



# Chhattisgarh State Renewable Energy Development Agency (CREDA)

(Dept. of Energy, Govt. of Chhattisgarh)

Near Energy Education Park, Village Fundhar

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

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Tender No. 25150/CREDA/EEP

Dated: 29.01.2019

*Tender for Fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh.*

**Important Events and their schedule for this tender are as follows-**

S.No	Particulars	Date	Time	Place
1	Submission of Tender Document, Technical Bid, and Price Bid	15.02.19	Till 01.00 PM	At the Office of Executive Engineer (O&M) CREDA HO Raipur
2	Examination of Technical Bid	15.02.19	From 3.00 PM	At H.O. CREDA or Bio-Diesel Conference Hall, Raipur
3	Opening of Price /Financial Bid	15.02.19	From 4.00 PM	

## **Tender Document Cost- Rs.1000.00**

Document can also be downloaded from our website [www.creda.co.in](http://www.creda.co.in) with the cost of tender as mentioned in NIT, which shall have to be deposited along with the tender document

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## CHHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY

Head Office, CREDA , Near Energy Education Park, VIP Road Raipur.(C.G).

Website: [www.creda.co.in](http://www.creda.co.in)

No. 25150/CREDA/EEP/2018-19,

Date :- 29.01.2019

### **NOTICE INVITING TENDER**

CREDA invites sealed tenders “For fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children’s at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh “ as per following:

S. No.	Description of Items	Approx.Value in Lacs	EMD in Rs.	Cost of Tender Document
1	Tender for Fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children’s at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh.	34.00 Lacs.	50,000/-	1,000/-

- The sealed tender documents shall have to be submitted on 15.02.2019 at **1:00 PM** at EE, O&M Cell, CREDA, H.O., VIP Road, Near Energy Education Park, Raipur and thereafter the Technical bid will be opened on the same day at **03:00 P.M.** in the office of H.O., CREDA or CBDA Conference Hall, Near Energy Education Park, Biodiesel Plant, Raipur. Chhattisgarh.
- The Tender should be **downloaded from CREDA website** ([www.creda.co.in](http://www.creda.co.in)) and the tenderer should enclose a demand draft of 1,000/- (Rupees One Thousand Only) along with EMD of Rs.50,000/- Thousand in favour of **Director, CREDA, Raipur**).

Financial bid may be opened only after scrutiny of technical bid on the same day or may be on other day, as per the decision of Tender Committee.

CREDA reserves all rights to accept/reject any or all tenders in full/part without assigning any reasons.

**(Sanjeev Jain)**  
**Chief Engineer**

## 2. ELIGIBILITY CRITERIA

S. No.	Particular	Criteria	Supportive Document to be provided by Bidder
01	Tender for Fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh.	<ol style="list-style-type: none"> <li>1. The Bidder should be a Manufacturer of Scientific exhibits/Models.</li> <li>2. The Bidder should have Experience of Supply and Installation of Scientific and Renewal Energy Smarts Exhibits for children's in Govt./Semi Govt. Undertaking amusement park/garden etc. amounting Rs 75 Lacs or more till date.</li> <li>3. The bidder should have positive Net worth at the end of FY 2015-16, 2016-17 &amp; 2017-18.</li> </ol>	<ol style="list-style-type: none"> <li>1. CA certified copies of balance sheets for the financial years 2015-16, 2016-17, and 2017-18.</li> <li>02. Attested Copies of Performance certificates or work orders issued by govt./ Semi Govt. Agencies/ govt Undertakings regarding supply and Installation of Scientific and Renewal Energy Smarts Exhibits for children's in year till date.</li> </ol>

**NOTE:**

The bidder should have GST registration number, PAN and EPF number (if applicable) and should submit the attested copies thereof.



