



Chhattisgarh State Renewable Energy Development Agency (CREDA)

Near Energy Education Park, Village Fundhar

VIP (Air Port Road) Raipur 492015 (C.G.)

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E-mail: info@creda.in, Website: www.creda.co.in

E-BID DOCUMENT No. 23733/CREDA/BID/RE-03/SREF /2019

**FOR DESIGN, MANUFACTURING & SUPPLY, INSTALLATION &
COMMISSIONING WITH 05 YEAR COMPREHENSIVE OPERATION &
MAINTENANCE OF SOLAR REFRIGERATOR ANYWHERE IN THE
STATE OF CHHATTISGARH**

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

S. No	Particulars	Date	Time	Place
1.	Submission of sample, Bid Documents, Technical Bid	23-01-19	Till 11.30 AM	Office of Chief Engineer (RE – III), Head Office, CREDA
2.	Examination of Bid Documents & Technical Bid	23-01-19	from 12.30 PM	
3.	Submission of Price Bid through http://cspc.co.in	23-01-19	Till 11.30 AM	http://cspc.co.in Web Portal
4.	Opening of Price Bid	23-01-19	After Technical Bid	At Bio Diesel Conference Hall, Near Energy Education Park, VIP Road, Raipur

Bid Document Cost:

Document can also be downloaded from our website <https://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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NOTICE INVITING LIMITED BID

CREDA invites sealed Bids from registered system integrators in CREDA for SPV Projects for FY 2018-19 for Design, manufacturing, supply, Installation & commissioning of Solar Refrigerator with five years comprehensive operation & maintenance contract at anywhere in the state of Chhattisgarh.

S.N.	Item Description	Cost of Bid Document	EMD	Essentials*
1	Design, manufacturing, supply, Installation & commissioning of Solar Refrigerator at anywhere in Chhattisgarh state.	₹ 5,000/-	₹ 5.00 Lacs/-	<i>* for details pl see eligibility conditions of the Bid documents</i>

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Note:-

- 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 Office of Chief Engineer (RE – III), Head Office, CREDA, Raipur. Bidders are advised to follow the instructions provided for Registration and E Submission Process accordingly.
- The bid forms, General Instructions to Bidders and other details including amendments/changed can be viewed/ downloaded from website <http://www.creda.co.in/>
- Bid notice is also available on CREDA website <http://www.creda.co.in/> the link notice or <http://www.cspc.co.in>.
- CREDA reserves all rights to accept/reject any or all Bids in full/part without assigning any reasons.

(Rajiv Khare)
Chief Engineer, CREDA

B. 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	Proof of submission of Bid Fee and EMD		
2	Proof of having registration in CREDA for FY 2018-19.		
3	List and Performance Certificate issued by Govt/Govt Undertaking for Supply, installation & commission of minimum 10 Solar Refrigerator by the Bidder		
4	Sample of the Solar Refrigerator		
5	Balance Sheets of last three financial years certified by a registered Chartered Accountant showing positive net worth and overall average annual turnover of 5 Crore in SPV Projects .		
6	The original document duly signed & sealed on each page, as a confirmation of acceptance of Terms & Conditions (T&C)		
7	Declaration of the supplier about any relatives working with CREDA		

Details of EMD & Bid Document Fee Attached

S.No.	Description
1	Earnest Money Deposit - Earnest Money Deposit of ₹ 5.00 lakh /-, submitted in the form of Demand Draft/Banker's Cheque/ NEFT/RTGS, drawn on Bank,Branch, bearing DD/BC No..... dated.....is attached herewith.
2	Bid Document Fee - Bid Document Fee of ₹ 5000.00 /-, submitted in the form of Demand Draft/Banker's Cheque/ NEFT/RTGS, drawn on Bank,Branch, bearing DD/BC No..... dated.....is attached herewith.

(Sign & Seal of the Manufacturer)

C. 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 ₹ 5.00 lakh /- is hereby forwarded as earnest money in the form of crossed 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/Government.

