



CHHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY (CREDA)

(Dept. of Energy, Govt. of Chhattisgarh)
Near Energy Education Park, Village Fundhar, VIP (Air Port Road) Raipur 492006 (C.G.)
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E.BID DOCUMENT No. 6742/RE-03/Street Light/2019 Dt 25-07-2019

Standardization of Rates for Design, Supply, Installation & Commissioning of Solar Street Light System With Five Years on Site Unconditional Warrantee at different locations anywhere in Chhattisgarh State

Important Events and their schedule for this E. Bid are as follows -

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S. No	Particulars	Date	Time	Place
1	Submission of Bid Document, Technical Bid	20-08-2019	Till 01.30 PM	In the Office of Chief Engineer (RE-03), SPV Off Grid, Head Office, CREDA Raipur
2	Submission of Samples	20-08-2019	Till 01.30 PM	Energy Education Park, VIP Road, Raipur
3	Submission of Price Bid through http://cspc.co.in	20-08-2019	Till 01.30 PM	http://cspc.co.in web portal
4	Examination of Technical Bid	20-08-2019	From 3:00 PM	In the Office of Chief
5	Opening of Price Bid	20-08-2019	After Technical Bid	Engineer (RE-03), SPV Off Grid, Head Office, CREDA Raipur

Bid Document Cost- Rs. 5,000.00 + 18% GST = Rs. 5,900.00 (in words Rupees Five Thousand Nine Hundred Only)

Document can also be downloaded from our website **www.creda.co.in** with the cost of Bid as mentioned in NIT, which shall have to be deposited along with the Bid document.



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Ref. No. 6742/RE-03/Street Light/2019

NOTICE INVITING E.BID

CREDA invites E.Bids from experienced System Integrators, Contractors and Vendors registered in CREDA for standardization of rates for Design, Supply, Installation and Commissioning of Solar Street Light System with Five Years on Site Unconditional Warrantee at different locations anywhere in Chhattisgarh State, as per following details:-

Particulars	Cost of Bid Document	EMD	Desired Experience
Design, Supply, Installation & Commissioning of Solar Street Light System with Five Years on Site Unconditional Warrantee at different locations anywhere in Chhattisgarh State	Rs 5900.00 (incl. 18% GST)	Rs 5,00,000.00 (for bidders registered outside of CG state) Rs. 3,00,000.00 (for bidders registered in CG state) Rs. 1,00,000.00 (for Start-ups)	* for details pl see eligibility conditions of the bid documents.

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S. No	Particulars	Date	Time	Place	
1	Submission of Bid Document, Technical Bid	20-08-2019	Till 01.30 PM	In the Office of Chief Engineer (RE-03), SPV Off Grid, Head Office, CREDA Raipur	
2	Submission of Samples	20-08-2019	Till 01.30 PM	Energy Education Park, VIP Road, Raipur	
3	Submission of Price Bid through http://cspc.co.in	20-08-2019	Till 01.30 PM	http://cspc.co.in web portal	
4	Examination of Technical Bid	20-08-2019	From 3:00 PM	In the Office of Chief Engineer	
5	Opening of Price Bid	20-08-2019	After Technical Bid or the next day	(RE-03), SPV Off Grid, Head Office, CREDA Raipur	

Note:

- 1. Price Bid shall be submitted online only at http://www.cspc.co.in,* however technical bid will have to be submitted in hard copy at the Office of Chief Engineer(RE-03), SPV Off-grid, Head Office, CREDA, Raipur. Bidders are advised to follow the instructions provided for Registration and E Submission Process accordingly.
- 2. The bid forms, General Instructions to Bidders and other details including amendments/change can be viewed/ downloaded from website creda.cgstate.gov.in
- 3. Bid notice is also available on CREDA website www.creda.co.in the link notice or http://www.cspc.co.in

CREDA reserves all right to extend the deadline for submission of Bids or accept/reject any or all bid in full/part without assigning any reasons whatsoever.

(Rajiv Khare) Chief Engineer

Date: 25-07-2019



2. CHECK LIST

To ensure that your bid submitted to CREDA is complete in all respects, please go through the following checklist & tick mark for the enclosures attached with your bid:

S.No.	Description	Attached / Not Attached	Page no. if attached
1	EMD (Proof of submission)		
2	Bid Document Fee (Proof of submission)		
3	Copy of Bidder Registration Certificate in CREDA in SPV Programme for FY 2019-20		
4	Balance Sheets of last three financial years showing positive net worth and an minimum aggregate turnover of Rs 05 Crores in three Financial Years i.e. 2015-16, 2016-17 and 2017-18 duly certified by a registered Chartered Accountant (not required for Start-ups)		
5	List and Completion and Performance Certificates issued by a Govt. Agency of completed works		
6	Original Bid document duly signed & sealed on each page, as a confirmation of acceptance of Terms & Conditions (T&C)		
7	Authorization Certificate & Agreement Copy from Manufacturer/ Vendor		
8	Declaration of the supplier about any relatives working with CREDA		

(Sign & Seal of the Bidder)

Details of EMD & Bid Document Fee Attached

S.No	
	Description
	Earnest Money Deposit - Earnest Money Deposit of Rs. 5,00,000/- in normal case/ Rs.
	3,00,000/- if the SI is registered in Chhattisgarh State /Rs. 1,00,000/- in case of Start-up;
1	submitted in the form of Demand Draft drawnBank,
	Branch, bearing DD no
	datedis attached herewith.
	Bid Document Fee - Bid Document Fee of Rs. 5,900/-, submitted in the form of Demand
	Draft drawn onBank,
2	Branch, bearing DD No dated
	is attached herewith.

(Sign & Seal of the Bidder)



3. UNDERTAKING OF THE BIDDER

I/We have read carefully and examined the notice inviting bid, schedule, General Rules and terms and conditions of the contract, special conditions, Schedule of Rates and other documents and Rules referred to in the bid document for the supply.

I/We hereby bid my rates for the execution of the work for CREDA as specified within the time stipulated in the schedule in accordance with all aspects with the specifications, designs, drawings and instructions with such conditions so far as applicable.

I/We agree to keep the bid open for Ninety (90) days from the due date of submission thereof and not to make any modifications in its terms and conditions.

A sum of RsLacs only is hereby forwarded as earnest money in the form of Demand Draft payable to CREDA at Raipur (C.G.). If I/We, fail to commence or complete the sanction ordered in specified time I/We agree that the CREDA shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money absolutely. The said Earnest Money shall be retained by CREDA towards security deposit to execute all the works referred to in the bid documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be required by CREDA.

I/We hereby declare that I/We shall treat the bid documents, specifications and other records connected with the work as secret/confidential and shall not communicate information derived there-from to any person other than a person to whom I/We have authorized to communicate the same or use the information in any manner prejudicial to the safety of CREDA/the State Govt.

I/We shall abide to all the laws and shall b and other Govt. dues etc. to the appropriate	e responsible for making payments of all the taxes, duties, levies Govt. departments.
Our GST registration No. is	The PAN No. under the Income Tax Act is
	of the respective taxes to the appropriate authorities and should REDA to recover the taxes due from us and deposit the same with
Dated:	Signature
Place:	Name of Bidder with seal
	Witness:
	Signature:
	Name:

Postal Address:



4. General Information about this Bid

S. No.	Particulars	Details
1	Bid No.	Ref. No. 6742/RE-03 /Street Light /2019 Date 25-07-2019
2	Particulars of the work	Design, Supply, Installation & Commissioning of Solar Street Light System with Five Years on Site Unconditional Warrantee at different locations anywhere in Chhattisgarh State
3	Time Period for completion of the work	Maximum 3 Months from the date of allocation of Work/ Date of completion as per Work Order whichever is earlier.
4	Mode of submission of Bids	Technical Bid – Off Line Price Bid – E. Bidding through http://www.cspc.co.in Website (Online)
5	Last date and time for submission of Bid Documents including Technical bid & Samples (Offline) and Price Bid (Online)	Till 01:30 pm Date 20-08-2019
6	Period of validity of rates for acceptance	Three months from the date of opening.
7	Date and time of opening of Technical Bid	From 03:00 pm Date 20-08-2019
7	Date and time of opening of Price Bid	After technical Bid Date 20-08-2019
8	Place of opening Bid	In the Office of Chief Engineer (RE-03), SPV Off Grid, Head Office, CREDA Raipur



