B-R POWERGEN LIMITED (BRPL)

(A govt. owned power generation organization)

Request for Expression of Interests (REOI) for Appointment of Owner's Engineering Services for 150 (±10%) MW HFO Based Power Plant Construction Project at Sreepur, Gazipur, Bangladesh.

Tender Enquiry No: BRPL/SRPP/SR-10-lot-01/2021-22, Date: 10.02.2022

CORPORATE OFFICE

B-R POWERGEN LIMITED

House-01, Road-13, Sector-01, Uttara Model Town,

Dhaka-1230, Bangladesh

February-2022

INSTRUCTION TO THE APPLICANTS

1. Application of the interested firms must include:

i) Name of the Principal Firm with complete address, Telephone Nos. E-mail address etc.

ii) Name of the Associated Firm (if any) with complete address, Telephone Nos., E-mail address etc.

iii) Notarized Joint Venture/Consortium/Association Agreement (JVCA) on Non-Judicial Stamp of the firms (in case of Joint Venture/Association with another firm) for the said consulting service. The value of Non-Judicial Stamp should be Tk. 300.00 (Tk. Three hundred).

iv) The name of the employees/owner(s) of the firms and corporate profile of the firms.

v) The name and qualification of the Management/Administrative Personnel.

vi) List and qualification of the key-personnel likely to be involved in the proposed consulting service. The proposed fields of expertise for the said consulting service would be at least the following:

SI. No.	Required expertise/Position	Number of Experts	Estimated Men-Months
1	Senior Mechanical Engineer (Team Leader)	1	15.0
2	Senior Civil Engineer	1	4.0
3	Senior Electrical and I&C Engineer	1	6.0
4	Senior I&C and SCADA Engineer	1	3.0
5	Junior Mechanical Engineer	1	10.0
6	Junior Civil Engineer	1	6.0
7	Junior Electrical/ I&C Engineer	1	7.0
Total		**16**	**51.0**

vii) Identity, Structure, Organization of the firms(s) including copies of the documents defining the constitution or legal status, place of registration and principal places of business and/or principal offices of the company/firm.

viii) Details of vehicles, instruments & office equipment the firm owns.

ix) Audited Financial Statements of the firm for the last five fiscal years.

x) Experience of the firms along with a list of similar work at hand or carried out since 2003. The Consultant must submit the end user certificate in support of experience.

xi) The Consultant should submit the signed CV by the proposed professional staff.

2. Applicant must submit information using the attached table/format [Annexure-1 to 6] with the document. The submitted document must be sealed and signed by a person duly authorized by the consulting firm.

07.02.2022

(Engr. Papon Das)
Superintending Engineer (O&M)
B-R Powergen Limited.

Annexure-1

Photo

Curriculum Vitae (CV) for Each Proposed Professional Staff

Name of the Consultant	
RFP IDENTIFICATION NO:	
Name of the Client	

1	PROPOSED POSITION FOR THIS PROJECT	*[From the Terms of Reference, state the position which the Consultant will be engaged. Only one candidate shall be nominated for each position]*
2	NAME OF STAFF	*[state full name]*
3	DATE OF BIRTH	
4	NATIONALITY	
5	MEMBERSHIP IN PROFESSIONAL SOCIETIES	*[state rank and name of society and year of attaining that rank]*
6	EDUCATION:	*[list all the colleges/universities which the consultant attended, stating degrees obtained, and dates, and list any other specialised education of the consultant]*
7	OTHER TRAINING	*[indicate significant training since degrees under EDUCATION were obtained, which is pertinent to the proposed tasks of the Consultant]*

8	LANGUAGES & DEGREE OF PROFICIENCY	Language	Speaking	Reading	Writing
		e.g. English	*Fluent*	*Excellent*	*Excellent*

9	COUNTRIES OF WORK EXPERIENCE	

10	EMPLOYMENT RECORD *[starting with position list in reverse order* ***every employment held and state the start and end dates of each employment]***	*[The Consultant should clearly distinguish whether as an "employee" of the firm or as a "Consultant" or "Advisor" of the firm]* *[The Consultant should clearly indicate the Position held and give a brief description of the duties in which the Consultant was involved]*	
	EMPLOYER 1	FROM: *[e.g. January 1999]*	TO: *[e.g. December 2001*
	EMPLOYER 2	FROM:	TO:
	EMPLOYER 3	FROM:	TO:
	EMPLOYER 4 (etc)	FROM:	TO:
11	WORK UNDERTAKEN THAT BEST ILLUSTRATES YOUR CAPABILITY TO HANDLE THIS ASSIGNMENT	*[give an outline of experience and training most pertinent to tasks on this assignment, with degree of responsibility held]*	
12	COMPUTER SKILLS	*[give details of knowledge and skills]*	

CERTIFICATION *[do not amend this certification]*

I, the undersigned, certify that (i) I was not a former employee of the Client immediately before submission of this Proposal, (ii) I have not offered my CV to be proposed by a Firm other than this Consultant for this assignment and, (iii) to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I also understand that any wilful mis-statement described herein may lead to my disqualification or dismissal, if engaged.

