



CATALYZING CLEAN ENERGY IN BANGLADESH (CCEB) PROGRAM

TASK 1: IMPROVE REGULATORY ENVIRONMENT FOR CLEAN ENERGY DEVELOPMENT

RFP FOR ENERGY REGULATORY AUDIT OF GHORASHAL POWER PLANT AND PRODUCTION OF AN ENERGY REGULATORY AUDIT MANUAL

JULY 22, 2015

This document was produced for review by the United States Agency for International Development. It was prepared by Deloitte Consulting LLP for the Catalyzing Clean Energy in Bangladesh project, Contract Number: AD-388-C-13-00001.

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USAID CATALYZING CLEAN ENERGY IN BANGLADESH (CCEB)

CONTRACT NUMBER: AID-388-C-13-00001

DELOITTE CONSULTING LLP

USAID/BANGLADESH

JULY 22, 2015

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Operational Definitions

Unless the context otherwise requires, the following terms whenever used in this RFP and Agreement have the following meanings:

- **“Applicable Law”** means the laws and any other instruments having the force of law in Bangladesh as they may be issued and in force from time to time.
- **“Auxiliary Consumption”** means the total electricity consumed internally within the boundary of a power station to run the plant.
- **“Agreement”** means the agreement signed by the parties for engagement along with the entire documentation specified in the RFP.
- **“BERC”** means Bangladesh Energy Regulatory Commission.
- **“BPDB”** means Bangladesh Power Development Board.
- **“Bidder/Consultant”** means a company/organization/institution individually or as a consortium drawn up in pursuance of this RFP, which will carry out the assignment. A consortium will also need to submit a Letter of Association confirming the consortium and specifying the lead member of the consortium.
- **“CCEB”** means USAID funded project Catalyzing Clean Energy in Bangladesh.
- **“Day”** means calendar day.
- **“Forced Outage”** means the shutdown of a generating unit for emergency reasons, or a condition in which the equipment is unavailable as a result of an unanticipated breakdown.
- **“Heat Rate”** means the amount of energy in a primary fuel used by a power plant to generate one kilowatt-hour (kWh) of electricity, usually measured in kCal/kWh.
- **“Lead Member”** means the authorized signatory for the entities that make up the joint venture/consortium/association, in relation to responding to this RFP.
- **“Member”** means any of the entities that make up the joint venture/consortium/association, in relation to responding to this RFP.
- **“Personnel”** means professional and support staff provided by the consultant to perform services for the said agreement.
- **“Proposals”** means proposal submitted by respondents in response to this RFP issued by CCEB for the engagement of consultants.
- **“Services”** means the work to be performed by the consultant pursuant to the engagement by CCEB and to the agreement to be signed by the parties in pursuance of any specific assignment awarded to them.
- **“USAID”** means United States Agency for International Development, Bangladesh.

Request for Proposals

United States Agency for International Development (USAID) funded project Catalyzing Clean Energy in Bangladesh (CCEB) intends to appoint consultants for 1) conducting energy regulatory audit of natural gas based 5th unit (210 MW) of Ghorashal Steam Turbine Power Plant of Bangladesh Power Development Board and 2) development of a manual to guide utilities when conducting future energy regulatory audits for all types of power plants.

The participating Bidder should be a company/organization/institution from with a sound understanding and experience in operation, maintenance and management of various types of power plants, and have sufficient experience and team strength for conducting the energy regulatory audit as required in the RFP document.

Contents

- Operational Definitions**..... i
- Request for Proposals** ii
- 1. INTRODUCTION** 1
 - 1.1 Background..... 1
 - 1.2 Highlights and Key Points of Request for Proposal 1
 - 1.3 Objectives of the Assignment 2
- 2. Terms of Reference**..... 3
 - 2.1 Scope of Work..... 3
 - 2.2 Project Implementation Support 5
 - 2.3 Project Implementation Schedule 5
 - 2.4 Qualification Criteria 6
 - 2.5 Evaluation Criteria 7
 - 2.6 Evaluation Method 8
- 3. Bid Specification**..... 9
 - 3.1 Duration of Assignment 9
 - 3.2 Deliverables 9
 - 3.3 Terms of Payment 9
 - 3.4 Penalty for Liquidated Damages 9
 - 3.5 Safety Measures 10
 - 3.6 Pre Proposal Queries 10
 - 3.7 Submission of Bid Proposal 10
 - 3.8 Submission of Proposals by Respondents 12
- 4. General Terms and Conditions** 13
 - 4.1 Conflict of Interest..... 13
 - 4.2 Validity of Proposals..... 13
 - 4.3 Right to Accept Proposal 13
 - 4.4 Fraud and Corruption 13
 - 4.5 RFP Clarifications 14
 - 4.6 Disqualifications 14
- 5. Miscellaneous Terms and Conditions**..... 15