### 3. Check List

To ensure that your tender submitted to CREDA is complete in all respects, please go through the following checklist & tick mark / fill details in the box below:-

S. No.	Description	Attached	Not Attached
1	Earnest Money (proof of submission)		
2	Tender Document Fee (proof of submission)		
3	The original document duly signed & sealed on each page, as a confirmation of acceptance of Terms & Conditions (T&C)		
4	A Copy of GST registration number, PAN and EPF number (if applicable), Income tax return of latest year.		
5	The bidder shall submit along with bid document a copy of Audited Balance Sheets, Profit & Loss Account for the last three consecutive financial years		
6	Performance certificates or copies of work orders issued by govt./ Semi Govt. Agencies/ govt. Undertakings		
7	Declaration of the Tenderer about any relatives working with CREDA.		
8	Deviations, if any, from the specifications, terms & conditions etc.		
9	Whether validity of your tender is confirmed as per the document		

#### Details of EMD & Tender Document Fee Attached

S. No.	Description
01	<b>Earnest Money Deposit</b> Earnest Money Deposit of Rs. 50,000/-, submitted in the form of Demand Draft/Banker's Cheque/RTGS, drawn on .....Bank, .....Branch, bearing DD/BC No..... dated .....is attached herewith.
02	<b>Tender Document Fee</b> Tender Document Fee of Rs. 1,000/-, submitted in the form of Demand Draft/Banker's Cheque /RTGS, drawn on .....Bank, .....Branch, bearing DD/BC No..... dated.....is attached herewith.

(Sign & Seal of the Manufacturer/Tenderer)



#### 4. UNDERTAKING OF THE TENDERER

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

I/We hereby tender 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 tender 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 Rs. 50,000.00 is hereby forwarded as earnest money in the form of crossed demand draft/RTGS. If I/We, fail to commence or complete the work 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 tender 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 tender 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 be responsible for making payments of all the taxes, duties, levies and other Govt. dues etc. to the appropriate Govt. departments.

Our GST 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:

Place:

Witness

Signature:

Signature  
Name of Tenderer with seal

Name:

Postal Address:



## 5. INSTRUCTIONS FOR TENDERER

1. The Chief Engineer, CREDA, H.O, Raipur invites sealed Tender for fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh.
2. Tenders should only be dropped in **the tender box kept in the office of E.E. O&M Cell, H.O. CREDA, VIP Road, Raipur by 01.00 P.M. on 15.02.2019.**
3. "Tender for fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh". Earnest Money should be deposited in the form of Demand Draft/RTGS drawn in favour of Director, CREDA Raipur payable at Raipur. **The technical bid and financial bid of the tenders will be opened at 3.00 P.M. and 4:00 PM respectively on 15.02.2019, in the office of H.O, CREDA or CBDA Conference Hall, Near Energy Park, Biodiesel Plant, Raipur (C.G).** The price bids of the technically eligible tenderer may be opened after the scrutiny of the technical bid on the same day or any other day as per the decision of the tender committee, which shall be communicated after the opening of Technical Bid.
4. At the time of opening E-3 every tenderer should submit details of their service network in Chhattisgarh. If CREDA feels that the service network details submitted are not adequate, the financial bids may not be opened or the tenderer may be deregistered even later on. Without the details of service network like address of local office, staff, phone numbers etc. the tenderer shall not be qualified for opening of financial bid.

### 5. FOUR PART BID:

- a) EMD
- b) Tender form & commercial details and other documents
- c) Technical bid
- d) Price Bid

Sealed Tenders are invited in four-part basis. One envelope (E-2) containing the E.M.D. (Tender fees also, if applicable) clearly super-scribed EMD on Top, Second envelope (E-3) should contain the tender form with required documents (Commercial details and other documents) and Third envelope (E-4) should contain technical details of the items for which price are being quoted, should be clearly marked as Technical Bid. Fourth envelope (E-5) of price bid should be clear marked as PRICE BID.

### \*NOTE:

- 1 **Only those price bids will be accepted for which tenderer has quoted the price along with technical details which are approved by the tender committee.**

All these envelopes shall be kept in sealed cover (E-1) addressed to the Chief engineer, CREDA, Head Office, Near Energy Education Park, VIP Road Raipur (C.G) with the name of work, tender specification number, due date of tender, amount & mode of E.M.D. and name of the tenderer super-scribed on the cover.