I have been employed by [*name of the Consultant*] continuously for the last twelve (12) months as regular full time staff. Indicate "Yes" or "No" in the boxes below:

YES ☐ **NO** ☐

Signature	
Date of Signing	Day / Month / Year

Annex-2

Name and Qualification of Management/Administrative Personnel

Serial No	Name of the Personnel	Position at the Firm	Temporary/Permanent	Educational Qualification	Experience in years

Annex-3

Financial Statement

Summary of Assets & Liabilities:

Sl. No.	Year	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
1	Total Asset					
2	Total Liabilities payment					
3	Total investment					
4	Operative Expenditure					
5	Taxes Paid					
6	Profit after payment of Taxes					
7	Turnover [Sl. No. 2+3+4+5+6]					

Annex-4

Details of Vehicles, Instrument and Office Equipment

Sl. No.	Name, Brand of the Vehicles/Equipment, Year of Manufacture	Model No., Serial No./Registration No.	Present Condition

Specimen form for Similar Experience of the Firm

The following format should be used to indicate the similar experience of the firm in projects.

Project Name		
Project Location	Start Date (M/Y)	Completion Date (M/Y)
Name of the Client **with address and Contact number**		
Contract Amount		
Name of the associated firm (if any)		
Narrative description of actual service provided by the firm for the project:		

Name of the firm……..
Signature……..

Annex-6

Experience of the firm in other works

Sl. No.	Name of Services	Name of Client with address and Contact number	Contract amount	Start date	Completion time

Terms of Reference (TOR)

For

Owner's Engineering Services for 150 (±10%) MW HFO Based Power Plant Construction Project at Sreepur, Gazipur, Bangladesh.

Table of Content

Owner's Engineering Services for Sreepur 150 (±10%) MW HFO Based Power Plant Construction Project at Sreepur, Gazipur, Bangladesh.

1. BACKGROUND

B-R Powergen Limited (BRPL) has been formed, incorporated and registered in November, 2010 under the framework of the Government Power Sector Reforms Policy and the provision of the Companies Act, 1994. The Company has primarily started its functioning with Kodda 150 MW Dual Fuel Power Plant, Mirsharai 150 MW Power Plant Project. The Company intends to be the leading power generating utility in the country in the long run.

B-R Powergen Limited (BRPL) intends to build a HFO Fired Engine Based Power Plant on the Bank of sitalakha River at Sreepur, Gazipur, Bangladesh. The proposed name of the Project is "Sreepur 150 (±10%) MW HFO Based Power Plant Project". In this regard, about 15 acres of land has been selected by BRPL under the Borma mouza, at Sreepur, Gazipur, Bangladesh. Land acquisition process has been done through DC office, Gzipur and Feasibility Study of the Project has been done.

BRPL has signed a contract with M/s. MAX Infrastructure limited for Engineering, Design, Manufacturing, Inspection, Supply, Installation, Erection, Testing, and, Commissioning of Sreepur 150 (±10%) MW HFO Based Power Plant Construction Project on Turnkey Basis.

BRPL now intends to employ a Consulting Firm (Consultant) to provide Engineering Consultancy Services (Owner's Engineering Services) for Construction Supervision of the Sreepur 150 (±10%) MW HFO Based Power Plant Construction Project at Sreepur, Gazipur, Bangladesh. The Consultant will be responsible for post contract award supervision works such as; review preliminary studies, project requirement and issues, review contract document, review /approval of basic/ detailed design & drawings, equipment design specifications, construction supervision, progress monitoring, testing & commissioning etc. and ensure the proper implementation of the Project by EPC as per approved drawing, design, Contractual and technical requirement.

2. OBJECTIVE OF OWNER'S ENGINEERING SERVICES

EPC will be responsible for Engineering, Procurement and Construction of Sreepur 150 (±10%) MW HFO Based Power Plant Construction Project at Sreepur, Gazipur, Bangladesh. BRPL intend to engage a consultant firm to ensure the Engineering, Procurement and Construction of this Project is in compliance with the EPC Contact and technical requirement on behalf of owner of this project as owner's engineer. BRPL will bear the cost of the Consultant service from its own cost.

3. SCOPE OF SERVICES OF THE CONSULTANT

The proposed scope of services of the Owner's Engineering Services for Sreepur 150 (±10%) MW HFO Based Power Plant Construction Project will be as below:

A. Review of Basic Design and Contract Document:

The Consultant will review preliminary studies, project requirement and issues, review of Basic Design and contract document in order to render their services properly.

B. Review of Details Design and Drawing Documents:

Checking and approval of design calculations, drawings and specifications submitted by the Turnkey Contractor in respect of all Electrical, Mechanical, Instrumentation & Control, SCADA and Communication, Fuel Oil (HFO and HSD) unloading and storage facilities, Water storage & treatment equipment, Waste water/ Effluent treatment system, Firefighting system, Civil works and ancillaries under the Scope of Turnkey Contract.