6. Format for Bid Submission	16
6.1 Covering Letter.....	16
6.2 Format for Technical Proposal	17
6.3: Format for Authorization of Key Person.....	18
6.4 Format for Team Structure.....	19
6.5 Format for Work Experience.....	20
6.6 Format for CV's of Key Personnel	21
6.7 Format for Joint Venture/Consortium	22
6.8 Format for Approach and Methodology.....	23
6.9 Formats for Work Schedule	24
6.10 Format for Financial Proposal - F1	25
6.11 Format for Financial Proposal - F2.....	26
Annexure	1

1. INTRODUCTION

1.1 Background

The USAID-funded Catalyzing Clean Energy in Bangladesh (CCEB) project supports the sector development for energy security, economic growth and climate change mitigation. The five-year program commenced in October, 2012, is implemented by Deloitte Consulting LLP, and is comprised five tasks. CCEB will enhance the enabling environment, build capacity to design and implement supportive policies and regulations, and increase utilization of clean energy technologies for energy sector development on a low-carbon trajectory. CCEB works with a number of stakeholders in the power sector including the Bangladesh Energy Regulatory Commission (BERC), various government ministries and agencies, energy utilities, and energy end-users. CCEB aims to facilitate the improvement in the regulatory environment for clean energy development by strengthening the capacity of BERC to function as an effective regulator as mandated by BERC Act 2003.

One of the functions of BERC is to ensure efficiency in electricity generation. In order to assist BERC achieving this objective, CCEB intends to engage local consultants to undertake an energy regulatory audit of the Ghorashal Power Plant of Bangladesh Power Development Board (BPDB) and to develop a manual for conducting energy regulatory audits of power plants. This manual will be used by the utilities for undertaking energy regulatory audit of power plants.

1.2 Highlights and Key Points of Request for Proposal

Name of the Client	CCEB
Title of assignment	Conduct an energy regulatory audit of the 5 th unit (210 MW) of natural gas-based Ghorashal steam turbine power plant of BPDB, and develop a manual to be used as guidance by utilities when conducting future energy regulatory audits of all types of power plants
Release of RFP	July 22, 2015
Last Day to Submit Questions	July 30, 2015
Contact Person	Kazi Hanif Address: Road 32, House 14, 2 nd Floor, Gulshan 1, CCEB Email: khanif@cleanenergy-bd.org
Last Date of Proposal Submission	August 13, 2015

Term Allowable to Complete Assignment and Provide Deliverables	30 Days
Expected Start Date of Contract	September 1, 2015
Expected Completion Date of Contract	September 30, 2015

1.3 Objectives of the Assignment

The prime objective of this assignment is to undertake an energy regulatory audit of the Ghorashal Power Plant of BPDB and to evaluate current operational and management performance. From this activity, the Bidder will provide two primary deliverables.

Deliverable #1: The first is a completed Energy Regulatory Audit Report on the Ghorashal Power Plant through which the Bidder is expected to suggest measures for improving the technical and management performance of the power plant to ensure efficient least cost power production, safety of plant & personnel, improving environmental quality and reducing outages. The following achievements are expected through the energy regulatory audit:

- Assessment of performance of the power plant and comparison of key performance indicators with design values/industry standards and in case of poor performance, recommendations for improved performance.
- Improved power plant efficiency through identification of areas of waste in the fuel and power production and delivery process.
- Increased net power generation through more efficient operation of major components and reduced auxiliary power consumption.
- Increased reliability and availability through improved operation and maintenance planning and practices.
- Improved power plant control through identification and rectification of errors in instrumentation and metering.
- Reduced emissions of elements harmful to the environment such as greenhouse gases (GHG).

Deliverable #2: The second is a guidance manual to be provided by BERC to power utilities that provided the necessary guidance and instructions for how they (the utilities) should conduct energy regulatory audits in the future. The first deliverable (the energy regulatory audit report) will be attached to the second (user's guide/instruction manual) as a sample audit report.

2. Terms of Reference

2.1 Scope of Work

The Bidder will conduct an energy regulatory audit of the specified plant, from which they will produce 1) an energy regulatory audit report as well as 2) a guide for other utilities to use when conducting their own audits. The energy regulatory audit involves review of energy balance equation across the power plant cycle. The scope of work for the Bidder will be the following:

- The Bidder will visit the selected power plant, collect the required data and information, analyze the data and information, and compute the key performance indicators and provide a comparison with industry standards/design parameters.
- The Bidder will visit the power plant and interview plant management and operating personnel, observe performance of the various components of the plant and collect data and information necessary to assess the performance and efficiency of the power plant. The attached Forms 1 through 6 (Annexure 1) will be used to present the collected information on salient features of the power plant, energy generation, auxiliary consumption, fuel consumption, scheduled outages, forced outages, GHG emissions, instrumentation and metering, etc. In respect of scheduled and forced outages, the Bidder will analyze and identify the underlying reasons for abnormally long period of outages. The Bidder may also review the maintenance plan, procurement process and quality control of spares. Basing on the collected data/information, the Bidder will develop the key performance indicators and make recommendations for improved performance and efficiency. The Bidder may develop and use additional forms if deemed necessary to present the collected and computed data/information.
- The Bidder will determine levels of GHG emissions based on currently accepted methodologies in the industry and measuring equipment calibrated to international standards. The Bidder will be responsible for supplying the necessary emissions testing equipment.
- Based on the analysis of the collected data, information, statistics, etc. the following KPIs will be computed to assess and compare the performance of the power plant versus design values and industry benchmarks. The KPIs given below will be computed using the attached Forms 7 through 10 (Annexure 1). The comparison of KPIs with benchmark/industry values may made using Form 11 (Annexure 1). The Bidder may develop additional forms to present any other KPIs deemed necessary.
 - Heat rate/efficiency
 - Availability factor
 - Equivalent forced outage rate
 - Auxiliary consumption
 - Available capacity
 - GHG emissions

- The Bidder will make recommendations for actions necessary to improve the plant performance based on the findings of the audit.
- The Bidder will also prepare a power plant energy regulatory audit manual which will describe the procedures and standards to be followed for undertaking an audit of various types of power plants. The manual should provide a guide for identifying vital components of power plant, observing the operational performance of these and other components, drawing inferences to such observations, collection and analysis of relevant data and information, procedures for computation of results and comparison with industry standards and the basis of making recommendations. The manual should be prepared in such a way that it can be used for energy regulatory audit of a power plant easily.
- The Bidder will review the following documents during the audit:
 - Accounts manual, construction work orders and budgets
 - Continuing property records
 - Depreciation studies
 - External independent audit reports and work papers (looking especially at the adjustments that the company chose not to make despite auditor's recommendations)
 - General and subsidiary ledgers
 - Internal audit reports and work papers
 - Invoices and list of property units
 - Monthly or quarterly operating/financial reports and trial balances
 - Organizational charts, payroll records and property tax statements

Based on the review and analysis of the above and other relevant documents, the Bidder will calculate the cost of generation in TK/kWh broken down by heads of expenses, such as fuel expenses, operation and maintenance expenses, depreciation, etc. and provide comments on the rational of the amount of expenses and whether the expenses have been properly recorded and accounted for. The Bidder will also assess the financial performance of the power plant and present financial performance indicators, such as debt ratio, debt equity ratio, current ratio, quick ratio, and return on assets.

Debt Ratio:

The debt ratio shall measure the degree of indebtedness of the distribution licensee. The debt ratio shall be calculated as the ratio of total liabilities to total assets.

Debt-Equity Ratio:

The debt-equity ratio shall indicate the relationship between long-term funds provided by creditors and those provided by the distribution licensees. The debt-equity ratio shall be calculated as the ratio of the sum of long-term debt plus value of leases to equity.

Current Ratio:

The current ratio shall measure the ability of the distribution licensee to meet short-term obligations. The financial current ratio shall be calculated as the ratio of current assets including inventories to current liabilities.

Quick Ratio:

The quick ratio shall measure the ability of the distribution licensee to satisfy its short-term obligations as they become due. The quick ratio shall be calculated as the ratio of the sum of cash, marketable securities, and receivables to the current liabilities.

Return on Assets:

The return on assets shall measure the overall effectiveness of the distribution licensee in generating profits from its available assets. The return on assets shall be calculated as the ratio of earnings before interest and taxes minus tax to the average total assets. The average total assets shall be computed as the average of the assets at the beginning and end of the year.

2.2 Project Implementation Support

The Bidder will be provided with office accommodation with internet connection and printing facilities at CCEB’s office at BERC. However, the Bidder will bring his/her own laptop. CCEB team and designated BERC staff will coordinate with the Bidder in carrying out the assignment. The CCEB team will facilitate visit to the power plant and data collection and meeting with key people at BERC and at the power plant.

The Bidder will be required to arrange transportation for power plant visits. The Bidder will be required to stay at the power plant for some period of time as may be required for the audit and accommodation will be provided at the power plant rest house on payment of rent.

2.3 Project Implementation Schedule

The expected project implementation schedule is given below:

Kick Off Meeting	September 1, 2015
Weekly Meetings	To be held weekly
Draft Deliverables Submitted for Review	September 24, 2015
Completion of Assignment	September 30, 2015

2.4 Qualification Criteria

The Bidder intending to submit their proposal for above mentioned tasks should fulfill the following eligibility criteria and will provide documentary evidence towards the following:

No.	Conditions for Qualification	Documents to be Submitted to Support the Qualification
1	The Bidder must have at least employee strength of five technical persons on permanent roll.	Self-certification
2	The team proposed by Bidder to conduct an energy regulatory audit should include at least three consultants out of which two should have bachelor degree in electrical/mechanical engineering and at least 15 years' working experience in a steam turbine power plant (capacity 150 MW and above) and the other consultant must have a Master degree in Accountancy/Business Administration and sound experience of power plant audit.	CV's of the consultants clearly indicating their relevant work experience
3	If bid is submitted through consortium bidding, then MOU needs to be submitted.	Copy of MOU. MOU should clearly specify the "Lead Bidder" in the consortium.
4	The participating Bidder or any of the partners in the consortium should not be a black-listed company in any of the tendering process, either with the BERC or Government Bangladesh.	Self-declaration.

