

**EMPANELMENT OF ENERGY**  
**AUDITORS / ENERGY AUDITING**  
**FIRMS/ ACCREDITED ENERGY**  
**AUDITORS/ ACCREDITED ENERGY**  
**AUDITING FIRMS**

**(2016- 2017)**



**Chhattisgarh State Renewable Energy  
Development Agency (CREDA)**

V.I.P. Road (Airport Road), Near Energy Education Park, Raipur (C.G.)

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## **CREDA: The Pioneering Model**

CREDA - Chhattisgarh State Renewable Energy Development Agency, has been constituted on 25th May 2001 under the Department of Energy, Government of Chhattisgarh for implementation of various schemes pertaining to Renewable Energy sources and Energy Conservation activities. It is registered under Society Act 1973 with the controlling body being Ministry of Energy, Govt. of Chhattisgarh headed by Hon'ble Chief Minister Chhattisgarh as Chairman (As Energy Minister). CREDA is established as the State Nodal Agency by State Govt. for development and popularization of non-conventional & renewable sources of energy. Most of the scheme like National Programme on Bio-gas Development, Solar Thermal, Solar Photo Voltaic, Remote Village Electrification, Biomass Gasifier etc., with financial assistance from Ministry of New & Renewable Energy Sources (MNRE), Government of India are implemented by CREDA.

Furthermore, the Government of Chhattisgarh has notified CREDA as the State Designated Agency (SDA) to coordinate, regulate and enforce the provision of the Energy Conservation Act-2001 and implement schemes under the said Act within the State of Chhattisgarh. This is a significant step forward for CREDA having additional responsibility of promoting energy efficiency and developing energy conservation projects besides facilitating renewable energy development within Chhattisgarh State. Within a short span, CREDA has done a pioneering job in various energy efficiency activities in Chhattisgarh.

Since its establishment, CREDA did extensive work in the field of Renewable Energy focusing on rural areas and stand alone devices. It has implemented projects in the field of power generation from renewable energy and environment friendly sources. To undertake this onerous responsibility, CREDA has positioned itself as an organization with enough financial and human capabilities having a professional organizational structure. It has also undertaken extensive human resource development activities which has created a modern working environment for its staff.

## **Chhattisgarh: Energy Conservation Momentum**

CREDA emphasis on Energy Conservation has always been very strong. CREDA continues to initiate several programmes to promote energy conservation in the state, both at the urban and rural levels. Energy efficient devices such as installation of Automatic Power Factor Corrector (APFC), installation of Energy Efficient Street Light Lamps (LED, Induction) within vicinity of Nagar Nigams & Municipal Corporations & installation of LED lights in various rural area. CREDA has also initiated installation of Biomass Gasifiers for cooking at various institute as well as Central & District Jails of Chhattisgarh State. Rectification of agricultural pump sets (Asadhya & Sadhya Pumps) with installation of SPV Pump sets implemented by CREDA, has also led to considerable savings of electrical power, diesel and water in irrigation.

The Energy Conservation Promotion Program has been an integral part of CREDA's Agenda.

## **Industrial Energy Efficiency (EE) Improvement Program**

Seminars and various awareness programme has been conducted by CREDA focusing on Steel, Cement and Rice milling sector as well as Small scale Industry sector. Identification of energy conservation methods, improve energy efficiency and reduce energy costs. Useful and crucial data was collected that helped diagnose and treat the problem areas. CREDA EC Program created general awareness and strengthened the energy service sector to a significant extent.

The realization of the fact that a considerable amount of the industrial profit leaks out due to poor energy efficiency of the plants and machinery has served as an "eye-opener" in the State industrial sector - both for the private sector and the government. Energy audit has become a mandatory norm for all designated consumers. CREDA is looking after the implementation of this notification of Govt of India, in the state with the help of certified energy auditors. This notification of Govt. of India has further enhanced the role of professional energy consultants and experts Empanelment of Energy Auditors and Consultants

A very large number of extremely inefficient small-scale units still remain out of the preview of the mandatory audit program and continue to waste large amount of vital energy resources of the state.