- E-1- Sealed Main Tender Envelope which will contain four sealed envelope (E-2 + E-3 + E-4+E-5)
- E-2- Sealed Envelope which will contain EMD/EMDs & its details and tender fees, if applicable.
- E-3- Sealed Envelope which will contain Tender form & commercial details and other related documents
- E-4- Sealed Envelope which will contain Technical Bid
- E-5 - Sealed Envelope which will contain sealed envelopes of Price Bids. Each Price Bid of Various Categories of Module should be kept in different envelopes, as stated in Price Bids.

Please note that each price bid should be kept in a separate sealed envelope (E-5-1 & E-5-2 and should mark the name of the item for which the price bid is quoted). On the top of each of these sealed



envelopes the name of the product should be clearly typed or hand written, for which the rates are quoted. Only those price bids should be submitted for which rates are being quoted. Tenderer should not submit any blank price bid. Tenderer should enclose the **Technical & Commercial details and other related documents** of only those items for which the rates are being quoted in envelope E-5.

The envelopes should have clear headings, stating the tender number & the categories of ITEMS for which rates are quoted.

- A. When tenders are delivered by special messenger, it should be deposited in the tender box kept in the office of the H.O, CREDA, O&M Cell, VIP Road, Raipur till due date and time. Nobody is authorized to receive or grant receipt for tender delivered.
- B. The terms, conditions and specifications mentioned in tender specifications shall be binding on the tenderer and no condition or stipulation contrary to the conditions shall be applicable. Please note that the tenderers who do not accept terms and conditions stipulated in this tender specifications, their offers shall be liable to be out rightly rejected without assigning any reason whatsoever.
- C. Each page of tender document & enclosures shall be signed by the tenderer and affix the seal. All the pages of the documents issued must be submitted along the offer.
- D. CREDA reserves the right to reject any or all tenders in part or full or to accept any tender considered advantageous to CREDA whether it is the lowest tender or not.
- E. Offers through Telegraph/Fax/Emails or open offer received will not be considered and summarily rejected.
- F. **EARNEST MONEY :**

Each tenderer should submit an earnest money required amount prior to submission of quotation in a separate envelope. The tenders not accompanied with earnest money or accompanied with inadequate earnest money will summarily be rejected and returned unopened. EMD details to be submitted with covering letter and attach herewith the bank draft/RTGS. The details of EMD are as below:

S. No.	Description of Items	EMD	Cost of Tender Document
1	Tender for fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh.	50,000/-	1,000/-

The earnest money deposit can be furnished in the form of Bank Draft/RTGS on Schedule Bank at Raipur made payable to **Director, CREDA, Raipur** .

#### 6. EXEMPTION FROM PAYMENT OF EARNEST MONEY:

- i) SSI Units of Chhattisgarh State for the items for which these units are registered. Valid updated Certificate for such exemption should be attached with the tender document.

#### 7. PRICE:

The prices quoted should be firm and F.O.R. Destination CREDA, Energy Education parks, Raipur Chhattisgarh excluding GST as applicable. The quoted price shall include Freight, Loading, Unloading and any other incidental charges. The GST shall be paid at applicable rate on date of billing in addition to above quoted price

#### 8. JURISDICTION OF THE COURT:

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

**Chief Engineer  
CREDA**



## **6. GENERAL CONDITIONS OF CONTRACT**

### **1. DEFINITION OF TERMS:**

In writing these General Conditions of Contract, the specification and bill of quantity, the following works 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 Director.

The "Engineer in charge" shall mean the Engineer or Engineers authorized by Director, for the purpose of this contract. CREDA Engineer shall mean any Engineering person or personnel authorized by CREDA.

"The contractor" shall mean the successful 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 these General conditions of Contract. "CREDA Purchase" shall mean the purchases or turnkey works order which is being placed by CREDA.

"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 contractor 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 under hand.

### **2. CONTRACT DOCUMENT:**

The term "Contract" shall mean and include the General conditions, specifications, schedules, drawings, supply 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.

### **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 relevant Standard Specifications (where ever required), to the reasonable satisfaction of CREDA. The successful tenderer would be provided period of 60 days for supply installation and commissioning of the ordered Items.

