 100 nos or multiples, thereof for each component. For each lot, 5% sample will be tested by third party inspection agencies appointed by the District Collector. Only after the pre despatch inspection agency clears the lot, it will be permitted to be installed in the field. A bar code/hologram sticker shall be affixed to each component of such accepted lots. Lot will be rejected, if any sample test results shows 2 or more samples failing out of 5 samples tested. The successful bidder shall bear the cost of pre despatch Inspection of the lot replacing the rejected lot. If the bidder desires to have smaller lots, he has to bear the cost of inspection.
- d) Components to be supplied must give same performance results or better results with respect to technical evaluation results.

- e) The District Collector may nominate his own officers to be at the manufacturing plant to supervise the quality of manufacturing process. This will be in addition to the third party inspection.

### **11.2 Bar Coding**

All passed components, will be bar coded with Hologram Security Label supplied by DRDA which will be affixed on each of the component before Despatch to the site.

### **11.3 Scope of Work**

- a) Scope of work covers Design, Supply, Installation & Commissioning of LED based SPV Home Lighting Systems as per the Technical Specification. Any deviation from the specification will not be accepted under any circumstance.
- b) Separate Solar wiring including LEDs Lamp fixtures/Holders and switches are in the scope of the successful bidder.
- c) Performance testing of the complete system.
- d) Providing earthing as per the technical specification.
- e) Comprehensive maintenance of the system for 5 years.
- f) Insuring the goods in transit is the responsibility of the bidders.
- g) The list of locations will be provided to the successful Bidder by the District Collector.
- h) The supplier shall send status report on installation in the format to be prescribed in such intervals as may be required by DRDA from time to time till the execution of the entire order.
- i) The entire work shall be completed as per the Installation & Completion schedule specified in clause **10.6**
- j) The supplier shall undertake to supply spares free of cost for the Maintenance of the offered items during the warranty period. The successful bidder shall keep all the spares available for sale at least for a period of 5 years after the completion of the warranty period.



- k) A leaflet containing the details of the service centres within the district responsible to attend the installation, warranty services at each district. name and designation of the contact persons and centre in-charge, higher level in-charge who is responsible to oversee the service centres, person to whom complaints can be made in case the service provided by any centre is not satisfactory, phone, mobile numbers & email address must be provided to each beneficiary at the time of handing over of Solar home lighting systems. This will enable the beneficiaries to directly approach the service centres in the event of repairs. These details also shall be provided to DRDA.
- l) If the operation or use of the system proves to be unsatisfactory during the warranty period, supplier shall replace the faulty ones or carry out necessary repairs as per the warranty terms and conditions agreed upon with the District Collector.
- m) In case the supplier fails to carry out the warranty regulations, the District Collector will engage any other agency and carry out the service/replacement and deduct the amounts from the warranty amount retained by the District Collector as per the Payment terms or from their pending bills (or) any money due (or) payable to them (or) recover from the successful bidder.
- n) Depending upon the ground situations and instructions from the District officials, the District Collector reserves the right to divert the quantity from the allotted Successful Bidder to other Successful Bidders.

#### **11.4 Insurance**

Transportation of components to the installation site and insuring the goods in transit is the responsibility of the Bidder. The goods installed under the contract shall be covered for comprehensive Insurance by the successful Bidder against loss (or) damage incidental to transportation, storage at site and delivery to site during the erection period.

### 11.5 Handing Over

- a) The system shall be handed over to the beneficiary on the same day of Installation & Commissioning, through prescribed handing over and taking over format.
- b) Hands on Training on maintenance of solar home lights shall be arranged for all the beneficiaries, their family members and for the people selected for that purpose in all the Panchayats.

### 11.6 Inspection by Departmental officers

Receipt of Installation & Commissioning Certificate will be issued jointly by the Block Development Officer (BP) and Assistant Engineer/Block Engineer, of the concerned Block and TEDA Engineer of the District after the inspection.

### 11.7 Monitoring Software

Monitoring Installation, Commissioning and Maintenance will be done with NIC software at District level.

#### 11.7.1 Service Centres

- a) The supplier shall set up office cum service centre facility in the District within 30 days from the date of issue of Work Order by the District Collector, else the SD shall be forfeited & Work Order cancelled. These service centres shall operate throughout the warranty period of 5 years plus **a grace period of three months.**
- b) Depending on the ground conditions and necessity, the District Collector reserves the right to divert the quantity of SPV Home Lighting Systems from one allotted supplier to others (in case if the second bidder also matches the L1 rate).

### 11.8 Comprehensive Maintenance for 5 years

1. CMC shall begin from the 3<sup>rd</sup> month after the month of installation and meticulous records of the same shall be maintained.
2. Comprehensive Maintenance charge for 5 years is fixed at 5% of the total system cost @ 1% per year.

3. The Successful Bidder shall provide 5 years comprehensive maintenance of the SPV home lighting systems, which shall include corrective maintenance, repair (or) replacement, free of cost on site.
4. The service personnel of the Successful Bidder will make routine quarterly maintenance visits. The maintenance shall include thorough testing & replacement of damaged parts. Apart from this, any complaint registered/ service calls received shall be attended to and the system shall be repaired/restored/replaced within 7days.
5. If the successful bidder, having been notified by the end user fails to rectify the defect(s) and restore the home lights to good working condition within the period specified above, then a penalty of Rs.25 per non-working system per day of the breakdown period beyond 7 days will be levied. This will be deducted from the bills due.
6. A separate Service & Maintenance card shall be maintained at each house as per the format provided by the District Collector.
7. The deputed personnel shall be in a position to check and test all the components regularly, so that preventive actions, if any, could be taken well in advance to save any component from damage. Any abnormal behaviour of any equipment shall be brought to the notice of the District Collector for appropriate action.
8. Normal and preventive maintenance of the SPV Home Lighting Systems such as cleaning of module surface, tightening of all electrical connections, cleaning & greasing of battery terminals etc., are also the duties of the deputed personnel during quarterly maintenance visits.
9. During the comprehensive maintenance period of the SPV home lighting systems, if there is any loss or damage to any component due to miss management/miss handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/rectification. The damaged component may be repaired or replaced by new component.

10. The District Collector reserves the right to claim damages and Costs for non-fulfilment of warranty, apart from forfeiting un-paid amount if any, in the event of unsatisfactory maintenance.

### **11.9 Product Take Back & Recycling**

Proper decommissioning and recycling of SPV panels, Batteries & electronics etc., are necessary to ensure that harmful materials are not released in to the environment. Hence, an under taking from the successful bidder for product take back after expiry of their life shall be submitted. It is mandatory for the successful bidder to comply with batteries (Management and Handling) Rules 2001 of MOEF, as amended from time to time.

### **11.10 Warranty**

1. (a) The SPV panel shall carry a warranty of minimum 25 years.  
 (b) The SPV panel must be warranted for their output peak watt capacity which shall not be less than 90% at the end of 12 years and 80% at the end of 25 years.  
 (c) The PCU/battery charger/ Charge controller shall carry a warranty of minimum 5 years.  
 (d) The battery shall carry a warranty of minimum 5 years.  
 (e) The **LED luminaries shall carry a warranty of minimum 5 years.**
2. The SPV home lighting systems installed and commissioned shall be under a warranty against any manufacturing defect for a period of 5 years from the date of Commissioning.
3. The mechanical structures, electrical works including power conditioners/charge controllers/ maximum power point tracker units/ distribution boards/digital meters/ switchgear/ storage batteries etc. and overall workmanship of the SPV home lighting systems must be warranted against any manufacturing/design/ installation defects for a minimum period of 5 years.