### **Implementation of the EC Act in Chhattisgarh**

Achievements in the EC area uphold the CREDA's status; it has been nominated as the Designated Agency to function as the nodal focal point to implement the Bureau of Energy Efficiency programmes in the state. CREDA is also responsible for implementation of the Energy Conservation Act 2001 within the State. The basic objectives of the Act are:

- Provide a policy framework and direction to the national energy conservation activities.
- Coordinate policies and programmes on efficient use of energy with the stakeholders.
- Establish systems and procedures to verify measure and monitor EE improvements.
- Leverage multilateral, bilateral and private sector support to implement the EC Act.
- Demonstrate EE delivery systems through public-private partnerships.

### **Thrust Areas of the EC Act**

1. Energy efficiency improvement in the industrial sector
2. EE manuals and codes
3. Energy efficiency improvement in buildings & establishments
4. Energy efficient building codes
5. Professional certification and accreditation
6. School education and curriculum change
7. Standards & Labeling programme
8. DSM in Municipal Corporations & Agricultural Sector
9. EE policy research

## **Outline of EC Activities**

In the current financial year the agency has outlined several programmes such as:

- Identify designated consumers as defined in the EC Act and create a database of major industries and industrial groups, manufacturers & suppliers of energy efficient technologies.
- Develop & Organize capacity building / training programs for Designated Consumers, industrial executives, shop-floor workers and energy service providers.
- Undertake Energy Audits of Municipalities, Institutions, Buildings etc.
- Execute Demand Side Management Programme in Rural & Urban areas.
- Establish a nodal facility viz. development of an Energy Efficiency databank of resources, website, and liaise with BEE.
- Undertake curriculum development projects and organize energy education programs for technical schools, ITIs, and for engineering college teachers and students.
- Organize Awareness Generation Programs for a cross section of the energy users, viz. industrialist and executives, energy consultants & auditors, domestic users.

## **Pooling Resources for Promoting Energy Efficiency in the State**

CREDA is the State Designated Agency of Bureau of Energy Efficiency (BEE), Ministry of Power, Govt of India for implementation of the provision of the EC Act – 2001 and promotion of related programs and activities in the State. In order to widen its role for providing technical support services in the ENERGY EFFICIENCY sector CREDA desires to pool resourceful service providers who are actively involved in EC activities and those who are willing to pursue a profession as energy auditor and deploy them in the State. Bureau of Energy Efficiency (BEE) Certified Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms have an important role to play in the implementation of the EC Act. The enactment of the EC Act has raised the overall profile of EE and created ample opportunities for energy auditors in the country.

CREDA has been actively involved in pooling energy expertise from around the country and providing opportunities to energy professionals in Chhattisgarh. CREDA, as per the mandate of BEE regularly conducts capacity building / training programs for energy professionals. To fulfill role of a State Designated Agency, CREDA has constantly been innovating to strengthen the energy service sector of the state.

## **Empanelment of BEE Certified Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms**

CREDA will enroll qualified Bureau of Energy Efficiency (BEE), Govt. of India certified Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms for deployment of its energy conservation programs during the current year upto period 31<sup>st</sup> March 2017. The eligibility criteria for Empanelment are given in Encl.1 (a). The empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms shall be involved in all EC promotion activities of CREDA, as per norms whenever there is need.