5. INSTRUCTIONS FOR BIDDERS

5.1 ELIGIBILITY CRITERIA

- A. Bidder should be registered in CREDA as a System Integrator, Contractors & Vendors in SPV Programme for the financial year 2019-20 on the date of opening of this Bid. Bidder registered as a Pvt. Ltd. / Ltd. / Partnership / Proprietor Ship firm incorporated / registered in the State of Chhattisgarh shall be treated as Bidder of Chhattisgarh.
- B. Bidder should have minimum direct experience of supply, installation and commissioning of 20 nos. of Solar Stand Alone Street Light with Lithium Battery in last five financial years.
- C. Experience Certificates should be submitted in the attached format. Any other format containing similar information as in attached format shall be considered only in-case of submitted in Hindi / English Language only. Work order, L.O.I. / L.O.A will not be acceptable.
- D. Bidders who are registered as Start-up entity under Solar PV Module/PV System Integrator by Govt. of India of Govt. of Chhattisgarh shall be eligible for work allocation under this bid subjected to
 - a. Meeting other bid criteria including technical criteria.
 - b. Acceptance of Price offer by CREDA as discovered in this bid.
 - c. Non-meeting of Financial eligibility and experience criteria as mentioned under "eligibility criteria" head shall not be the reason for rejection of bid.
 - d. Bidders who qualify under this section shall be allocated with maximum 5% of the total work.
- E. Bidders must have a positive net worth. They shall have to submit a certificate duly signed by a qualified and registered Chartered Accountant as a proof.
- F. Bidders should have an minimum aggregate turnover of Rs. 5 Crores in three Financial Years ending on 31st March of each FY i.e. FY 2015-16, FY 2016-17, FY 2017-18.
- G. Bidder will have to submit audited copy of Balance Sheet certified by a registered chartered accountant as a proof for point no. E and F.
- H. The Bidder should have valid GST registration certificate in the state. A copy of which should be enclosed.
- I. Bidders should have to submit test reports/acknowledgement (of complete material and fee which they have submitted for testing) of the system in which they are bidding in their name from NABL accredited Lab or MNRE approved Lab. Also bidders have to submit test reports of the components.
- J. Bidders who are **Blacklisted** by CREDA or any other Govt Agency/ Department / UT, **will not be** allowed to participate in this bid. System integrator whose registration has been suspended by CREDA due to bad performance or other reasons shall not be eligible to participate in price bid.
- K. Bidders who have any litigation pending in any court with CREDA on the date of opening of the bid shall not be eligible for this bid.
- L. Any information/data submitted/rendered by the applicant/bidder if found false/ forged /wrong would entitle CREDA to reject/cancel the bid submitted by bidder.



- **E-BIDDING PROCESS:** For ease of accessing the E-Bidding website and registration the following is to be done by bidder:-
 - A. Visit http:/www.cspc.co.in
 - B. Click on e-biding button on right hand side of the page.
 - C. The user will be directed to e-bidding page where all information regarding registration is available along with helpline details.
 - D. The Bidder must submit attested copies of all legal documents pertaining to the constitution of their Concern as applicable, along with the Bid, to authenticate their identity, such as affidavit of Sole Proprietorship/Partnership Deed/ Registration Certificate/Certificate of incorporation of the Company/Memorandum of Association of the Company and Power of Attorney authorizing a person to represent the firm in all matters with respect to the Bid.
 - E. Price Bid shall be submitted online only at http://www.cspc.co.in, however technical bid will have to be submitted hard copy. Bid Documents (including Technical Bid) must reach at Office of Chief Engineer (RE-03), SPV Off Grid, Head Office, CREDA, Raipur latest by 01:30PM on 20-08-2019. Bids submitted after scheduled time and date shall not be considered.
- 1. Bid Documents should be submitted in prescribed manner in separate envelops duly super scribed and placed as follows (A) Bid Fees and EMD, (B) Eligibility Documents as per point 5A to 5G mentioned above (C) Technical Bid and Complete bid document in original duly signed by authorized signatory on each & every page of the bid document.
- 2. The envelopes must be clearly marked as "(A) Bid Fees and EMD/ (B) Eligibility Documents/ (C) Technical Bid and Complete bid document in original of Bid No. 6742/RE-03/Street Light/ 2019, Date 25-07-2019. These will be examined by Technical Committee of CREDA on 20-08-2019 and bidders will be shortlisted on the basis of approval of the technical bids along with Test Report/acknowledgement for opening of price bids.
- 3. The Bidder is expected to examine all instructions, forms, terms and specifications as mentioned in the Bid document. Failure to furnish all information required by the Bid documents or submission of a bid not substantially responsive to the Bid Document in every respect will be at the Bidder's risk and is likely to result in out-right rejection of the Bid.

4. **LOCAL CONDITIONS:**

It shall be imperative on each bidder to fully inform him of all local conditions and factors, which may have any effect on the execution of the works covered under these documents and specifications. AGENCY shall not entertain any request for clarifications from the Bidder, regarding such local conditions.

5. CLARIFICATION OF BID DOCUMETS:

- 5.1 A prospective Bidder requiring any clarification of the Bid Documents may contact AGENCY in writing or by Fax /E-Mail at the AGENCY's mailing address indicated in the Invitation for Bid.
- 5.2 Verbal clarifications and information's given by the AGENCY or its employees or its Representatives shall not be in any way entertained.

6. AMENDMENT IN BID DOCUMENTS:

At any time prior to the submission of the bid or prior to the opening of the financial bid the AGENCY may, for any reason, whether at its own initiative or in response to a clarification requested by the Bidder, modify the Bid documents by amendments.

- 7. The Specifications of Solar Street Light System should be as specified in the bid in drawing/schedule attached.
- 8. If any amendments are issued by MNRE/CREDA in due course of time, in this context, then those shall be applicable under this bid.
- 9. Bidder shall have to submit details of GST & PAN registration numbers issued by the appropriate authority.
- 10. The documentary evidence for meeting the eligibility criteria must mandatorily be submitted along as per check list with bid in prescribed manner.



- 11. Bidders must enclose the safety procedure & manual.
- 12. When Bid Documents are delivered through messenger, it should be submitted at office of Chief Engineer (RE-III) Head Office CREDA, Near Energy Education Park VIP Road Raipur latest by 01:30 PM on 20-08-2019. Nobody is authorized to receive or grant receipt for bid delivered on behalf of CREDA.
- 13. Bidder should quote their rates considering variation of site conditions, variation in price of different components and keeping the quantum and quality of work in mind. If CREDA anticipates that rate is abnormally low or high, CREDA shall have liberty to amend the rates or reject the bid. Bidder will have to provide bill copies of material procurement, duly endorsed.
- 14. **VALIDITY:** Full descriptive particulars and complete specifications should accompany the offer. Offers should be kept open for acceptance for at least 180days from the date of opening. After finalization of this bid the approved rates shall be valid till one year from the date of award; however, CREDA shall have liberty to increase or decrease this validity if needed.
- 15. The terms, conditions and specifications mentioned in bid document shall be binding on the Bidders and no condition or stipulation contrary to the conditions shall be acceptable. It may please be noted that the Bidders who do not accept terms and conditions stipulated in this bid documents, their offers shall be liable to be rejected out-rightly without assigning any further reasons.
- 16. Each page of bid document & enclosures shall be signed by the Bidder and seal affixed. All the pages of the documents issued must be submitted along with the offer. In case of any corrections / alterations in the bid, the Bidder should attest the same; otherwise bids may not be considered.
- 17. Bidders are also instructed to submit their bids in properly arranged manner (with index, proper paging and with flags on important documents). Incomplete, lose, conditional or improper arranged bids will not be accepted.
- 18. CREDA reserves the right (i) to reject or accept any or all bids wholly or partly without assigning any reason on the grounds considered advantageous to CREDA, whether it is the lowest bid or not and (ii) to split the quantities against the bid on more than one firm for the same items/ work. No reason will be assigned by CREDA for this and will be binding on the bidders. The bidder who had quoted the lowest price shall be preferred for placing order. Due to large quantum of work & limitation of the time period for completion of the work CREDA shall take consent from more than one bidder if they agree to work on rates standardized by CREDA. CREDA may undergo agreement with those eligible bidders who give consent to work on rates standardized by CREDA and may place work orders to them. Rates approved through this bid may be standardized for all eligible bids to work in year 2019-20 and shall be valid till 31-07-2020. However CREDA reserves right to curtail or extend this period.
- 19. Offers through Telegraph/Fax/Emails or open offers etc. received shall be summarily rejected.
- 20. All the Bidders shall essentially indicate the break-up of prices as shown in Price Bid. In case any of the charges are not included in the quoted prices, the same shall be clearly shown as extra, indicating specifically the rate/scale of such charges. The lowest prices quoted shall be considered.

21. BID DOCUMENT FEE AND EARNEST MONEY:

Each Bidder should submit Bid Document Fee and Earnest money deposit in the form of Demand Draft as mentioned in the NIT vide "Bid No. 6742/RE-03/Street Light/2019 Date 25-07-2019" due on 20-08-2019", in a separate envelope, else they will summarily be rejected and returned. Bid Document Fee, EMD submitted in any other form shall not be accepted. [Exemption from EMD shall be given only to those SSI units of Chhattisgarh state who submit the competency certificate on which it should be clearly mentioned that, "the company/firm is registered in Chhattisgarh for manufacturing of that particular product"]. CREDA competency certificate for EMD will not be considered as EMD for this rate contract bid.

22. FORFEITURE OF EARNEST MONEY DEPOSIT:

It should be clearly understood that in the event of Bidder failing to enter into the agreement in the prescribed format on their quoted rates and also fails to execute assigned works under this bid,



within stipulations, if he is so communicated within the validity period of the offer, the full amount of earnest money shall be forfeited and Bidder will be debarred from future business with CREDA. CREDA's decision in this respect will be final and binding on the Bidder.

23. **PRICE**:

The prices quoted should be firm and F.O.R. destination excluding GST payable on the bill of supply and installation / services. GST as applicable on the date of billing shall be paid additionally as per applicable rate over the above quoted prices.