I/We shall a Bid to all the laws and shall be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.

Our state sales tax registration TIN No. is _____ and CST registration No. _____ . The PAN No. under the Income Tax Act is _____

I/We shall be responsible for the payment of the respective taxes to the appropriate authorities and should I/we fail to do so, I/we hereby authorize CREDA to recover the taxes due from us and deposit the same with the appropriate authorities on their demand.

Dated: Signature

Place: Name of Bidder with seal

Witness

Signature:

Name:

Postal Address:

D. General Information about this Bid

S.No.	Particulars	Details
1	E.Bid No.	E-BID DOCUMENT No. 23733/CREDA/BID/RE-03/ SREF /2019, Date 05-01-2019.
2	Particulars of the work	Design, manufacturing, supply, Installation & Commissioning of Solar Refrigerator with five years comprehensive onsite unconditional warrantee & COM.
3	Time Period for completion of the work	Within 03 Months from the date of allocation of Work.
4	Mode of submission of Bids	Technical Bid – Off Line Price Bid – E Bidding through http://www.cspc.co.in website.
5	Last date and time for submission of Sample, Bid and Technical Documents (Offline)	Till 11.30 Hours Date 23-01-2019.
6	Last date and time for submission of Bid and Technical Documents (Online)	Till 11.30 Hours Date 23-01-2019.
7	Period of validity of rates for acceptance	Three months from the date of opening.
8	Date and time of opening of Technical Bid	From 12.30 hours Date 23-01-2019.
9	Date and time of opening of Price Bid	After Technical bid Date 23-01-2019 or on the next date.
10	Place of opening Bid	At Bio Diesel Conference Hall, Near Energy Education Park, VIP Road, Raipur.

E. Eligibility Criteria:-

- E-1 Bidder should be registered in CREDA for FY 2018-19.
- E-2 Bidder should have their own office cum service center with proper facilities and staff in the state of Chhattisgarh.
- E-3 Bidder should have direct experience of supply installation & commission of minimum 10 Solar Refrigerator; a list and Performance Certificate issued by Govt/Govt Undertaking shall be mandatory to submit as a proof for the same.
- E-4 Bidder should have to submit a sample of Solar Refrigerator at the office of Chief Engineer, CREDA on or before submitting the technical bid.
- E-5 Bidder must have a positive net worth as on 31-03-2018.
- E-6 Bidders should have an overall average annual turnover of ₹ 5.00 Crore of last three Financial Years ending on 31st March of each FY i.e. FY 2015-16, FY 2016-17, FY 2017-18 in SPV Projects. Bidder coming into existence after 2015-16 must have an overall average annual turnover of ₹ 5.00 Crore
- E-7 Bidder will have to submit audited copy of balance sheet certified by a registered chartered accountant as a proof for point no. E-5 and E-6.
- E-8 The Bidder should have valid GST registration certificate. A copy of which should be enclosed
- E-9 Authorization of person representing Bidder from Director / Proprietor / Partner of the Firm/ Company of the Bidder .
- E-10 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.
- E-11 Bidders who has any litigation pending in any court with CREDA on the date of opening of the Bid shall not be eligible for this Bid.
- E-12 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.

F. INSTRUCTIONS TO THE BIDDERS

1. 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.
2. **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.
4. **CLARIFICATION OF BID DOCUMENTS:**
 - A. A prospective Bidder requiring any clarification of the Bid Documents may contact AGENCY in writing or by Fax at the AGENCY's mailing address indicated in the Invitation for Bid.
 - B. Verbal clarifications and information's given by the AGENCY or its employees or its Representatives shall not be in any way entertained.
5. **AMENDMENT OF 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.
6. **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-bidding 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 Tender, 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 authorising 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 in hard copy. Bid Documents (including Technical Bid and samples) must reach At Office of Chief Engineer (RE – III), Head Office, CREDA latest by 11.30 AM on 23.01.2019. Tenders submitted after scheduled time and date shall not be considered.
 - F. Technical Bid Documents should be submitted in prescribed manner in separate envelopes duly super scribed and placed as follows- (A)Bid Fees and EMD , (B) Eligibility Documents as per point E(1) to E(12) mentioned above (C) Technical Bid and Complete bid document in original duly signed by authorized signatory on each & every page of the bid document.
 - G. 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 DOCUMENT NO 23733/CREDA/E-BID/RE-03/SREF/2019 Date 05-01-2019 DUE ON 23.01.2019**”.

