

**CENTRAL ELECTRONICS LIMITED**  
(A Public Sector Enterprise)



**TENDER DOCUMENT**

**for**

**“Supply of BOS, installation, commissioning, warranty and maintenance for 5 years  
of Solar Powered Street Lighting Systems with white Light Emitting Diode (W-LED)  
12W with Li-Fe-PO4 battery  
at various locations in Banda District of Uttar Pradesh”**

**Tender Notice No.C-2(b)/RC/0700/4565/2019 dated 8<sup>th</sup> March, 2019**

General Manager (Materials)  
Materials Management Division  
Central Electronics Limited,  
4, Industrial Area, Saur Urja Marg, Sahibabad – 201 010 (UP) INDIA  
Tel. No. 0091-120-2895145 Fax No. 0091-120-2895148  
Email: mmd@celindia.co.in Website: www.celindia.co.in



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### **TENDER NOTICE**

**Tender Notice No.C-2(b)/RC/0700/4565/2019**

**8<sup>th</sup> March 2019**

Central Electronics Limited invites sealed bids (Technical & Financial) from eligible bidders which are valid for a minimum period of 365 days from the date of opening for **“Supply of BOS, installation, commissioning, warranty and maintenance for 5 years of Solar Powered Street Lighting Systems with white Light Emitting Diode (W-LED) 12W with Li-Fe-PO4 battery at various locations in Banda District of Uttar Pradesh”**

<b>Scope of Work</b>	<b>Supply of BOS, installation, commissioning, warranty and maintenance for 5 years of Solar Powered Street Lighting Systems with white Light Emitting Diode (W-LED) 12W with Li-Fe-PO4 battery at various locations in Banda District of Uttar Pradesh</b>
<b>Earnest Money Deposit</b>	<b>Rs. 1,85,000/- (Rupees One Lakh Eighty Five Thousand Only)</b>

Interested parties may view and download the tender document containing the detailed terms & conditions, free of cost from the website [www.eprocure.gov.in](http://www.eprocure.gov.in) and [www.celindia.co.in](http://www.celindia.co.in)

**ONLINE bid to be uploaded at <https://cel.euniwizard.com/>**

**Please see document control Sheet at Annexure-1**

For **CENTRAL ELECTRONICS LIMITED**

Sd-

**General Manager (Materials)  
Materials Management Division**

**Document Control Sheet & Important dates**

Tender Reference No.	C-2(b)/RC/0700/4565/2019
Name of Organization	Central Electronics Limited
Tender Type (Open/Limited/EOI/Auction/Single)	Open
Tender Category (Services/Goods/works)	Goods
Type/Form of Contract (Work/Supply/ Auction/Service/Buy/Empanelment/Sell)	Buy
Payment Mode (Online/Offline)	Online/Offline

Date of Issue/Publishing	08/03/2019 (18:30 Hrs)
Document Download/Sale Start Date	08/03/2019 (18:30 Hrs)
Document Download/Sale End Date	22/03/2019 (14:30 Hrs)
Bid submission Start Date	08/03/2019 (18:30 Hrs)
Last Date and Time for Submission of Bids	22/03/2019 (15:00 Hrs)
Date and Time of Opening of Bids	22/03/2019 (15:00 Hrs)

**THIS IS AN OPEN TENDER. BIDS ARE TO BE SUBMITTED ONLINE.  
BIDS SUBMITTED OFFLINE, IF ANY, WILL BE REJECTED.**

**Important Instructions: -**

1. The following documents/Annexures are part of tender document:
  - a. Tender notice
  - b. Document Control Sheet - Annexure -1
  - c. Detailed Specifications & Drawing & Special Conditions Annexure 'A'
  - d. Price bid format given in Annexure 'A'
  - e. Commercial terms & conditions Annexure 'B'
  - f. Format for submission of Vendor Data Annexure 'C'
  - g. Tender acceptance letter Annexure 'D'
2. Quotations shall be liable to be rejected if there is/are any deviation(s) from the specifications.
3. Escalation in price (except where price variation clause is applicable), deviation from delivery schedule, terms and conditions will not be permitted in your quotation. Statutory Taxes & Duties should be shown separately from the price.
4. Bidder who is Micro & Small Enterprise should enclose copy of valid Certificate of Registration with DIC or KVIC or KVIB or Coir Board or NSIC or DHH or any other body specified by Ministry of Micro, Small and Medium Enterprises, Govt. of India to avail benefits under the "Public Procurement Policy for Micro & Small Enterprises (MSEs) Order 2012".
5. Catalogue, literature, specification details should accompany the quotation. Incomplete quotations are liable to be rejected.
6. **Any deviations whether technical or commercial stated anywhere in the bid shall not be taken into account and may render the bid non-responsible and liable to be rejected.**
7. Vendor Data should be submitted in the **Format for submission of Vendor Data** as per annexure C.
8. Quotation should be submitted in **Two Packet system**.
9. Bulk quantity of material shall be procured from approved vendor as per list available with CEL. In case of quotation of un-approved vendor being lowest, an educational order for the sample quantity may be placed for vendor development purpose.
10. Bids should be submitted in ONLINE only in TWO parts (Technical and Price Bid). Following are to be submitted in your bid:
  - a) **Technical:**
    - i. Earnest Money RTGS/NEFT acknowledgement or the documents for exemption from submission of EMD.
    - ii. Technical catalogue, literature and approval/registration certificate, if any, required as per eligibility criteria given in the tender.
    - iii. Filled up Format for Submission of Vendor Data as per format at Annexure C.
    - iv. Tender acceptance letter as per format at Annexure D
  - b) **Price Bid**