### **4. CONTRACTORS DEFAULT LIABILITY:**

CREDA may upon written notice of default to the contractor terminate the contract in circumstances detailed hereunder:

- (a) If in the judgment of the CREDA, the contractor fails to supply the items within the time specified in the contract agreement or within the period for which extension has been granted by CREDA to the contractor.
- (b) If in the judgment of CREDA, the contractor fails to comply with any of the provisions of this contract.
- (c) In the event CREDA does not terminate the contract as provided in paragraph (a) the contract shall continue performance of the contract in which case he shall be liable to CREDA for penalty for delay as set out in this contract until the work is completed.

## **5. FORCE MAJEURE:**

The 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, 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 to CREDA in writing of the cause of delay. CREDA shall verify the facts and grant such extension as facts justify.

## **6. REJECTION OF WORKS:**

In the event of any of the material supplied by the contractor is found defective in material or workmanship or otherwise not in conformity with the requirement of this contract specifications, CREDA shall both reject the material and/ or work and advise the contractor to rectify the same. The contractor on receipt of such notices rectify or replace the defective material and rectifies the work, free of cost. If the contractor fails to do so, CREDA may,

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

## **7. WARRANTEE PERIOD:**

The material shall be warranted for two year against any manufacturing defect.

## **8. PENALTY FOR DELAY IN COMPLETION OF CONTRACT:**

If the contractor fails to complete the order within the phased delivery schedule specified in the work order or any extension granted there to, CREDA will recover from the contractor as penalty a sum of one percent (1%) of the contract price of the uncompleted portion of the work each calendar week delay. The total penalty shall not exceed 10% (Ten percent) of the contract price of the uncompleted portion of work.

## **9. TERMS OF PAYMENT:**

The following terms of payment shall apply for the tender in case of CREDA Purchase:-

- a) 95% of the value of the supply order (Excluding GST) after acceptance of supply by CREDA. GST shall be paid in addition and in full on the produced bill at the rate applicable on date of billing.
- b) Balance 05% after one year or against TDR/FDR assigned in the favour of CREDA of equivalent amount valid for one year.

## **10. PERFORMANCE SECURITY (PS):**

The performance security shall be recovered as per 9(b). No interest shall be payable on this security. EMD may be retained as part of performance security.

## **11. WORK AWARD:-**

- Supply order shall be given to L-1 subjected to rate reasonability.
- CREDA retains the rights to negotiate with L-1

## **8. SCOPE OF WORK**

Energy Education Park (EEP), is spreading over a 07 acre is being developed at the Rajiv Gandhi Smriti Van located on VIP Road (Airport road), Village-Fundhar, Raipur (C.G.)

A venture of Chhattisgarh State Renewable Energy Development Agency (CREDA), the Energy Education Park is a unique establishment among the many interesting exhibits are Solar Hut, Attractive Garden, Solar Car, Musical Fountain that attracts many People, students and tourists every year. The primary objective behind setting up the park was to bring awareness among people about the use of renewable technologies and resources to meet the energy crisis.

It is a park on the theme of generation and usage of various forms of renewable energy sources, surrounded by a beautiful garden with abundance of greenery, colorful flowers, attractive fountain and unique waterfalls. Energy Education Park at Raipur has been set-up to create awareness and educate people in general and children in particular about various forms of renewable energy sources. This has been sought to be achieved through indoor and outdoor exhibits and through working models, inter-active games and quizzes. For toddlers, there are solar operated toy cars.

The scope of works under this contract includes Equipments for children playground and other Items for CREDA, Energy Education Park VIP Road, Fundhar Raipur (C.G.)