7. The Specifications of Solar Refrigerator should be as specified in the bid.
8. Bidder shall have to submit details of GST & PAN registration numbers issued by the appropriate authority
9. The documentary evidence for meeting the eligibility criteria must mandatorily be submitted along as per check list with bid in prescribed manner.
10. Each offered solar module should have RFID & I-V curve measured with a sun simulator of a SPV Module Manufacturer reregistered/approved by MNRE with record of suitable calibration reference, as per guidelines of MNRE.
11. Bidders must enclose the safety procedure & manual.
12. When Technical Bid Documents & Eligibility documents are delivered through messenger, it should be submitted at Office of Chief Engineer (RE - III), Head Office, CREDA latest by 11.30 AM on 23.01.2019. Nobody is authorized to receive or grant receipt for tender 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.
14. **VALIDITY:** Full descriptive particulars and complete specifications should accompany the offer. Offers should be kept open for acceptance for at least three months 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 outrightly 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. CREDA reserves the right (i) to reject or accept any or all tenders wholly or partly without assigning any reason on the grounds considered advantageous to CREDA, whether it is the lowest tender or not and (ii) to split the quantities against the tender 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 tender may be standardized for all eligible tenders to work in year 2018-2019 and shall be valid till 31-03-2020. However CREDA reserves right to curtail or extend this period.

18. Offers through Telegraph/ Fax/Emails or open offers etc. received shall be summarily rejected.
19. 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.
20. **BID DOCUMENT FEE AND EARNEST MONEY:**
Each bidder should submit Bid Document Fee and earnest money 5 Lakh for participating in bid in the form of Demand Draft/Pay Order or RTGS/NEFT/FDR/TDR as mentioned in the NIT of "BID document NO. **23733/CREDA/E-BID/RE-03/SREF /2019**", Date **05-01-2019**, in a separate envelope else they will summarily be rejected and returned. Bid Document Fee, EMD submitted in any other form e.g. Cash/Bank Guarantee etc 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 registered in Chhattisgarh for manufacturing of that particular product"]. CREDA Competency Certificate will not be considered as EMD for this Rate Contract Bid.
21. **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 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.
22. **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.
23. **ENGINEERING DOCUMENT & TEST CERTIFICATE:**
Bidders will have to submit Engineering Documents with technical details, drawings, Specifications & Performance Report from any certified laboratory.
24. **SAMPLES:**
If Require CREDA may inspect the consignment before dispatch of the material at shall be delivered/ accepted as per the scope of work and specifications, as get it tested in accreted laboratory at its own cost.

25. **TAX OBLIGATIONS:**

TDS for Income Tax, GST, Civil Work etc shall be recovered under various acts and deposited with the appropriate authority. Eligible Bidder will have to submit break up of cost and taxes before execution of agreement with CREDA, so as to ensure tax deposition as per Govt. Rules accordingly. .

26. **JURISDICTION OF THE COURT:**

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

G. 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 CEO.

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 SPV Pump.

"The Eligible SI/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 eligible SI/Contractor 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, sanction 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.

- i) The eligible SI shall conduct a detailed survey of site and submit Application of Beneficiary along with Processing Fee, necessary documents and survey details in concerned District Office of CREDA in prescribed manner.
- ii) District / Regional Office CREDA shall examine these reports and after satisfaction

forward these to concerned Chief Engineer, RE-03 of Head office of CREDA for approval.