4. The warranty will be against breakages, malfunctions, non-fulfilment of guaranteed performance and breakdowns due to manufacturing defects or defects that may arise due to improper operation of electrical / electronic components of the system but do not include physical damages by the end users.
5. The above warranty shall take effect from the date on which the system is taken over by the beneficiary after commissioning.
6. The successful Bidder shall be liable to make good the loss by replacing the defective product during the warranty period for the entire system free of cost, failing which the District Collector will deduct the amount from the amount retained by DRDA as per Payment terms (or) issue recovery and also the bidder will be blacklisted.
7. The warranty will cover all the materials and goods involved in the installation and commissioning of solar home lighting systems by the successful Bidder under this contract irrespective of the fact whether these have been manufactured by the Successful Bidder or not. The decision in this regard by the District Collector is final and binding on the successful bidder.

#### **11.11 Traceability of the product to be supplied**

In order to prevent the misuse of the product such as unauthorised sale or diversion to the open market, a logo shall be incorporated in the product.

**Design approval for the logo shall be obtained from DRDA before using in the production.** The above feature is meant for the specific supply to DRDA and the successful Bidders are not permitted to use them for their normal sale.

### **11.12 Workmen's Compensation Insurance:**

This insurance shall protect the Contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability disease or death of its or its or its Sub-Contractor's employees, which for any reason are not covered under the Workmen's Compensation Act, 1948. The liabilities shall not be less than Workmen's Compensation.

**Compensation:** The contractor shall arrange to exercise effective supervision over the works so as to ensure safety to the men and materials. In the case of accidents to the workmen arising out of and in the course of employment, the contractor shall pay necessary compensation to them according to the workman's compensation act, besides arranging immediate medical aid. He shall indemnify the District Collector against any liability whatsoever in this regard and execute a bond accordingly. In case, the contractor fails to pay the compensation within the reasonable time, the District Collector may settle the claim and arrange to recover the same time, the District Collector may settle the claim and arrange to recover the same from the contractor.

## **12 LIQUIDATED DAMAGES**

- 1) If the Successful Bidder fails to achieve substantive completion (75% of allotment) as per the Installation & Completion schedule specified, Liquidated Damages at the rate of 0.5% per completed week on the value of the unfinished / non-commissioned quantity of the work order will be levied subject to a maximum of 10%. The Liquidated Damages amount will be automatically deducted from the Bills submitted by the Successful Bidder. If the installation is not completed, the District Collector will make alternate arrangements and the cost incurred by DRDA for doing the same will be recovered from the Successful Bidder.

- 2) The successful bidder's performance will be reviewed periodically. The shortfall in Installation & Completion schedule will be reduced from the overall orders given to the successful bidder. An equivalent quantity may be allocated to the good performing Successful Bidder then and there as additional work order.

### **13 PAYMENT TERMS**

- 1) All payments will be made in INR only.
- 2) No advance will be paid or no letter of credit will be issued.
- 3) Payment will be made after the issue of Receipt, Installation & Commissioning Certificate issued jointly by the Block Development Officer (BP) and Assistant Engineer/Block Engineer of the concerned Block and TEDA Engineer in the District.
- 4) Comprehensive Maintenance charges will be paid annually on successful completion of maintenance work each year.
- 5) The CMC payment will be subject to fulfilment of Warranty/ Comprehensive Maintenance obligations.
- 6) The Successful Bidder will have full and exclusive liability for payment of all Duties, Taxes and other statutory payments payable under any or all of the Statutes/Laws/Acts etc., now or hereafter imposed.

## SECTION-D

### TECHNICAL SPECIFICATION

#### 14 Technical Specifications for LED based SPV Home Lighting Systems

#### I. DEFINITION

The Solar Home Lighting System aims at providing solar electricity for operating lights for specified hours of operation per day.

#### II. MODEL

| Component        | Specifications  |
|------------------|---|
| PV Module        | Indigenous Crystalline module not less than 50 Wp under STC.  |
| Lamps            | 5 Nos LED luminaries with input power consumption not more than 7W x 2 nos, 5W x 2 nos & 3W x 1 no  |
| Battery bank     | not less than 12V, 40AH LMLA / VRLA Battery   |
| Other Components | Control electronics, Module mounting hardware, Battery box, Inter- connecting wires/cables, Switches, Operation, instruction and maintenance manual |

#### III. DUTY CYCLE

Average hours of Operation per Day- 5 Lights, 5 Hours a day with one day autonomy.



#### IV. PV MODULE

1. PV Module shall contain crystalline silicon. **Only indigenous modules shall be used in the project.** The power output of the PV module shall be min 50 Wp under STC.
2. The offered module shall be in accordance with the requirements of MNRE. Latest edition of IEC 61215 / IS 14286. The bidder shall submit appropriate certificates.
3. PV modules must qualify to IEC 61730 Part 1- requirements for construction & Part 2 - requirements for testing, for safety qualification.
4. PV modules must qualify Salt Mist Corrosion Testing as per IEC 61701.
5. The power output of the PV module must be reported under standard test conditions (STC). I\_V curve of the sample module shall be submitted.
6. The efficiency of the crystalline PV modules shall be minimum 13% and fill factor more than 70%.
7. The open circuit voltage of the PV modules under STC shall be at least 21.0 Volts.
8. PV modules must be warranted for output wattage, which shall not be less than 90% at the end of 12 years and 80% at the end of 25 years.
9. The terminal box on the module shall have a provision for opening for replacing the cable, if required.

##### **Other general requirements of PV module**

1. The module frame shall be made of corrosion resistant materials, which shall be electrolytically compatible with the structural material used for mounting the module.
2. Necessary protective devices in order to protect the PV module from the surges shall be provided.
3. Module Junction box (weather resistant) is designed for long life out door operation in harsh environment.
4. Each PV module must use a RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside the laminate, but must be able to withstand harsh environmental conditions.)

- i. Name of the manufacturer of PV Module
- ii. Name of the Manufacturer of Solar cells
- iii. Month and year of the manufacture (separately for solar cells and module)
- iv. Country of origin (solar cells)
- v. I-V curve for the module
- vi.  $W_m$ ,  $I_m$ ,  $V_m$  and FF for the module
- vii. Unique Serial No and Model No of the module
- viii. Date and year of obtaining IEC PV module qualification certificate
- ix. Name of the test lab issuing IEC certificate
- x. Other relevant information on traceability of solar cells and module as per ISO 9000 standard.

#### **V.LED Luminaire**

1. The light source will be of white LED type. The colour temperature of white LEDs used in the system shall be in the range of 5500° K – 6500° K. Use of LEDs which emit ultraviolet light will not be permitted.
2. The illumination shall be uniform without dark bands or abrupt variations, and soothing to the eye. Suitable diffusers shall be used for reducing glare and providing soft, uniform light. Higher light output will be preferred. The light output from the white LED light source shall be almost constant.
3. The lamps shall be housed in an assembly suitable for indoor use and shall comply to IP40. The LED housing shall be made of aluminium having sufficient area for effective heat dissipation and heat resistant clear glass/ high quality poly carbonate. The temperature of heat sink shall not increase more than 30°C above ambient temperature even after 48 hrs of continuous operation. .
4. LED lamps of CREE/ NICHIA/ OSRAM/ SEOUL/ PHILIPS LUMILEDS/ LEDNIUM or equivalent shall only be used.
5. The LEDs used in the luminaire shall have life time more than 50,000 hrs as per L 70.