**Price:** Prices to be filled ONLINE in the excel file only

**Annexure – A**

**Tender for Supply, Installation, Commissioning, Warranty and maintenance for 5 years of Solar Powered Street Light System with white light emitting diode (W-LED) 12W with Li-Fe-PO4 battery (with SPV Modules to be provided by CEL) at various locations in Banda District of Uttar Pradesh:**

1	<p><b>Bill of Quantities</b></p> <p>Supply of balance of system, installation and commissioning, warranty &amp; Maintenance for 5 years of 500 Nos. of Standalone Solar powered LED Street lighting systems at various locations at Banda district of UP as per following details:</p> <table border="1"> <thead> <tr> <th>S No.</th> <th>Description</th> <th>Qty.</th> </tr> </thead> <tbody> <tr> <td>01.</td> <td>Street light pole along with Module mounting structure (Suitable for CEL make 80Wp SPV Module) along with all necessary hardware.</td> <td>500 sets</td> </tr> <tr> <td>02.</td> <td>Street light luminaries 12 Watt White light along with necessary cables (As per latest IS) as per enclosed specifications and required hardware</td> <td>500 sets</td> </tr> <tr> <td>03.</td> <td>Battery Lithium Ferro Phosphate (Li-Fe-PO4 or LFP) 12.8 Volt, 40 Ah, at STC.</td> <td>500 nos.</td> </tr> <tr> <td>04.</td> <td>Suitable size of Battery Box (if battery is not included in Luminaire enclosure), acid and corrosion proof with hot dip galvanised (MS box) painted having IP65 ingress protection and anti-theft arrangement.</td> <td>500 sets</td> </tr> <tr> <td>05.</td> <td>Installation &amp; commissioning of the above</td> <td>500 Jobs</td> </tr> <tr> <td>06.</td> <td>Maintenance of street lights installed for 5 years after handing over the systems in working conditions</td> <td>500 Jobs</td> </tr> </tbody> </table> <p><b>All the supplied material should be warranted for a period of 5 years. Any item or work required for successful installation and commissioning but not mentioned above would also be responsibility of vendor at no extra cost to CEL. No escalation of price on any account would be allowed. List of beneficiaries would be provided after award of work to successful bidder.</b></p>	S No.	Description	Qty.	01.	Street light pole along with Module mounting structure (Suitable for CEL make 80Wp SPV Module) along with all necessary hardware.	500 sets	02.	Street light luminaries 12 Watt White light along with necessary cables (As per latest IS) as per enclosed specifications and required hardware	500 sets	03.	Battery Lithium Ferro Phosphate (Li-Fe-PO4 or LFP) 12.8 Volt, 40 Ah, at STC.	500 nos.	04.	Suitable size of Battery Box (if battery is not included in Luminaire enclosure), acid and corrosion proof with hot dip galvanised (MS box) painted having IP65 ingress protection and anti-theft arrangement.	500 sets	05.	Installation & commissioning of the above	500 Jobs	06.	Maintenance of street lights installed for 5 years after handing over the systems in working conditions	500 Jobs
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2	<p><b>Eligibility</b></p> <p>1. The bidder's company/firm must have successfully supplied, installed and commissioned minimum <b>100 Nos.</b> solar street lights (Single order) for any government department/PSU/Regd. NGO/ Limited Company/Pvt. Ltd. Company/Regd. Co-operative society during last 3 financial years. The Purchase Order/Work Order copies and Installation &amp; Commissioning Certificate copies are required to be submitted with the technical bid. TDS Certificate must also be submitted in case the order for supply, installation and commissioning is from any</p>																					

- Pvt. Ltd. or Ltd. Company mentioning name of the Pvt. Ltd. or Ltd. company which has issued the Purchase Order/Work Order to the bidder.
2. The bidder must submit an undertaking from battery manufacturer that they would supply the batteries as per delivery schedule requirements of CEL and provide warranty support for 5 years from the date of installation and commissioning of batteries.
  3. Bidder must have office/service centres in the state of Uttar Pradesh. The technical bid must have proof of having office in form of any of the following documents:
    - a) Electricity Bill in name of bidder company,
    - b) Valid Rent agreement or proof of ownership of the office/service centre,
    - c) Telephone Bill in name of the bidder company,
    - d) Any other documents issued by any govt. authority.
  - e) The bidder is required to have GST registration in the state of UP. Copy of registration certificate should be submitted with the technical bid. In case bidder does not have GST registration in the state of Uttar Pradesh, the bidder company must submit an undertaking on letter head that the bidder would submit GST registration certificate of state of Uttar Pradesh within 5 days of award of Purchase Order/Work Order.
  - f) Bidder has to submit Battery test certificate which should conform to the latest BIS/International standards such as IS 16270 (Secondary cell/battery for solar Photovoltaic application, general requirement and method of tests.) / IS 16046 (Standard for Li Ion battery) or similar battery test certificates should be submitted with the technical bid.
  - g) LED Chip should be compliant to IES: LM-80, and its certificate is to be submitted with the technical bid.
  - h) The luminaire shall be compliant for electrical, Photometry and Colour parameter as per IES LM-79:2008 or IS: 16106:2012 and a valid certificate is to be submitted with technical bid.
  - i) Bidders need to submit an undertaking for maintenance of the system for 5 years (including warranty period) from the date of installation without any additional cost to CEL on their company's letter head.
  - j) The bidder company/firm must submit a declaration from a registered Chartered Account/Bank/NSIC on their letter head certifying that the bidder company/firm is financially capable and has sufficient working capital to execute purchase orders/work orders to the tune of INR 93,00,000.00 (INR Ninety Three Lakhs). This declaration/certificate must be submitted with the technical bid.
  - k) All the relevant test reports / certificates of various Components (excluding PV Module) as mentioned in the tender under **Technical Specification** should be provided and fulfilled.
  - l) The bidder is required to submit an undertaking along-with the bid that it would provide test report of the Solar LED Street Light System with CEL make module in CEL name from any MNRE accredited/approved lab at their own cost within 10 working days of opening of price bids or 5 working days of award of purchase order/work order whichever is earlier.

