EOI DOCUMENT

FOR

RENDERING CONSULTANCY SERVICES AS OWNER'S ENGINEER FOR CONSTRUCTION OF RAOZAN 600 MW ± 10% GAS BASED COMBINED CYCLE POWER PLANT PROJECT, CHATTOGRAM, BANGLADESH

1.0 Introduction:

A Combined Cycle Hi-efficient Power Station of 600 MW ± 10% capacity at site conditions (35°C, 1.013 bar, 98% R.H.) is intended to be set up by Bangladesh Power Development Board at the specified space within existing Raozan Power Station, Chattogram, Bangladesh. Raozan Upazila is located in Chattogram District, 25 kilometers north-east from Chattogram on the south side of the Chattogram–Kaptai Highway. The proposed Plant configuration will be 1:1:1 with combined cycle capacity of 600 MW ± 10% at site conditions (35°C, 1.013 bar, 98% R.H.). Natural Gas will be used as fuel of this Power Plant. Around 38 acres of land is available in the southern & eastern side of existing power station boundaries. Portion of this land will be used for Construction of Raozan 600 MW ± 10% Combined Cycle Power Plant Project (around 15 acres) and the remaining space will be used for future Power Plant expansion.

The Project will be implemented on turnkey basis and it is in tendering process. Contract effective date for the Owner's Engineer will be finalized and from that phase BPDB requires Owner's Engineer for implementation of this project. Construction period for this Project is 900 Days (including simple cycle completion time 540 days) and Warranty period is 24 months.

2.0 Expression of Interest:

BPDB now invites reputed International Engineering Consulting Firms to indicate their interest in providing consultancy services as Owner’s Engineer for Construction of Raozan 600 MW ± 10% Gas Based Combined Cycle Power Plant Project, Chattogram.

3.0 Purpose of Inviting EOI:

Through this EOI, BPDB intends to prepare a short-list of Consulting Firms having requisite eligibility and experience in executing works of similar nature in line with scope at Sl. No. 4.0 below. Separate Request for Proposal (RFP) shall be issued to short-listed Consulting Firms.

4.0 Scope of Services in brief:

Scope of service for the owners engineers are bellow but not limited to

I. Review, check and providing comments on prepared Tender Documents by BPDB.
II. Assist BPDB as required in evaluation of submitted offers and signing of EPC Contract.
III. Review of the Turnkey EPC Contract Document which will be signed between BPDB and EPC contractor.
IV. Checking and Approval of Design Calculations, Drawings and Specifications submitted by the Turnkey Contractor in respect of all Electrical, Power evacuation, Mechanical, Instrumentation & Control, Water Storage & Treatment, fuel supply system, Civil works and all other Auxiliaries Under the Scope of Turnkey Contract.


VI. Supervision of land filling, land development, power evacuation works through 230 KV overhead line/ cable with termination from proposed Power Plant to Raozan 230 KV Grid Sub-Station.

VII. Evaluation, Review and Approval of the Field Test Methods Submitted By the Turkey Contractor for Civil works, Electrical, I & C, Mechanical, and their Auxiliaries, Witnessing of the Test at Various Phases of Work.

VIII. To attend Post landing inspection along with BPDB representatives, if any and submit the reports to the competent authority of BPDB.

IX. Examine and approve the method for testing, pre-commissioning, commissioning procedures (submitted by the Turnkey Contractor).

X. Assisting BPDB Testing and Commissioning Team, if Such a Team is constituted, during Pre-Commissioning/ commissioning Tests and Preparing Recommendations for Board's Acceptance of the Plant.

XI. Review and approval of the performance test procedure submitted by the EPC contractor in accordance with the EPC contract requirement.

XII. Checking/Witnessing of Reliability Test Run and Performance Tests of the Power Plant (to be carried out by the Contractor) in association with BPDB Engineers and submission of detailed report.

XIII. Assisting BPDB in Providing the Contractor with Provisional Acceptance Certificate (PAC) and Final Acceptance Certificate (FAC).

XIV. Checking and approval of all Electrical, I&C, Civil, Mechanical and their Auxiliaries "As Built" Drawings Submitted by the Turnkey Contractor.