24. **ENGINEERING DOCUMENT:**

Bidders will have to submit Engineering Documents and test reports/acknowledgement with technical details, drawings, Specifications of components and make etc. to CREDA for approval, as and when asked by CREDA. Works may only be started out only after approval of the Engineering Document and their samples. The test report should be in the name of the bidder.

24. SAMPLES:

If require, CREDA may inspect the consignment before dispatch of the material that shall be delivered/ accepted as per the scope of work and specifications, as get it tested in accreted laboratory at its own cost. Bidder will have to provide Bill copies of material procurement duly endorsed.

25. INSPECTIONS:

CREDA reserves right to inspect the material at Godowns/Temporary Stores before dispatch and also at works sites.

26. TAX OBLIGATIONS:

TDS for Income Tax & GST shall be recovered under various acts and deposited with the appropriate authority if required as per rules.

27. TECHNICAL CRITERIA

- 1) The eligible Bidder to whom work is likely to be awarded should have their own service unit cum office within Chhattisgarh state.
- 2) The Bidders should have sufficient technically qualified and well-experienced manpower for execution of the project and after sales service of the systems. These details may be called by CREDA and in case there is any deficiency found the SI may be debarred from the bid.

28. **JURISDICTION OF THE COURT:**

Any dispute arising out of the contract shall be subject to the jurisdiction of court at Raipur.



6. GENERAL CONDITIONS OF CONTRACT

1. **DEFINITIONS**:

In writing General Conditions of Contract, the specifications and bill of quantity, the following words shall have the meanings hereby indicated, unless there is something in the subject matter or content inconsistent with the subject.

CREDA shall mean the Chhattisgarh State Renewable Energy Development Agency represented through the C.E.O.

Work shall mean any work entrusted to the BIDDER as mentioned in the scope of work and sanction order.

The "Engineer in charge" shall mean the Engineer or Engineers authorized by CEO, CREDA for the purpose of this contract. Inspecting Authority shall mean any Engineering person or personnel authorized by CREDA to supervise and inspect the erection of the Solar Street Light System.

"The Eligible Bidder" shall mean the BIDDER awarded with the contract or their successors and permitted assigns. Contract Price shall mean the sum named in or calculated in accordance with the provisions of the contract as the contract price. General Conditions shall mean the General conditions of Contract.

"Specifications" shall mean the specifications annexed to these General Conditions of contract and shall include the schedules and drawings attached thereto or issued to the bidder from time to time, as well as all samples and pattern, if any,

"Month" shall mean calendar month. "Writing" shall include any manuscript, typewritten, printed or other statement reproduced in any visible form whether under seal or written by hand.

2. CONTRACT DOCUMENT:

The term "Contract" shall mean and include the General conditions, specifications, schedules, drawings, and work orders etc., issued against the contract schedule of price or their final general conditions, any special conditions applying to the particular contract specification and drawings and agreement to be entered into. Terms and conditions not herein defined shall have the same meaning as are assigned to them in the Indian contract Act or any other Act in vogue or by any person of common knowledge and prudence.

3. MANNER OF EXECUTION:

Execution of work shall be carried out in an approved manner as outlined in the technical specifications or where not outlined, in accordance with desired Specifications laid down by CREDA, to the reasonable satisfaction of the Engineer.

- 1) The eligible Bidder shall conduct a detailed survey of site and submit Site Clearance and necessary documents and survey details in concerned District Office of CREDA in prescribed manner.
- 2) District / Regional Office, CREDA shall examine these reports and after satisfaction forward these, to concerned Chief Engineer of Head office of CREDA for approval.
- 3) The Bidder shall start work within 15 days after the date of issue of work Order. Work order will be given to the chosen Contractor only after execution of the agreement with CREDA.



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- 4) All the materials required for the Installation of Solar Street Light System as per Work Order issued shall be kept at site in the custody of the System Integrators, Contractors and Vendors. CREDA shall not be responsible for any loss or damage of any material during the installation.
- 5) After successful completion of work and joint inspection will be done in presence of beneficiary, System Integrator/Contractor/Vendor and CREDA and after successful completion of works and its approval from CREDA, then bill will be signed and the claim will be forwarded for payments as per guidelines and procedures of CREDA.
- 6) Work order/LOI will be given to the chosen System Integrator only after execution of the agreement with CREDA.

4. VARIATIONS, ADDITIONS & COMMISSIONS:

CREDA shall have the right to alter, amend, omit, split or otherwise vary the quantum of work, by notice in writing to the System Integrator/Contractor/Vendor. The eligible bidder shall carry out such variation in accordance with the rates specified in the contract so far as they may apply and where such rates are not available; those will be mutually agreed between CREDA and the eligible Contractor.

5. INSPECTION DURING ERECTION:

The Engineer in Charge or his authorized representative shall be entitled at all reasonable times to inspect and supervise and test during construction work. Such inspection will not relieve the eligible bidder from their obligations under this contract. Material can be inspected before dispatch by the authorized representatives of CREDA at the factory at the cost of the eligible bidder, if desired by CREDA.

6. COMPLETION OF WORK:

Time being the essence of contract, the installation of Solar Street Light System shall be completed within the time schedule prescribed in the Work Order.

7. ELIGIBLE BIDDER DEFAULT LIABILITY:

CREDA may by written notice of default to the eligible Bidder terminate the contract in circumstances detailed hereunder:

- (a) If in the opinion of the CREDA, the eligible Bidder fails to complete the work within the time specified in the work order or within the period for which extension has been granted by CREDA to the eligible bidder.
- (b) If in the opinion of CREDA, the System Integrator/contractor/Vendor fails to comply with any of the provisions of this contract.
- (c) In the event of CREDA terminating the contract in whole or in part as provided in paragraph (a) above, CREDA reserves the right to engage another eligible bidder or agency upon such terms and in such a manner as it may deem appropriate and the eligible bidder shall be liable to CREDA for any additional costs or any losses caused to CREDA as may be required for the completion of erection of Solar Street Light System and or for penalty as defined under this bid document until such reasonable time as may be required for the final completion of the work.
- (d) In the event CREDA does not terminate the contract as provided in paragraph (a) the eligible bidder shall continue performance of the contract, in which case he shall be liable to CREDA for penalty for delay as set out in this bid document until the work is completed.



8. FORCE MAJEURE:

The eligible Bidder shall not be liable for any penalty for delay or for failure to perform the contract for reasons of FORCE MAJEURE such as of God acts of public, enemy, naxal problem, acts of government, cyclone, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes provided that the contract, shall within 10 (ten) days from the beginning of such delay notice the CREDA in writing of the cause of delay. CREDA shall verify the facts and grant such extension as facts justify. Delay in supply of any accessories material of Street Light etc by the related vendors, to whom the BIDDER has placed order, shall also not be treated as force majeure.

9. REJECTION OF WORKS:

In the event of any of the material supplied/ work done by the eligible bidder is found defective in material or workman ship or otherwise not in conformity with the requirements of this contract specifications, CREDA shall either reject the material/ work and advise the eligible bidder to rectify the same. CREDA may impose penalty for such rejection upto the 200% cost of the entire system. Habitual/repeated offenders shall be black listed/debarred to participate in the any Tender/ Activity of CREDA till further orders. The eligible bidder on receipt of such notices shall rectify or replace the defective material and rectify the work, free of cost. If the eligible contractor fails to do so, CREDA may,

- 1) At its option replace or rectify such defective materials and/ or work and recover the extra cost so involved from the contractor plus 15% service charges of the cost of such rectification, from the contractor and/ or terminate the contract for balance work/ supplies with enforcement of penalty as stated above.
- 2) Defective materials/ workmanship will not be accepted under any conditions and shall be rejected outright without compensation. The eligible Bidder shall be liable for any loss/ damage sustained by CREDA due to defective work with enforcement of penalty as stated above.

10. EXTENSION OF THE TIME:

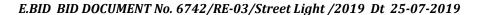
If the completion of work is delayed due to any reason beyond the control of the eligible bidder shall without delay give notice to the CREDA in writing of his claim for an extension of time. CREDA on receipt of such notice may agree to extend the contract/delivery date of the Solar Street Light System may be reasonable but without prejudice to other terms and conditions of the contract.

11. MAKES OF EQUIPMENTS TO BE USED IN THE WORK:

The eligible bidder has to ensure that equipments as per Technical Requirements of guidelines of CREDA as complied with. The eligible bidder has also to ensure that he will use only components of approved vendors of CREDA. The material/works for which CREDA/ MNRE or BSI or ISI specification is not available, engineer-in-charge of the works will examine and approve the material/works, preferably of all makes on which CREDA has report of satisfactory performance. Test certificates for all major equipments should be submitted to the engineer-in-charge of the works before installation of the same. Bidders shall have to submit authorization certificate and agreement copy from the registered Manufacturer/Vendor of CREDA in regards to procure materials of Solar Street Light System. Bidders will not be permitted to change the Manufacturer/Vendor for procuring of the material. Only in special cases where the Manufacturer/Vendor is at fault for delay or poor quality or non-functionality of system, CREDA may intervene and take suitable actions.