- iii) The SI/Contractor shall start work within 15 days after the date of issue of work Order. Work order will be given to the chosen System Integrator only after execution of the agreement with CREDA.
- iv) All the materials required for supply of Solar Refrigerators as per Work Order issued shall be kept at site in the custody of the SI/Contractor. CREDA shall not be responsible for any loss or damage of any material during supply/ installation.
- v) All the electrical works (if needed) should be done as per Indian electricity Act. The persons engaged for carrying out electrical works should have a valid license of required category accordingly.
- vi) After installation and joint inspection will be done in presence of beneficiary, SI/Contractor and CREDA and after successful commissioning of Solar Refrigerators and its approval from CREDA a JCC will be signed and the claim will be forwarded for payments as per guidelines and procedures of CREDA.

4. VARIATIONS, ADDITIONS & OMISSIONS:

CREDA shall have the right to alter, amend, omit, split or otherwise vary the quantum of work, by notice in writing to the SI/Contractor. The eligible SI/Contractor 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 SI/Contractor.

5. INSPECTION DURING ERECTION:

The Engineer in Charge or his authorized representative (s) shall be entitled at all reasonable times to inspect and supervise and test during installation and commissioning. Such inspection will not relieve the eligible SI/Contractor 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 SI, if desired by CREDA.

6. COMPLETION OF WORK:

Time being the essence of contract, all works specified in the work orders shall be completed within the time schedule prescribed in the Sanction order.

7. ELIGIBLE SIs DEFAULT LIABILITY:

CREDA may by written notice of default to the eligible SI/Contractor, terminate the contract in circumstances detailed hereunder:

- (a) If in the opinion of the CREDA, the eligible SI/Contractor fails to complete the work within the time specified in the sanction order or within the period for which extension has been granted by CREDA to the eligible SI/Contractor.
- (b) If in the opinion of CREDA, the eligible SI/Contractor 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 SI/Contractor or agency upon such terms and in such a manner as it may deem appropriate and the eligible SI/Contractor 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 the Solar Refrigerators 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 SI/Contractor 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.
- (e) The maximum liability of the bidder is limited to 100% of contract value.

8. FORCE MAJEURE:

The eligible SI/Contractor 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 problems, 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 of Solar Refrigerators 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 SI/Contractor 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 and/ or work and advise the eligible SI/Contractor to rectify the same. The eligible SI/Contractor on receipt of such notices shall rectify or replace the defective material and rectify the work, free of cost. If the eligible SI/Contractor fails to do so, CREDA may,

- i At its option replace or rectify such defective materials and/ or work and recover the extra cost so involved from the eligible SI/Contractor plus fifteen percent service charges of the cost of such rectification, from the eligible SI/Contractor and/ or terminate the contract for balance work/ supplies with enforcement of penalty as per contract
- ii Defective materials/ workmanship will not be accepted under any conditions and shall be rejected outright without compensation. The eligible SI/Contractor shall be liable for any loss/ damage sustained by CREDA due to defective work.

10. EXTENSION OF THE TIME:

If the completion of installation is delayed due to any reason beyond the control of the eligible SI, the eligible SI 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 System as 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 SI has to ensure that equipments as per Technical Requirements of guidelines of CREDA as complied with. The eligible SI/Contractor 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.

12. WARRANTEE PERIOD AND POST INSTALLATION SERVICES:

The work done/ material supplied by the eligible SI/Contractor should be warranted for satisfactory operation and against any defect in material and workmanship including Solar Refrigerator, module, battery etc. and other balance of equipments, at least for a period of 5(five) years, from the date of commissioning of the Solar Refrigerator including other works as per scope of work. For complete Solar Refrigerator warrantee on SPV Modules shall be for 10 (ten) years from the date of commissioning of the Solar Refrigerator 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 the CREDA for approval. Any defect noticed during this period should be rectified by the supplier 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 plant remains non-operative due to reasons within control of the eligible SIs. This warrantee must be an unconditional onsite warrantee and the eligible SI/Contractor will have to replace the defective material within 7days positively from the date of information given to him. Care should necessarily be taken to make the Solar Refrigerators operational, once the reporting of the fault/non operational status is done, within a week. If the Solar Refrigerators 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. This warrantee must be an unconditional onsite warrantee and the eligible SI/Contractor will have to replace the defective material within 7 days positively from the date of information given to him.