6. Power consumption of the LED Luminary shall not be more than 7W x 2 nos (each in Hall & Verandah), 5W x 2 nos (each in Bed room & Kitchen) & 3W x 1no in Toilet (including LED Driver power loss, not exceeding 10%).
7. From the light source mounted at a height of 2.5 meter shall give the min lux as below assuming zero reflection factor:
  - a) 7W in Hall (3.75 x 2.44 x 3 m) –  
Average lux  $\geq 7$  & Uniformity (Min/Avg)  $\geq 0.7$
  - b) 5W in Kitchen (2.73 x 2.44 x 3m) -  
Average lux  $\geq 5.5$  & Uniformity (Min/Avg)  $\geq 0.8$
  - c) 3W in Toilet (1.3 x 1.3 x 3m)-  
Average lux  $\geq 3.5$  & Uniformity (Min/Avg)  $\geq 0.8$
8. Important Parameters:
  - LED DC current regulation – better than 3 %
  - Input – 12 V DC
  - CRI -  $> 75$  %
  - Lighting quality- Free from glare and flickering
  - Ambient temp– upto 50°C
  - Total electronics efficiency  $\geq 90$  %
9. The connecting wires used inside the luminaries, shall be low smoke halogen free, fire retardant e-beam cable and fuse protection shall be provided at input side.
10. Auto resettable reverse polarity protection shall be provided
11. LED lighting unit shall comply to LM -79-08 and LM -80-08 standards
12. The make, model number, country of origin and technical characteristics of white LEDs used in the lighting system must be furnished.
13. Holders – The lamp holder for fixing the LED luminarie shall only be angled screw thread type (E27)

## **VI. BATTERY**

- (i) The battery shall be, Low Maintenance Lead Acid (LMLA) (or) Valve Regulated Lead Acid (VRLA). The batteries shall conform to IEC 61427/

IS 1651/ IS 13369 in case of tubular lead acid and IS 15549 in case of VRLA.

- (ii) The battery shall have a minimum rating of 12V, 40Ah at C/10 discharge rate.
- (iii) At least 50 % of the rated capacity of the battery shall be between fully charged & load cut off conditions.
- (iv) Battery terminal shall be provided with covers.
- (v) Suitable carrying handle shall be provided.
- (vi) Bidder shall mention the design cycle life of batteries at 80%, 50% and 20% depth of discharge at ambient temperature upto 45°C.
- (vii) The batteries shall be designed for operating in ambient temperature of site.
- (viii) The self-discharge of batteries shall be less than 3 % per month at 20°C and less than 6% per month at 30°C.

## **VII. Battery Charger and Charge Controller**

The Battery charger shall charge the battery from PV Array.

### **a) Charging from PV Array:**

PWM charging, incorporating MPPT to maximize energy drawn from the Solar PV array. The MPPT shall be microcontroller based. The details of working mechanism of MPPT shall be mentioned. PV charging efficiency shall not be less than 90% and shall be suitably designed to meet array capacity. MPPT must conform to IEC 62093, IEC 60068 as per specifications.

### **b) Charge Controller:**

- The Charge Controller shall be charged from the SPV module,  
     Input from solar PV : 12V(nom) DC  
     Output Voltage : Suitable for charging 12V
- Charge controller shall conform IEC to 62093 / IEC 60068 as per specification.
- The charge controller shall have

- (i) Appropriate battery charging algorithms with temperature compensated set points for charging/ discharging
- (ii) PV array disconnect/reconnect and load disconnect/reconnect points shall be through programmable settings
- (iii) Protection against polarity reversal of PV array and battery, Over Current, Short Circuit, Deep Discharge, Input Surge Voltage ; Blocking diode protection against battery night time leakage through PV Module.

#### **VIII. Visual LED Indicators:**

- PV Charging ON
- Battery FULL
- Battery LOW

#### **IX. Parameter to be displayed in Digital**

- Voltage, Current (PV)
- Battery Voltage, Charge status in %, Charging & Discharging current
- Voltage, Current (Load)

#### **X. MECHANICAL COMPONENTS**

- i. Metallic frame structure with corrosion resistance paint, holding the PV panel, shall be fixed on a channel structure with suitable brackets, to ensure the module mounting structure remain firmly for the entire life of the system.
- ii. The MMS shall be fixed to the parapet wall / main wall using ISI quality coach screws to hold the SPV module(s). Clearance between lowest part of the PV panel and terrace / parapet wall shall be at least 15 cm. Any other design of the Module Mounting Structure shall be allowed only on approval of DRDA.
- iii. A Ventilated good quality, rugged PP CP box which can with stand rough handling for 10 years should be provided for housing the battery. **Models available at DRDA** may be inspected for guidance. Samples shall be submitted for approval by DRDA before starting the work. Danger Logo sticker as approved by DRDA shall be affixed on the box.

## **XI. CABLES**

All the cables shall be supplied conforming to IEC 60227– IS 694 / IS 1554 – IS / IEC 60502 shall be of 650 V/ 1.1 kV grade as per requirement. Only PVC copper cables shall be used. The size of the cables between array to CCU, CCU to LED luminaries etc shall be so selected to keep the voltage drop and losses to the minimum. Permissible Wire Drop shall be  $\leq 1\%$ . The DC cable from the SPV module, shall be run through a PVC conduit pipes, which in turn shall be firmly fixed to the wall with clamps.

The DC cable from the solar panel to CCU/Battery will be laid through a rigid PVC conduit by the Installer of the system.

- Separate solar wiring in external conduit pipes along with separate switch boards, switches (for the 5 LEDs) and lamp holders for fixing the LEDs shall also be provided by the installer.
- Rigid PVC Conduit of nominal dia as per IS standard (IS: 9537)- medium class.
- Clamps shall be provided at 1 meter spacing to secure the conduits
- Ensure colour Coding of all wiring as follows :  
     DC (Positive) =Red  
     DC(Negative)=Black  
     Earth =green
- DC cable from panel to CCU -10m.Internal wiring from CCU is 25m and the same is 50m if wire is used.

### **Specification for cable /wires used:**

- Solar panels to CCU    incomers DC 2 core multi strand 4 sq.mm copper cable.
- From Battery to DC incomer of CCU:2.5 sq.mm multi strand copper wire.
- DC out going from CCU:2.5 sq.mm multi strand copper wire.
- All earth wires- 2.5 sq.mm multi strand copper wire.
- Suitable Glands shall be provided at all cable entries of the cabinet
- Provide DC fuse between the battery plus terminal and the CCU at a location as close as possible to the battery plus terminals.
- Miniature Circuit Breaker (MCB)-4A,2 Pole - 12V DC
- Holders – The lamp holder for fixing the LED luminarie shall only be angled screw thread type (E27)

## **XII. EARTHING**

The metallic supporting structure of PV module structure shall be grounded properly as per IS 3043 using adequate size of earth lead. All metal casing / shielding of the home lighting system shall be thoroughly grounded to ensure safety. Earthing procedure and Earth Resistance shall be as per Indian Standard Specification.

## **XIII. DOCUMENTATION**

- (i) An Operation, Instruction and Maintenance Manual in Tamil & English shall be provided with the solar home lighting system.