12. WARRANTEE PERIOD AND POST INSTALLATION SERVICES:

• The work done/ material supplied by the eligible SI should be warranted for satisfactory operation and against any defect in material and workmanship including Battery, Luminary and other balance





- of equipment, at least for a period of 5(five) years, from the date of commissioning of the Solar Street Light System including other works as per scope of work.
- Warrantee on SPV Modules shall be for 10 (ten) years from the date of commissioning. SPV Modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and not less than 80% at the end of 25 years.
- The above warrantee certificates shall be furnished to CREDA. Any defect noticed during this period should be rectified by the SI free of cost upon written notice from CREDA provided such defects may be due to bad workmanship or bad materials used.
- The warrantee period shall be extended by the period during which the system remains nonoperative due to reasons within control of the eligible SIs.
- This warrantee must be an unconditional onsite warrantee and the eligible SI will have to replace the defective material within 7 days positively from the date of information given to him.
- Care should necessarily be taken to make the Solar Street Light System operational, once the reporting of the fault/non-operational status is done, within a week. If the Solar Street Light System is not made operational within **7 days** CREDA may rectify the same at the cost of SI and the warrantee period shall be extended for a month for the same.
- System Integrators shall have to establish their service stations in the state and shall have to keep sufficient quantity of spares and man power to ensure proper service network for taking care of smooth functioning of Solar Street Light System installed by them. SI shall have to give a toll free number to register complaints.

Also, the primary responsibility of warrantee of Solar Street Light System shall be of concerned system integrator only who has been awarded for execution of work by CREDA. Only in special cases where the cause of non-functionality of the system is the manufacturing defect and where the manufacturer/vendor is solely responsible as per warrantee terms/agreement between System Integrator and Manufacturer/Vendor, CREDA may intervene and take suitable actions against System Integrator/ Manufacturer/Vendor if required.

13. TERMS OF PAYMENT:

The following terms of payment shall apply for the bid: -

- a) 95% of the cost of Solar Street Light System as per the work order, after completion of work as per specifications and drawings at site with proper handing over. Payment will be done after receipt of Beneficiary contribution to CREDA.
- b) Balance 5% of the cost of system as per the work order shall be retained by CREDA as Security Deposit for a period of 60 months. However the same may be released to SI on submission of TDR of equivalent amount duly pledged in favour of CREDA valid for a period of five years issued by a scheduled bank. Payment will be done after receipt of Beneficiary contribution to CREDA.
- c) GST shall be paid extra as applicable on the date of billing. Any change in GST shall also be applicable during the period of contract.

14. PENALTY FOR DELAY IN COMPLETION OF CONTRACT:

If the eligible SI/Vendor/Contractor fails to complete the erection, testing and commissioning etc, within the phased time schedule specified in the work order or any extension granted there to, CREDA will recover from the eligible SI/Vender/Contractor as penalty a sum of one percent (1%) of the system/work price of the uncompleted portion of the work for each calendar month of delay or part thereof. For this purpose, the date of taking over shall be reckoned as the date of completion. The total penalty shall not exceed 5% (five percent) of the Cost. The repeated fault may result in forfeiture of part or whole of money and even termination of the contract.

Penalty may be recovered from payments due or by invocation of performance security. CREDA may also debar the SI from future business for upto 3 years in case of non performance of work in time limit. Review of the progress of installation of Solar Street Light allocated to SIs shall be done time to time by CREDA and if the progress of installation is found unsatisfactory, the allocation of entire remaining uninstalled Street Light or their part of can be re-allocated to other SI as per discretion of CREDA.



15. SECURITY DEPOSIT:

- The Earnest Money shall be retained by CREDA as additional SD for five years after agreement is
 done to execute all the works referred to in the tender documents upon the terms and conditions
 contained or referred to therein and to carry out such deviations as may be required by CREDA.
- Beside this 5% of the cost shall also be retained as SD during the five years of warrantee period. In case the Security Deposit is in form of TDR from **any scheduled bank** and in the event of extension of completion date, the validity of TDR shall also be suitably extended. No interest shall be payable on the Security Deposit.

16. INSURANCE:

The eligible Bidder shall arrange insurance coverage for the materials at his/ beneficiary's custody for the work under execution and successful completion of work and subsequent handover to the beneficiary. The eligible bidder shall take up insurance or such other measures for the manpower so as to cover the claim for damage arising under workmen's compensation Act and other applicable State/ Central laws. CREDA shall not bear any responsibility on this account.

Eligible SI shall arrange for insurance coverage for Solar Street Light System during COMC period i.e. for 05 year from the date of installation. Insurance should cover for damage and theft. In case of such incidence, SI must replace the lost/damaged part within 7 days from the date of intimation.

17. PENALTY DUE FROM THE BIDDER:

All costs of damages for which the eligible bidder is liable to the CREDA will be deducted from any money due to the eligible bidder including the security deposit of any project under CREDA.

18. ELIGIBLE BIDDER'S RESPONSIBILITY:

Notwithstanding anything mentioned in the specifications of subsequent approval or acceptance of the Solar Street Light System by CREDA, if any, the ultimate responsibility for satisfactory performance of the entrusted work shall rest with the eligible bidder. If in any case the eligible bidder does not complete the work as per the orders issued to them then CREDA may take over the task & complete the project at the cost of eligible bidder.

19. RESPONSIBILITY TO RECTIFY THE LOSS AND DAMAGE:

All costs of damages for which the eligible bidder is liable to the CREDA will be deducted from any money due to the eligible bidder including the security deposit. If any loss or damage occurs to the work or any part thereof or materials/ equipments for incorporation therein the period for which the eligible bidder is responsible for the cause thereof or from any cause whatsoever, the eligible bidder shall at his own cost rectify/ replace such loss or damage, so that the permanent work confirms in every respect with the provision of the contract to the satisfaction of the Engineer. The eligible bidder shall also be liable for any loss or damage to the work/ equipments occasioned by him in course of any operation carried out to him during performing the contract.

20. RESPONSIBILITY TOWARDS THE WORKMAN OR OUT SIDERS:

The eligible bidder shall have to take insurance coverage from any authorized Insurance Company against Workmen compensation due under Workmen Compensation Act and submit copy of the insurance document before issuance of Sanction order. The eligible bidder shall ensure all safety measures during execution and repairs of the work. CREDA, will, in no case be responsible for any accident fatal or non-fatal, caused to any workman or outsider in course of transport or execution or



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repairs of work. All the expenditure including treatment or compensation will be entirely borne by the eligible bidder. The eligible bidder shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations.

21. NON-ASSIGNMENTS:

The eligible bidder shall not assign or transfer the work orders issued as per this contract or any part thereof without the prior approval of CREDA. If eligible SI transfer / assign / sublet full or any part of work allocated to him without prior permission from CREDA in writing to any third party shall be liable to be debarred/blacklisted from any Bid/Activity of CREDA till further orders.

22. CERTIFICATES NOT TO AFFECT RIGHTS OF CREDA:

The issuance of any certificate by CREDA or any extension of time granted by CREDA shall neither prejudice the rights of CREDA in terms of the contract nor shall they relieve the eligible contractor of his obligations for due performance of the contract.

23. SETTLEMENT OF DISPUTES THROUGH ARBITRATION:

- 1) Except as otherwise specifically provided in the contract, all disputes concerning questions of fact arising under the contract shall be decided by the Chief Executive Officer (CEO), CREDA provided a written appeal by the eligible bidder is made to CREDA. The decision of the CEO, CREDA shall be final and binding to the all concerns.
- 2) Any dispute or difference including those considered as such by only of the parties arising out of or in connection with the contract shall be to the extent possible be settled amicably between the parties. If amicable settlement cannot be reached then all disputed issues shall be settled by arbitration.

24. LAWS GOVERNING CONTRACT:

The contract shall be constituted according to and subject to the Laws of India and jurisdiction of the High Court of Bilaspur, Chhattisgarh.

<u>Compliance with Labour Regulations:</u>- During continuance of contract, the bidder shall abide at all times by all applicable existing labour enactment and rules made there under, regulations, notifications and bye laws of state and central Govt or local authority that may be passed/issued or may be issued.

25. LANGUAGE AND MEASURES:

All documents pertaining to the Contract including specifications, schedules, notice correspondences, operating and maintenance instructions, drawings or any other writings shall be written in English/Hindi language. The metric system of measurement shall be used in this contract.

26. CORRESPONDENCE:

- 1) Any notice to the eligible bidder under the terms of the contract shall be served by registered mail to the registered office of the contractor or by hand to the authorized local representative of the contractor and copy by post to the eligible bidder principal place of business.
- 2) Any notice to CREDA shall be served to the CEO, CREDA, Raipur in the same manner.

27. SECRECY:

The eligible bidder shall treat the details of the specifications and other documents as private and confidential and they shall not be reproduced without written authorization from CREDA.



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- **28.** CREDA reserves all right to change/ amend any condition of the Bid or accept/reject any or all bids in full/part without assigning any reasons whatsoever.
- **29.** CREDA reserves all rights to increase or decrease quantum of works to be allocated to bidders if required without assigning any reason.
- **30.** In case of non-compliance of any terms and conditions by bidder, CREDA, may discontinue the contract if required and may forfeit the EMD.
- **31.** CREDA reserves the right to cancel the work allotted to the SI/Contractor/Vendor if the SI/Contractor/Vendor fails to complete the work within stipulated/ extended time limit as mentioned in the Work Order. Subsequently CREDA will have discretionary power to cancel and award the work to any other experienced SI/Contractor/Vendor also as and when required. CREDA shall also have right to forfeit payment of uncompleted work of the bidder if require.