System Integrators shall have to establish their service stations in the allocated area 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 Refrigerators supplied by them. SI/Contractor shall have to give a toll free number to register complaints.

13. TERMS OF PAYMENT:

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

- a. 95% of the eligible payments as per the work order after satisfactory completion & performance test of Solar Refrigerators at site with proper handing over.
- b. Balance 05% of the eligible payments shall be retained by CREDA as Security Deposit for a period of 60 months. However the same may be released to SI/contractor on submission of TDR (duly pledged in favour of CREDA) of

equivalent amount issued by a Scheduled Bank in prescribed format valid for a period of at least five years issued by a scheduled bank.

- c. GST shall be paid extra as applicable on the date of billing.

14. PENALTY FOR DELAY IN COMPLETION OF CONTRACT:

If the eligible SI/Contractor fails to complete supply, testing and commissioning etc, within the phased time schedule specified in the sanction order or any extension granted there to, CREDA will recover from the eligible SI/Contractor as penalty a sum of one percent (1.0%) of the system 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.

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.

15. PERFORMANCE SECURITY:

The Performance Security shall be 5% of the eligible payments and shall be deposited in manner under clause no. 13. For the purpose of 13(b) the EMD shall be retained by CREDA as security deposit for a period of 24 months, which could be refunded only upon submission of at least equal amount towards Performance Security or else EMD shall be deemed to be converted into Performance Security.

- 16. INSURANCE:** The eligible SI/Contractor shall arrange insurance coverage for the materials and Solar Refrigerators at his/ beneficiary's custody for the work under execution and successful commissioning and subsequent handover to the beneficiary. The eligible SI/Contractor 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.

17. PENALTY DUE FROM THE ELIGIBLE SI/CONTRACTOR :

All cost of damages for which the eligible SI/contractor is liable to the CREDA, will be deducted from any money due to the eligible SI/ Contractor including the Security Deposit.

18. ELIGIBLE SI'S RESPONSIBILITY:

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

19. RESPONSIBILITY TO RECTIFY THE LOSS AND DAMAGE:

If any loss or damage occurs to the work or any part thereof or materials/ plant/ equipments for incorporation therein the period for which the eligible SI/Contractor is responsible for the cause thereof or from any cause whatsoever, the eligible SI/Contractor 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 SI/Contractor 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 SI/Contractor 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 SI/Contractor 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 repairs of work. All the expenditure including treatment or compensation will be entirely borne by the eligible SIs. The eligible SI/Contractor shall also be responsible for any claims of the workers including PF, Gratuity, ESI & other legal obligations.

21. NON-ASSIGNMENTS:

The eligible SI/Contractor shall not assign or transfer the sanction orders issued as per this contract or any part thereof without the prior approval of CREDA.

22. CERTIFICATES NOT TO AFFECT RIGHTS OF CREDA:

The issuance of any certificate by CREDA or any extension of time granted by CREDA shall not prejudice the rights of CREDA in terms of the contract nor shall they relieve the eligible SI/Contractor of his obligations for due performance of the contract.

23. SETTLEMENT OF DISPUTES THROUGH ARBITRATION:

- i. 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 SI/Contractor is made to CREDA. The decision of the CEO, CREDA shall be final and binding to the all concerns.
- ii. 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.

Compliance with Labour Regulations-During continuance of contract, the contractor 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:

- i. Any notice to the eligible SI/Contractor under the terms of the contract shall be

served by registered mail to the registered office of the eligible SI/Contractor or by hand to the authorized local representative of the eligible SI/Contractor and copy by post to the eligible SI's principal place of business.

- ii. Any notice to CREDA shall be served to the Director, CREDA, Raipur in the same manner.