The following minimum details must be provided in the Manual:

- a. About Photo voltaic
- b. About solar home lighting system-its components and expect performance
- c. About PV module.
- d. About battery and electronics used
- e. About LED
- f. Clear instructions about mounting of PV module.
- g. About Status of indicators.
- h. DO's and DONT's,
- i. Clear instructions on regular maintenance and trouble shooting of solar home lighting system.
- j. Name and address of the person or service centre & Toll free number of DRDA call centre to be contacted in case of failure or complaint.
- k. Warranty Card & Service and Maintenance register shall be provided with the home lighting systems. Approval of the District Collector needs to be obtained on the content of Manual, Warranty card & Service entry card.

## 15 TECHNICAL REQUIREMENTS/STANDARDS

### 1. PV MODULES:

- 1.1. The Crystalline Silicon Terrestrial PV Modules must conform to IEC 61215 / IS14286 for PV module design qualification and type approval
- 1.2. In addition, the modules must conform to IEC 61730 Part 1- requirements for construction & Part 2 – requirements for testing, for safety qualification.
- 1.3. PV modules must qualify Salt Mist Corrosion Testing as per IEC 61701.

### 1.4. TEST CERTIFICATES / REPORTS TO BE FURNISHED:

- (i) Test Certificates / Reports from IECQ / NABL accredited laboratory for relevant IEC / equivalent BIS standard. If IEC certificates are not available for 50 Wp capacity, qualification certificate from IEC / NABL accredited laboratory as per relevant standard for any of the higher wattage regular module shall be furnished. Further, the manufacturer shall certify that the supplied module is also manufactured using same material design and process similar to that of certified PV module.
- (ii) STC Performance report for the modules from one of the IECQ / NABL accredited laboratories including Solar Energy Centre, Gurgoan.

### COMPONENTS:

The components must conform to the latest edition of IEC/ equivalent BIS Standards as specified below:

| Nos. | component               | IEC/Equivalent BIS standard                |                                    |
|------|-------------------------|--|------------------------------------|
|      |                         | Standard Description                       | Standard Number                    |
| 2.1  | Charge Controller/ MPPT | Design Qualification Environmental Testing | IEC 62093<br>IEC60068-2(1,2,14,30) |




| 2.2   | Batteries  | General Requirements & Methods of Testing<br><br>Tubular Lead Acid Valve Regulated Lead Acid  | IEC 61427<br><br>IS 1651/ IS 13369/JIS 8702<br><br>IS 15549 |
|-------|--|---|---|
| 2.3   | Luminary   | DC LED  | LM-80-08<br>LM-79-08  |
| 2.4   | BoS item /component  | IEC/Equivalent BIS standard   |   |
|       |  | Standard Description  | Standard Number   |
| (i)   | Cables   | General Test and Measuring Method<br><br>PVC insulated cables for working voltage up to and including 1100 V<br><br>UV resistant for outdoor installation | IEC 60227/ IS694<br><br>IEC60502/IS 1554 (Pt.I&II)          |
| (ii)  | Switches/ Circuit Breakers/Connectors                                    | General Requirements<br>Connectors Safety   | IS60947 /IEC 60947 part I,II,III<br>EN 50521                |
| (iii) | Enclosures<br><br>Terminal/Junction Boxes<br><br>CCU<br><br>LED Luminary | General Requirements  | IEC 529<br>IP 65<br><br>IP 21<br><br>IP40                   |

## 2.5 TEST CERTIFICATES / REPORTS TO BE FURNISHED:

Test reports for integrated Home Lighting System as well as individual component certificates as per “clause 14 &15” from MNRE approved test centers shall be submitted within 30 days from the date of issue of LOA. Beyond which the LOA issued will be cancelled.

## SECTION-E

### FORMATS AND ANNEXURES

|  |   |
|--|---|
|   | <h1>Government of<br/>Tamil Nadu</h1>   |
|  | <p>Tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting System in 168 Houses in Vellore District of Tamil Nadu under CMSPGH Scheme.</p> <p>Bidding Document</p> <p><b>Package No.GH/SL/2019/RD/VLR/1</b></p> <p><b>Tender Reference: 40179/2019/RHS 1- 1, Dated : 08.01.2021</b></p> <h2>Techno commercial Bid-Part-I</h2> |
|  | <h3>District Rural Development Agency</h3> <p>Vellore District (INDIA)<br/>Phone: 0416 - 2258199<br/>Email: drdavel@nic.in<br/>Website:www.tntenders.gov.in</p>   |

## F.1 Techno Commercial Bid

(All pages of the Techno commercial Bid shall be organised section-wise, annexed with proof documents, serially numbered and submitted)

### F1.1 Profile of the Bidder

| Sl.No. | Particulars   | Bidder / Firm |
|--------|---|---------------|
| 1.     | Name of the Company   |               |
| 2.     | Year of registration  |               |
| 3.     | <b>Registered office</b>  |               |
|        | Address   |               |
|        | Office Telephone Number   |               |
|        | Fax Number  |               |
|        | <b>Contact Person</b>   |               |
|        | Name  |               |
|        | Personal Telephone Number   |               |
|        | Mobile Number   |               |
|        | Email Address   |               |
| 5.     | <b>Local office(s) in Tamil Nadu</b>  |               |
|        | Address   |               |
|        | Office Telephone Number   |               |
|        | Fax Number  |               |
| 6.     | <b>Tender signing authority</b>   |               |
|        | Name  |               |
|        | Address   |               |
|        | Personal Telephone Number   |               |
|        | Email Address   |               |
|        | Please enclose Authorisation or Power of Attorney to sign and submit the Tender |               |
| 7.     | Address for communications under the current Tender                             |               |
| 8.     | <b>Registration Details</b>   |               |
|        | Permanent Account Number  |               |
|        | GSTIN Registration Number   |               |
| 9.     | Banker's Name, Address and Account Number                                       |               |

### F1.2 EMD Details

| #  | Particulars                            | Please furnish details |
|----|--|------------------------|
| 1. | Name of the Bank                       |                        |
| 2. | Demand Draft (DD) / Banker's Cheque No |                        |
| 3. | DD Date                                |                        |
| 4. | DD Amount                              |                        |

### F1.3 Furnish details for meeting the Eligibility Criteria

#### 1) Details about the components to be procured from others

| #  | Description   | Name of the Manufacturer |
|----|---------------|--------------------------|
| 1. | PV Module     |                          |
|    |               |                          |
|    |               |                          |
| 2. | Battery       |                          |
|    |               |                          |
|    |               |                          |
| 3. | LED Luminaire |                          |
|    |               |                          |
|    |               |                          |

#### 2) Details about Annual Turnover

| #  | Audited years (from 2015-16)   | Bidder / Prime Bidder |
|----|--|-----------------------|
| 1. |  |                       |
| *  | Please enclose audited Balance sheets and Profit and Loss accounts for all the three years audited from 2015-16 towards meeting the annual turnover criteria |                       |

#### 3) Details about minimum quantity installed

| #  | W.O reference with Name , Address & contact details of the Client                    | Quantity Installed ( Nos) | Date of Commissioning |
|----|--|---------------------------|-----------------------|
| 1. |  |                           |                       |
| 2. |  |                           |                       |
| *  | Please enclose Work Orders along with proof for satisfactory completion of that work |                           |                       |

#### 4) Details about the Blacklisting, if any

| #  | Description   | Bidder / Prime Bidder |
|----|---|-----------------------|
| 1. | Has the Bidder been blacklisted by any of the State/Central Government or organisations of the State/ Central Government or Union Territories of India. | Yes/No                |
| a. | If yes furnish the details  |                       |