32. AGREEMENT:

The successful eligible bidder shall have to enter into an agreement with the CEO, CREDA in the approved contract agreement form within 07 days of the receipt of call from CREDA.



7. PROCEDURE FOR FINALIZATION OF BID

7.1 BID EVALUATION CRITERIA

- i. Offer of only those parties who are found qualifying based on eligibility Criteria will be taken into further consideration and prices of only those parties qualifying based of these criterion will be opened.
- ii. Bids shall be evaluated on the basis of rates without GST.
- iv. CREDA retains right to negotiate rates with L-1 Bidder.
- v. L1 rates or the rates approved by CREDA will be considered as the final rate.
- vi. Conditional bids shall not be accepted.
- vii. However CREDA shall have rights and liberty to call any /other parties to work on approved rates as and when required in accordance with quantum of work and scheduled time limits for completion of targets.
- viii. CREDA shall call offers from eligible bidders to work on approved rates and the work shall be allocated to those eligible bidders who gave consent to work on such approved rates.

7.2 ALLOCATION OF TARGETS AND AREA OF WORK

- i. Initially eligible Bidders will be awarded with equal nos. of work; quantity may change according to nos. of sanctioned works. Further allocations shall be made on the basis of their performance subsequently.
- ii. CREDA reserve rights to increase or decrease quantities to be allocated to eligible bidders on the basis of the availability of stock with bidder and time limits for the projects.
- iii. CREDA has discretion to allot work to any eligible bidder anywhere in the State of Chhattisgarh.

We (on behalf of Eligible Bidder) have read all the above stated details & accept to comply with it in total.

(Name, Signature & Seal of the Bidder)



8. SCOPE OF WORK:

The scope in brief will be as follows-

- 1. Survey of Sites, designing, supply, installation & commissioning of Solar Street Light Systems including necessary civil work for construction of RCC Foundation as per design and specifications approved by CREDA, on turnkey basis. Bidder shall have to take approval of the engineering documents, Bill of Materials and samples from CREDA prior to commencement of the work. Five years unconditional onsite warrantee for manufacturing defects shall be required for each of the system after successful commissioning and proper handing over.
- 2. The scope of work shall also includes the followings:
 - Survey of Sites, Submission of site clearance certificate where the Solar Street Light Systems are to be installed. A layout plan of the site should also be submitted clearly indicating the identified location for installation of SPV Modules, Structures and other components shall be installed. SI shall furnish all necessary information to beneficiary for Solar Street Light System Warrantee, Do & Don'ts etc. so as to avoid further misunderstandings and disputes.
 - Detailed planning of time bound smooth execution of project.
 - Design, supply, installation & commissioning of Solar Street Light System of required capacities as per design and specifications approved by CREDA, on turnkey basis.
 - Providing User Manuals and Warrantee Cards to beneficiary / CREDA.
 - SI shall have to submit JCCs within 15 days of Installation and Commissioning of Solar Street Light System in District Office of CREDA.
 - Unconditional onsite warrantee for manufacturing defects for Five years faultless operation, assure inventory for maintenance.
 - Providing Prompt Service Facilities to customers/ beneficiaries.
 - Risk liability of all personnel associated with implementation and realization of the project.
 - Training of at least two persons nominated by user, on the various aspects of design and maintenance of the offered system after commissioning of the system.
 - The eligible SI shall maintain sufficient inventory of the spares to ensure that the system can be made functional within 7 days from the communication of breakdown of the system during currency of the warrantee period. If in case, the concerned SI fails to rectify the defects or replace the non-functional component of the system, CREDA reserves the rights to make the system functional through any other eligible SI and the cost of the same will be borne from the SD/Performance Security deposited in CREDA of the concerned SI.

 The contractor shall run the system on trial basis and shall closely monitor the performance of
 - The contractor shall run the system on trial basis and shall closely monitor the performance of the system before handing over the system, so that the assured annual power generation can be estimated for monitoring of the performance of the system. CREDA shall examine the data of generation and ascertain if the generation is adequate with reference to the capacity of the SPV Systems.
 - Performance Guarantee Test: Successful performance guarantee test to demonstrate the rated capacity of Solar Street Light System as per CREDA's norms shall have to be conducted by SI in presence of representatives of CREDA, if required.



9. TECHNICAL SPECIFICATIONS:

A standalone solar photovoltaic street lighting system (SLS) is an outdoor lighting unit used for illuminating a street or an open area. The Solar Street Light System consists of solar photovoltaic (SPV) module, a luminary, storage battery, control electronics, inter-connecting wires/cables, module mounting pole including hardware and battery box. The luminary is based on White Light Emitting Diode (W-LED), a solid state device which emits light when electric current passes through it. The luminary is mounted on the pole at a suitable angle to maximize illumination on the ground. Electricity generated by the PV module charges the battery during the day time which powers the luminary from dusk to dawn. The system lights at dusk and switches off at dawn automatically.

DETAILED SPECIFICATIONS:

1. Type - I: Specifications.

a. For 360Wp/6M High Solar Street Light System:-

<u>Luminary:</u> The luminary shall deliver a system lumen > 6000 lm by consuming wattage <44W. The luminary shall be with 5000K and CRI > 70. The luminary shall have a rated life of 50,000 burning hours @ L70. The luminary shall be street light made of pressure die-cast aluminium body. The bottom cover shall be polycarbonate with IP 65 and IK 08 rating. The LED shall be SMD type.

<u>Battery:</u> The battery used in the system shall be LiFePO4. The battery capacity shall be 100Ah with Life cycles of 2500 cycles @ 90% DOD. The battery shall be integrated inside the square aluminium alloy pole, for which the battery compartment shall be with IP 68 protection. The Operating temperature of the battery shall be -0 to 60 $^{\circ}$ C. The size of the battery shall be 120x146x470mm and weigh not more than 12.2kg. The system shall carry a battery management system along with the battery.

<u>PV Module:</u> PV cell technology shall be mono-Si, which shall be mounted on four sides of the square aluminium pole. The PV module and the pole shall be an integrated system (Top mounted solar panel is not accepted). Watt peak rating per module should be minimum 360Wp / 23Voc. Solar cell efficiency (under STC) 16.40%. Number of strings on the pole shall be min 8 nos with parallel striping topology. The lifespan of the PV module shall be > 20 years. The dimension of the PV module shall not be less than 172x172x4000mm per string.

Pole: The total height of the Pole shall be 6m above ground level. Aluminium alloy bottom part shall be 2m and solar PV module part shall be 4m. Size of the square pole shall not be less than 172x172mm. The pole shall have a special locking arrangement for the battery compartment. The aluminium shall be powder coated with RAL 7043. Total nominal peak power output shall be 360Wp. The Light poles shall be EN 40-6 & CE certified. Battery compartment should be provided with lock and key mechanism for security purpose.

b. For 180Wp/4M High Solar Street Light System: -

<u>Luminary</u>: The luminary shall deliver a system lumen > 2000 lm by consuming wattage <27W. The luminary shall be with 4000K and CRI > 70. The luminary shall have a rated life of 50,000 burning hours @ L70. The luminary shall be circular in shape made of pressure die-cast aluminium body. The bottom cover shall be polycarbonate with IP 65 and IK 08 rating. The LED shall be SMD type.

Battery: The battery used in the post top lantern shall be LiFePO4. The battery capacity shall be 60Ah with Life cycles of 2500 cycles @ 90% DOD. The battery shall be integrated inside the square aluminium alloy pole, for which the battery compartment shall be with IP 68 protection. The Operating temperature of the battery shall be -0 to 60 $^{\circ}$ C. The size of the battery shall be 120x146x470mm and weigh not more than 8.5kg. The system shall carry a battery management system along with the battery.



<u>PV Module:</u> PV cell technology shall be mono-Si, which shall be mounted on four sides of the square aluminium pole. The PV module and the pole shall be an integrated system (Top mounted solar panel is not accepted). Watt peak rating per module 180 Wp/23Voc. Solar cell efficiency (under STC) 16.40%. Number of strings on the pole shall be 4 nos with parallel striping topology. The lifespan of the PV module shall be > 20 years. The dimension of the PV module shall not be less than 172x172x2000mm per string.

Pole: The total height of the pole shall be 4m above ground level. Aluminium alloy bottom part shall be 2m and solar PV module part shall be 2m. Size of the square pole shall not be less than 172x172mm. The pole shall have a special locking arrangement for the battery compartment. The aluminium shall be powder coated with RAL 7043. Total nominal peak power output shall be 180Wp. The Light poles shall be EN 40-6 & CE certified. Battery compartment should be provided with lock and key mechanism for security purpose.