3	<p><b>SPECIAL CONDITION</b></p> <p>a) The contractor/bidder shall not display the photographs &amp; content of the work and also will not take advantage through publicity of the work without written permission of CEL. Noncompliance to this may result in blacklisting of the contractor and any other penal or punitive action as may be decided by CEL.</p> <p>b) Service level agreement has to be signed on 100/- stamp paper after award of PO.</p>
4	<p><b>Execution Schedule:</b></p> <p>The program of execution of the supply, installation and commissioning shall be carried out within 5 months of award of order as per the schedule to be given by CEL.</p> <p>Execution of work shall be carried out in an approved manner as outlined in the technical specification or where not outlined, in accordance with the relevant Indian Standard Specification, to the reasonable satisfaction of the authorized CEL Officer. In case of deficiency / gap in any specifications the supplier shall stand to be penalized. Penalty shall be imposed pro rata as per the deficiency of any system calculated on the basis cost of system.</p> <ol style="list-style-type: none"> <li>i. Upon intimation about commissioning of the systems by the executing firm a joint inspection will be carried out by the representatives of CEL and other officers.</li> <li>ii. The issuance of a JCC shall, in no way relieve the executing firm of its responsibility for satisfactory operation of the solar systems.</li> </ol>
5	<p><b>Scope of work</b></p> <p>The broad scope of the work includes Supply, Installation, Testing and Commissioning of Solar Street Light (SSL) system consisting of white LED luminary of 12Watt (LED + Driver) LED light along with solar PV (80Wp), Lithium Ferro Phosphate (Li-Fe-PO4 or LFP) battery (of capacity 12.8V, 40AH), battery box (not in case if battery is included in luminaire enclosure itself), necessary control electronics-interconnecting wires / cables, module mounting structure, pole and other materials required as per specifications to operate from dusk to dawn, including Annual Maintenance for a period of 5 years.</p> <p>The bidder is required to submit a test report of the Solar LED Street Light System with CEL make module in CEL name from any MNRE accredited/approved lab at their own cost within 10 working days of opening of price bids or 5 working days of award of purchase order/work order whichever is earlier. The PV module for testing has to be arranged by the bidder at their own cost. Material despatch will be allowed only after submission of valid test certificate to CEL from an MNRE authorised test lab.</p> <p><b>Note: SPV Modules of CEL make for the Solar LED Street Light system supply, installation and commissioning work shall be provided by CEL. This excludes modules required for testing at MNRE authorised lab.</b></p>

- Contractor (*herein the successful bidder to whom purchase order/work order is awarded*) to deliver the materials at CEL project site directly, after pre despatch inspection by CEL officials/our customer at work of manufacturer.
- Contractor will deliver all the materials to site (U.P) along with SPV modules from CEL works. Transportation and insurance of CEL's modules is to the account of the contractor.
- Contractor shall make his own arrangement for safe storage of their as well as CEL SPV Modules at site till the handing over of the systems.
- Collection of all documents pertaining to identification of beneficiary along with photograph - including photographs of the installed systems and preparing the joint commissioning reports.
- Submission of all documents as detailed in the tender document including the joint commissioning report to CEL.
- Keeping servicing personnel and availability of essential spares like LED Luminaire (Min. 5%), in the vicinity of the solar system and log book for spares must be maintained by the contractor at service centre.
- Supply of the complete systems, including all necessary components, sub-components, spares, tools, tackles etc. as per technical specifications given in this document including packing, forwarding, safe storage, handling, commissioning, trial and performance testing and handing over, insurance of all the materials till completion of project.
- Solar Systems deployed must be utilized for the purpose of lighting in the villages as per the requirement of the villagers, if there is any misuse the same shall be responsibility of the contractor.
- If Module is found defective during the warranty period of 5 years the same shall be made available at CEL, Sahibabad by the contractor and the repaired materials will be handed over to contractor at CEL, Sahibabad. Transportation from CEL to villager's location would be responsibility of the contractor.
- Periodic maintenance of the system as detailed in this tender. To update CEL regarding performance of the installed systems on Quarterly basis as per the following requirement and submit report in this respect till the end of Maintenance and warranty period of 5 Years as per the format provided by CEL.
  - Number of complaints received during the period of reporting.
  - Numbers of complaint attended during the period of reporting.
  - Major cause of failure, as observed.
  - Major replacement made during the reporting period.
- Keeping servicing record and make available all essential spares in the vicinity of the solar system will give the desired performance with least interruption.
- Any other works as required on the site or instructed by CEL officials. The contractor shall be responsible for fulfilling all the obligations under prevailing labour laws of the land.
- No extra transportation charges shall be paid during the period of contract.
- No escalation shall be applicable on the prices.
- In case of any losses, theft or damage of material, the contractor shall alone be responsible to make alternate arrangement for completion of the project within