## **Role of Empanelled Energy Auditors / Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms**

Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms empanelled with CREDA shall be involved in CREDA's EC activities related to the implementation of the Act, as & when required s per norms. Inputs Services of Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms will be utilized for implementation of activities in various consumer sectors like government, industries, commercial, public utilities, institutions, domestic & agricultural. Involvement of EEA is envisaged in preparation of action plans, project formulation, conducting trainings, monitoring & evaluation of various EC projects as and when required. Empanelment of any Certified Energy Auditor/Energy Auditing Firm/ accredited Energy Auditor/ accredited Energy Auditing Firm does not mean that CREDA shall directly allocate any task of EC. For allocation of any task, whenever applicable, shall proceed as norms of CREDA. Hence CREDA is not committing any task allocation through this empanelment process. **But whenever there is need for services of empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms then there CREDA may float tenders, invite quotations & proposal (RFQ,RFP) etc. amongst empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms**

## **Targeted EC Act related Activities**

The focus of the Annual Action Plan will be on the following activities:

1. EC Awareness and Capacity Building Programs for Industries, Commercial organizations, Govt/non-government organizations & Educational Institutions.
2. Promotion of EC Act Programs & Activities
  - a. S&L (Promotion of BEE Star Labeled Products) – Notification
  - b. Implementation of ECBC in the State - Notification
  - c. Investment Grade Energy Audit of Govt. & Commercial Buildings
  - d. Energy Surveys and EE Improvement in Public Utilities
  - e. EC Demonstration Projects
  - f. Capacity Building Programs for Certified Auditors & Managers
  - g. Preparation of Energy Saving Action Plans for Public Utilities – lighting & water & sewerage pumping facilities & Agriculture Sectors.
  - h. Implementation of PAT Scheme for Designated Consumers

Preparation of Directory of EE Products & Consultancy Services in the State

3. Development of schemes for promotion of energy conservation in all sectors
4. Designing educational curriculum / course material for ITI & Diploma in EE & EC
5. Promote energy efficiency through actual industrial energy audits in the SMEs.

## Enclosure 1(a)

### **A. Eligibility Criteria for Empanelment of Energy Auditors / Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms**

BEE Certified Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms can be apply under following criteria:

1. Applicant should be a BEE Certified Energy Auditor with at least 5 years of experience in the field of energy auditing of Industries, Municipalities/Urban Local Bodies (ULBs), Educational Institutions Buildings, Govt. & Private Buildings, Malls, Hotels etc. In case of Empanelment of firms at least one member of the technical team should be a BEE certified Energy Auditor having 5 years of experience in the field of energy auditing of Industries, Municipalities/Urban Local Bodies (ULBs), Educational Institutions Buildings, Govt. & Private Buildings, Malls, Hotels etc.
2. Should have carried out at least 01 no. of detailed energy audits of Municipal corporations/ULBs with a minimum connected load of 100 kW.
3. The applicant must have relevant experience in energy management and energy audit of industries / buildings. Necessary documents / certificates / proofs and Energy Audit Reports prepared by the applicant should be produced.
4. The Energy Auditor / Energy Auditing Firm must possess following basic instruments having high class accuracy level & their calibration certificates for required for conducting energy audit.
  - Power Analyzer (kVA, kW, kWh, V, A, PF, etc)
  - Digital Tachometer
  - Magger
  - Earth Tester
  - Clip-on Meter
  - Lux Meter
  - Digital Thermometers
  - Digital Anemometer
  - Flue Gas Analyzer (for Thermal Energy Audit only)
  - Thermal Imager
  - Fluid Flow Meter
5. The Energy Auditor / Energy Auditing firm must have the following infrastructure facilities:
  - Office Premises (permanent office address)
  - Telephone/Fax
  - Computer System with printer
  - Service network in Chhattisgarh