2.5 Evaluation Criteria

Sr. No.	Criteria for Credit Points	No. of Credit Points
1	Proposed methodology and action plan for the execution of project work	35
	<ul style="list-style-type: none"> a. Methodology for the execution of project work b. Action plan for the execution of the project work 	<ul style="list-style-type: none"> 20 15
2	Team composition and qualification of the consultants/engineers involved for the project implementation	30
	<ul style="list-style-type: none"> a. Team leader b. Senior consultant c. Junior consultant 	<ul style="list-style-type: none"> 15 10 5
3	Working experience in steam turbine power plant (150MW and above)	35
	<ul style="list-style-type: none"> a. Operation and maintenance (15 Years) b. Power plant instrumentation, control and metering c. Financial audit d. Power plant audit 	<ul style="list-style-type: none"> 15 10 5 5
Total		100

2.6 Evaluation Method

It will be quality cum cost basis selection. Bids of all Bidders will be evaluated based on the above mentioned criteria to arrive at a technical score for each Bidder. Only bids having a technical score equal to or greater than 70 marks will be qualified for the next stage: i.e. opening of the financial bid.

The Bidder attaining a technical score lower than 70 marks will be disqualified and their respective financial proposal will not be opened.

Subsequently, the financial bids of only those Bidders that have qualified as per the criteria mentioned above will be opened. The financial bids will be evaluated and a financial score will be determined for each Bidder as given below.

The financial score will be calculated based on the following formula:

$$S = 100 \times F_m/F_x$$

Where:

- S will mean the financial score of the Bidder to be evaluated
- F_m will mean the lowest price offered among all the Bidders
- F_x will mean the price quoted by the Bidder to be evaluated

The technical score of the Bidder multiplied by 80% and to which financial score worked out above multiplied by 20% will be added. The Bidder with highest total score will be the successful Bidder.

3. Bid Specification

3.1 Duration of Assignment

The assignment will be completed within 30 days from the date of kick off meeting.

3.2 Deliverables

- Resource Mobilization Plan (within 5 days from the date of kick off meeting), which would include resource utilization plan, action plan to conduct an energy regulatory audit, proposed Table of Contents for the audit report deliverable as well as for the audit manual deliverable.
- Draft final deliverables (within 25 days from the date of kick off meeting) which includes:
 - Benchmarking report to check prudence in context to the power plant of similar capacity, size etc.
 - Conclusion and recommendations
 - Manual for energy regulatory audits of power plants
- Final deliverables (within 30 days from the date of kick off meeting).

3.3 Terms of Payment

Sr. No.	Milestones	Payment Terms (% of Total Contract Price)
1	Resource mobilization advance	10
2	Submission of deliverable 1	20
3	Submission of deliverable 2	40
4	Acceptance of final deliverables	30
	Total	100

3.4 Penalty for Liquidated Damages

If the work is not completed within the stipulated time frame, barring force majeure reasons, there will be a penalty at the rate of 1% per week or for the part thereof up to the maximum of 10% of total contract value.

However, CCEB at its discretion may waive off this penalty on the written request from the Bidder explaining the circumstances of the delay.

3.5 Safety Measures

Bidder will have to comply with all the provisions of safety rules of the plant.

3.6 Pre Proposal Queries

The prospective respondent, requiring any clarification on RFP may notify the same in the form of query to CCEB latest by July 30.

3.7 Submission of Bid Proposal

List of documents to be submitted as part of the Proposal.

Proposal Form: Covering letter of the Bidder in Form 6.1 of Section 6.

Technical Proposal: Applicants will submit the technical proposal in the formats given in Section 6 (the “Technical Proposal”). While submitting the technical proposal, the applicant will, in particular, ensure that the following are covered:

- A brief description of the firm (including joint venture/consortium member) and an outline of the relevant past experience on assignments.
- The composition of the team of personnel which the consultants would propose to provide with the details of name of the key personnel, his area of expertise, position and the tasks which would be assigned to each team member.
- Curricula Vitae of the individual staff members to be assigned to the work. The curricula vitae should follow the attached format.
- Any comments or suggestions of the consultant on the terms of reference as given.
- The technical proposal will not include any financial information relating to the financial proposal. CCEB reserves the right to verify all statements, information and documents, submitted by the applicant in response to the RFP. Failure of CCEB to undertake such verification will not relieve the applicant of its obligations or liabilities hereunder nor will it affect any rights of CCEB there under. In case it is found during the evaluation or at any time before signing of the agreement or after its execution and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the applicant or the applicant has made material misrepresentation or has given any materially incorrect or false information, the applicant will be disqualified forthwith if not yet appointed as the consultant either by issue of the LOA or entering into of the agreement, and if the applicant has already been issued the LOA or has entered into the Agreement, as the case may be, the LOA/agreement will, notwithstanding anything to the contrary contained therein or in this RFP, be liable to be terminated, by a communication in writing by CCEB

without BERC being liable in any manner whatsoever to the Applicant or consultancy, as the case may be. In such an event, CCEB will forfeit and appropriate the security deposit as mutually agreed pre-estimated compensation and damages payable to BERC for, inter alia, time, cost and effort of CCEB, without prejudice to any other right or remedy that may be available to CCEB.

Financial Proposal: Applicants will submit the financial proposal in the formats given in Section 6 (the “financial proposal”) clearly indicating the total cost of the consultancy in both figures and words, in Bangladeshi Taka (BDT), and signed by the applicant’s authorized signatory. In the event of any difference between figures and words, the amount indicated in words will be taken into account.

In the event of a difference between the arithmetic total and the total shown in the financial proposal, the lower of the two will be taken into account. While submitting the financial Proposal, the applicant will ensure the following:

- All the costs associated with the assignment will be included in the financial proposal. The total amount indicated in the financial proposal will be without any condition attached or subject to any assumption, and will be final and binding. In case any assumption or condition is indicated in the financial proposal, it will be considered non-responsive and liable to be rejected.
- The financial proposal will take into account all expenses and tax liabilities including the service tax. For the avoidance of doubt, it is clarified that all taxes as are applicable or may become applicable will be deemed to be included in the costs shown in the financial proposal. Further, all payments will be subject to deduction of taxes at source as per applicable laws. In case of revision of rate in applicable service taxes, the impact of the same will be covered by CCEB.
- All costs/fees will be expressed in BDT.

3.8 Submission of Proposals by Respondents

Respondent will submit responses (referred to as 'proposals' herein) only to the contact person mentioned below:

Address for Communication: Address: Road 32, House 14, 2nd Floor, Gulshan 1, CCEB, Email: khanif@cleanenergy-bd.org

Guidelines for Submission of the Bid: The duly completed Bid as described below, in a sealed envelope, super-scribed "Energy Regulatory Audit of Ghorashal Power Plant" as mentioned in Para 2 of "bidding document" should be submitted so as to reach the address mentioned above. In the event of the specified date for the submission of the bids being declared a holiday, the bids will be received up-to the appointed time on the next working day of CCEB'S office. Any bid received after the abovementioned deadline will be rejected and may be returned un-opened.

The bid will comprise of two parts, i.e. (I) Technical Offer, and, (II) Financial Offer, as follows:

- **Technical Offer:** as per the format given, will be submitted in triplicate (one original plus two copies of the offer), sealed in an envelope which must be clearly marked as - "Energy Regulatory Audit of Ghorashal Power Plant "(Technical Offer)"
- **Financial Offer:** as per the format given in Section 6, one original plus one copy of the Offer, will be submitted, sealed in a separate envelope which must be clearly marked as - "Energy Regulatory Audit of Ghorashal Power Plant "(Financial Offer)"

Note: technical offer and financial offer should be in two different envelopes marked as mentioned above. These two sealed envelopes should be submitted in a single large envelope/packet marked as above.

4. General Terms and Conditions

4.1 Conflict of Interest

CCEB requires that the consultants should provide professional, objective, and impartial advice purely based on standard and accepted technical norms and at all times hold BERC's interests paramount, strictly avoid conflicts with other assignments/jobs or their own corporate interests and act without any consideration for future work. The norms should be based on sound engineering principles guided by all connected codes and guidelines issued from time to time by central and state authorities.

4.2 Validity of Proposals

Proposals will remain valid for a period of 30 days from the last date of submission of the proposal. A proposal valid for shorter period may be rejected as non-responsive.

4.3 Right to Accept Proposal

CCEB reserves the right to accept or reject any proposal, and to annul the engagement process and reject all proposals at any time prior to the signing of the agreement, without thereby incurring any liability to the affected respondent(s) or any obligation to inform the affected respondent(s) of the grounds for such decision.

4.4 Fraud and Corruption

CCEB requires that the consultants responding to this RFP must observe the highest standards of ethics during the performance and execution of such agreement. In pursuance of this policy, CCEB:

- a) Defines, for the purposes of this provision, the terms set forth as follows:
 - "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of CCEB or any personnel of Consultant(s) in contract executions.
 - "Fraudulent practice" means a misrepresentation of facts, in order to influence a procurement process or the execution of a contract, to CCEB, and includes collusive practice among respondents (prior to or after proposal submission) designed to establish proposal prices at artificially high or non-competitive levels and to deprive CCEB of the benefits of free and open competition.
 - "Unfair trade practices" means supply of services different from what is ordered on, or change in the scope of work which was given by CCEB of this RFP.

- “Coercive practices” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the execution of contract.
- Will reject a proposal for award, if it determines that the respondent recommended for award, has been determined by CCEB to having been engaged in corrupt, fraudulent or unfair trade practices.
- Will declare a consultant ineligible, either indefinitely or for a stated period of time, for awarding the contract, if it at any time determines that the consultant has engaged in corrupt, fraudulent and unfair trade practice in competing for, or in executing, the contract.

4.5 RFP Clarifications

During technical evaluation of the proposals, CCEB may, at its discretion, ask respondents for clarifications on their proposal. The respondents are required to respond within the time frame prescribed by CCEB.

4.6 Disqualifications

CCEB may at its sole discretion and at any time during the evaluation of proposal, disqualify any respondent, if the respondent has:

- Submitted the proposal documents after the response deadline.
- Made misleading or false representations in the forms, statements and attachments submitted in proof of the eligibility requirements.
- Exhibited a record of poor performance such as abandoning works, not properly completing the contractual obligations, inordinately delaying completion or financial failures, etc. in any project in the preceding two years.
- Submitted a proposal that is not accompanied by required documentation or is non-responsive.
- Failed to provide clarifications related there to, when sought.
- Submitted more than one proposal.
- Declared ineligible by the Government of Bangladesh for corrupt and fraudulent practices or blacklisted.
- Submitted a proposal with price adjustment/variation provision.

5. Miscellaneous Terms and Conditions

- This RFP document is non-transferable.
- Although, CCEB has taken adequate care while preparing RFP documents, the Bidder will satisfy himself that the document is complete in all respects. The Bidder will intimate any clarification/explanation by the date specified in the RFP. If no intimation is received by this office from the Bidder within that period from the date of issue of bid document, it will be assumed that the RFP document, as issued to the Bidder, is complete in all respect.
- CCEB reserves the right to modify, amend or supplement this RFP document including selection process and evaluation criteria, if deemed necessary by it or the same is required under law. Further, CCEB or its authorized officers reserve the right, without prior notice, to change the selection procedure and the delivery of information at any time before the submission of the bid without assigning any reasons thereof. However, such change will be intimated to all parties who have procured this document.
- This document is not intended to provide basis of any investment decision to be made by any Bidder. Each prospective Bidder must make his own independent assessment of the project, baseline parameters and ground conditions at his own cost. However, CCEB and its authorized officers will extend all necessary assistance to arrange the site visit at the Power Plant, with prior intimation of such a visit by Bidder before three working days.
- CCEB, nor its employees, advisors, consultants accept any liability or responsibility for the accuracy or completeness, nor make of any representation or warranty, express, or implied, with respect to the information contained in the RFP, or on which the RFP is based, or any other information or representations supplied or made in connection with the selection process.
- Nothing in the RFP should be relied on, as a promise or representation as to the future.
- CCEB reserves the right to reject any or all of the bids submitted in response to this tender document at any stage without assigning any reasons whatsoever.
- It is also agreed that the document is not confidential.

6. Format for Bid Submission

6.1 Covering Letter

Date:

To

CCEB

Dear Sir,

Sub: Proposal for Engagement of Consultants for “Energy Regulatory Audit of the Ghorashal Power Plant”

Having examined the RFP, we, the undersigned, hereby submit the proposal for the engagement of consultants with CCEB in full conformity with the said RFP. We have read the provisions of RFP and confirm that these are acceptable to us. We further declare that additional conditions, variations, deviations, if any, found in our proposal will not be given effect to.

We agree to abide by this proposal, consisting of this letter, technical proposal, and the financial proposal duly notarized written power of attorney, and all attachments including the presentation to be made to the evaluation committee, if required, it will remain binding upon us and at any time before the expiration of the period of engagement.

Until the formal final contract is prepared and executed between us, this proposal, together with your written acceptance of the proposal and your notification of award, will constitute a binding contract between us.

We hereby declare that all the information and statements made in this proposal are true and accept that any misinterpretation contained in it may lead to our disqualification. We understand you are not bound to accept any proposal you receive.

Signature..... In the capacity of..... Duly authorized to sign

Proposal for and on behalf of..... Date..... Place.....

6.2 Format for Technical Proposal

Date:

To

CCEB

Sub: Proposal for Engagement of Consultants for “Energy Regulatory Audit of the Ghorashal Power Plant”

Dear Sir,

I/we _____ consultancy/firm herewith enclose technical proposal for selection of my/our firm as consultant for “Energy Regulatory Audit of the Ghorashal Power Plant”.

Yours faithfully,

Signature:

Full Name and Address:

Seal:

6.3: Format for Authorization of Key Person

Date:

Certificate as to corporate principal, I _____ certify that I am _____ of the company under the laws of _____ and that _____ who signed the above tender is authorized to bind the company/firm by authority of its governing body.

Signature:

Full Name and Address:

Seal:

6.4 Format for Team Structure

Sr. No	Name of Key Personnel	Position	Qualification	Experience
1				
2				
3				
4				
5				

Full name of Authorized Representative:

Signature:

Full Name and address:

Seal:

6.5 Format for Work Experience

Title of Assignment:	
Objective of Assignment:	
Narrative Description of Assignment:	
Name of the Client:	
Address:	
Commencement and Completion of the Assignment:	
Number of Man Months as a well as the Duration Period for Completion of Assignment:	
Outcome of the Assignment:	
Contract Value of the Assignment:	
Any other Relevant Information:	

Full name of Authorized Representative:

Signature:

Full Name and address:

Seal:

6.6 Format for CV's of Key Personnel

Curriculum vitae (CV) for proposed professional staff

- Proposed Position
- Name of Firm
- Name of Staff
- Profession
- Years with Firm/Entity
- Nationality
- Membership in Professional Societies
- Detailed Tasks Assigned
- Key Qualifications
- Education
- Employment Record
 - From: To:
 - Employer:
 - Designation:
 - Responsibilities Undertaken:
- Experience of energy regulatory audits of power plant
- Languages
- Certification

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

----- Date: ----- [Signature of staff member and authorized representative of the Firm] Day/Month/Year]

Full name of Staff Member: -----

Full name of authorized Representative: _____

6.7 Format for Joint Venture/Consortium

Date:

Letter of Affiliation

To

CCEB

Subject: Letter of affiliation to work in CCEB project titled as “Energy Regulatory Audit of Ghorashal Power Plant”

Dear Sir,

Based on our interaction and mutual consent, we hereby express our willingness to associate in the CCEB project, as mentioned above.

We will be glad to assist _____ with our expertise and resources, as deemed necessary for the successful execution for this project.

We accept that _____ will be the prime and lead Bidder for this assignment.

Yours sincerely,

Signature:

Name:

Designation:

Date and Place:

6.8 Format for Approach and Methodology

Approach and methodology for completion of the assignment.

(Not more than 10 pages)

6.9 Formats for Work Schedule

List of Activities	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8

6.10 Format for Financial Proposal - F1

Date:

From:

To

CCEB

Subject: “Energy Regulatory Audit of the Ghorashal Power Plant” - Financial Proposal

Dear Sir,

I/we _____ consultancy/firm herewith enclose financial proposal for selection of my/our firm as consultant for “Energy Regulatory Audit of the Ghorashal Power Plant”.

Yours faithfully,

Signature:

Full Name and Address:

Seal:

6.11 Format for Financial Proposal - F2

(Schedule)

(To be submitted with financial offer in second envelope)

Item	Lump sum in BDT	
	In Figures	In Words
Fee Towards Consultancy for “Energy Regulatory Audit of Ghorashal Power Plant Audit”		

Note: The prices will remain FIRM till completion of the assignment.

Signature:

Full Name and address:

Seal:

Annexure

Forms 1-11 for Collection, Computation and Comparison of Data/Information:

Energy Regulatory Audit of Power Plant

Salient Features of Plant

1	Name of Power Plant	
2	Date of Commissioning	
3	Gross Capacity as per Design (MW)	
4	Auxiliary Consumption as per Design (MW)	
5	Net Capacity as per Design (MW)	
6	Net Capacity at Commissioning (MW)	
7	Current Net Capacity (MW)	
8	Current Gross Capacity (MW)	
9	Gross Heat Rate as per Design (kCal/kWh)	
10	Gross Heat Rate at Commissioning (kCal/kWh)	
11	Name of Manufacturer	
12	Year of Manufacture	

Name and Signature of the Auditor

Date:

**Energy Regulatory Audit of Power Plant
Record of Forced Outages**

Name of Power Plant:

Fiscal Year	Forced Outage Hours	De-rating (MW)	Equivalent Partial Forced Outage Hours ¹	Primary Reason(s) for Shutdown/De-rating
FY 1		-----MW to -----MW		
FY 2		-----MW to -----MW		
FY 3		-----MW to -----MW		

Name and Signature of the Auditor

Date:

¹ Equivalent Partial Forced Outage Hours = $\sum((\text{De-rating}/\text{Gross Capacity}) * \text{Partial Forced Outage Hours})$. As for example, if the plant has a partial forced outage that limits its output to 50% of capacity for two hours, the equivalent partial forced outage hours will be equal to $0.5 * 2 = 1$ hour. Summation of all such events during the FY will be the Equivalent Partial Forced Outage Hours.