Type of Renewal Energy Smarts Exhibits given below:

<b>Sl. No.</b>	<b>Name of The Exhibits</b>
1	Energy Past – Present - Future
2	Exhibit on Storage of Energy:
3	Global Warming (Green House Effect to Climate Change)
4	Solar Thermal Energy Collectors
	A. Solar Cabinet Drier
	B. Solar Furnace / Centralized Collector
5	C. Solar Passive Heating & Cooling
	Energy from Biomass
	A. Energy from City Waste (Combustion)
6	B. Biomass Gasifier.
	Geothermal Power Plant

## TECHNICAL SPECIFICATIONS

### 1. Energy Past – Present – Future

This exhibit will virtually cover the entire field of evolution of energy. The Smart Exhibits contain the photographs/ illustrations / charts/graphics/graphs etc on the following topics:

- Discovery of fire
- Dawn of Agriculture
- Invention of Wheels
- Invention of Steam engine
- Internal Combustion engine
- Energy from Nucleus
- Energy from Sun
- Ocean Wave Energy
- Hydrogen Fuel car
- Wind Mill
- Parabolic Mirror
- Michele Faraday
- First Dynamo
- Nuclear Power Plant
- Thermal Power Plant
- James Persecute Joule
- Heat energy and Thermo dynamics
- Energy from Fire
- Designing of Utility
- Mussel Power
- Oil and Gas pollution
- Water power
- Model of Motor carriage
- Radio communication
- First locomotive

### 2. Exhibit on Storage of Energy:

This Smart Exhibit will be a self-explanatory 3D-Animatimated. The animations will describe the different technique of storage of energy as given below:

1. Potential energy by lifting a mass.
2. Kinetic energy by moving a mass.
3. Kinetic energy by rotating a mass.
4. Magnetic energy stored in a magnetic field.
5. Electrical energy stored in a capacitor.
6. Hydro potential energy.
7. Electrical energy stored in a battery.
8. Energy stored in compressed gas.
9. Energy stored in a spring (potential energy).
10. Energy stored in a hot mass.



The potential energy gained by a mass while it is displaced from a reference point to higher point, the stored energy –  $mgh$  (where  $m$ = mass,  $g$  = gravitational acceleration &  $h$  = height) has to be suitably demonstrated.

Kinetic energy gained by a mass while it is in motion, the stored energy –  $\frac{1}{2} mv^2$  (where  $m$  = mass of the body under motion,  $v$  = velocity of the moving body) has to be suitably demonstrated.

Kinetic energy gained by a rotating mass while it is in motion, the stored energy –  $\frac{1}{2} J w^2$  (where  $J$  = moment of inertia &  $w$  = angular velocity of the moving body) has to be suitably demonstrated.

While a current passing through a solenoid wound on a magnetic material, stored magnetic energy in the magnetic material is expressed by –  $\frac{1}{2} LI^2$ , where  $L$  = magnetic inductance of the coil &  $I$  = current passing through the solenoid. The working principle of storage of energy in a magnetic field & existence of that stored magnetic energy have to be suitably demonstrated.

While a condenser having capacitance  $C$  is charged at a voltage  $V$ , energy is stored in the capacitor, which is expressed by  $\frac{1}{2} CV^2$ . The working principle of storage of energy in a magnetic field & existence of that stored magnetic energy have to be suitably demonstrated.

While in a water stream flow it contains potential as well as kinetic energy and which is suitably tapped to generate electrical energy by the way of hydro-power project, whether it is micro, mini or small capacity type project. The quantum of energy that can be obtained in a typical run-off the river hydel power system has to be suitably demonstrated.

Battery is the most well-known storage device for a large quantum of energy. The storage principle has to be suitably demonstrated.

Air can be compressed in a closed vessel by a compressor & by this way potential energy can be stored. Releasing the compressed air by a suitable regulator, potential energy can be utilized to do some work. The working principle of stored energy & existence of that stored energy have to be suitably demonstrated.

Potential energy can be stored in spring. The technique of storage of energy & its existence is to be suitably demonstrated.

While a fluid is heated, it stores energy. As long as the heated fluid is kept under a leakage proof condition, there will be no loss & the heat can be suitably utilized as and when necessary. A typical heat storage technique has to be suitably demonstrated.

### **3. Global Warming (Green House Effect to Climate Change)**

This is a Smart Exhibit which will give the concept of Global Warming through a visual presentation. The presentation will be based on the following theme:

- What is Global Warming?
- What are the causes of Global Warming?
- Impact of Agriculture, Traffic, Industrialization.
- Effect on Glaciers.
- Increase of storms.
- Accelerating desertification.