## **Enclosure 1(b)**

### **Terms & Conditions of Empanelment**

1. The Empanelment shall be only valid for operating under CREDA's Energy Conservation Activities & Programs within Chhattisgarh State for a specified period up to 31<sup>st</sup> March 2017.
2. The Empanelment is subject to be reviewed in every 03 month by CREDA and shall be liable for cancellation in case of non-performance or violation of any of the terms & conditions of Empanelment by the consultant, specified herein.
3. CREDA may ask to the Empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms to submit Work Report pertaining to their overall activity including relevant work done by them privately or under any other schemes anywhere in the country during their empanelled period with CREDA.
4. CREDA may ask to the Empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms to actively participate in CREDA EC Programs during this period as when & where required.
5. The Empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms shall abide by the scope of work and the terms & conditions of the assignment given by CREDA.
6. The Empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms shall be required to participate in all the meetings and workshop convened by CREDA, periodically, for reviewing the progress of the assigned work to them.
7. All the data, documentary details information about the concern industry/Municipality/institute/building is to collect by empanelled Certified Energy Auditor/Firm to execute the assigned work. Meeting with stake holders and agencies related to concern industry/ Municipality/institute/building and data collection from that agencies/stake holder shall be done by empanelled Energy Auditor/firm. All the clearances and NOC (if required) shall be taken by the Auditor/Auditing firm.
8. Rest of the Terms & Condition shall be as per Tender which will be float time to time.

### **Empanelment Processing Fees - Rs.5000/- (Non-Refundable)**

- The Empanelment Processing Fee of Rs.5000/-(Non- Refundable) is payable in form of Demand Draft in favour of CREDA, payable at Raipur along with the application submitted. Certificate of Empanelment will be issued by CREDA on approval. Empanelled Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms will be governed by the terms and conditions given in the Encl.1 (b).
- The complete application form in Annexure A of this document should be dully filled, attached with required documents, fees packed in a single envelope super scribing “ Application Form for Empanelment of Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms” on the top of the envelope & submitted to the address :-**The Director, Chhattisgarh State Renewable Energy Development Agency (CREDA), Head Office, V.I.P. Road (Airport Road), Near Energy Education Park, Raipur -492015 (Chhattisgarh)**
- The last date Last Date & Time for receiving of application for empanelment with CREDA is **07.10.2016 (up to 03.00 PM)**.
- The filled application form received by fax / email shall be treated as defective, invalid and rejected. Only detailed complete form with documents attached & Empanelment Processing Fee in the form indicated above received prior to the closing time and date of the proposals shall be taken as valid. CREDA shall not be liable for any delay in postal / courier services.
- It is implied that the applicant applying for the empanelment has agreed to the empanelment conditions, shall not seek relaxation in empanelment fees under any circumstances.



ANNEXURE A

Empanelment of Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms

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**APPLICATION FORM**

**PART A: Details of Applicant**

**1. Name of Organization / Individual** \_\_\_\_\_  
\_\_\_\_\_

**2. Category** (Please "√" mark at appropriate place)

- |                           |                            |
|---------------------------|----------------------------|
| a) Individual/Proprietary | d) Partnership             |
| b) Public Limited         | e) Private Limited         |
| c) Research Institution   | f) Others (Please specify) |

**3. Address (Postal)** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Pin Code : \_\_\_\_\_

Telephone/s (with STD code): \_\_\_\_\_  
Fax No./ email ID \_\_\_\_\_ / \_\_\_\_\_

**4. Name of the Chief Executive** \_\_\_\_\_  
Mobile No.: \_\_\_\_\_  
Email: \_\_\_\_\_

**5. Year of Establishment:** \_\_\_\_\_

**6. Other Professional Membership / Registrations** \_\_\_\_\_

- |                                     |     |      |                                |
|-------------------------------------|-----|------|--------------------------------|
| i Chief Electrical Inspector, GoCG. | Yes | / No | <b>(If "YES" attach proof)</b> |
| ii. PCRA                            | Yes | / No | <b>(If "YES" attach proof)</b> |
| iii. Bureau of Energy Efficiency    | Yes | / No | <b>(If "YES" attach proof)</b> |
| iv. Any Other (pl specify)          | Yes | / No | <b>(If "YES" attach proof)</b> |

## 7. Details of Collaboration

(i.) Name of Organization : M/s \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