	<p>contractual delivery, commissioning &amp; handing over of systems within quoted price. CEL shall in no way, whatsoever, responsible to compensate the contractor in this account.</p> <ul style="list-style-type: none"> <li>• Adequate training has to be provided to the persons/villagers to be designated in maintenance and upkeep of the installed system. The bidder must also provide a detailed operation and maintenance manual specific to the installed systems in English &amp; Hindi.</li> <li>• The indicative documents are to be submitted to CEL like a) Photograph of the Solar system during distribution b) Photograph of the Solar system after installation &amp; of handing over c) System handing over report d) Joint commissioning certificate.</li> <li>• Any other works as required on the site or instructed by CEL officials.</li> <li>• Any complaint registered / service call received / fault notification in the report generated should be attended within 2 working days from the date of complaint.</li> <li>• Vendor has to address all complaints and rectify all the complaints received through any source like email, toll free, letter, etc.</li> </ul> <p><b>Job Works</b></p> <ol style="list-style-type: none"> <li>a) Construction of pedestals 450mm (L) x 450mm (W) x 500mm (D) (PCC 1:2:4) for each of the street light pole as well as fixing of the above structure on the top. The entire pedestals should be painted properly.</li> <li>b) Mounting &amp; fixing SPV Module of 80Wp each on the above installed structure.</li> <li>c) Mounting of battery box (not in case if battery is included in the luminaire enclosure) along with Battery with suitable arrangement as required.</li> <li>d) Painting of CEL logo on each Luminaire and a message with fluorescent colour on Battery Box as per instruction of CEL officials.</li> </ol> <p><b>Installation:</b></p> <p>The installation of 500 SSLs will be completed in 5 tranches of 100 SSL each i.e. after completion of installation of first tranche of 100 SLSs, the assignment of next tranche of installation of 100 SLSs will start till the completion of the installation of targeted 500 SLSs.</p> <p>The list of beneficiary will be provided by Honourable M.P and the vendor has to get an endorsement / verification the same by BDO/CDO/Concerned govt. agency or as per CEL's requirement.</p>
6	<p><b>Validity of offer:</b></p> <p>The offer must be kept valid for a period of twelve months from the date of opening of the technical bid. No escalation clause except the admissible tax component under the period of consideration would be accepted.</p>
7	<p><b>Warranty:</b></p> <p>The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and incorporate all recent improvements in</p>

	<p>design and materials unless provided otherwise in the Contract. The Supplier further warrants that the Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or is required by CEL Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in conditions prevailing in the country of final destination.</p> <p>This warranty shall remain valid for 60 (Sixty) months after the Goods or any portion thereof as the case may be, have been delivered to and handed over at the final destination indicated in the Contract.</p> <p>CEL shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall repair or replace the defective Goods or parts thereof, without cost to the Purchaser.</p> <p>If the Supplier, having been notified, fails to remedy the defect(s), the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.</p>
8	<p><b>Penalty and termination of contract:</b></p> <p>The systems shall be supplied and delivered within the scheduled time as mentioned in the work order. If the supplier fails to adhere to the schedule, CEL shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 1% of the delivery price of the delayed goods or unperformed services for each week of delay until actual delivery or installation/commissioning up to a maximum deduction of 5% of the contract price for delayed goods or installation and commissioning. Once the maximum is reached (i.e. 5 weeks of delay) CEL may consider termination of the contract and forfeit the EMD without prejudice to the other remedies of the contract.</p> <p>If at any time during the performance of the Contract, the Supplier or its subtle executants(s) should encounter conditions impeding timely delivery of the Goods and performance of the Services, the Supplier shall promptly notify CEL in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, CEL shall evaluate the situation and may at its discretion extend the Supplier's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.</p> <p>A delay by the supplier in the performance of its delivery obligations shall render the supplier liable to the imposition of liquidated damages pursuant, unless an extension of time is agreed upon without the application of liquidated damages.</p>
9	<p><b>Termination for Default</b></p> <p>CEL may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Supplier, terminate the Contract in whole or in part:</p>

	<ul style="list-style-type: none"> <li>I. if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser; or</li> <li>II. if the Supplier fails to perform any other obligation(s) under the Contract.</li> <li>III. if the supplier, in the judgement of the purchaser, has engaged in corrupt or fraudulent practices in competing for or in executing the contract.</li> </ul> <p>For the purpose of this clause:  “Corrupt practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. “fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the borrower, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the borrower of the benefits of free and open competition.</p> <p>In the event the Purchaser terminates the Contract in whole or in part, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.</p>
10	<p><b>Inspection:</b>  Pre-delivery inspection of major components may be carried out by a team of designated officials of CEL, any other department as may be considered appropriate at the factory site of the vendor / manufacturer. Before despatch of consignment intimation shall be given sufficiently ahead so that no delay occurs for deputing officials and inspection at the premises / test site. The cost of such inspection shall have to be borne by the supplier.</p>
10.1	<p>The rest of the tests and inspections shall be made at the place of delivery. Officers authorized by CEL shall be entitled at all reasonable time to inspect and supervise and test during erection and commissioning. Such inspection will not relieve the executing firm of their obligation in the contract.</p>
10.2	<p>CEL shall have the right to have the tests carried out at its own cost by an independent agency at any point of time</p>
11	<p><b>Payment:</b>  Payment will be made on back-to-back basis as per the following details and subject to receipt of payment by CEL from CEL’s customer:</p> <ul style="list-style-type: none"> <li>A. <b>70%</b> against receipt of the material in good condition at site on pro rata basis system at site after submission of the documents i.e. delivery receipt/challan, gate pass/Lorry receipt &amp; report of CEL’s QAC clearance.</li> <li>B. <b>20%</b> after successful completion of installation and commissioning of 100% of SLS in good condition at site &amp; submission of documents i.e. Installation, commissioning &amp; handing over certificate.</li> </ul>