XV. Checking and Approval of Training Documents Submitted by Turnkey Contractor and advising BPDB relating to the Suitability of the Training Documents as per Programme;

XVI. Checking and giving comments on Various Technical, Progress and Test Reports Etc. submitted by the Turnkey Contractor during execution of the Erection work and keeping BPDB informed of the actual Progress of the Work.

XVII. Checking and giving comments on Operation and Maintenance Manuals of Plant equipment's submitted by Turn-key contractor and correcting the manuals if necessary.

XVIII. Establishing in Consultation with BPDB a Procedure for Checking and Approval of Invoice for Payment of the Turnkey Contractor and certifying the invoices for further action (to be taken by BPDB) for payment to EPC contractor.

XIX. Arranging Periodical Co-Ordination Meetings with BPDB and Contractor and submitting the Reports of the same to BPDB and Contractor.

XX. Checking the Monthly/Quarterly Progress Reports submitted by the Turnkey Contractor and Preparing Comments on them.

XXI. Assisting all Concerned Agencies to ensure proper and timely completion of the Civil works, Electrical, I & C, Mechanical Works as well as smooth Commissioning of the Plant.

XXII. Providing any other assistance to BPDB that may not be listed above for proper execution of the project.

XXIII. Estimated foreign professional staff-months is 124 and local professional staff-months is 102. Required professional staffs along with Estimated staff-month in phase wise are given below:
### (a) Foreign Consultant

<table>
<thead>
<tr>
<th>SI No</th>
<th>Name of the Field</th>
<th>Procurement Phase</th>
<th>Construction Phase</th>
<th>PAC Issuance Phase</th>
<th>FAC Issuance Phase</th>
<th>Total Man-Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mechanical Engineer (GTG &amp; STG expert and Team Leader)</td>
<td>2</td>
<td>30</td>
<td>2</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>Mechanical Engineer (HRSG &amp; BOP's expert)</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>Electrical Engineer</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>4</td>
<td>I&amp;C Engineer</td>
<td>0.5</td>
<td>10.5</td>
<td>1</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Civil Engineer</td>
<td>1</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>Commissioning Engineer</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

### (b) Local Consultant

<table>
<thead>
<tr>
<th>SI No</th>
<th>Name of the Field</th>
<th>Procurement Phase</th>
<th>Construction Phase</th>
<th>PAC Issuance Phase</th>
<th>FAC Issuance Phase</th>
<th>Total Man-Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mechanical Engineer (Deputy Team Leader)</td>
<td>2</td>
<td>30</td>
<td>2</td>
<td>2</td>
<td>36</td>
</tr>
<tr>
<td>2</td>
<td>Electrical Engineer</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>3</td>
<td>I&amp;C Engineer</td>
<td>0.5</td>
<td>10.5</td>
<td>1</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>4</td>
<td>Civil Engineer</td>
<td>1</td>
<td>22</td>
<td>1</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>5</td>
<td>Environmental Expert</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Commissioning Engineer</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

### 5.0 Eligibility:

Interested Applicants should have experience in providing consultancy services for detail engineering, Construction Supervision and testing & commissioning of minimum 2 nos. Combined Cycle Power Plant Project having minimum 500MW Capacity within last 10 (ten) years. Out of these 2 nos. Combined Cycle Power Plant Project, one of the Combined Cycle Power Plant Project must have H-class or J-class Gas Turbine. In case of association/ joint venture, lead partner of the applicant must have the specific experience. Interested Applicants should provide information demonstrating that they have the required qualifications and relevant experiences to perform the Services.
Applicant should have at least 5 million USD or equivalent BDT average annual turnover for the last five years. In case of association/joint venture, members of the association/joint venture should have aggregate average annual turnover at least 5 million USD or equivalent BDT for the last five years. In this regard, Applicant should have to submit Audited Financial statements for last 05 years viz. Balance Sheet, P&L account etc.

Applicant should also have competent/qualified manpower required to execute the works. An Applicant may form association/joint venture with other Consulting Firms to enhance their qualifications/capabilities to submit a single proposal in undertaking this assignment. Association/joint venture with Local Consulting Firms is encouraged. No firm should form association/joint venture with more than one Group. As well as no firm is allowable to submit more than one proposal either individually or as a member of association/JV.