27. SECRECY:

The eligible SI/Contractor 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.

28. AGREEMENT:

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

29. BID EVALUATION CRITERIA

- a. Offer of only those parties who are found qualifying based on Technical Evaluation Criteria will be taken into further consideration and prices of only those parties qualifying based of these criterion will be opened.
- b. Bids shall be evaluated on the basis of lowest total Design, manufacturing & Supply, installation & commissioning rates without GST.
- c. CREDA retains right to negotiate rates with L-1 Bidder.
- d. Conditional Bids shall not be accepted.
- e. 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.

30. ALLOCATION OF TARGETS AND AREA OF WORK

- (a) L1 bidder will be given preference for allocation and they will be awarded min. 25% of the Work.
- (b) Initially all the eligible SI will be awarded with equal nos of work. However further allocations shall be made on the basis of their performance subsequently.

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

(Name, Signature & Seal of the Bidder)

SCOPE OF WORK

1. Designing, manufacturing, supply, installation, commissioning and comprehensive operation & maintenance (COM) for consecutive five years, of Solar Refrigerators anywhere in Chhattisgarh State in accordance to the design and specifications approved by CREDA, with warrantee norms as mentioned in section "WARRANTEE PERIOD AND POST INSTALLATION SERVICES" on page no. 15 of the tender document on turnkey basis. Bidder shall have to take approval of the engineering documents from CREDA prior to commencement of the work. Five years warrantee 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 :-
 - Detailed planning of time bound smooth execution of project.
 - Design, Manufacturing & supply of Solar Refrigerators as per design and specifications approved by CREDA.
 - Providing User Manuals and Warrantee Cards to beneficiary / CREDA.
 - SI shall have to submit JCCs within 15 days of supply of Solar Refrigerators in concerned District Offices of CREDA.
 - Performance testing of the complete system.
 - Onsite Warranty of the system for Five year 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 forty eight hours from the communication of breakdown of the system during currency of the warrantee period.
 - 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 Solar Systems.
 - Performance Guarantee Test: Successful performance guarantee test to demonstrate the rated capacity of Solar Refrigerators as per CREDA's norms shall have to be conducted by SI in presence of representatives of CREDA, if required.

H. Technical Specifications of Solar Refrigerators

Solar Refrigerators should have following technical specifications:

1. General

Solar Direct Drive vaccine refrigerators

2. Performance

- Minimises thermal shock during usage compared to conventional refrigerators
- Ambient temperature range: +10°C to +43°C
- Voltage and frequency: 2 x 300 Wp, 24V solar panels
- Guaranteed for never to freeze contents.

3. Features

- Display Thermometer: Externally readable digital display thermometer
- Surge protector
- Front opening for easy stock management
- Corrosion Resistant: Epoxy Polyester (EPO) coated Galvanized Steel Outer Cabinet.
- Fitted with two latch locks for use with a padlock
- Designed for easy maintenance and repair

4. Specifications

- Gross capacity of solar refrigerator should be 121 Ltrs. minimum.
- Storage capacity of solar refrigerator should be minimum 99 Ltrs.
- Solar input capacity should be minimum 500 watt power.
- Power Consumption at +43°C* should not be more than at:

Stable Running - 0.99 kWh

Cool Down Test - 1.06 kWh

- Refrigerant should be R600a
- Net Weight should be minimum 95 Kg.
- Gross Weight should be minimum 225 Kg (95 Kg for solar system).
- Quality standard should be based on ISO 9001: 2008
- Holdover time Should be minimum +11 days at any condition

5. SPV MODULE SPECIFICATION:

General Specifications of SPV Pumping Systems shall be in accordance with prevailing guidelines of MNRE, however the specifications of some components are also mentioned as follows –

1.1 Type and Quality

The total Solar PV array capacity shall be as specified in price schedule and shall be assembled with 300 Wp (with minimum of 24 V) Multi/Mono Crystalline/MNRE approved solar modules with minimum 72 cells with minimum 15% Module Efficiency. The modules should be tested and certified by a Govt. of India authorized test centres or should conform to relevant IEC standard as per MNRE guidelines. Offered module shall have a power discharge warranty of 90% of the rated power for 10 years. The rated discharge power and Efficiency of any supplied module shall not be less than the specified power rating and Efficiency of the modules, in any case. Every module should have

suitable by-pass diode at its terminal box. The SPV Modules must be installed in such a way so as to deliver proper voltage and current to ensure desired power discharge as per specifications of CREDA for the size of SPVPP ordered.