- C. Balance **10%** payment would be made @ 2% per year of the warranty period/AMC period of 5 years. The payment would be released after certification from CEL/CEL's customer of successful completion of warranty/AMC period every year.
- D. In addition to above, the following points may be noted and complied by contractor:
- a) Before the release of first instalment for each tranche: The contractor shall also ensure the following:
- i. Submission of list of proposed locations (duly consented by respective Gram Panchayat/Block Development Officer (BDO)/Chief Development Officer (CDO)/ concerned Govt. agency as may be applicable) along with the certificate that the proposed site of installation do not have adequate number of street lights.
  - ii. Submission of undertaking that contractor shall not supply similar material to other parties at a lower rate than the rates mentioned in the order during the project period.
  - iii. Visit to the identified location by representative of CEL/ CEL's customer.
- b) Before the release of second instalment for each tranche: The contractor shall also ensure the following:
- i. Submission of completion certificate, project completion report, list of SLSs along with serial number and place of installation and photographs of site.
  - ii. Proof of permanent display of support extended by CEL's customer including CEL's customer's name, logo on the installed SLS.
  - iii. Proof that the installed SLS have been serially numbered.
  - iv. To submit 'Handover Certificate' duly signed by respective Gram Panchayat/BDO/CDO/concerned Govt. agency along as may be applicable, with certificate that the SLS have been installed and are working satisfactorily.
  - v. To submit undertaking for maintenance of the systems for 5 years (including warranty period) from the date of installation with any additional cost to CEL.
  - vi. Undertaking from the respective Gram Panchayat/BDO/CDO/concerned Govt. agency as may be applicable, stating that they will provide security and maintain the solar street lights installed, shall be obtained by contractor and submitted to CEL for onward submission by CEL to CEL's customer.
  - vii. Visit of CEL/CEL's customer to the SLS installed sites.
  - viii. To certify that:
    - The norm/guidelines of the Ministry of New and Renewable Energy (MNRE), wherever applicable, have been followed.
    - The beneficiaries/villagers have been imparted with relevant training on system operation and general maintenance techniques.
- c) CEL may seek any relevant additional document/information/certifications prior to release of any instalment of payment, if required.

	<p>E. <b>Performance Security Deposit:</b> The successful bidders will be required to submit an amount equivalent to 10% of the Order value including taxes and duties as a performance Security Deposit for satisfactory execution/handing over to customer of the ordered complete system and to cover the warranty period of 5 years. The performance security deposit should be in form of Bank Guarantee and should be deposited within 05 days from the date of PO. The bank guarantee should be valid for 6 months beyond the completion of 5 years from the date of commissioning of the project.</p>
<p>12</p>	<p><b>Force Majeure:</b>                  In no event shall either Party have any liability for failure to comply with this Agreement, if such failure results directly from the occurrence of any contingency beyond the reasonable control of the Party, including, without limitation, strike or other labor disturbance, riot, major power failure, war, natural calamities including but not limited to floods, earthquakes, fire, volcanic eruptions, epidemics, National Emergency, interference by any government or governmental agency, embargo, seizure, or enactment or abolition of any law, statute, ordinance, rule, or regulation (each a " Force Majeure Event"). In the event that either Party is unable to perform any of its obligations under this Agreement because of a Force Majeure Event, the Party who has been so affected shall as soon as may be, after coming to know of the Force Majeure Event, inform the other Party and shall take reasonable steps to resume performance as soon as may be after the cessation of the Force Majeure Event. If the period of nonperformance due to a Force Majeure Event exceeds thirty (30) days, the Party whose ability to perform has been so affected may, by giving written notice, terminate this Agreement.</p>
<p>13</p>	<p><b>QUALITY AND WARRANTY</b>                  All the components and parts used in the solar street lighting systems should conform to the latest BIS or IEC specifications, wherever such specifications are available and applicable.</p> <p><b>The street lighting system including batteries, battery box, structure and all accessories/components will be warranted for a period of five years from the date of commissioning/handing over.</b></p>
<p>14</p>	<p><b>TEST CERTIFICATE FOR COMPLETE SLS SYSTEM</b>                  The bidder has to provide a Test Report in the name of CEL (with CEL make Solar Modules) for the <u>Complete Solar LED Street Lighting System</u> (comprising of Li-Fe-PO4 battery and LED lights, CEL module along with necessary accessories like control electronics, etc.). All cost involved in testing and certification of the complete Solar LED Street Lighting System from MNRE authorized/accredited lab has to be borne by the successful bidder.</p>
<p>15</p>	<p><b>Cost overruns</b>                  CEL shall not bear cost overrun, whatsoever that may be.</p>

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**OPERATION and MAINTENANCE MANUAL**

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

- Basic principles of Photovoltaic's.
- A small write-up (with a block diagram) on Solar Street Lighting System - its components, PV module, battery, electronics and luminaire and expected performance.
- Type, Model number, Voltage & capacity of the battery, used in the system.
- The make and wattage of the LED used in the lighting system.
- About Charging and Significance of indicators.
- Clear instructions about erection of pole and mounting of PV module (s) and lamp housing assembly on the pole.
- Clear instructions on regular maintenance and trouble shooting of the Solar Street Lighting System.
- DO's and DONT's.
- Name and address of the contact person for repair and maintenance, in case of non-functionality of the solar street lighting system.

## **TECHNICAL SPECIFICATION**

### **LED BASED SOLAR STREET LIGHTING SYSTEM**

#### **Battery Box**

Battery shall be either included in the luminaire enclosure of IP 65 enclosure box and acid and corrosion resistant or should be outside the luminaire in a vented, hot dip galvanised metallic (MS) with acid proof & corrosion resistant painting along-with anti-theft arrangement etc. The dimension of Battery Box shall be according to the battery to be placed inside.