An animation shows the Green House Effect and environmental hazards that are being caused due to the continuous discharge of toxic, harmful gases from thermal power plant, transportation and other sources.

This Smart Exhibit for alarming the visitor to climate change. It will show the impact of climate change and its potential health impact. How the climate change increases vector borne Diseases & Respiratory diseases.

## 4. Solar Thermal Energy Collectors

### A. Solar Cabinet Drier

The solar cabinet dryer is suitable for drying perishable, semi perishable and wet processed food material. It consists of a frame to hold the drying trays, a glazed cover and an aspirator for driving out the hot and humid air utilizing natural convection. The special construction of the aspirator takes advantage of prevailing direction of wind to create a sucking action. Small quantities of chilli, potato chips, cauliflower, leafy vegetable etc. can be dried in a short time without contamination from foreign matter.

### D. Solar Furnace / Centralized Collector

As the title suggests, this is a bulk collector of solar energy which can be rightly called a furnace. A large concave mirror fitted on a high surface facing an array of smaller mirrors fitted with a tracking device. In between these two structures, a receiver is kept which acts as a furnace. The smaller mirrors constantly track and reflect the artificial sun light on the large concave mirror which is a much concentrated form direct this sunlight on to the receiver to act it like a furnace.

### F. Solar Passive Heating & Cooling

Solar energy is a radiant heat source that causes natural processes upon which all life depends. Some of the natural processes can be managed through building design in a manner that helps heat and cool the building. The basic natural processes that are used in passive solar energy are the thermal energy flows associated with radiation, conduction, and natural convection. When sunlight strikes a building, the building materials can reflect, transmit, or absorb the solar radiation. Additionally, the heat produced by the sun causes air movement that can be predictable in designed spaces. These basic responses to solar heat lead to design elements, material choices and placements that can provide heating and cooling effects in a home. In the 3D animation two small houses will show. One of which explain Passive Cooling and another will show Passive Heating.

## 5. Energy from Biomass :

### A. Energy from City Waste (Combustion)

This is an interesting smart exhibit showing a city where the usual city waste is taken to a plant and then converted in to electrical energy by the generator.

### B. Biomass Gasified.

The 3D-animation will be shows a 'Cross section view of a Biomass Gasifier and how the Producer gas generated by the gasifier can be used for generating electric power or produce heat energy. This 3D Animation consists of Reactor, Cooling & Cleaning system, Dual Fuel Engine, Blower and Generator.

## 6. Geothermal Power Plant

This Smart Exhibits shows 3D-animation of a schematic view of a geothermal power generation process with the operative functional parts which presents a realistic picture of the functional aspects. **Geothermal Energy** makes use of the energy stored as heat in the water deep below the Earth's surface. The most prominent and visual example of this coming from "Geysers" and "Hot Springs" ejecting large columns of very hot water, steam and gases high up into the air in spectacular fashion. *Geothermal Energy* is another renewable energy resource as it uses the immense and limitless natural heat stored deep within the Earth's core. The viewers can view a chain of activities taken place till the end of the power generation.