1.2 The modules used shall have following specifications:

Type : Mono crystalline/ Multi crystalline/
MNRE approved Solar Modules
Specification and standard : Confirming to Prevailing MNRE guidelines

1.3 The PV modules must conform to the latest edition of any of the following IEC/ equivalent BIS Standards for PV module design qualification and type approval: Crystalline Silicon Terrestrial PV Modules: IEC 61215 / IS14286

1.4 IDENTIFICATION AND TRACEABILITY –

Each PV module must use a RF identification tag (RFID), which must contain the following information:

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

1.5 The panel should be supplied with CREDA Logo in the form of sticker on the back of SPV panel or duly laminated inside the glass of solar module with the remark "Manufactured for CREDA". Inter connections of solar modules should be through good quality male female joint. Name of manufacturer, S. No. of Module & manufacturing year should be clearly fixed inside the glass lamination of every module. Back label should be affixed behind every module which should clearly state the specifications & capacity of the module.

1.6 **The size of Module Frame and the thickness of Glass, Back Sheet and EVA Sheet must be of the maximum size with only positive tolerance of applicable IEC standards. Modules should be of indigenous make and the efficiency of SPV Modules must be above 15 %.**

1. QUALITY AND WARRANTY:

- i. The Solar Refrigerator will be warranted for a period of five years from the date of supply.
- ii. Warrantee on PV module(s) will be warranted for a minimum period of 10 years from the date of supply.
- iii. 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.

- iv. The Warranty Card to be supplied with the system must contain the details of the system.

6. **Mechanical Components: MODULE MOUNTING STRUCTURE (MMS):**

MMS as per drawings should be installed along with the hot dipped galvanized (minimum 80 microns) array support structure for mounting of SPV modules at site. The panel frame structure should be capable of withstanding a minimum wind load of 150 Km per hour, after grouting and installation. MMS should be sturdy & designed to assist SPV Modules to render maximum discharge. The hardware (fasteners) used for installation of SPV Modules & MMS should be of suitable Stainless Steel (SS 304). Each MMS should be grouted on pedestals & Foundation as per drawings.

Module Mounting Structures should have theft proof arrangements with the use of GI Steel C-channel along with the array support structure for locking arrangement of SPV modules for protecting them from theft. Its size should be with reference to the specifications of the SPV modules such that modules can comfortably slide in the channel while installation. It should not hide any portion of the photovoltaic circuit encapsulated in the lamination of the SPV module, there by unaffecting the efficiency & rating of the SPV modules. Anti Theft Nut Bolts of SS (with washers) should also be used for better theft proofing along with "C" Channel MMS.

7. **Specification for foundation** : The PCC foundation shall have to be designed on the basis of the weight of the structure with module and minimum wind speed of the site, i.e. 150 Km/hour. Each MMS should be with four legs grouted on pedestals of proper size.

8. **Surge Protection Mechanism**: Internal surge protection shall consist of three MOV type arrestors connected from +ve and -ve terminals to earth (via Y arrangement) for higher withstand of the continuous PV-DC voltage during earth fault condition. SPD shall have safe disconnection and short circuit interruption arrangements through integrated DC in built bypass fuse(parallel) which should get tripped during failure mode of MOV, extinguishing DC arc safely in order to protect the installation against fire hazards. Nominal discharge current (In) at 8/20 micro seconds shall be minimum 10 KA with maximum discharge (I_{max}) at 8/20 micro seconds minimum 20 KA with visual indication (through mechanical flag) in modules to monitor the life of SPD.