**F 1.4 TECHNICAL BID**

| <b>Sl.No</b> | <b>Description</b>                          | <b>To be furnished by the tenderer</b> |
|--------------|---|--|
| <b>A.</b>    | <b>SPV MODULE</b>                           |  |
| 1.           | Type of Module                              | Mono/ Poly crystalline                 |
| 2.           | Make  |  |
| 3.           | Availability of RFID tag                    |  |
| 4.           | Max power at STC Pmax (W)                   |  |
| 5.           | Max power voltage Vmp(V)                    |  |
| 6.           | Max power current Imp(A)                    |  |
| 7.           | Open circuit voltage Voc (V)                |  |
| 8.           | Short circuit current Isc (A)               |  |
| 9.           | Load voltage Vld (V)                        |  |
| 10.          | Conversion Efficiency                       |  |
| 11.          | No of cells per module                      |  |
| 12.          | No of bypass diodes in module               |  |
| 13.          | Solar module frame material                 |  |
| 14.          | Module Dimension                            |  |
| 15.          | Module Weight                               |  |
| 16.          | No of Modules                               |  |
| 17.          | Series/ parallel combination                |  |
| 18.          | Other details, if any                       |  |
| <b>B.</b>    | <b>MODULE MOUNTING STRUCTURE</b>            |  |
| 1.           | Structure material                          |  |
| 2.           | Leg Material                                |  |
| 3.           | Length, thickness & Dia of leg              |  |
| 4.           | Foundation size, if grouted                 |  |
| 5.           | Other details, if any                       |  |
| <b>C.</b>    | <b>Charge Control Unit</b>                  |  |
| <b>b.</b>    | <b>PV Array Charging</b>                    |  |
| 1.           | Type of Charging                            |  |
| 2.           | Charging efficiency (PV i/p to Battery i/p) |  |

|              |                                     |    |    |    |
|--------------|-------------------------------------|----|----|----|
| <b>c.</b>    | <b>Charge Controller</b>            |    |    |    |
| 1.           | Type                                |    |    |    |
| 2.           | Input from PV charger               |    |    |    |
| 3.           | Max input voltage rating            |    |    |    |
| 4.           | Max output current rating           |    |    |    |
| 5.           | Output voltage                      |    |    |    |
| 6.           | Temperature compensation set points |    |    |    |
| 7.           | Protections                         |    |    |    |
|              | i. PV array polarity reversal       |    |    |    |
|              | ii. Battery polarity reversal       |    |    |    |
|              | iii. Over current                   |    |    |    |
|              | iv. Short Circuit                   |    |    |    |
|              | v. Deep discharge                   |    |    |    |
|              | vi. Input surge voltage             |    |    |    |
|              | vii. Blocking Diode                 |    |    |    |
| viii. Others |                                     |    |    |    |
| 8.           | Details of Visual Indications       |    |    |    |
|              | i. PV Charging ON                   |    |    |    |
|              | ii. Battery Full                    |    |    |    |
|              | iii. Battery low                    |    |    |    |
| <b>D.</b>    | <b>BATTERIES</b>                    |    |    |    |
| 1.           | Make                                |    |    |    |
| 2.           | Type                                |    |    |    |
| 3.           | Voltage & Capacity of Battery       |    |    |    |
| 4.           | Container material                  |    |    |    |
| 5.           | Self-Discharge                      |    |    |    |
| 6.           | DOD                                 |    |    |    |
| 7.           | Design Cycle Life of battery        |    |    |    |
| 8.           | Charge efficiency                   |    |    |    |
| 9.           | Size & Weight of the battery        |    |    |    |
| <b>E.</b>    | <b>LED Luminary</b>                 |    |    |    |
| 1.           | Make of LED                         |    |    |    |
| 2.           | Power consumption of LED Luminary   |    |    |    |
| 3.           | No of LEDs in                       | 7W | 5W | 3W |
|              |                                     |    |    |    |
| 4.           | Wattage of each LED                 |    |    |    |
| 5.           | Driver Consumption                  |    |    |    |

|           |                                 |  |  |  |
|-----------|---------------------------------|--|--|--|
| 6.        | Lux level at Floor from 2.5 m   |  |  |  |
| 7.        | LED Current Regulation          |  |  |  |
| 8.        | Input Voltage                   |  |  |  |
| 9.        | CRI                             |  |  |  |
| 10.       | LED Efficacy                    |  |  |  |
| 11.       | Luminaire Efficiency            |  |  |  |
| 12.       | Other features                  |  |  |  |
| <b>F.</b> | <b>DC CABLES</b>                |  |  |  |
| 1.        | Make                            |  |  |  |
| 2.        | Size & Type                     |  |  |  |
| 3.        | Standard                        |  |  |  |
| 4.        | Other details, if any           |  |  |  |
| <b>G.</b> | <b>Housing for Battery</b>      |  |  |  |
| 1.        | Material                        |  |  |  |
| 2.        | Thickness                       |  |  |  |
| 3.        | Dimension                       |  |  |  |
| 4.        | Provision for ventilation       |  |  |  |
| <b>H.</b> | <b>EARTHING</b>                 |  |  |  |
| 1.        | Details of points to be earthed |  |  |  |
| 2.        | Earth Resistance                |  |  |  |


Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

|   |  |
|---|--|
|  | <h1>Government of<br/>Tamil Nadu</h1>  |
|  | <p>Tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting System in 168 Houses in Vellore District of Tamil Nadu under CMSPGH Scheme</p> <p><b>Package No.GH/SL/2019/RD/VLR-1</b></p> <p><b>Tender Reference: 40179/2019/RHS 1-1 , Dated : 08.01.2021</b></p> <p><b>Price Bid-Part II</b></p> |
|   | <p><b>District Rural Development Agency</b><br/> Vellore District (INDIA)<br/> Phone: 0416 - 2258199<br/> Email: drdavel@nic.in<br/> Website: www.tntenders.gov.in</p>   |



## F.2 Price Bid

### 1. Cost of LED based SPV Home lighting system

| Sl. No. | Description   |
|---------|---|
| 1.      | SPV Module  |
| 2.      | Module Mounting Structure   |
| 3.      | Battery   |
| 4.      | CCU & MPPT Unit   |
| 5.      | LED Luminaries (7Wx2nos. 5Wx2nos. & 3W x1no.)   |
| 6.      | Housing for Battery   |
| 7.      | Cables  |
| 8.      | DC Wiring with lamp fixtures  |
| 9.      | Others, if any<br>(shall be indicated separately)   |
| 10.     | <b>Packing &amp; forwarding, Freight &amp; Insurance charges etc.,(shall be indicated separately)</b> |
| 11.     | <b>Installation &amp; Commissioning charges</b>   |
| 12.     | <b>Basic Cost/unit</b>  |
| 13.     | <b>Duties / Taxes (shall be indicated separately with %)</b>  |
| 14.     | <b>Comprehensive Maintenance charges for 5 years</b>  |
| 15.     | <b>Total Cost per system including CMC for 5 years</b>  |