#### **Pole & Mounting Structures**

Hot dip Galvanised Iron Pole as per IS 1161 and IS 4736 i.e. Class B, and diameter of 76.1mm minimum thickness 3.6mm, Heavy Duty, Length 5 metres (1 meter below the ground level and 4 Mtrs. above the ground level) with Civil foundation, With module mounting structure (with a provision of tilt angle from horizontal 0° to 35°) suitable for CEL's 80Wp (PM80) Solar Module.

#### **Cables**

Copper cable PVC insulated, Flexible multi-strand, annealed copper conductor un-armoured 1100V grade, conforming to relevant latest IS and duly ISI mark of 2 core x 2.5 sq. mm suitable for 0° to 50°C temperature.

#### **STREET LIGHT LUMINAIRE**

The LED Street lights shall be weatherproof (IP65), suitable for outdoor application. The enclosure will house 12 Watt white LED at a height of 4 meters. **The Street light luminaries will bear the logo of CEL.**

- Automatic dusk to dawn controller (DTDC)
- Highly efficient charge controller & Electronic Ckt.
- Two step charging algorithms
- Temperature compensated battery set points
- Weather proof luminaries (IP65)
- Adequate protections and indications
- Long Life - more than 35,000 working hours
- Excellent CRI —Closest to natural light
- Instant starting

#### **12 Watt Solar Street Light LED:**

##### **Light Output:**

The luminaire must use high Lumen efficacy W-LED with minimum 130 lumens per watt (and UV free)

**For single light level:** Minimum 24 Lux when measured at the periphery of 4-meter diameter from a height of 4 meter. The illumination should be uniform without dark bands or abrupt variations, and soothing to the eye. Higher light output will be preferred.

**For Multiple Light levels:**The luminaire should have two levels of light to take care of different lighting needs during the night. Minimum 24 Lux when measured at the periphery of 4meter diameter from a

height of 4 meter (at " High" illumination level). The illumination should be uniform without dark bands or abrupt variations. Minimum 12 Lux at lower illumination level (Higher light output will be preferred)

Application (Indoor/outdoor)	Outdoor
Total Luminous flux	≥1200 lm.
Lamp wattage	12 Watts (LED +Driver)
Fixture make	Al-casting
IP rating	IP-65 or above
Working temperature	-5 degree C to + 50 degree C
Working humidity	10% to 90% RH
LED type	High Power-Nichia/Philips/Osram make
Lumen efficacy	>130 lumens/watt @350mA
Dispersion angle	100-120 degree
Colour temperature	5500-6500 K
CRI	≥75
Autonomy	3 days or Minimum 36 Operating hours per permissible discharge with fully charged lithium- ferro phosphate- Battery
Electronics Efficiency	Overall total Efficiency of the Electronics should be Minimum 85%

Note: Using LEDs that emit UV light will not be permitted.

LED Chip should be compliant to IES: LM-80 (APPROVED Method for Measuring Lumen Maintenance of LED Light Sources and LED lumen depreciation time to LM70). Test reports for same should be submitted with the bid.

The luminaire shall be compliant for electrical, Photometry and Colour parameter as per IES LM-79:2008 or IS: 16106:2012 for the above performance parameters. Luminous intensity distribution should follow the batwing patterns in polar curves. Test report for the above should be submitted with the bid.

**Integrated Charge Controller**

- i. The total electronic efficiency should be at least 90%.
- ii. Charge controller should be MPPT Type.
- iii. Electronics should operate at an appropriate voltage suitable for proper charging of battery.
- iv. No Load current consumption should be less than 20 mA.
- v. The PV module itself should be used to sense the ambient light level for switching ON and OFF the lamp.



- vi. The PCB containing the electronics should be capable of solder free installation and replacement.
- vii. Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.

**Electronics Protection**

- i. Adequate protection is to be incorporated under “No Load” conditions e.g. when the lamp is removed and the system is switched ‘ON’.
- ii. The system should have protection against battery overcharge and deep discharge conditions.
- iii. The system should have protection against short circuit conditions.
  - Protection for reverse flow of current through the PV module(s) should be provided.
  - Adequate protection should be provided against battery reverse polarity.
  - Load reconnect should be provided at 80% of the battery capacity status.

**Battery**

- i. The Battery shall be of 12V, 40AH (Type: Lithium Ferro Phosphate (Li-Fe-PO4 or LFP)) along with necessary accessories.
- ii. Battery pack should have proper ‘Battery management System’ (BMS) for cell balancing, over charge and over temperature protection.
- iii. Battery should conform to the latest BIS/International standards. Such as IS 16270 (Secondary cell/battery for solar Photovoltaic application, general requirement and method of tests.) / IS 16046 (Standard for Li Ion battery) or similar battery test certificates should be submitted with the bid.
- iv. Each Battery should be packed individually for proper and safe transportation.

**PRICE BID FORMAT**

**(Price to be filled and uploaded in separate Excel file in the tender)**

<b>S. no.</b>	<b>Particulars</b>	<b>Qty.</b>	<b>Unit Price in INR</b>	<b>Total Price in INR</b>
1	Supply, Installation, Commissioning, Warranty and maintenance for 5 years of Solar Powered Street Light System with white light emitting diode (W-LED) 12W with Li-Fe-PO4 battery (with SPV Modules to be provided by CEL) at various locations in Banda District of Uttar Pradesh as per detailed specifications, scope of work, terms and conditions given in Annexure A.	500 Nos.		