2. Type - II: Specifications (Integrated Type).

Particulars	Model -I	Model -II
PV Module 12V x 100 Watt poly/mono panel		12V x 150 Watt poly/mono panel
Battery	12.8V x 40 Ah Lithium Ferro Phosphate Battery with 80% DOD	12.8V x 60 Ah Lithium Ferro Phosphate Battery with 80% DOD
Charge Controller	12V/10A MPPT	12V/15A MPPT
LED Lamp (Sensor Control)	Max Power - 12v 20W Led Chip brand – Bridgelux/ Osram/Cree Lumen (LM) - 3000 lm Life Time – 50000 Hours	Max Power - 12v 30W Led Chip brand – Bridgelux/ Osram/Cree Lumen (LM) - 4500 lm Life Time – 50000 Hours
Lamp Material Aluminium Alloy		Aluminium Alloy
Charge Time	4-5 Hours (by Sun)	4-5 Hours (by Sun)
Discharge Time	02 Days or 24 Hours	02 Days or 24 Hours
Duty Cycle	The illumination should be 100% for first 5 Hours, 50% for next 3 Hours for the rest of the time.	
Height of Pole (GI Pole) 6 meters		7 meters

3. Type - III: Specifications (Non-Integrated or Semi Integrated Type).

Particulars	Model -I	Model -II	Model -III	Model -IV
PV Module	12V, 75Wp	12V, 100Wp	12V, 150Wp	36V,200Wp
Battery	12.8V 30Ah	12.8V 40Ah	12.8V,60Ah	12.8V,80Ah
MPPT Charge Controller	10A	10A	15A	15A
LED Lamp	12W	20W	30W	40W
Lamp Material	Aluminium Alloy	Aluminium Alloy	Aluminium Alloy	Aluminium Alloy



Charge Time	4-5Hours (by Sun)	4-5Hours (by Sun)	4-5Hours (by Sun)	4-5Hours (by Sun)
Autonomy	2Days/24Hours	2Days/24Hours	2Days/24Hours	2Days/24Hours
Light Operation	Dusk to Dawn with 5 Hours full light level, 3 Hours at 60% brightness level and rest of the time at 30% light level			
Height of Pole (GI)	6 meters	6 meters	7 meters	7 meters
Light Source	LED Chip should be compliance to IES: LM-80 (Approved Method for Measuring Lumen Maintenance of LED Light Sources and LED lumen depreciation time to L70). Test report for same should be submitted.			
Light Out put	 The luminaire must use high efficacy W-LED with minimum 135 lumens per watt (and UV free). [A certificate to be submitted by the System supplier to the Test Lab during certification] 1) Color Temperature: Between 5500 K to 6500 K. 2) CRI ≥ 70 3) Luminous intensity distribution should follow the batwing patterns in polar curves. 4) The luminaire should be tested for all type tests as per IS 10322 Part 5 Sect 3 or IEC 60598-2-3 standards. 			
Ingress Protection - IP	Luminary Optical and Control gear compartment - IP 65 / IP 66			

4. <u>Type - IV: Specifications</u> (Garden Light).

Particulars	Details
PV Module	12V x 30 Watt polycrystalline panel
Battery	12.8V x 10 Ah Lithium Ferro Phosphate Battery with 100% DOD
Charge Controller	12V/ 5/10A MPPT
LED Lamp (Sensor Control)	Max Power - 20W Led Chip brand – New Century/ Nichia/Phillips/Osram/Cree. The minimum Lumen (LM) output of the luminary should be 2000 lm. Life Time – 50000 Hours
Lamp Material	Aluminium Alloy
Charge Time	4-5 Hours (by Sun)
Autonomy	02 Days/ 24 Hours
Duty cycle	Provided with motion/time sensor to conserve energy
Height of Pole (SS Pole)	5 meters

5. <u>Type - V: Specifications</u> (Campus Light).

Particulars	Details	
PV Module	12V x 35 Watt monocrystalline panel x 3nos.	
Battery	12.8V x 20 Ah Lithium Ferro Phosphate Battery x 3nos.	
Charge Controller	Micro processor based MPPT with dimming & motion sensor	



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Luminary	12 Watt (Max.) x 3nos.		
Charge Time	4-5 Hours (by Sun)		
Autonomy	02 Days/ 24 Hours		
Height of Pole (GI Pole)	6 meters octagonal pole shall be min 75 mm at top side, 150 mm at bottom side with minimum thickness of 3 mm. The base plate shall be of size 260x260x18 mm duly welded to pole.		
Mounting Structure	Hot Dip galvanized design to hold 3 integrated type luminary with battery and panel in 360 degree formation		
Duty cycle	Dimming profile at 100% for first 5 hours 50% for next 5 hours and 100% for rest 2 hours or provided with motion/time sensor to conserve energy.		
LED Lamp (Sensor Control)	Max Power - 12W (each) Led Chip brand –Nichia/Phillips/ Osram/Cree. The minimum Lumen (LM) output of the luminary should be 2000 lm. Life Time – 50000 Hours		
Lamp, Battery and PV housing	Should be integrated type made of pressure die-cast aluminum with the provision of replacement of module		

PV MODULE:

- Indigenously manufactured SPV module should be used.
- The PV module should have crystalline silicon solar cells and must have a certificate of testing conforming to IEC 61215 Edition II / BIS 14286 from an NABL or IECQ accredited Laboratory.
- The power output of the module under STC should be as per the above specification sheet mention for each model. The SPV Modules shall confirm to NOCT norms.
- The module efficiency should not be less than 12 % for module size up to 50W and 14% above that.
- The terminal box on the module should have a provision for opening it for replacing the cable, if required.
- There should be a Name Plate fixed inside the module which will give:
 - Name of the Manufacturer or Distinctive Logo.

Model Number.

Serial Number.

Year of manufacture.

• A distinctive serial number starting with NSM will be engraved on the frame of the module or screen printed on the tedlar sheet of the module.

BATTERY:

- Battery pack should have proper 'Battery management System' (BMS) for cell balancing, over charge and over temperature protection.
- Battery should conform to the latest BIS/IEC/ International standards.

LIGHT SOURCE:

- The light source will be a white LED type.
- The colour temperature of white LED used in the system should be in the range of 5500°K-6500°K.
- W-LEDs should not emit ultraviolet light.
- The light output from the white LED light source should be constant throughout the duty cycle.
- The lamps should be housed in an assembly suitable for outdoor use.
- The temperature of heat sink should not increase more than 20°C above ambient temperature during the dusk to dawn operation.

ELECTRONICS:

- The total electronic efficiency should be at least 90 %.
- Charge controller should be MPPT Type.

人) CREDA

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- Electronics should operate at an appropriate voltage suitable for proper charging of the battery.
- The PV module itself should be used to sense the ambient light level for switching ON and OFF the lamp.
- The PCB containing the electronics should be capable of solder free installation and replacement.
- Necessary lengths of wires/cables, switches suitable for DC use and fuses should be provided.

ELECTRONIC PROTECTIONS:

- Adequate protection is to be incorporated under "No Load" conditions e.g. when the lamp is removed and the system is switched 'ON'.
- The system should have protection against battery overcharge and deep discharge conditions.
- 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.

MECHANICAL COMPONENTS:

- A corrosion resistant metallic frame structure should be fixed on the pole to hold the SPV module and the luminary.
- The frame structure should have provision so that the module can be oriented at the suitable tilt angle.
- Pole should be Hot dip galvanized pipe as per IS1161 & IS4736 i.e. Class B.
- The pole should have the provision to hold the luminaire.
- The battery shall be either included in the luminaire enclosure, which should be water proof (IP 65) and corrosion resistant or outside the luminaire enclosure in a vented, acid proof and corrosion resistant, hot dip galvanized metallic box (IP 65) with anti-theft locking arrangement for outdoor use.

INDICATORS:

- The system should have two indicators, green and red.
- The green indicator should indicate the charging under progress and should glow only when the charging is taking place. It should stop glowing when the battery is fully charged.
- Red indicator should indicate the battery "for low battery and fault" condition.

OUALITY AND WARRANTY:

- The street lighting system (including the battery) will be warranted for a period of five years from the date of supply.
- The PV module(s) will be warranted for a minimum period of 25 years from the date of supply. The PV modules must be warranted for their output peak watt capacity, which should not be less than 90% at the end of Ten (10) years and 80% at the end of Twenty five (25) years.
- The Warranty Card to be supplied with the system must contain the details of the system.

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.
- A small write-up (with a block diagram) on Solar Street Lighting System its components, PV module, battery, electronics and luminary and expected performance.
- Type, Model number, Voltage & capacity of the battery, used in the system.
- The make, model number, country of origin and technical characteristics (including IESNA LM-80 report) of W-LEDs used in the lighting system.
- About Charging and Significance of indicators.



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- 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 troubleshooting 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.