## **8. SCHEDULE - I**

### **PART 'C': TECHNICAL INFORMATION**

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

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

SIGNATURE OF TENDERER

DATE

NAME IN FULL  
DESIGNATION/STATUS  
FIRM/COMPANY SEAL



## SCHEDULE - I PART 'B': COMMERCIAL INFORMATION

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

01. i) Earnest Money Details : Bank draft/Bankers  
cheque payable to CREDA, Raipur
- ii) Amount of E.M.D. & full details : Rs. ....
- iii) If exempted, state whether the : SSI Unit of C.G.  
bidder/Fully Owned State/Central Govt. Unit
- iv) Reference of documentary : Yes/No  
Evidence regarding exemption enclosed.
02. Whether the offer is valid for 6 months : Yes/No  
from the date of opening of commercial/  
Technical bid.
03. A) GST : a) Concessional Central Sales  
Tax/Commercial Tax against  
Declaration form.  
b) Concessional State Sales Tax/  
Commercial tax against  
declaration form.
- B) Rate of Sales Tax on the date of bid:  
(exclusive in the rate quoted)
04. DISCOUNT:
- a) Whether any rebate/discount is offered. : Yes/No
- b) If yes, whether the rebate is unconditional/conditional :  
Rate/amount of rebate/discount :  
If conditional State condition :
05. PAYMENT TERMS:  
Whether CREDA's terms of payment is acceptable to tenderer : Yes/No
06. COMPLETION PERIOD OF WORK:  
Whether tenderer is agreeing for completion period of work as : Yes/No  
specified in the tender
07. PENALTY CLAUSE:  
Whether agreeable to CREDA's Penalty Clause : Yes/No
08. Whether agreeable to CREDA's clause of warrantee period : Yes/No
09. SECURITY DEPOSIT:  
Whether Security Deposit clause is understood : Yes/No
10. Indicate State, Central Sales Tax Registration Number : State  
(Please Note that in case of non-registration with Sales Tax : Central  
Department Purchase Tax as admissible shall be deducted by  
the Purchaser from the Bills of the supplier)  
Whether photocopy of the clearance from Income Tax & Sales : Yes/No  
Tax Deptt. and profit & loss Account and Turn over for last  
(If no, then give details) 5 years up to the last financial year  
have been enclosed.
12. Please mention whether rates offered are : Yes/No  
applicable for part quantities.

PLACE:

DATE:

SIGNATURE OF  
TENDERER  
NAME IN FULL  
DESIGNATION/STATUS  
FIRM/COMPANY SEAL





**SCHEDULE - I**  
**PART 'A': GENERAL INFORMATION**

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

01. Name & Address of the Bidder :  
02. Name & Address of the firm/Company etc. :  
    a) Registered office :  
    b) Factory/works address :  
    c) Fax Nos. :  
    d) Telephone / Mobile Nos. :  
    e) Email id :  
03. Confirm whether tenderer is Manufacturer : Yes/No  
04. Only manufacturer to give following particulars :  
    a) 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. Whether the firm is SSI Unit of : Yes/No  
    Chhattisgarh State:  
    a) If yes, write registration No. :  
    b) Whether documentary evidence :  
        Regarding registration enclosed :  
    c) Items for registration :  
    d) Period of registration :  
    e) Whether latest copy Competency/ : Yes/No  
        Certificate furnished :  
06. Whether the firm is 100% owned by :  
    a) State Government : Yes/No  
    b) Central Government : Yes/No  
        If yes, Notification/certificate issued from : Yes/No  
        The competent authority to this effect is :  
        Enclosed :  
07. a) Whether the bidder is old participant : Yes/No  
    with CREDA :  
    c) If yes, whether documentary : Yes/No  
        Evidence is enclosed. :  
08. Any other information that bidder may like : If yes, give details  
    to give in order to highlight his bid :

PLACE :

DATE:

SIGNATURE OF TENDERER  
NAME IN FULL  
DESIGNATION/STATUS  
FIRM/COMPANY SEAL



## 9. SCHEDULE - II TECHNICAL DEVIATIONS

From  
Tenderer Name & Address –

To,

The Director  
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 of Tender document	Clause No. of Tender document	Page No. deviations and variations	Statement of
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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.

PLACE

SIGNATURE OF TENDERER

DATE

NAME IN FULL  
DESIGNATION/STATUS  
FIRM/COMPANY SEAL

**\*NOTE: -Continuation sheet of like size & format may be used as per bidder's requirements and shall be Annexed to this schedule.**



**10. SCHEDULE - III**  
**PAST EXPERIENCE**

From:  
Bidder's Name & Address: -

To,  
The Director,  
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 Name & Address	Order No. Date	Ordered Quantity	Qty. supplied (Nos.)	Value of Order
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PLACE

DATE

SIGNATURE OF TENDERER

NAME IN FULL  
DESIGNATION/STATUS  
FIRM/COMPANY SEAL

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



**PRICE BIDS**  
**ARE**  
**TO BE ENCLOSED**  
**IN**  
**ENVELOPE 'E-5'**



**To be kept in a separate envelope E-5-1 properly sealed & submitted inside envelope 'E-5'**

**Schedule of fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh**

Rates are inclusive of all the accessories mentioned above as per the tender specifications and also inclusive of Freight, loading, unloading, installation and commissioning and any other incidental charges but exclusive of GST.

