

CENTRAL ELECTRICITY REGULATORY COMMISSION

3rd & 4th Floors, Chanderlok Building, 36, Janpath, New Delhi-110001.

Tel. No.23353503, Fax No.23753923

Ref No.: 1/12009-Reg.Aff.(REC)/CERC

Date: 06.01.2012

Sub: Notice inviting Quotations for "Empanelment of Compliance Auditor in the area of Renewable Energy Certificate Mechanism"

Central Electricity Regulatory Commission (CERC), a statutory organization constituted under an Act of Parliament, proposes to empanel Compliance Auditor in the area of Renewable Energy Certificate Mechanism. The required qualifications, experience, scope of work and other detailed terms and conditions are contained in enclosed Terms of Reference (TOR).

2. Sealed quotations in the format prescribed in Annexure I, Appendix-‘A’ and Appendix-‘B’ are invited for the aforesaid purposes. The sealed bids clearly marked as “Technical” are required to be submitted in one envelope clearly mentioning in bold letters on top of the envelope

“QUOTATION FOR EMPANELMENT OF COMPLIANCE AUDITOR IN THE AREA OF RENEWABLE ENERGY CERTIFICATE MECHANISM”.

3. The bids may be addressed to Assistant Secretary (P&A), CERC so as to reach by 3.00 PM of 02nd February, 2012. “Technical” bids will be opened by the Tender Opening Committee of CERC on the same day at 4.00 PM. Bidders or their authorized representatives may remain present during opening of bids. Secretary, CERC reserves the right to modify/change the date and time of the receiving/opening of bids.

Sd/-
(Ramanuj Dey)
Assistant Secretary (P&A)

Enclos : As above.

Empanelment of Compliance Auditor by Central Electricity Regulatory Commission in the area of Renewable Energy Certificate Mechanism

Terms of Reference (ToR)

1.0 Background:

1.1. The Electricity Act 2003 (the Act) stimulated the development of RE based power generation by mandating State Electricity Regulatory Commissions (SERC) with the function of RE promotion within the State. Under the Act, the SERCs set targets for obligated entities to purchase certain percentage of their total power requirement from renewable energy sources. Although India is abundantly gifted with variety of renewable energy (RE) sources, not all States are endowed with same level of renewable energy sources. While some States have very high renewable energy potential, some States have very little renewable energy potential. Currently RPO is being fixed based on the renewable energy potential available in the State. As a result, the RPO Regulations developed by the SERCs differ from each other on many counts.

1.2. National Action Plan for Climate Change (NAPCC) announced by the Hon. Prime Minister of India on June 30, 2008 has suggested national level target of 5% renewable energy purchase for FY 2009-10. Further, suggested that such target will increase by 1% for next 10 years. This would mean NAPCC envisages renewable energy to constitute approx 15% of the total electricity consumption by 2020.

1.3. Most of the renewable energy sources are infirm in nature. Therefore, to transmit the power from one State to another becomes difficult. The requirement of scheduling and prohibitive long term open access charges also poses major barrier for RE abundant States to undertake inter-State sale of their surplus RE based power to the States which do not have sufficient RE based power. Consequently, the States with

lower RE potential have to keep their RPO target at lower level. As a result, while RE abundant States have no motivation to produce RE based power more than that required to satisfy the RPO mandate within the State. On the other hand, RE scarce States are not able to procure RE generation from other States.

1.4. In order to address the above mentioned limitations, one such policy instrument prescribed in NAPCC is Renewable Energy Certificate (REC) Mechanism which would enable large number of stakeholders to purchase renewable energy in a cost effective manner. Accordingly, Ministry of New and Renewable Energy (MNRE) initiated a study 'Conceptual Framework for Proposed REC Mechanism in India' to develop such mechanism. Subsequently, Forum of Regulators (FOR) evolved a conceptual framework for Renewable Energy Certificate mechanism. Renewable Energy Certificate seeks to address the mismatch between availability of RE sources and the requirement of the obligated entities to meet their renewable purchase obligation.

1.5. Based on the conceptual framework evolved by FOR, CERC has notified The Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 (REC Regulations) on 14.01.2010 in fulfillment of its mandate to promote renewable sources of energy and development of market in electricity. The framework of REC is expected to give push to Renewable Energy (RE) capacity addition in the country. REC is a green component of energy and a tradable instrument into the market. Subsequently, Commission issued Orders on designation of NLDC as Central Agency, determination of Floor and Forbearance price of REC and detailed Procedures for implementation of REC mechanism, Fee & Charges payable under REC Mechanism. Forum of Regulators has framed a Model Regulation for the consideration of the State Electricity Regulatory Commissions. Accordingly, 24 States have issued REC Regulations wherein REC is considered as valid instrument for the fulfillment of renewable purchase

obligation (RPO). The REC framework launched on 18.11.2010. Up till now around 2100 MW RE generators got accreditation.

1.6. Regulation 13 of REC Regulations mandates for appointment of compliance auditors. Regulation 13(1) reads asunder:

13. Appointment of compliance auditors:

(1) The Commission may, in consultation with the Central Agency, appoint from time to time compliance auditors to inquire into and report on the compliance of these Regulations by the person applying for registration, or on the compliance by the renewable energy generators in regard to the eligibility of the Certificates and all matters connected thereto.

2.0 Scope of the work assigned to the Compliance Auditor:

2.1 In order to meet the requirement of Regulation as quoted in para 1.6, the Central Electricity Regulatory Commission has decided to empanel individual persons/firms as compliance Auditors in accordance with the provisions of Central Electricity Regulatory Commission (Appointment of Consultants) Regulations, 2008 and the Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 and subsequent amendment(s) (hereafter REC Regulations).

2.2 The Compliance Auditor shall inquire into and report on the compliance of REC Regulations by the person applying for registration, or on the compliance by the renewable energy generators in regard to the eligibility of the Certificates and all matters connected thereto. The Compliance Auditor shall verify the following conditions (list of conditions is indicative) for all the projects:

- 2.2.1 Eligibility criteria
- 2.2.2 Verification of technology used
- 2.2.3 Renewable Energy sources (as defined in Regulation 2 & 4 of RE Tariff Regulations for wind, biomass, cogeneration etc.)
- 2.2.4 To verify whether all the clearances required for setting up RE generation project are obtained and the validity thereof.
- 2.2.5 To verify about any power sold to DISCOM at the rate higher than its pooling cost (indicating the approximate pooling rate for the year, as determined by the State Electricity Regulatory Commission). PPA Status : signing date/expiry date/no PPA
- 2.2.6 Verification of capacity of power plant, auxiliary consumption, voltage level, installation of special energy meter.
- 2.2.7 To ensure that the information submitted by the generator at the time of accreditation and registration is true.
- 2.2.8 To verify that compliance of the observations raised by the State Agency / any other inspecting agency / other competent authority is made and there is no failure in rectification of the defects
- 2.2.9 Metering/calibration Status
- 2.2.10 Auxiliary consumption (wherever required)
- 2.2.11 To verify that there is no willful or prolonged default.
- 2.2.12 To verify that there is no violation of terms / conditions / rules / regulations / procedure of the State / Central Agency.
- 2.2.13 To verify that Renewable Energy certificates are claimed as per the energy injected for generation after the date of registration by NLDC.
- 2.2.14 To verify about the existence of validity of accreditation & registration.
- 2.2.15 Any other compliance required as per CERC REC Regulations and its amendments thereon
- 2.2.16 Any other compliance matter as specified/directed by CERC.

2.2.17 To verify the process of Accreditation, Registration, Issuance and Redemption.

For Biomass based Rankine cycle power project and Bagasse based cogeneration projects;

2.2.18 Type of Boiler and its suitability for burning biomass fuel comments in brief (after due observation at site).

2.2.19 To ensure about the actual fuel being used by spot inspection (with observation of minimum 1 hr. at the plant site).

2.2.20 What type of fuel is being fed in the Boiler?

2.2.21 If Biomass - its type.

2.2.22 If coal, give details.

2.2.23 If combination of Biomass & coal, what percentage of each fuel?

2.2.24 What is the consumption of above fuel in 1 hr with 100% steam generation (maintaining rated temperature & pressure) & what is the generation of electricity/hour.

2.2.25 Total Biomass available at site.

2.2.26 Total coal available at site.

2.2.27 Whether the above availability of Biomass & coal tally with the register records maintained, give details and if not what is the difference?

2.2.28 Total Biomass & coal (separately) used for generation of power since the date of accreditation/registration as per the record, tallying with Truck/Tractor No., date of receipt, transportation payments etc.

2.2.29 Out of total fuel used (as above), what is the percentage of biomass and coal.

2.2.30 Whether coal used is within the permissible limit of 15% as per norms.

2.2.31 Whether the above fuel used tallies with the generation?

2.2.32 What is the average consumption of Biomass & coal and generation of power per day?

- 2.2.33 What is average consumption of secondary fuel.
- 2.2.34 Tallying of Heat Rate with respect to fuel consumption & other observation.
- 2.2.35 Heat Rate of Turbine , Efficiency of Boiler, Station Heat Rate
- 2.2.36 Average GCV of fuel (taking into consideration Biomass and coal with respect to their quantity & GCV).
- 2.2.37 Assessed handling losses of fuel (biomass/coal) in percentage.
- 2.2.38 Actual fuel consumption per unit as worked out based on the records (maintained/ register) for the period from the date of registration for REC.
- 2.2.39 As per the calculation of Heat Rate, what is the average fuel consumption per unit?
- 2.2.40 Difference in fuel consumption per unit as per the record Vs Heat Rate calculation.
- 2.2.41 If the above variation is more than 5%, reason to be furnished what is the explanation of the developer.
- 2.2.42 Verification of ash details to ascertain the fuel actually being used.(being ash analysis is an important aspect to countercheck the type of fuel being used).
- 2.2.43 Sample of ash to be collected and got it tested from the authorized Lab. to ascertain the type of fuel on the basis of the testing results
- 2.2.44 What is the % of ash of Biomass & coal (being used/separately) as per norms.
- 2.2.45 Whether quantity of ash tally with the fuel combination & records.
- 2.2.46 (Ash contents in Biomass fuel is hardly 4-8% depending upon the type of fuel, whereas it is more than 40% for F/G type coal).
- 2.2.47 Assessed quantity of ash lying available at site.
- 2.2.48 What is arrangement of disposal of ash & where being dumped (to check from records/register – about dispatch by trucks/trailors etc).

2.2.49 How much quantity of ash disposed off (dumped to other area) as per records ash available at site / surrounding from the date of accreditation/registration for REC.

2.2.50 Average quantity of ash being generated per month & quantity since the date of accreditation /Registration and to compare with the electricity being generated.

2.2.51 To verify from past history of biomass generation as to whether it has entered into any agreement for availing preferential tariff and what is the present status & whether now eligible for REC.

2.3 **Conflict of interest:** The individual/firms empanelled by the Commission shall be debarred from auditing of RE projects with which they have been associated in the past and shall also be debarred from associating with such project developer in future on the matters which may cause any conflict of interest.

3.0 Deliverables and duration of the Assignment:

3.1 The Deliverables and duration of the assignment shall be decided by the Central Agency.

3.2 in case of compliance audit of Central Agency the report shall be submitted to CERC only and a copy of the report shall be given to Central Agency only after due permission of CERC.

4.0 Qualification Criteria:

4.1 The Compliance Auditor could be an individual person or a firm having persons with qualifications and experience in the following areas:

- a. Finance or accounts or commerce, and

- b. having qualifications and experience (minimum 5 years) in the field of engineering with specialisation in generation, transmission or distribution of electricity, experience that demonstrates an adequate understanding of the electricity sector, institutions involved including Regulatory Commission, utilities, government institutions, State agencies and their roles and responsibilities.
- c. Proficiency in use of computer applications.

5.0 Application and Evaluation Criteria:

- 5.1 The format of application is at **Annexure-I**.
- 5.2 The Compliance Auditor (Bidder) is required to submit four (4) copies of bids for Technical offer (each of which will be treated as original) duly sealed in envelope.
- 5.3 Technical component will carry 100% weightage.
- 5.4 The bids of the eligible bidders as per Clause 4 will be scrutinized by Consultancy Evaluation Committee (CEC) and the decision of the CEC would be final and binding in this matter. The technical performance may be evaluated based on the following model criteria:

Sl.No.	Technical Parameters**	Weights
1	Relevant Experience {in Renewable Energy generation/ Energy Audit in power generation (RE/Conventional)} (atleast 5 years)	0.3
2	Understanding scope of the assignment, Detailed approach & methodology, Work Plan (information must be provided as per format at Appendix – A)	0.4
3	Qualifications and experience of the key staff proposed (as per Clause 4) (information must be provided as per format at Appendix – B)	0.3

** Documentary proofs have to be submitted along with the bid.

- 5.5 The minimum qualifying marks in the Technical Evaluation will be 75% of the total score for technical component.
- 5.6 Only those bidders, who qualify technically as per Clause 5.4 & 5.5, would be considered for empanelment of Compliance Auditors.
- 5.7 Only successful bidder would be communicated the award of 'empanelment of compliance auditor'.
- 5.8 The number of compliance auditor(s) (organisation/institution/individual) in the panel will be determined by CERC depending upon the requirement.
- 5.9 The Validity of empanelment: Empanelment shall be reviewed by the Commission after two years from the date of such empanelment and it can be reviewed by the Commission for such period as may be decided by the Commission after ascertaining the technical capability as per para 5.6 above. The Commission may at its discretion, add or delete the names of the Compliance Auditor for the reasons recorded in writing.

6.0 Selection of the Compliance Auditor by the Central Agency:

- 6.1 The Commission shall publish on its website a panel of Compliance Auditors for enquiry into and report on the compliance of REC Regulations by the person applying for registration, or on the compliance by the renewable energy generators in regard to the eligibility of the Certificates and all matters connected thereto.

Provided that the Commission may at its discretion, add or delete the names of the Compliance Auditor for the reasons recorded in writing.

- 6.2 Central Agency may choose Compliance Auditor(s) from the panel notified by the Commission from time to time for enquiry into and report on the compliance of REC Regulations by the person applying for registration, or on the compliance by

the renewable energy generators in regard to the eligibility of the Certificates and all matters connected thereto.

- 6.3 The Central Agency shall seek the bids from two or more empanelled Compliance auditors and shall select the one with lowest quotation after following transparent process;

Provided that if a single bid is received in response to notice inviting bids, the Central Agency may select such designated individual or firm as compliance Auditor with prior intimation to the Commission.

- 6.4 The selected designated individual or firm as an Compliance Auditor should not have any conflict of interest with RE generators or other agencies involved which has selected it for inquire into and report on the compliance of REC Regulations.

- 7.0 **Fee for the Compliance Auditor:** The payment to the Compliance Auditor shall be made by the Central Agency.

/ ANNEXURE – I /

DETAILED PROPOSAL FOR COMPLIANCE AUDIT UNDER REC MECHANISM

(TECHNICAL)

Note: **Four (4) copies** of the proposal shall be submitted to the Central Electricity Regulatory Commission.

I. GENERAL INFORMATION:

01. Title of the Proposed Assignment :

02. Name and address of the Compliance Auditor:
(Organization/Institution)

03. Name & Designation of the Key Person :

04. Contact address of the Key Person :
 - 4.1 Address :
 - 4.2 e-mail :
 - 4.2 Telephone :
 - 4.3 Fax :
 - 4.4 Mobile No. :

05. Net-worth/Turnover of the Organization/ :
Institution (To be supported by Annual Statement
of Accounts of Last three Financial Years)

06. Details of Office in New Delhi and the available infrastructures

II. TECHNICAL SPECIFICATIONS:

- 07. i. Department(s) of the organization/Institution(s) where the study of the compliance audit will be carried out.
- ii. Other department(s), if any, which will collaborate in this study/compliance audit.
- 08. Brief review of the experience in the relevant field (National and/or International) (if any)**.
- 09. Detailed Approach & Methodology for undertaking the assignment.
- 10. Facilities available for the proposed work in the applicant’s organization/institution
- 11. Name and Designation of the Proposed Team (also indicate the man-hour committed for each member of the team)
- 12. Biographical sketch of the Compliance Auditor Team (for every team member)
 - (i) Name
 - (ii) Designation
 - (iii) Date of Birth
 - (iv) Education and Experience;

(a) Academic Qualifications

Degree	University	Field(s)/Specialisation	Year

(b) Experience :

(1) Total Relevant Experience for the proposed assignment: Years

(2) Detailed Experience :

Institution	Topic of work done	Period

(v) Field of major interest

(vi) Additional information (if any)

** Documentary proofs have to be submitted along with the bid.

/ Appendix-'A' /

Based on the broad areas of work outlined in the ToR and bidder’s own experiences, bidders are required to provide details of bidder’s understanding and approach regarding the following in a maximum of 20 pages.

- Understanding of scope
- Planned approach and methodology to conduct the Audit
- Robustness of methodology
- Audit plan {for RE Generators/State Agency/Central Agency/SLDCs/Power Exchange(s)}
- Identifying and determining materiality of deviation
- Work Plan and timelines

/ Appendix-'B' /

Sl. No.	Name	Role	Educational Qualification	Experience (in years)	Area of Expertise	No. of relevant projects handled