Pin code : \_\_\_\_\_

Contact & Designation \_\_\_\_\_

(ii) **Scope of Collaboration**  
(In brief)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 8. Details of Support Facilities (Instruments, lab, computer, etc.)

a. Laboratory / Workshop (attach list of equipment) \_\_\_\_\_

b. Instruments (attach list with detailed specification) \_\_\_\_\_

c. Computer \_\_\_\_\_

d. Others (Pl specify ) \_\_\_\_\_

## 9. Particulars of Expertise/specialty

i. Audit Type : Thermal Electrical Both

ii. Type of Industry/ies : \_\_\_\_\_

iii. Particular equipment or processes: \_\_\_\_\_

## PART B : MAN POWER AND EXPERIENCE

### 1. Table I : Details of Technical Manpower

| Sr. No. | Name & Designation | Qualification | Experience (years) | Field of Expertise | Whether BEE Certified Auditor |
|---------|--------------------|---------------|--------------------|--------------------|-------------------------------|
| 1.      |                    |               |                    |                    |                               |
| 2.      |                    |               |                    |                    |                               |
| 3.      |                    |               |                    |                    |                               |

(Attach resume of each of the team member with necessary credentials. Use separate sheet)

## 2. Table II : Projects undertaken during last 2 years

| Sr. No | Area (*) | Sector | Sub-sector | No. of Projects |
|--------|----------|--------|------------|-----------------|
| 1.     |          |        |            |                 |
| 2.     |          |        |            |                 |
| 3.     |          |        |            |                 |
| 4.     |          |        |            |                 |
| 5.     |          |        |            |                 |

\* - Electrical/Thermal/Both (Use separate sheet, if required)

## 3. List of Major Clients of last 2 years

| Sr.No. | Name of Client | Contact Person (by designation) | Contact Nos. (Telephone) |
|--------|----------------|---------------------------------|--------------------------|
| 1.     |                |                                 |                          |
| 2.     |                |                                 |                          |
| 3.     |                |                                 |                          |
| 4.     |                |                                 |                          |
| 5.     |                |                                 |                          |

(Use separate sheet, if required)

## Justification in support of your application:

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## 4. Specimen Signature of Certified Energy Auditors / Certified Energy Auditors of the firms with seal

| Sr. No. | Name | Specimen Signature |
|---------|------|--------------------|
| 1       |      |                    |
| 2       |      |                    |
| 3       |      |                    |

- Attach copy of BEE Certification of Energy Auditors/ Energy Auditing Firms/ accredited Energy Auditors/ accredited Energy Auditing Firms.
- Attach documents/ copy of work orders of past executed work in the field of energy audit .
- Attach evidence documents/ copy of work orders of past executed work in the field of energy audit of Municipalities/ULBs.
- Attach copy of invoices procured measuring instruments in the name of applicant & their calibration certificate.

**PART C: GENERAL INFORMATION**

**1. List of three references (from industries and govt. institutions)**

| Sr.No. | Name | Address | Contact No. |
|--------|------|---------|-------------|
| 1      |      |         |             |
| 2      |      |         |             |
| 3      |      |         |             |

**2. Any additional information in support of your application**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Declaration**

The information provided in this form is accurate and true to the best of my knowledge. We agree to the terms & conditions of Empanelment.

- Name & Designation of the authorized signatory:

\_\_\_\_\_

(Signature)  
(Seal of Organization)

Date: \_\_\_\_\_

----- (for office use only)-----

Date of Receipt of Application: \_\_\_\_\_

Non-refundable fee submitted: Rs.10000.00

M.R. No.: \_\_\_\_\_ date: \_\_\_\_\_

Ref. & Date of Empanelment: \_\_\_\_\_ date: \_\_\_\_\_

Date of Expiry of Empanelment: \_\_\_\_\_

Remark: \_\_\_\_\_

\_\_\_\_\_

Signature