### PRICE BID- Bill of Quantities

**Rate contract for the Supply, Installation & Commissioning with 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems in 168 Houses in Tamil Nadu under Chief Minister's Solar Powered Green House Scheme for the Village Panchayats in Vellore District for the year 2016 - 19**

| Sl. No. | Description of work   | No. of Units | BASIC RATE In Figures and words to be entered by the Bidder in Rs. P<br>( The basic rate is inclusive of packing & forwarding charges, Freight & Insurance charges, Installation and Commissioning CMC Charges) | GST in % | GST in Rs. | Amount Per unit inclusive of tax in Rs.<br>(7)=(4)+(6) | TOTAL AMOUNT Without Taxes<br>col (8) = (3) x (4) in Rs. P | TOTAL AMOUNT With Taxes<br>col (9) = (3) x (7) in Rs. P |
|---------|---|--------------|---|----------|------------|--|--|---|
| 1       | 2   | 3            | 4   | 5        | 6          | 7  | 8  | 9   |
| 1       | Supply, Installation & Commissioning of LED based SPV Home Lighting Systems in Houses in Tamil Nadu under Chief Minister's Solar Powered Green House Scheme and <b>5 years Comprehensive Maintenance</b> for the Village Panchayats in Vellore District (The SPV Home lighting should comply with detailed specifications indicated in <b>Section D</b> )<br>[The basic rates and corresponding GST (as applicable) has to be quoted separately ] |              |   |          |            |  |  |   |

**CONDITIONS:**

- 1) The Bidder should Supply, Installation & Commissioning of **168** Nos. of LED based SPV Home Lighting Systems in **168** Houses in Tamil Nadu under Chief Minister's Solar Powered Green House Scheme and **5 years Comprehensive Maintenance** in compliance with the specification mentioned in Annexure.
- 2) **The basic Rate is inclusive of packing & forwarding charges, Freight & Insurance charges, Installation and Commissioning Charges and comprehensive maintenance charge(CMC) for five years and the prevailing GST has to be quoted separately.**  
(CGST% & SGST% are to be quoted separately as per the enclosed BOQ in the price bid).
- 3) The rate should be quoted in both figures and words. In case of any discrepancy, lower of the two shall be taken for consideration.
- 4) The rate is valid for one year from the date of signing of agreement.
- 5) Rate is inclusive of transportation and other incidental charges for the **Supply Installation & Commissioning of 168 Nos. of LED based SPV Home Lighting Systems in 168 Houses in Tamil Nadu under Chief Minister's Solar Powered Green House Scheme with 5 years Comprehensive Maintenance for the Village Panchayats in Vellore District** and/or to any other location within the District as may be specified by the District Collector or any officer of the Rural Development Department in the purchase order.

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder& Stamp of bidder.

**F-3 Bidder's undertaking covering letter**

(Letter shall be submitted on Bidder(s) Letter Head)

Date:

To  
The Project Director  
District Rural Development Agency,  
Vellore District  
Pin code 632009  
Tamil Nadu, India.

Dear Sir,

Sub: Tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems.

Ref: \_\_\_\_\_ -  
\*\*\*\*\*

1. We have examined the tender for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of LED based SPV Home Lighting Systems as specified in the Tender. We undertake to meet the requirements and services as required and are set out in the Tender document.
2. We attach our Techno commercial Bid and Price Bid in separate files as required by the Tender both of which together constitutes our proposal, in full conformity with the said Tender.
3. We have read the provisions of Tender and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our response shall not be given effect to.

4. We undertake, if our Bid is accepted, to adhere to the requirements as specified in the Tender or such modified plan as may subsequently be agreed.
5. We agree to unconditionally accept all the terms and conditions set out in the Tender document and also agree to abide by this Bid response for a period as mentioned in the Tender from the date fixed for bid opening and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this Bid response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and DRDA.
6. We affirm that the information contained in the Techno commercial Bid or any part thereof, including its schedules, and other documents, etc. delivered or to be delivered to Project Director, DRDA is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead Project Director, DRDA as to any material fact.
7. We agree that Project Director, DRDA is not bound to accept the lowest or any Bid you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ service specified in the bid response without assigning any reason whatsoever.
8. It is hereby confirmed that I/We are entitled to act on behalf of our company/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.
9. We agree to use only indigenous PV modules in this project.
10. We also declare that our Company/Organisation is not blacklisted by any of the State or Central Government and organisations of the State or Central Government or Union Territories.

11. We undertake to use the BoS components as per the standard stipulated in clause.

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

### **CERTIFICATE AS TO AUTHORISED SIGNATORIES**

I, certify that I am (Name) ..... (Designation) .....and that (Name)..... who signed the above Bid has been duly authorized to sign the same on behalf of our Organisation.

Date:

Signature:

Seal:

**F-4 Bidder's undertaking for minimum quantity offered**

(Letter shall be submitted on Bidder(s) Letter Head)

Date:

To  
The Project Director  
District Rural Development Agency,  
Vellore District,  
Pin code 632009.  
Tamil Nadu.

Dear Sir,

Sub: Tender for Supply, Installation, Commissioning and 5 years  
Comprehensive Maintenance of LED based SPV Home Lighting  
Systems– Reg.

Ref: Tender Reference DRDA/

I/We undertake to supply, install & commission the entire quantity of  
LED based SPV Home lighting systems quoted by us and any additional  
allotment given to us upto around 25%.

I/We am/are aware that if I/We do not accept to supply & install the  
LED based SPV Home lighting systems as above my/our Bid is liable for  
rejection.

Signature of the authorised person:

Name of the authorised person:

Designation:

Name and Address of Bidder

Stamp of bidder

### **F-5 Model Form of Contract**

**To be executed on a Rs.100- Non-judicial Stamp paper bought in Tamil Nadu by the Successful Bidder for Supply, Installation, Commissioning, and 5 years Comprehensive Maintenance of LED SPV Home Lighting Systems (NO FIGURES IN NUMERALS OR WORDS SHALL BE FILLED UP IN THIS SAMPLE FORM AT THE TIME OF SUBMISSION OF TENDER)**

### **CONTRACT**

This Contract is entered into at Chennai on the ..... day of ..... 2018 between

District Collector, ..... District (Which term shall mean and include its successors and permitted assigns) on behalf of DRDA, hereinafter referred to as “Implementing Agency” and ....., a Company registered under .....and having its Registered office at ..... hereinafter referred to as the “Successful Bidder” (Which term shall mean and include its successors and permitted assigns)

Whereas District Collector on behalf of theDRDA... District invited a tender vide Tender Ref.No: \_\_\_\_\_ for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of SPV Home Lighting Systems in ..... District and the Successful Bidder was selected as per the following terms and conditions:-

This document on having been signed by both the parties shall constitute a binding contract between the parties and shall remain in force for a period of five years. But in the event of any breach of the Contract at any time on the part of the Successful Bidder, the contract shall be terminated by the District Collector without compensation to the Successful Bidder. The contract may also be put to an end at any time by the Implementing Agency upon giving seven days notice to the Successful Bidder.



The Successful Bidder agrees for Supply, Installation, Commissioning and 5 years Comprehensive Maintenance of \_\_\_\_ SPV Home Lighting Systems with 5 years warranty as per clause “ **11.10** ” after carrying out successfully all tests prescribed by DRDA at the price of Rs. \_\_\_\_/- (Rs.....only) per lighting system as per the Terms & Conditions given below.

### **1. Installation & Completion Schedule**

The entire work involving Supply, Installation and Commissioning of SPV home lights shall be completed within **6 months** from the date of handing over of ready to install houses.

### **2. Service Centres**

The Successful Bidder shall set up district level service centres. A district level help line shall also be installed by the supplier/ Manufacturer and the beneficiaries shall be provided with such contact numbers for any emergency or grievance redressals otherwise the Security Deposit remitted by the Successful Bidder will be forfeited. These service centres shall operate throughout the warranty period of 5 years plus a grace period of three months.

Depending on the ground conditions and necessity, the District Collector reserves the right to divert the quantity of SPV Home lighting systems from one allotted installer to others.