**Energy Regulatory Audit of Power Plant
Record of Scheduled Maintenance**

Name of Power Plant:

Fiscal Year	Hours of Shutdown	Major Works Done
FY 1		
FY 2		
FY 3		

Name and Signature of the Auditor

Date:

Energy Regulatory Audit of Power Plant

Record of Energy Generation, Gas Consumption and GHG Emissions

Name of Power Plant:

	FY 1	FY 2	FY 3
Gross Energy Generation (GWh)			
Auxiliary Consumption (GWh)			
Net Energy Generation (GWh)			
Quantity of Gas Consumed (Million Cubic Meters)			
Calorific Value of Gas (KCal/CM)			
Total GHG Emissions (Tons of CO₂ equivalent)			

Name and Signature of the Auditor

Date:

Energy Regulatory Audit of Power Plant

Record of Annual Outages

Name of Power Plant:

Fiscal Year	Operating Hours ²	Maintenance Hours ³	Forced Outage Hours ⁴	Equivalent Partial Forced Outage Hours ⁵	Reserve Hours ⁶	Total Hours ⁷
a	b	c	d	e	f	g
FY 1						
FY 2						
FY 3						

Name and Signature of the Auditor

Date:

² Total number of hours the unit was operated

³ Total number of hours the unit was on scheduled maintenance.

⁴ Total number of hours the unit was in forced outage state

⁵ Equivalent Partial Forced Outage Hours: As defined in Form 2

⁶ Total number of hours the unit was capable of running, but not operated owing to dispatch instructions

⁷ Total hours in the fiscal year (8760 hours in normal years and 8784 hours in a leap year)

**Energy Regulatory Audit of Power Plant
Record of Meter Testing**

Name of Power Plant:

Meters	Date of Last Test	Results of Test	Corrective Actions (if any)
Energy (kWh) Meter at Generator Terminal			
Energy (kWh) Meter at High Voltage Side of Unit Transformer			
Fuel Supply Meter for Supply to Plant			
Calorific Value of Fuel			

Name and Signature of the Auditor

Date:

Energy Regulatory Audit of Power Plant

Heat Rate (Efficiency) of Power Plant

Fuel: Gas

Name of Power Plant:

Fiscal Year	Gross Generation (GWh)	Gas consumed (Million SCM ⁸)	Gas consumed per unit generation SCM/kWh	Calorific value of gas (LHV ⁹) kCal/SCM	Heat Rate (kCal/kWh)	Efficiency (%)
a	b	c	d=c/b	e	f=d * e	g= (860/f)*100
FY 1						
FY 2						
FY 3						

Signature:

Name:

Designation:

⁸ SCM is Standard Cubic Meter of gas volume measured at 15° C and 1 atmosphere.

⁹ LHV is Lower Heating Value of gas.

**Energy Regulatory Audit of Power Plant
Availability Factor and Forced Outage Rate**

Name of Power Plant:

Fiscal Year	Service Hours¹⁰	Maintenance Hours¹¹	Forced Outage Hours¹²	Reserve Hours¹³	Total Hours¹⁴	Equivalent Partial Forced Outage Hours¹⁵	Equivalent Forced Outage Rate (%)¹⁶	Availability Factor (%)¹⁷
a	b	c	d	e	f	g	h	i
FY 1								
FY 2								
FY 3								

Signature:

Name:

Designation:

¹⁰ Total number of hours the unit was operated.

¹¹ Total number of hours the unit was on scheduled maintenance.

¹² Total number of hours the unit was in Forced Outage state.

¹³ Total number of hours the unit was capable of running but not operated owing to dispatch instructions.

¹⁴ Total number of hours in the fiscal year 8760 hours in a normal year and 8784 hours in a leap year

¹⁵ Equivalent Partial Forced Outage Hours: As defined in Form 2

¹⁶ Equivalent Forced Outage Rate = $((d+g)/(d+g+b))*100$

¹⁷ Availability Factor = $((f-(c+d+g))/f)*100$

**Energy Regulatory Audit of Power Plant
Auxiliary Consumption**

Name of Power Plant:

Fiscal Year	Gross Generation (GWh)	Auxiliary Consumption (GWh)	Net Generation (GWh)	Auxiliary Consumption (%)
a	b	c	d=b-c	e=(c/b)*100
FY 1				
FY 2				
FY 3				

Signature:

Name:

Designation:

**Energy Regulatory Audit of Power Plant
Greenhouse Gas Emissions**

Name of Power Plant:

Fiscal Year	Gross Generation (GWh)	GHG Emissions (Tons of CO₂ Equivalent)	GHG Emissions (grams CO₂ equivalent/kWh)
a	b	c	d=c/b
FY 1			
FY 2			
FY 3			

Signature:

Name:

Designation:

Energy Regulatory Audit of Power Plant
KPI Comparison

Name of Power Plant:

No.	Key Performance Indicator	Power Plant Performance	Design value	Industry Benchmark
1.	Gross Heat Rate (kCal/kWh)			
2.	Auxiliary Consumption (% of Gross generation)			
3.	Availability Factor (%)			
4	Equivalent Forced Outage Rate (%)			
5	Current Gross Capacity (MW)			-
6	GHG Emissions (grams CO ₂ equivalent/kWh)		-	