**Note:** GST would be extra, as applicable.

Signature of the bidder with Seal  
Name of Authorised signatory

**General Terms and Conditions:**

1.	This is Open tender. Eligible bidders qualifying the eligibility criteria may submit their bid as described in tender. Bids having deviation from our specifications, terms & conditions would be rejected.
2.	<b>Basis of price:</b> The offer should clearly indicate units and rates. Prices should be submitted on FOR sites basis and the scope of work described in Annexure A. <b>The quotations submitted with basis of price other than the above will be rejected.</b>
3.	<b>GST:</b> GST will be extra at actual as applicable.
4.	<b>Execution Schedule:</b> As given in Annexure-A.
5.	<b>Payment:</b> As given in Annexure-A.
6.	<b>Warranty period:</b> As given in Annexure-A.
7.	<b>Performance Security Deposit:</b> As given in 'Performance Security Deposit' clause in 'Payment' in Annexure-A.
8.	<b>Liquidated Damages:</b> As given in 'Penalty and termination of contract' in Annexure-A.
9.	<b>Inspection:</b> As given in Annexure A.
10.	<b>Price variation Clause:</b> Price variation would not be permitted and quotations having Price variation clause would be rejected.
11.	<b>Validity of offer:</b> The quotation/tender/bid submitted by the bidder/supplier shall be valid for a minimum period of 365 days from date of opening.
12.	Any corrections/alterations in the tender/quotation/bid are to be duly signed by the bidder. CEL does not take any responsibility for delay in receipt or non-receipt or loss of tender(s) in transit.
13.	<p><b>Earnest Money Deposit:</b> An amount of <b>₹1,85,000/-</b> to be submitted as Earnest Money Deposit through RTGS/NEFT. No interest shall be payable on the earnest money deposit. The earnest money may be deposited into CEL's account with Syndicate Bank. The details of account are as below:</p> <p>Beneficiary Name: Central Electronics Limited  Beneficiary Account Number/IBAN: 8776125000014  Beneficiary Bank SWIFT Address/BIC: SYNBINBB161  Beneficiary Bank Name: Syndicate Bank (IFSC: SYNB0008776)  Bank Address: Sahibabad Branch,  CEL Complex, Plot No. 1,  Site 4, Sahibabad 201010</p> <p><b>Exemption from submission of EMD:</b> Micro &amp; Small Enterprise registered with DIC or KVIC or KVIB or Coir Board or NSIC or DHH or any other body specified by Ministry of Micro, Small and Medium Enterprises, Govt. of India are exempted from submission of EMD subject to submission of valid registration certificate with technical bid.</p> <p>The Earnest Money Deposit (after deduction of bank charges, if any) of unsuccessful bidders/tenderers will be refunded within one month of finalization of tender. EMD of successful bidders will be returned on receipt of 10% Performance Security Deposit through BG. In case the Performance Security Deposit is not received within 05 days of issuance of purchase order, CEL reserves the right to forfeit the EMD amount, cancel the purchase order and blacklist the successful bidder at their risks and costs with wide publicity including uploading on CEL's website. No justification for delay in submission of security deposit will be entertained.</p> <p>Micro &amp; Small Enterprises quoting price within price band of L1+15 per cent shall also be allowed to supply a portion upto 20% of requirement by bringing down their price to L1 price where L1 is non MSEs (as per "Public Procurement Policy for Micro &amp; Small Enterprises (MSEs) Order 2012")</p>

14.	CEL reserves the right to reject any or all tenders/quotations/bids received or accept any or all tenders/quotation/bids wholly or in part. Further, CEL reserves the right to order a lesser quantity without assigning any reason(s) thereof. CEL also reserves the right to cancel any order placed on the basis of this tender in case of strike, accident or any other unforeseen contingencies causing stoppage of production at CEL or to modify the order without liability for any compensation and or claim of any description.
15.	<p><b>Submission of Tender:</b> ONLINE Bids in <b>Two Packet System</b> to be submitted before <b>1500 hours on 22.03.2019</b>. Bids should be submitted in ONLINE only in TWO parts (Technical and Price Bid). Following are to be submitted in your bid:</p> <p>a) <b>Technical:</b></p> <ol style="list-style-type: none"> <li>i. Earnest Money RTGS/NEFT acknowledgement or the documents for exemption from submission of EMD.</li> <li>ii. Technical catalogue, literature and approval/registration certificate, if any, required as per eligibility criteria given in the tender.</li> <li>iii. Filled up Format for Submission of Vendor Data as per format at Annexure C.</li> <li>iv. Tender acceptance letter as per format at Annexure D</li> </ol> <p>b) <b>Price Bid</b>  <b>Price:</b> Prices to be filled ONLINE in the excel file only</p>
16.	<b>Opening of Tenders:</b> Bids will be opened on <b>22/03/2019 at 1500 hrs (IST)</b> .
17.	<b>Technical Clarifications:</b> Bidders desiring any technical clarification may contact General Manager (Project Executive), Central Electronics Limited, 4, Industrial Area, Sahibabad – 201010 Phone No. 0120-2895158 Fax: 0120-2895148 email: hemant@celindia.co.in. However, the tender submission and opening dates would remain unchanged.
18.	In case an order placed by the CEL based on the quotation/bid/tender submitted by the bidder/supplier is not executed by the supplier/bidder, CEL may buy the ordered goods from elsewhere and recover the additional amount that CEL may have to spend in procuring the stores plus 10% to cover the overhead & incidental expenses.
19.	<b>Replacement of Rejected Material:</b> Any material supplied against order placed on the basis of this tender and found to be defective on inspection or differing from approved samples or make or specifications will be replaced by the supplier free of cost or full refund made for the amount paid by Central Electronics Limited including freight and insurance and other incidental charges at CEL's discretion.
20.	<p><b>Arbitration:</b> All the disputes, difference controversies/ difference of opinions, breach and violation arising from or related to this agreement between the parties, then the same shall be resolved by mutual discussion /reconciliations in good faith. If disputes, difference controversies /difference of opinions , breach and violation arising from or related to this agreement cannot be resolved within 30 days of commencement of reconciliations / discussions then the matter shall be referred to the sole arbitrator, nominated by CMD CEL, for this purpose and his/her decision shall be final binding on both the parties. The cost of arbitration, if any shall be shared equally between the parties.</p> <p>The arbitration proceedings shall be conducted by the Arbitral Tribunal in accordance with the provisions of the Arbitration &amp; Conciliation Act, 1996 as amended from time to time. The place of arbitration shall be Delhi and language of such arbitration proceedings shall be in English.</p> <p>All disputes relating to this agreement shall be subject to jurisdiction of the courts at Delhi only.</p>
21.	All the other terms & conditions mentioned in Annexure A shall also apply. In case of any ambiguity in the terms & conditions mentioned here-above and Annexure A of the tender, clause defined in Annexure-A shall supersede.