10. SCHEDULE - I PART 'A': GENERAL INFORMATION

(Strike off whichever is not applicable. Separate sheets should be used, wherever necessary)

01.	Nam	e & Address of the Bidder		:		
02.	Nam	e & Address of the firm/Company etc.	:			
	a)	Registered office		:		
	b)	Factory/works address		:		
	c)	Fax Nos.		:		
	d)	Telephone / Mobile Nos.		:		
	e)	Email id		:		
03.	-	firm whether tenderer is Manufacturer	:		Yes/No	
04.		manufacturer to give following particu			,	
	a) Î	Address of factory		:		
	b)	Year of starting manufacture	:			
	c)	Whether same/similar materials		:		
		Manufactured earlier				
		(if yes, give reference)				
	d)	Yearly/monthly production capacity	:			
	e)	Maximum yearly production	:			
		Achieved so far				
05.		ether the firm is SSI Unit of		:	Yes/No	
	_	attisgarh State:				
	a)	If yes, write registration No.		:		
	b)	Whether documentary evidence		:		
	c)	Regarding registration enclosed Items for registration				
	d)	Period of registration		•		
	e)		:	•	Yes/No	
	c)	Certificate furnished	•		165/116	
06.	Whe	ther the firm is 100% owned by				
	a)	State Government		:	Yes/No	
	b)	Central Government	:		Yes/No	
	Ify	yes, Notification/certificate issued from	:		Yes/No	
		The competent authority to this effect	ct is End	closed		
07.		Whether the bidder is old participant the CREDA	:		Yes/No	
		yes, whether documentary idence is enclosed.	:		Yes/No	
08.		other information that bidder may like ve in order to highlight his bid	:		If yes, give details	
	51					
PLAC	E:			SIGNATU	URE OF TENDERER	
DATE	Ξ:			DESIGN	IN FULL NATION/STATUS COMPANY SEAL	



SCHEDULE - I PART 'B': COMMERCIAL INFORMATION

(Strike off, whichever is not applicable. Separate sheets should be used. Wherever necessary)

	(comic on, which ever is not approached equities since		oura de adea	
01.	i)	Earnest Money Details		k draft/Bankers DA", Raipur	cheque payable
	ii)	Amount of E.M.D. & full details	:	`	
	iii)	If exempted, state whether the bidder i / Fully Owned State/Central Govt. Unit	:	SSI Unit of C.G.	
	iv)	Reference of documentary evidence regarding exemption enclosed.		:	Yes/No
02.		ether the offer is valid for 6 months n the date of opening of commercial/technical bid.		:	Yes/No
03.		e of Sales Tax on the date of bid clusive in the rate quoted)		:	
04.	DIS	COUNT:			
	a)	Whether any rebate/discount is offered.		:	Yes/No
	b)	If yes, whether the rebate is unconditional/conditional Rate/amount of rebate/discount	ional	:	Yes/No
	c)	If conditional State condition		:	Yes/No
05.	PAY	MENT TERMS:			
	Wh	ether CREDA's terms of payment is acceptable to ten	ıderer	:	Yes/No
06.	CON	MPLETION PERIOD OF WORK:			
	Wh	ether tenderer is agreeing for completion period of vicified in the tender	work a	as :	Yes/No
07.	PEN	IALTY CLAUSE:			
	Wh	ether agreeable to CREDA's Penalty Clause		:	Yes/No
08.	Wh	ether agreeable to CREDA's clause of warrantee peri	od	:	Yes/No
09.	SEC	URITY DEPOSIT:			
	Wh	ether Security Deposit clause is understood		:	Yes/No
10.	Indi	cate State, Central Sales Tax Registration Number	State	:	Yes/No
			Cent	ral :	
	Dep	ase Note that in case of non-registration with Commartment Purchase Tax as admissible shall be deduct Purchaser from the Bills of the supplier)			
11.		nse mention whether rates offered are licable for part quantities.		:	Yes/No
PLA	CE:				
			9	SIGNATURE OF	TENDERER
DAT	E:		N	AME IN FULL	
			D	ESIGNATION/ST	ΓATUS
			F	TRM/COMPANY	SEAL

to



11. SCHEDULE - II PART 'C': TECHNICAL INFORMATION

(Strike off whichever is not applicable. Separate sheets should be used. Wherever necessary)

: Yes/No 01. Whether material offered is exactly as per technical specification

02. Whether the copies of orders received during last 3 years from other : Yes/No State Nodal Agency or from other Organization for similar materials (if yes, give details)

enclosed.

03. Whether performance certificate from such Organization regarding : Yes/No

supplies is enclosed. (if yes, give details)

04. Whether pamphlets/technical details literatures along with drawing etc. : Yes/No

furnished with the offer

(if yes, give details)

05. Whether the tenderer agrees to furnish material test certificates in : Yes/No

respect of chemical composition and physical properties from Govt./ Govt. approved lab with each batch of supplies.

06. Whether the tenderer has furnished details of manufacturing : Yes/No

equipments and short history of plant (if yes, give details)

07. Whether details of manufacturing process furnished with offer. : Yes/No

(if yes, give details)

08. a) Whether all testing facilities are available. : Yes/No

If so, give details and in case of non-availability of facilities indicate

approved lab available in surrounding areas where tests are proposed to be conducted.

PLACE DATE

SIGNATURE OF TENDERER

NAME IN FULL DESIGNATION/STATUS

FIRM/COMPANY

SEAL



12. SCHEDULE - III TECHNICAL DEVIATIONS

From,	
Bidder Name & Address -	

To, The CE, CREDA, HO, Raipur

Sub - Technical Deviations.

Dear Sir,

The technical deviations & variations to the specifications stipulated in the tender, for the item quoted are as under -

Sl.No.	Condition	Clause No.	Page No.	Statement of	
		of Tender	of Tender	deviations and	
		document	document	variations	

2. Event of property deviations the entire order if placed on us shall be even ted in accordance with

PLACE SIGNATURE OF TENDERER
DATE NAME IN FULL

DESIGNATION/STATUS FIRM/COMPANY SEAL

^{2.} Except aforesaid deviations, the entire order, if placed, on us shall be executed in accordance with your specifications and other conditions. Variation/deviations etc. if found, elsewhere in our offer should not be given any considerations while finalizing the tender.

^{*} NOTE-Continuation sheet of like size & format may be used as per bidder's requirements and shall be annexed to this schedule.



13. SCHEDULE - IV PAST EXPERIENCE

From:

Bidder's Name & Address -

To, The CE, CREDA, HO, Raipur

Sub - Performance/Past Experience.

Dear Sir,

We furnish herewith the record of our performance and experience as follows -

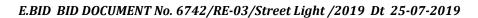
Sl.No. Purchaser's Order No. Ordered Qty. supplied Value of Name & Address Date Quantity (Nos.) Order

PLACE SIGNATURE OF TENDERER

DATE NAME IN FULL

DESIGNATION/STATUS FIRM/COMPANY SEAL

*NOTE-Photocopy of the orders & performance reports received from other State Agencies/Govt. Undertakings etc. should be enclosed.





14. DRAFT OF AGREEMENT

M/s_		of month (year) 2019 between after called as " Contractor' (Which expression shall unless				
excluder and a	ded by or repugnant to the context , include its assignee) through Shrison of Si	s successor Rs ,heir, executors, administrative representative rri, duly authorized by the contractor to sign this				
		arh State Renewable Energy Development Agency, Raipun son of Shri of other par				
	e following covenants:	son of our or other pur				
		into contract with the said CREDA for the Design, Supply				
	llation, commissioning & comprehensive operat bid of Tender nodated	ion & maintenance of Solar Street Light System as mention in				
	oved by the CREDA have been duly accepted and	the terms and conditions herein contained and the rates where as the necessary security deposit shall be furnished in tent and whereas no interest will be claimed on the security				
depos		tent and whereas no interest will be claimed on the security				
асрос		greed and declared by and between parties to these presents				
as foll	lows -					
1)	completion thereof, until this Contract shall be carryout, by means of labors employed at equipment etc. to be supplied by him to his Light" as described in tender documents. (Ann					
2)	rates annexed hereto and such other add drawings, so far they relate to the Tender No.	n to NIT, Bid documents (Qualifying and Financial), approved itional particulars, instructions, engineering documents & xxxxx as may be found requisite to be given during execution in integral part of the contract and shall also be deemed to be "The Contract "wherever herein used.				
3)		number of workmen with means & materials as well as tools transportation, cartage etc. required for the proper execution orders and /or as per the tender conditions.				
4)		nstalled Solar Street Light from the date of commissioning as				
5)	per the terms & conditions prescribed in the T The contractor hereby declares that nobody co ever be admitted as partner in the contract.	onnected with or in the employment of CREDA is not/shall not				
6)	precautions etc. stipulated in the tender docu and the CREDA having bearing on execution of	l conditions, rules, guidelines, construction practices, safety iment including any correspondence between the contractor work and payments of work to be done under the contract.				
7)		all the laws including Workmen Compensation Act and al ll the obligations towards labour including EPF,ESI, etc.				
8)		n vogue shall be recovered by CREDA and deposited with the				
	appropriate authorities In witness whereof the parties present today h					
	ed &sealed on behalf of the above ed contractor.	Signed on behalf of CREDA				
Name	2:()	Name :				
Desig	nation:	Designation :				
Witne						
	me:	2. Name:				
Address:		Address:				



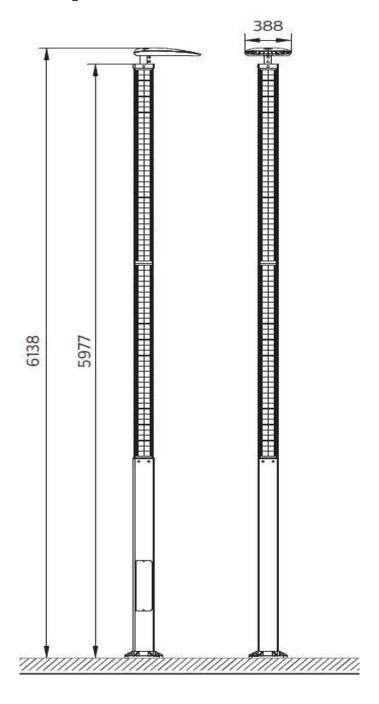
<u>15.</u>

ANNEXURE - A:

DRAWINGS:

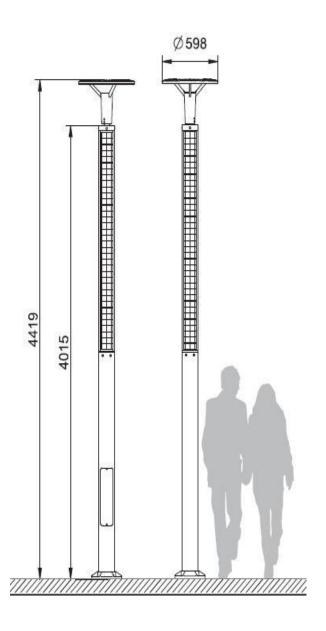
Type - I Drawing:

a. 6M High Pole:





b. 4M High Pole:

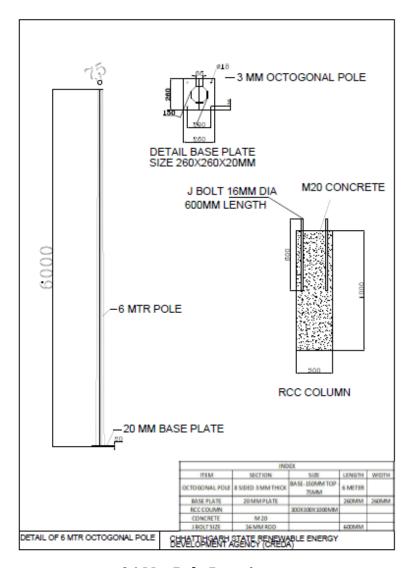






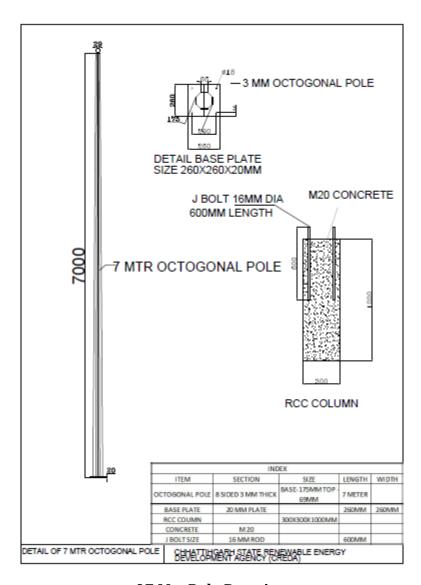
05 Mtr Pole Drawing





06 Mtr Pole Drawing





07 Mtr Pole Drawing



16.

ANNEXURE - B:

Completion cum Performance Certificate

This is to certify that M/S _			_ (With Full Add	iress) , has	s successfully
completed the work of design, Suppl	ly, Installation	and Commission	ing of Solar Stre	et Light S	ystems with
Lithium Battery in Stat	te, as per follow	ving details :-			
	_				
			Cara Of Calan		

S. No.	Location/Site	District	Work Order No. & Date	Cap. Of Solar Street Light System with Lithium Battery	Number of System	Installation Date
		Total	•			

This certificate is being issued against the request of M/S _______, for their intent for participation in the following Bid:-

S. No.	Bid Number
1	6742/CREDA/ RE-3/Street Light/2019 DATED 25-07-2019

The Workmanship and performance of the installed systems are found satisfactory.

Seal & Signature of Concern Department/Govt. Organization



<u>17.</u>

PRICE BID - A (TYPE - I).

Schedule of Rates for Solar Street Light Systems.

(As per Specifications & Scope of Work of E.Bid Document No.6742/RE-3/Street Light/2019 Date 25-07-2019)

Design, Supply, Installation and Commissioning of **Solar Street Light Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/ Unit (without GST)
	Supply of Solar Street Light System 6 meter high with 360Wp Module/ LFP Battery (100AH at 12.8V)/ LED Luminary with five years onsite unconditional warrantee.	
	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	Supply of Solar Street Light System 4 meter high with 180Wp Module/ LFP Battery (60AH at 12.8V)/ LED Luminary with five years onsite unconditional warrantee.	
2	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	GRAND TOTAL (1+2)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance as mentioned in the tender document. According to GST notification no. 24 /2018-Central Tax (Rate) Dated 31.12.2018 GST Rate will be applicable under composite supply and installation basis. Rate of GST on Supply of Goods (70% of gross consideration treated as supply of Goods) 5% GST and balance portion (30% of gross consideration treated as taxable installation services) 18% GST will be charged. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:		
Seal of Company	:	
Date	:	



PRICE BID - B (TYPE - II).

Schedule of Rates for Solar Street Light Systems.

(As per Specifications & Scope of Work of E.Bid Document No.6742/RE-3/Street Light/2019 Date 25-07-2019)

Design, Supply, Installation and Commissioning of **Solar Street Light Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/Unit (without GST)
1	Supply of Solar Street Light System (20W) with LFP Battery and 100 Wp SPV Module with five years onsite unconditional warrantee.	
	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
2	Supply of Solar Street Light System (30W) with LFP Battery and 150 Wp SPV Module with five years onsite unconditional warrantee.	
	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	GRAND TOTAL (1+2)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance as mentioned in the tender document. According to GST notification no. 24 /2018-Central Tax (Rate) Dated 31.12.2018 GST Rate will be applicable under composite supply and installation basis. Rate of GST on Supply of Goods (70% of gross consideration treated as supply of Goods) 5% GST and balance portion (30% of gross consideration treated as taxable installation services) 18% GST will be charged. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:		
Seal of Company	:	
Date	:	



PRICE BID - C (TYPE - III).

Schedule of Rates for Solar Street Light Systems.

(As per Specifications & Scope of Work of E.Bid Document No.6742/RE-3/ Street Light/2019 Date 25-07-2019)

Design, Supply, Installation and Commissioning of **Solar Street Light Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/Unit (without GST)
	Supply of Solar Street Light System (12W) with LFP Battery and 75 Wp SPV Module with five years onsite unconditional warrantee.	
1	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	Supply of Solar Street Light System (20W) with LFP Battery and 100 Wp SPV Module with five years onsite unconditional warrantee.	
2	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	Supply of Solar Street Light System (30W) with LFP Battery and 150 Wp SPV Module with five years onsite unconditional warrantee.	
3	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	Supply of Solar Street Light System (40W) with LFP Battery and 200 Wp SPV Module with five years onsite unconditional warrantee.	
4	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
	TOTAL AMOUNT without GST(in Figures and words)	
	GRAND TOTAL (1+2+3+4)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance as mentioned in the tender document. According to GST notification no. 24 /2018-Central Tax (Rate) Dated 31.12.2018 GST Rate will be applicable under composite supply and installation basis. Rate of GST on Supply of Goods (70% of gross consideration treated as supply of Goods) 5% GST and balance portion (30% of gross consideration treated as taxable installation services) 18% GST will be charged. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory: .		
Seal of Company	:	
P. J		
Data	_	
Date	•	



PRICE BID - D (TYPE - IV-Garden Light).

Schedule of Rates for Solar Street Light Systems.

(As per Specifications & Scope of Work of E.Bid Document No.6742/RE-3/ Street Light/2019 Date 25-07-2019)

Design, Supply, Installation and Commissioning of **Solar Street Light Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/Unit (without GST)
1	Supply of Solar Street Light System (20W) with LFP Battery and 30 Wp SPV Module with five years onsite unconditional warrantee.	
2	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
3	TOTAL AMOUNT without GST(in Figures and words)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance as mentioned in the tender document. According to GST notification no. 24 /2018-Central Tax (Rate) Dated 31.12.2018 GST Rate will be applicable under composite supply and installation basis. Rate of GST on Supply of Goods (70% of gross consideration treated as supply of Goods) 5% GST and balance portion (30% of gross consideration treated as taxable installation services) 18% GST will be charged. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:		
Seal of Company	:	
Date	:	



PRICE BID - E (TYPE -V-Campus Light).

Schedule of Rates for Solar Street Light Systems.

(As per Specifications & Scope of Work of E.Bid Document No.6742/RE-3/Street Light/2019 Date 25-07-2019)

Design, Supply, Installation and Commissioning of **Solar Street Light Systems** including civil work foundation and other allied works with five years on site unconditional warrantee at various sites of Chhattisgarh State as per scope of work.

No.	Description	Rate/Unit (without GST)
1	Supply of Solar Street Light System (12W) with LFP Battery and 35 Wp x 03 nos SPV Module with five years onsite unconditional warrantee.	
2	Installation and Commissioning at site including civil work for RCC Foundation and Pedestal	
3	TOTAL AMOUNT without GST(in Figures and words)	

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, 5 years warrantee, insurance as mentioned in the tender document. According to GST notification no. 24 /2018-Central Tax (Rate) Dated 31.12.2018 GST Rate will be applicable under composite supply and installation basis. Rate of GST on Supply of Goods (70% of gross consideration treated as supply of Goods) 5% GST and balance portion (30% of gross consideration treated as taxable installation services) 18% GST will be charged. No other cost will be claimed other than above quotes price & the applicable GST.

Signature of the Authorized Signatory:		
Seal of Company	:	
Date	:	