5.1 Instruction for the forming association or Joint venture:

- An Applicant may form association/joint venture with other Consulting Firms to enhance their qualifications/capabilities to submit a single proposal in undertaking this assignment. Association/joint venture with Local Consulting Firms is mandatory.
- No firm should form association/joint venture with more than one group.
- Experience of parent company will not be treated as experience of its subsidiary/secondary company and vice versa.
- Financial capacity of parent company will not be treated as financial capacity of its subsidiary/secondary company and vice versa.

6.0 Required Information:

Interested Applicants are required to submit the following documents complete in all respects with one original and three authenticated copies for each of the following:

<table>
<thead>
<tr>
<th>Sl. no.</th>
<th>Description of Document to be submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Application for Expression of Interest</td>
</tr>
<tr>
<td>2</td>
<td>Brochures, Company Profile and Organization Chart with in position experienced staff for each area</td>
</tr>
<tr>
<td>3</td>
<td>“Details of all “similar works” executed in the past 10 years</td>
</tr>
<tr>
<td>4</td>
<td>“Details of all ongoing “similar works” &amp; time period for completion of each work</td>
</tr>
<tr>
<td>5</td>
<td>“Details of any new “similar works” being finalized/under process</td>
</tr>
<tr>
<td>6</td>
<td>Audited Financial statements for last 05 years viz. Balance Sheet, P&amp;L account etc.</td>
</tr>
<tr>
<td>7</td>
<td>Submission of working methodology for this Project.</td>
</tr>
<tr>
<td>8</td>
<td>Association/ Joint Venture Agreement on a non judicial stamp of value Bangladesh Taka 300 or Letter of intent to enter into such agreement along with the proposed agreement duly signed by all partners of the intended Association/Joint Venture and authenticated by a Notary Public. Otherwise EOI from a Association/Joint Venture will not be considered for Short-listing</td>
</tr>
</tbody>
</table>
| 9       | List of professional staffs and resources along with CV of the proposed professional staffs  
**Note:** Foreign Mechanical Engineer (GTG & STG expert and Team Leader) & Mechanical Engineer (HRSG & BOP’s expert) must have relevant work experience in H-class or J-class Gas Turbine. |
| 10      | Any Other Information/ Additional Information relevant to the work/assignment |

Details to cover: (1) Project Owner (2) Location (3) Name of Project (4) No. of Units (5) Unit size (6) Technology details (7) Project Cost (8) Consultancy Contract Value (9) Project start and completion date (10) Consultancy Scope of works (11) Project present status.
6.1 Each page of the documents submitted shall be duly authenticated by the applicant.
6.2 The language of submission of applications shall be in English.
6.3 Financial Data, Project Costs, Value of works shall be given in US Dollars/ EURO.

7.0 Evaluation of EOI:

Evaluation of EOI (Short listing of Consulting Firms) will be done as per clauses of PPR 2008 and on the basis of the followings

(a) Above mentioned point 5.0 Eligibility
(b) Above mentioned point 6.0 Required Information:
(c) Experience in similar operating environments and conditions;
(d) Availability of appropriate experience and professional qualifications among Applicant’s staff and adequate resources to carry out the assignment; and
(e) Managerial strength and financial capacity.

BPDB reserves the right to accept any or reject any/all EOIs without assigning any reason thereof.

Expression of Interest shall be submitted within 22/11/2018, 11.00 A.M. (BST); in four (4) hard copies (1 Original + 3 Photocopies) in a sealed cover super scribing Expression of Interest (EOI) for "RENDERING CONSULTANCY SERVICES AS OWNER’S ENGINEER FOR CONSTRUCTION OF RAOZAN 600 MW ± 10% GAS BASED COMBINED CYCLE POWER PLANT PROJECT, CHATTOGRAM" at the address given below:

Secretary
Bangladesh Power Development Board (BPDB)
WAPDA Building (1st floor), Motijheel Commercial Area, Dhaka- 1000, Bangladesh
Tel: 880-2-9554209; Fax: 880-2-9564765

Shafiqul Islam
(ID No-01-758)
Director
Design & Inspection-1
BPDB, Dhaka.

(Mina Masud Uzzaman)
Secretary
Bangladesh Power Development Board
Dhaka.