**Format for submission of Vendor Data**

1.	<b>Name of vendor</b>			
2.	Registered Address			
	Postal Code		Company's Year of Establishment	
	Company's nature of business		Company's Legal Status	
	Registration No.		Phone:	
	Fax No.		Website:	
	Name of Proprietor/ CEO/Chairman			
	Phone/Mobile No.			
	Email id			
3.	Factory Address			
	Phone No.			
	Fax No.			
	Email id			
4.	Delhi/NCR Address (if any)			
	Phone No.			
	Fax No.			
	Email id			
5.	Correspondence Address			
6.	Name of Contact Person for this tender			
	Designation			
	Date of Birth			
	Phone/Mobile no.			
	Fax No.			
	Email id			
7.0	<b>GST related information</b>			
7.1	GST No.			

8.0	<b>Income Tax related information</b>	
8.1	PAN No.	
8.2	PAN reference no. (in case PAN applied for)	
8.3	PAN Status (in case PAN applied for)	
10.	Registration No. with Directorate of Industries	
11.	SSI/MSE Reg. No. (if Small Scale Industrial Unit)	(Please enclose certificate from DIC/NSIC along with Certificate from registered CA with value of plant and machinery)
12.	Is MSE/SSI is ST/SC?	Yes / No ( If Yes please enclose relevant certificate as proof)
13.0	<b>Bank related information</b>	
13.1	Bank name	
13.2	Branch name	
13.3	Bank address	
13.4	Bank phone no.	
13.5	Bank fax no.	
13.6	Bank MICR Code (9 digit)	
13.7	RTGS-IFSC Code	
13.8	Account type	
13.9	Account no.	
13.10	Swift Code	

Correspondence with respect to this tender may be addressed to Mr/Ms  
 ..... at ..... email id  
 ..... and mobile  
 no.....

I/We accept that CEL may send SMS and/or email regarding this tender/any other tender, award of contract, purchase order(s) and/or any other information on any/all mobile nos. mentioned in this vendor data sheet.

I/We certify that the information given herein is correct to the best of my knowledge and belief.

Signature of Proprietor/CEO/Chairman  
 Seal of the company/concern

**TENDER ACCEPTANCE LETTER**  
(To be given on Company's Original Letter Head)

Date:

To,

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**Sub: Acceptance of Terms & Conditions of Tender.**

Tender Reference No: C-2(b)/RC/0700/4565/2019

Name of Tender / Work: -

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Dear Sir,

1. I / We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

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as per your advertisement, given in the above mentioned website(s).

2. I / We hereby certify that I / we have read the entire tender document along with technical specifications and terms & conditions of the tender documents from Page No. \_\_\_\_\_ to \_\_\_\_\_ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by all the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organization too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept all the technical specifications and terms and conditions of the above mentioned tender document(s) /corrigendum(s) in its totality / entirety.

5. In case any provisions of this tender are found violated , then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)

## **Instructions for Online Bid Submission:**

The bidders are required to submit soft copies of their bids electronically on the e-tender Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the e-tender Portal, prepare their bids in accordance with the requirements and submitting their bids online on the e-tender Portal.

More information useful for submitting online bids on the e-tender Portal may be obtained at: <https://cel.euniwizard.com/>

## **REGISTRATION**

1. Bidders are required to enroll on the e-Procurement Portal (URL <https://cel.euniwizard.com/> with clicking on the link "Online bidder Registration" on the e-tender Portal. of free of cost.
2. As part of the enrolment process, the bidders will be required to choose a unique user name and assign a password for their accounts.
3. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication with the bidder.
4. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Only Class III Certificates with signing + encryption key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / TCS / nCode / eMudhra etc.), with their profile.
5. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC"s to others which may lead to misuse.
6. Bidder then logs in to the site through the secured log-in by entering their user ID/password and the password of the DSC / e-Token.
7. The scanned copies of all original documents should be uploaded on portal.

## **SEARCHING FOR TENDER DOCUMENTS**

There are various search options built in the e-tender Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Item/work id, Title, Date, etc.

Once the bidders had selected the tenders in which they are interested, bidder can pay the processing fee of Rs.8,850/- including GST@18% (NOT REFUNDABLE) by net-banking / Debit / Credit card then you may download the required documents / tender schedules, Bid documents etc. Once you pay both fees, tenders will be moved to the respective "Register" Tab. This would enable the e-tender Portal to intimate the bidders through e-mail in case there is any corrigendum issued to the tender document.

Please feel free to contact ITI Helpdesk (as given below) for any query related to e-tendering.

### **Helpdesk landline No: 011-49606060**

1. Mr. Amrendra Kumar (9355030628).
2. Mr. Satyam Kumar Rai (9355030633).