### **3. Installation and Commissioning**

- a) The entire work involving Supply, Installation and Commissioning of SPV home lights shall be completed within **6 months** from the date of handing over of ready to install houses.
- b) The Installation and commissioning of solar home lights will have to be done at the locations identified by the District Collector.

#### **4. Insurance**

Transportation of components to the installation site and insuring the goods in transit is the responsibility of the Bidder. The goods installed under the contract shall be covered for comprehensive Insurance by the Successful Bidder against loss (or) damage incidental to transportation, storage at site and delivery to site during the erection period.

#### **5. Handing Over**

1. The system shall be handed over to the beneficiary on the same day of installation & Commissioning, through prescribed handing over and taking over format.
2. Hands on Training on maintenance of solar home lights shall be arranged for all the beneficiaries, their family members and for the people selected for that purpose in all the Panchayats.

#### **6. Comprehensive Maintenance**

- a) (i) There shall be a 5 year warranty period inclusive of comprehensive annual maintenance contract (CAMC) period for the system supplied, which shall be the responsibility of the concerned suppliers.
- (ii) Comprehensive Maintenance charges for 5 years is fixed at 5% of the total system cost @ 1% per year.
- (iii) CMC shall begin from the 3rd month after the month of installation and meticulous records of the same shall be maintained.
- b) The Successful Bidder shall provide 5 years comprehensive maintenance of the SPV Home Lighting Systems, which shall include corrective maintenance, repair (or) replacement, free of cost on site.
- c) As part of the tender, the commissioning agencies shall be responsible to train the beneficiaries as well as 4 SHG members in each Panchayat to do regular maintenance.

- d) The service personnel of the Successful Bidder will make routine quarterly maintenance visits. The maintenance shall include thorough testing & replacement of any damaged parts. Apart from this, any complaint registered/ service calls received shall be attended to and the system shall be repaired/ restored/ replaced within 7days
- e) If the successful bidder, having been notified by the end user fails to rectify the defect(s) and restore the home lights to good working condition within the period specified above, then a penalty of Rs.25 per non-working system per day of the breakdown period beyond 7 days will be levied. This will be deducted from the bills due.
- f) A separate Service & Maintenance register shall be maintained at each house as per the format provided by DRDA.
- g) The deputed personnel shall be in a position to check and test all the equipments regularly, so that preventive actions, if any, could be taken well in advance to save any equipment from damage. Any abnormal behaviour of any equipment shall be brought to the notice of the District Collector for appropriate action.
- h) Normal and preventive maintenance of the SPV home lighting systems such as cleaning of module surface, tightening of all electrical connections, changing of tilt angle of module mounting structure, cleaning & greasing of battery terminals, etc. are also the duties of the deputed personnel during quarterly maintenance visits.
- i) During the comprehensive maintenance period of the SPV home lighting systems, if there is any loss or damage to any component due to miss management/miss handling or due to any other reasons pertaining to the deputed personnel, what-so-ever, the supplier shall be responsible for immediate replacement/ rectification. The damaged component may be repaired or replaced by new component.

- j) The District Collector reserves the right to claim damages and Costs for non-fulfilment of warranty, apart from forfeiting un-paid amount if any, in the event of unsatisfactory maintenance.

### **7. Liquidated Damages:**

- i. If the Successful Bidder fails to achieve sustentative completion (75% of allotted quantity), Liquidated Damages at the rate of 0.5% per completed week on the value of the unfinished / non-commissioned quantity of the work order will be levied subject to a maximum of 10%. The Liquidated Damages amount will be automatically deducted from the Bills submitted by the Successful Bidder. If the installation is not completed, the District Collector will make alternate arrangements and the cost incurred by DRDA for doing the same will be recovered from the Successful Bidder.
- ii. The successful bidder's performance will be reviewed periodically. The shortfall in Installation & Completion schedule will be reduced from the overall orders given to the successful bidder. An equivalent quantity may be allocated to the performing Successful Bidder then and there as additional work order.

### **8. Warranty**

- (a) The SPV panel shall carry a warranty of minimum 25 years.
- (b) The SPV panel must be warranted for their output peak watt capacity which shall not be less than 90% at the end of 10 years and 80% at the end of 25 years
- (c) The PCU/battery charger/ Charge controller shall carry a warranty of minimum 5 years.
- (d) The battery shall carry a warranty of minimum 5 years.
- (e) The LEDs shall carry a warranty of minimum 5 years.

- i. The SPV home lighting systems installed and commissioned shall be under a warranty against any manufacturing defect for a period of 5 years(5 Years) from the date of commissioning.
- ii. The mechanical structures, electrical works including power conditioners/charge controllers/ maximum power point tracker units/ distribution boards/digital meters/ switchgear/ storage batteries etc. and overall workmanship of the SPV home lighting systems must be warranted against any manufacturing/ design/ installation defects for a minimum period of 5 years.
- iii. The warranty will be against breakages, malfunctions, non-fulfilment of guaranteed performance and breakdowns due to manufacturing defects or defects that may arise due to improper operation of electrical / electronic components of the system but do not include physical damages by the end users.
- iv. The above warranty shall take effect from the date on which the system is taken over by the beneficiary after commissioning.
- v. The successful bidder shall be liable to make good the loss by replacing the defective product during the warranty period for the entire system free of cost, failing which DRDA will deduct the amount from the amount retained by the District Collector as per Payment terms (or) issue recovery and will be blacklisted.
- vi. The warranty will cover all the materials and goods involved in the installation and commissioning of solar home lighting systems by the successful Bidder under this contract irrespective of the fact whether these have been manufactured by the Successful Bidder or not. The decision in this regard by the District Collector is final and binding on the successful bidder.

## **9. PAYMENT TERMS:**

- i. All payments will be made in INR only.
- ii. No advance will be paid or no letter of credit will be issued.
- iii. 90% payment will be released for each bill within 15 days from the date of clearance report from the third party inspection.
- iv. Balance 10% payment will be released on completion of 5 years comprehensive maintenance period,
- v. The payment will be subject to fulfilment of Warranty/ Comprehensive Maintenance obligations.
- vi. If the Duties and/or Taxes have been reduced retrospectively, the successful bidder is liable to return the same.
- vii. The Successful Bidder will have full and exclusive liability for payment of all Duties, Taxes and other statutory payments payable under any or all of the Statutes/Laws/Acts etc now or hereafter imposed.

## **10. Product take back & Re-Cycling**

Proper decommissioning and recycling of SPV panels, Batteries & electronics etc., are necessary to ensure that harmful materials are not released in to the environment. Hence an undertaking from the successful bidder for product take back after expiry of their life shall be submitted. It is mandatory for the successful bidder to comply with batteries (Management and Handling) Rules 2016 of MOEF, as amended from time to time.

## **11. Force Majeure**

Neither the Beneficiary/District Collector nor the Successful Bidder shall be liable to the other for any delay or failure in the performance of their respective obligations due to causes or contingencies beyond their reasonable control such as:

- Natural phenomena including but not limited to earthquakes, floods and epidemics.

- Acts of any Government authority domestic or foreign including but not limited to war declared or undeclared, priorities and quarantine restrictions.
- Accidents or disruptions including, but not limited to fire, explosions, breakdown of essential machinery or equipment, power and water shortages.

**12.** The following documents shall be deemed to form and be read and constructed as part of this Contract.

- a) Technical Specifications
- b) Tender Terms and Conditions
- c) Amendments issued by the Project Director, DRDA for the Tender document
- d) Corrigendum/Clarifications issued by the Project Director, DRDA for the Tender document
- e) Detailed final offer of the Successful Bidder
- f) Work Order(s) issued by the District Collector.
- g) Correspondence made by the District Collector to the successful Bidder from time to time during the period of the contract.