9. **EARTHING PROTECTION**: Each array structure of the PV yard shall be grounded properly. In addition the lightning arrester/masts shall also be provided inside the array field. Provision shall be kept for shorting and grounding of the PV array at the time of maintenance work. All metal casing/shielding of the plant shall be thoroughly grounded in accordance with Indian Electricity Act/IE rules as amended up to date. The earthing pit shall be made as per IS: 3043. All the array structures, equipments & control systems shall be compulsorily connected to the earth. Number of earthing shall vary with the capacity of SPV Power Plant & location. G.I. /Copper strips should be used for earthing instead of G.I. wires. LA should be installed to protect the array field & machines installed in the control rooms. Number of LA shall vary with the capacity of

SPV Power Plant & location. The LA installations should be get approved from CREDA prior to installation.

10. **DANGER BOARDS:** Danger boards should be provided as and where necessary as per IE Act/IE Rules as amended up to date, as per the instructions of CREDA & affixed at various appropriate locations.
11. **CABLES/WIRE:** All cables should be of copper as per IS and should be of suitable grade as per requirement. All connections should be properly made through suitable lug/terminal crimped with use of suitable proper cable glands. The size of cables/wires should be designed considering the line losses, maximum load on line, keeping voltage drop within permissible limit and other related factors. The cable/wire should be of ISI/ISO mark for overhead distribution, with prior approval of CREDA.
12. **CONTROLLER :** Controller should be of the approved make and it should be in accordance with the electrical parameters of the Solar Refrigerator.
13. **JUNCTION BOXES:** Junction Boxes (SJB / AJB / MJB) shall be mounted on poles of array support structure. The junction boxes should be made of FRP (Hensel or equivalent make (IP65), with prior approval of CREDA). It should be provided with proper locking arrangements.
14. Arrangement for cleaning of modules through a valve and flexible pipe from the inlet pipe of the tank at a suitable and safe point.
15. Provision of System Monitoring and Problems Control facility should be incorporated in control panel to monitor operation of Solar Refrigerator, power consumption and, over voltage, over load and overheating etc.

Other details regarding specifications & performance of SPV Pumping Systems may be downloaded from MNRE website. In case of difference/ ambiguity of indicative specifications in MNRE and Specifications of CREDA, specifications laid down by CREDA shall be considered.

16. DO's and DONT's:

Name and address of the contact person for repair and maintenance, in case of non-functionality of the Solar Refrigerators.

Photograph of Solar Refrigerator



I.

PRICE BID.

Schedule of Rates for Solar Refrigerators.

(As per Specifications & Scope of Work of

(E-BID DOCUMENT No. 23733/CREDA/BID/RE-03/SREF /2019 Date 05-01-2019)

Design, Manufacturing & supply of **Solar Refrigerators** including all allied works with five years on site unconditional warrantee & five years comprehensive operation & maintenance contract at anywhere in Chhattisgarh State as per scope of work.

No.	Description	Rate/ Unit (without GST) in Rs.
1	Design, manufacturing & Supply, installation & commissioning of Solar Refrigerators as specified in tender document at anywhere in the state of Chhattisgarh.	
	Comprehensive Operation and Maintenance of Systems for five years	
TOTAL		

Certified that rates quoted above are as per the requirement, specifications, and terms & condition mentioned in the bid document.

Above rates are FOR anywhere in the State of Chhattisgarh inclusive of roadworthy packing, loading, unloading, all types of incidental expenses, insurance, duties and any other job required to properly execute the work with 5 years warrantee as mentioned in the bid document. The GST payable on the bill produced for payment to CREDA shall be paid in addition to above quoted price as per rate of GST applicable at the time of billing.

(No other cost will be claimed above the price quoted)

Name of the authorized Signatory:

Signature of the Authorized Signatory:

Seal of Company:

Date: