

# **Engagement of consultant to undertake comparative studies, collate information collected from the stakeholders and providing assistance in framing “Tariff Regulations, 2014-19” by the Central Electricity Regulatory Commission**

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## **Terms of Reference (ToR)**

### **1.0 Background :**

- 1.1 The Central Electricity Regulatory Commission was constituted under erstwhile Electricity Regulatory Commissions Act, 1998 (short as “ERC Act”). The ERC Act, 1998 provides for Electricity Regulatory Commission at the Center and in the States for rationalization of electricity tariff, transparent policies regarding subsidies etc. The ERC Act, 1998 was then replaced by the Electricity Act, 2003. The regulatory Commission at the Central level created under the provisions of the ERC Act, 1998 was recognized as the Central Electricity Regulatory Commission (short as “CERC”) under the Electricity Act, 2003.
- 1.2 The Electricity Act, 2003 has significantly enlarged the spectrum of responsibility of the Central Electricity Regulatory Commission. The Central Commission has been vested with the functions under the Electricity Act, 2003 (short as “the Act”) to regulate the tariff of the generating companies owned or controlled by Central Government, generating companies having a composite scheme for generation and sale of electricity in more than one State, to regulate inter-State transmission of electricity and determination of tariff for inter-State transmission in electricity among other functions.
- 1.3 The CERC has emerged over the years as a catalyst of reforms in the power sector in India. The CERC has responsibility of promoting market development in the power sector and to encourage competition, and induce efficiency improvement with the larger objective of ensuring the fruits of competition and efficiency for consumers.
- 1.4 The Central Commission has issued Terms and Conditions of Tariff for period 2001-04 under Electricity Regulatory Commissions Act, 1998 and after enactment of Electricity Act, 2003, the Commission issued Regulations on Terms and Conditions of Tariff for control periods 2004-09 and 2009-14. The Commission has also issued various amendments to the Regulations along with explanatory memorandum. The current tariff period shall come to an end on 31<sup>st</sup> March, 2014. The Commission has initiated action for laying down the terms and conditions of tariff for the control period from 1.4.2014 to 31.3.2019 by issuing staff paper eliciting information, comments and suggestions from the stakeholders. Considering the developments in the sector during the current tariff period, current and perceived challenges in the Power sector and need for market development, it has been felt to give a fresh look into the basis and assumptions to be considered while framing the fresh terms and conditions of tariff for control period 2014-19.

- 1.5 The Commission proposes to undertake study on various aspects for framing new tariff regulations for the control period 2014-19, for providing legal/technical assistance in analyzing comments /response of stakeholders/public and drafting tariff regulations for control period 2014-19.

## **2.0 Objective of the study**

- 2.1 To review the existing tariff norms by considering developments in the sector during the current tariff period by considering comments of stakeholders, challenges in the Power sector and various policy changes.
- 2.2 To undertake the various studies for deciding financial and operational norms of CERC tariff regulations, which facilitate Commission for framing tariff regulations.

## **3.0 Scope of the work assigned to the Consultant:**

The scope of the consultancy assignment is as under:

- 3.1 To collate information received from the stakeholders and to review the data collected from the utilities. Collected data would be critically examined with reference to the existing operational norms/performance parameters and the standards of performance achieved and reported by the industry after taking into consideration various inputs, financial norms and present in the appropriate format to the staff committee for approval and final publication inviting comments thereof. The consultant will also suggest inclusion/deletion/modification of norms.
  - 3.1.1 Study various orders pertaining to tariff issued by CERC, APTEL and other judicial pronouncements that may have a bearing on the proposed Regulations.
  - 3.1.2 Analysis of comments received from stakeholders on the Approach Paper and the operational and financial data submitted by various stakeholders, study reports in connection with specific reference to the following :
    - Analysis of additional capital expenditure incurred by CPSUs in power sector, suggesting suitable methodology to deal with additional capital expenditure, classification of nature of additional capital expenditure required for existing and new stations of thermal, hydro and transmission system and developing norms for allowing additional capital expenditure, if considered feasible.
    - Study of Operation & Maintenance expenditure norms for generating stations (hydro and thermal) and transmission system based on annual operation and maintenance expenses for financial years 2008-09 to 2012-13. In case of

thermal generating stations, study of O&M expenditure norms is to be carried out separately for coal/lignite/gas/washery reject coal based power plants. For transmission system, separate study for HVAC, HVDC and GIS transmission system need to be made.

- Consider the recommendations of CEA relating to operational norms and analysis of existing operational norms for generating stations and transmission system.
- Study and analysis of capitalized spares and O&M spares for the thermal, hydro and transmission system for the purpose of deciding ceiling limit of initial spares and maintenance spares in working. For HVAC, HVDC and GIS separate study and analysis of capitalized spares and O&M spare need to be made.
- Study requirement of spares, norms prescribed by OEM and practice adopted by utilities need to be compared.
- Study and analysis of fuel stock being maintained by existing generating stations to take a view – in regard to benchmarking of fuel stock for the purpose of working capital.
- Examination of various methods including Capital Asset Pricing Model and study of expected rate of return by considering market data of existing generating stations and transmission companies for deciding return in investment.
- Study and analysis of debt market for the purpose of deciding approach for return on investment taking into consideration domestic market.
- For completion schedule of thermal generation transmission system, analysis of pre- award and post-award of activities under EPC to be studied for formulation of norms for eligibility of additional ROE.
- To analyze the implications of pre-tax/post tax return on equity with reference to the existing regulation.

3.2 Preparation of draft Explanatory Memorandum covering all aspects including Engineering, Finance, Accounts, Legal & Taxation relating to the terms and conditions for determination of tariff of generating companies owned or controlled by Central Government, generating companies having a composite scheme for generation and sale of electricity and inter-State transmission licensees.

3.3 The draft Regulations should include all component of tariff including technology specific parameters for generation of electricity and transmission of power like station

heat rate, secondary oil consumption, auxiliary energy consumption, normative availability, O&M norms and other relevant parameters.

While preparing the draft Regulations and explanatory memorandum as mentioned in Para 3.2, the consultant shall keep in view the following.

- a) The Electricity Act, 2003, National Electricity Policy, Tariff Policy and rules and guidelines issued by Government of India (GoI) under the Electricity Act,2003;
  - b) Various judgments passed by Appellate Tribunal for Electricity (APTEL) and other judicial pronouncements which may have a bearing on the new Tariff Regulations
  - c) Attend public hearings and evaluate the objections/comments received on the draft regulations, recommendation of CEA, data furnished by various stakeholders and Commission's view point on various aspects.
- 3.4 Prepare draft statement of objects & reasons and draft Regulations after considering the objections received on the draft Regulations and the Commission's view point.
- 3.5 To assist in finalization of regulations by the Commission and to provide input for a debate on various issues involved in framing the proposed Tariff regulations, 2014.

#### **4.0 Deliverables and duration of the Assignment:**

The assignment shall comprise of the following items of work to be completed as per the timeframe indicated:

The entire assignment shall be completed within a period of **four** months from the date of award of consultancy. For any delay after taking into account extension granted if any, 1% penalty per week will be levied for value of work executed after due date of completion of work subject to ceiling limit of 10% of contracted amount. The individual task should be completed in phased manner parallel for thermal, hydro and transmission as per time line given below:

- 4.1 The Consultant will be required to:
- (i) Submit Inception Report giving approach to be followed including study of existing operational norms/performance parameters and financial norms of CERC tariff regulations and orders issued by CERC, APTEL and other judicial pronouncements (followed by a presentation) at the end of 10 days from the date of award of assignment. At this stage, consultant shall have to indicate data requirement;
  - (ii) Submit fortnightly status report of progress of the assignment from the date of award of contract, to CERC;

- (iii) Submit report based on the analysis of comments/suggestions received from the stakeholders on the Approach Paper circulated by CERC and operational data submitted by the entities. The report shall also include way forward for O&M expenditure norms, operational and financial norms for the proposed regulations. The consultant shall have to collect requisite data and information.
- (iv) Interact with the staff committee of CERC at periodical intervals to be prescribed during the assignment and submit the Draft Regulations and Explanatory Memorandum within **45 days** from the date of award of assignment;
- (v) Submit report based on the analysis of comments/suggestions received from the stakeholders on the draft regulations issued by CERC along with issues to be addressed in proposed regulations along with draft.
- (vi) Submit proposed draft of final Regulations and Statement of Reasons after incorporating the suggestions/modifications;
- (vii) Adhere to any other instruction by Secretary, CERC within the scope of the assignment.

#### 4.2 The Consultant will required to arrange data as under :

- i) The Commission has sought operational data from generating companies and transmission utilities vide order dated 7.6.2013. The data received from PSUs/ISGS/ISTS shall be made available to the consultant in phased manner. The comments/suggestions received from stakeholders will be made available to the consultant for analysis. Any additional information required in regard to above shall have to intimate by consultant during inception report.
- ii) Any other information/data required for the analysis of debt market, study of various methods for rate of return etc. is to be arranged by consultants.

### 5.0 Qualification Criteria

- 5.1 The Consultant should have completed at least **5** assignments in the last **10** years in tariff determination in respect of thermal, hydro generation and transmission projects or experience of similar assignments involving analysis of tariff, order/regulations related to thermal and hydro generation and electricity transmission tariff, **two** of which should be for generation or transmission projects in power sector.
- 5.2 The consultant should have personnel with professional qualification having professional experience of Finance, Engineering, Economic and Law along with relevant experience of tariff determination.

- 5.3 The consultant and professionals deployed should have knowledge of relevant Acts, Policies, Regulations as well as operational & commercial aspects of thermal generating stations, hydro generating stations and transmission system.
- 5.4 The consultant should have in-depth knowledge of CERC tariff regulations and practices followed by other regulators. The Consultant should submit documentary evidence of having handled similar projects and tie-ups, if any.

## 6.0 Mode of payment

The consultant shall be paid as per the following model schedules:

Sr. No.	Stage	Percent of agreed amount
1.	Advance of the total fee of the study at the time of signing agreement/acceptance of the offer, subject to production of Bank guarantee for equal amount to be valid till the amount is to be absorbed in the amount payable to the Consultant.	10%
2.	On submission of inception report;	20%
3.	On submission of the draft tariff regulation (including all intermediate reports till submission of draft tariff regulation)	30%
4.	On submission of the proposed draft for final tariff regulation ( including all intermediate reports till completion of final tariff regulation)	30%
5.	On successful completion and acceptance of the final report by the CERC*	10%

\* Where necessary, the ToR may provide for withholding of the final installment till the satisfactory performance of the system delivered by the consultant is ensured

**7.0 Termination of contracts:** The assignment may be terminated as per clause 7 of the Contract Agreement enclosed at Annexure-III.

**8.0 Application and Evaluation Criteria:**

- 8.1 The format of application is at Annexure-I and Annexure-II.
- 8.2 The Consultant is required to submit four (4) copies of bids for Technical offer (each of which will be treated as original) and one copy of Financial offer, duly sealed in separate envelopes.
- 8.3 Technical component will carry 70 % weightage and Financial component will carry 30 % weightage.
- 8.4 The bids of the eligible bidders as per Clause 4 will be scrutinized by Consultancy Evaluation Committee (CEC) and shortlisted bidders will be called for interaction with the CEC and their technical performance shall be evaluated based on the following criteria:

<b>Technical Parameters</b>	<b>Weights</b>
The Consultants relevant experience for the assignment	30%
The quality of the methodology/approach proposed	10%
The qualifications and experience of the key staff proposed	40%
Quality of presentation*	20%
Total	100%

\* The bidding firms shall make a presentation before consultancy Evaluation Committee (CEC) on the proposed Approach and Methodology.

- 8.5 The minimum qualifying marks in the Technical Evaluation shall be 70 % of the total score for technical component.
- 8.6 Only those bidders, who qualify technically as per Clause 8.5, would be considered for Financial Evaluation.
- 8.7 Weight for Financial parameters: Proposal with the lowest cost will be given a financial score of 100 and other proposals will be given financial scores proportionally with reference to score of lowest price bid.
- 8.8 The total score will be obtained by combining the Technical and Financial scores. Only successful bidder would be communicated the award of consultancy assignment.
- 8.9 The consultant shall abide by the contract as per Annexure-III.

**DETAILED PROPOSAL FOR STUDY**  
**(TECHNICAL)**

**Note:** Four (4) copies of the proposal shall be submitted to Secretary, CERC.

**I. GENERAL INFORMATION:**

01. Title of the Proposed Assignment :
02. Name and address of the 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 Financial Year) :

**II. TECHNICAL SPECIFICATIONS:**

06. i. Department(s) of the organization/Institution(s) where the study will be carried out.  
ii. Other department(s), if any, which will collaborate in this study
07. Brief review of the experience in the relevant field (National and International).



08. Detailed Approach & Methodology for undertaking the assignment.
09. Facilities available for the proposed work in the applicant's organization/institution
10. Previous experience of the proposer in this or related field
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 Study 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
A	B	C	D

(b) Experience :

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

(2) Detailed Experience :

Institution	Topic of work done	Period
E	F	G

- (v) Field of major interest
- (vi) Additional information (if any)
13. Capacity to impart training/transfer of knowledge

/ Annexure – II /

**DETAILED PROPOSAL FOR ASSIGNMENT**  
**(FINANCIAL)**

**I. GENERAL INFORMATION:**

01. Title of the Proposed Assignment :
02. Name and address of the Organization/ Institution :
03. Name & Designation of the Key Person :
04. Contact address of the Key Person (e-mail/fax/telephone) :
05. Certificate of authorization in case of Institutes/other organizations (Format enclosed at **Appendix-‘A’**).

**II. Fee Proposed:**

06. Amount of Fee proposed for:

**Note: The fees should not include other financial liabilities of the Consultant.**

Components	Basis	Amount (in Rs.)
E (I) Consultant Charges -  (II) Misc./Others (if any)  (III) Tax		
<b>Total</b>		

(RUPEES \_\_\_\_\_)

Signature of the Principal Investigator/  
Head of the Study Team

/ Appendix-‘A’ /

**CERTIFICATE**

The undersigned agree to abide by the conditions of the grants and certify that available facilities for proposed work shall be extended to the investigator/study team.

Signature of Executive Authority  
Organisation

Signature of the Principal Investigator/of the  
Head of the Study Team

Name and Designation  
Date

Name and Designation  
Date

Signature of Co-investigator  
Name and Designation  
Date

Official stamp of  
Organization/Institution