Wherever the offer conditions furnished by the Successful Bidder are at variance with conditions of this contract or conditions stipulated in the work order, the latter shall prevail over the offer conditions furnished by the Successful Bidder.

**13.** Waiver of any terms and conditions by the District Collector / Beneficiary in writing shall not have the effect of waiving or abandoning other terms and conditions of the contract.

**14.** (a) Unless otherwise provided in the Contract, any notice, request, consent or other communication given or required to be given hereunder shall be given by mailing the same by registered mail, postage prepaid to DRDA at its registered office

(b) Any notice to the Successful Bidder shall be deemed to be sufficiently served, if given or left in writing at their usual or last known place of abode or business.

## **15. Termination of Contract**

### **15.1 Termination for default**

- a) The District Collector may without prejudice to any other remedy for breach of contract, by written notice of default with a notice period of seven days, sent to the Successful Bidder, terminate the contract in whole or part, (i) if the Successful Bidder fails to install and commission the solar home lighting systems within the time period(s) specified in the Contract, or fails to commission as per the Installation Schedule or within any extension thereof granted by the District Collector; or (ii) if the Successful Bidder fails to perform any of the obligation(s) under the contract; or (iii) if the Successful Bidder, in the judgement of the District Collector, has engaged in fraudulent and corrupt practices in competing for or in executing the Contract.
- b) In the event the District Collector terminates the Contract in whole or in part, the District Collector may procure, upon terms and in such manner as it deems appropriate, the goods and services similar to those tendered and the Successful Bidder shall be liable to the District Collector for any additional costs for these. However, the Successful Bidder shall continue the performance of the contract to the extent not terminated.



### **15.2 Termination for Insolvency**

The District Collector may at any time terminate the Contract by giving written notice with a notice period of 7 days to the Successful Bidder, if the Successful Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Successful Bidder, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to DRDA.

### **15.3 Termination for Convenience**

The District Collector may, by written notice, with a notice period of seven days sent to the Successful Bidder, may terminate the Contract, in whole or in part, at any time for its convenience.

The notice of termination shall specify that termination is for the District Collector's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective. On termination, the successful Bidder is not entitled to any compensation whatsoever.

If the installation & commissioning is not effected as specified in the work order, the District Collector shall have the full authority to cancel the order and to take any such action that will be deemed fit in the circumstances.

- 16.** In case of failure by the Successful Bidder to commission the Solar Home Lighting Systems within the period specified as per the schedule or in case of installations made by them, not being of the stipulated quality and specifications. The District Collector shall have the power to reject any such installations.
- 17.** In case of any dispute, the matter will be referred to a sole Arbitrator to be appointed by the District Collector in accordance with the Arbitration and Conciliation Act 1996. The arbitration shall be held in Chennai, India and the language English only.

**18.** Subject to the above, the Courts at Chennai alone only shall have jurisdiction in the matter.

In Witness whereof the parties hereto have signed on the day, month and year above written in the presence of

For and on behalf of  
Tamil Nadu Energy  
Development Agency

For and on behalf of  
Successful Bidder

Witnesses:

Witnesses:

1.

1.

2.

**F-6 DRAFT UNDERTAKING IN LIEU OF E.M.D.**

**(To be furnished in non-judicial stamp paper of value not less than Rs.100/)**

THIS DEED OF UNDERTAKING EXECUTED AT \_\_\_\_\_ ON THIS  
THE \_\_\_\_\_ DAY OF \_\_\_\_\_ TWO  
THOUSAND AND BY M/S. \_\_\_\_\_ a  
company registered under companies Act 1956, having its registered office  
at \_\_\_\_\_ hereafter called "Tenderer" (which expression shall  
where the context so admits mean and include their Agents, Representatives,  
Successors-in-office and Assigns)

TO AND IN FAVOUR OF District Collector, .....District  
"\_\_\_\_\_", herein called the "DRDA" (which  
expression shall where the context so admits mean and include its  
successors in office and Assigns).

WHEREAS the tenderer is required to pay Earnest Money Deposit of Rs.\_\_\_\_\_ for participation in the tender for supply and installation of \_\_\_\_\_in terms of specification No. \_\_\_\_\_

AND WHEREAS the tenderer is exempted from payment of EMD as per \_\_\_\_\_, subject to the tenderer executing an undertaking to the value of Rs.\_\_\_\_\_ (Rupees \_\_\_\_\_only) representing the amount equivalent to the amount of EMD specified to be paid to DRDA in the event of non-fulfillment or breach of any of the conditions of the tender by the Tenderer as mentioned hereunder.

AND WHEREAS in consideration of the acceptance by the District Collector of the above proposal, The tenderer has agreed to pay to DRDA the said amount of Rs.\_\_\_\_\_ in the event of :-

- i. Withdrawing his tender before the expiry of the validity period
- ii. Withdrawing his tender after acceptance or fails to remit the Security Deposit.
- iii. Violating any of the conditions of the tender issued by the competent authority.

NOW THE CONDITION OF THE above written undertaking is such that if the tenderer shall duly and faithfully observe and perform the conditions specified as above, then the above written undertaking shall be void, otherwise it shall remain in full force.

The tenderer undertakes not to revoke this guarantee till the contract is completed under the terms of contract.

The expression, 'tenderer' and 'DRDA' hereinafter before used shall include their respective successors and assign in office.

IN WITNESS WHERE OF THIRU \_\_\_\_\_  
 acting for and on behalf of the Tenderer has signed this deed on the day,  
 month and year herein before first mentioned.

**SIGNATURE**

**NAME IN BLOCK LETTERS**

**SEAL OF THE COMPANY**

**In the presence of Witnesses**

Signature

Name and Address

Signature

Name and Address

**A-1. The Block wise Tentative Quantity**

| Sl. No. | Name of the Block | Number of houses allotted |
|---------|-------------------|---------------------------|
| 1       | 2                 | 3                         |
| 1       | K.V.Kuppam        | 60                        |
| 2       | Gudiyatham        | 70                        |
| 3       | Pernambut         | 38                        |
|         | <b>Total</b>      | <b>168</b>                |

**A.2 EMD EXEMPTION**

- i) The Small Scale Industrial units located within the State and Registered with the Tamil Nadu Small Industries Development Corporation/NSIC for the manufacture of items such as SPV Cells/Modules OR Battery OR PV System Electronics manufactured by them.
- ii) The SSI units holding Permanent Registration certificate from the District Industries Centres of Directorate of Industries and Commerce in respect of those items as stated in (i) above for which the Registration Certificate has been obtained.
- iii) Departments of the Government of Tamil Nadu.
- iv) Undertakings and Corporations owned by Government of Tamil Nadu.
- v) Labour Contract Co-operative Societies registered within Tamil Nadu.
- vi) Tiny Industries classified under SSI, registered with the State of Tamil Nadu, and Registration Certificate issued by Department of Industries and Commerce/Government of Tamil Nadu.
- vii) Small Scale Industrial units located outside the State but registered with National Small Industries Corporation (NSIC) in respect of the items such as SPV Cells/Modules OR Battery OR PV System Electronics manufactured by them.
- viii) The Small Scale Industrial units located within the State and Registered with the Tamil Nadu Small Industries Development Corporation as a PV System Integrator.

**Sd./ A.Shanmuga sundaram**  
**District Collector/Chairman**  
**District Rural Development Agency, Vellore**