Sl. No.	Name of The Exhibits	Unit Price Excluding GST (In Rs)
1	Energy Past – Present - Future	
2	Exhibit on Storage of Energy	
3	Global Warming (Green House Effect to Climate Change)	
4	Solar Thermal Energy Collectors	--
	A. Solar Cabinet Drier	
	B. Solar Furnace / Centralized Collector	
	C. Solar Passive Heating & Cooling	
5	Energy from Biomass	--
	A. Energy from City Waste (Combustion)	
	B. Biomass Gasifier.	
6	Geothermal Power Plant	

**Terms: Mandatory**

These rates are inclusive of Insurance, Freight, Loading, unloading, transportation, installation, commissioning etc. but excluding GST.

GST shall be paid in addition and in full on the produced bill at the rate applicable at the time of billing.

The Evaluation shall be done as per the individual unit price being quoted as above.

Signature of the Tenderer  
With Name, Designation,  
Seal & Date

### Agreement

This agreement is hereby made today the \_\_\_\_\_ of \_\_\_\_\_ 2019 at Raipur between M/s \_\_\_\_\_, a company / firm registered under the Companies Act, 1956 / Partnership Act / \_\_\_\_\_ Act, having its registered office at \_\_\_\_\_ (hereinafter called as "Tenderer", the term which includes its successors, assigns and legal heirs), through \_\_\_\_\_, resident of \_\_\_\_\_ on one hand and Chhattisgarh State Renewable Energy Development Agency-CREDA registered under Societies Act having its Registered office at Head Office, CREDA , Near Energy Education Park, VIP Road Raipur (C.G) (hereinafter called as "CREDA" the term which includes its successors, assigns and legal heirs) through \_\_\_\_\_ resident of \_\_\_\_\_, Raipur, on the other hand on the following terms and conditions:-

- Whereas, the "CREDA" intends to fixation of rates for Supply & Installation of Scientific and Renewal Energy Smarts Exhibits for children's at CREDA, Energy Education Park VIP Road, Fundhar Raipur and anywhere in Chhattisgarh had floated Tender No. \_\_\_\_\_ dtd \_\_\_\_\_ for standardize the rates for Supply anywhere in the State of Chhattisgarh. "Tenderer" had submitted their rates and agreed to supply/perform the "Work" to CREDA on the rates appended hereto in Annexure No. 1, as per the terms and conditions of the limited tender and,

S.No.	Particular	Approved Unit Rates
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

- Whereas, the rates quoted by the "Tenderer" are inclusive of Excise, insurance, freight, loading, unloading, transportation and GST applicable. and all other incidental expenses F.O.R. at site and the "Tenderer" shall not increase the rates of the "Work "up to one year from the date of agreement and the rates mentioned in Annexure -1 shall be valid for a further period of six months or more with mutual agreement, and,
- Whereas, the "Tenderer" is committed to execute the " Work " at the ordered site, on the rates already agreed upon, within the schedule mentioned in the Work/Supply orders that shall be issued from time to time, and,
- Whereas, it has been also agreed upon that during any disputes regarding interpretation of any of the clauses of this agreement, the decision of the "Chief Executive Officer, CREDA" shall be final and binding on both the parties,



5. Whereas, it is agreed upon that all the terms and conditions of the tender and work/ supply orders which have already been agreed upon shall form part of this agreement, and,
6. Whereas, it has also been agreed that for any disputes arising, the jurisdiction shall be the Courts of Raipur,
7. It is also agreed that, If any sub contractor/Vendor/Staff is engaged for the allotted work the payment liabilities for them should be of tenderer, if they fail to do the same, then the payment will be made by CREDA on tenderer cost.

In witness whereof, both the parties thereto, put their signatures below:

**Signed &sealed on behalf of the above  
named contractor.**

**Name:-**

**Designation:-**

**Signed on behalf of CREDA**

**Name :-**

**Designation :**

**Witness:-**

1. Name:-  
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**Witness:-**

2. Name:-  
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