C. Construction Management Activities

Supervision of erection work of all Electrical, Mechanical, I&C and Civil works, Evaluation, review and approval of the Field Test Methods submitted by The Turkey Contractor for Electrical, Mechanical, I & C, Fuel Oil (HFO and HSD) unloading and storage facilities, Heat tracing system, Water storage & treatment Plants and their Auxiliaries, Waste water/ Effluent treatment system, Firefighting system, SCADA and Communication, Witnessing of the development at Various Phases of Work.

The main turnkey contract would cover construction of the Power Plant. The Consultant will certify all aspects of the construction work in order to assure that it is conducted properly. This includes assisting in developing and implementing a quality assurance program for construction, review and approval of design, monitoring schedule, inspection of materials upon arrival and upon erection, review of documents to assure quality of delivered goods, comparison of as-built drawings to design, and addressing shortcomings in any of these areas.

Owner's Engineer will supervise the site construction, erection and commissioning works carried out by the EPC Contractor with The Project Management Team of BRPL. It shall be ensured that the works are executed in compliance with the Project Time Schedules as well as with the technical requirements set out in the Contract Documents.

At the beginning of the construction, the use of roads, construction of temporary jetty, lay down areas, storage facilities, warehouses, temporary buildings, power and portable water supply and numerous other services and facilities which are necessary to efficiently carry out the project on site. This calls for a proper co-ordination of the use and allocation of Existing site facilities, utilities, space, equipment, waterways, roadways and all other related facilities. The goal is to minimize conflicts created by the simultaneous need for a single facility such as roadway, waterway, storage building or area.

The activities are structured as follows:

I. Work Planning and Schedule Control
II. Project Administration
III. Quality Assurance Management

I. Work Planning and Schedule Control

In accordance with international practices, project planning and control requirements shall be developed. Standard techniques for work of this nature shall be used.

The consultant will be provided all the necessary information to be evaluated the detailed Contract Program.

The consultant will provide Monthly Progress Reports related to the Contract Program.

II. Project Administration

Assist BRPL to set up and maintain necessary project administration procedures, including information transfer, document control and filing, etc.

III. Quality Assurance Management

Inspect the work of contractor during the implementation phase to ensure the quality of the work, workmanship, the quality of material, factory test certificates and equipment installed. Ensure conformance to the codes, instruction as stipulated in the contract. The consultant will maintain necessary field documents and records; arrange co-ordination meeting to review progress of the project works with respect to project time schedule as well as to solve the problem if there be any. Consultant may step as deemed necessary for ensuring quality of workman as well as maintaining of safety requirement at site.

Inspection and assurance of quality of delivered equipment/ machinery/ materials upon arrival in accordance with codes and standard stipulated in the contract agreement. If any shortage/ omission of the materials/ equipment be observed in the invoice/ packing or in the inventory Consultant shall inform BR-Powergen immediately.

Review of the EPC Contractor's procedures shall be done to establish its internal quality control. Following items will be reviewed:

Following items will be reviewed:

- Quality assurance program of the EPC Contractor and each major manufacturer/ subcontractor and Prepare RCDR report;
- Contractor's internal QA organization with names, functions and responsibilities;
- Contractor's QA procedure;
- Contractor's quality records, completion certificate.
- Contractor's non-conformity procedures
- Contractor's field inspection procedures
- Control of erection
- Control of fabrication Procedure
- Control of welder's certificates
- Control of welding Procedure
-Control of welding Inspection & testing procedure
- Pressure tests/Hydro test of piping/ tank
- Final acceptance inspection

D. Site Supervision and Field Services

The construction/erection work of the EPC Contractor shall be supervised by the Project Management Team of the Owner's Engineer (Construction Supervision Team). It is required to ensure that total 80% of total man month should allocate at site as well as always One Senior man will stay at site minimum.

E. Post Landing Inspection Witness

To attend Post landing inspection along with B-R Powergen representatives, if any and submit the reports to B-R Powergen.

F. Site Safety & Environmental Friendly

It is to be ensured that all construction and commissioning activities are carried out in a safe and environmentally friendly manner as per internationally approved health, safety and environment (HSE) manual.

G. Commissioning, Completion and Guarantee Performance Tests

Examine and approve the protocol submitted by contractor for start-up, trial run performance,

testing and commissioning of the individual parts including whole plant and witness the commissioning, guarantee and acceptance test in association with BR-Powergen Engineers and submit detailed report.
The start-up procedures, acceptance test codes, performance guarantees etc., shall be reviewed well ahead of the commissioning procedure itself.
Following main activities shall be performed:

- Supervise and co-ordinate the commissioning activities, such as initial tests, start-up and trial-run operation;
-Review the FAT report and project site report of all equipment and machinery and prepare a comparison in between FAT and Site report which will submit to BRPL;
- Review the Contractor's start-up and operating procedures and test schedules;
- Verify and check whether components and equipment have been properly installed and are complete
- Ensure the proper calibration of all test instrumentation, particularly for the performance and guarantee test;
- Supervise and witness the individual equipment and sub-system tests,
- Supervise start-up and initial operation of the main components;
- Supervise the start-up and operation of the whole plant, including load variation, overload and trip tests, and the trial run to prove the plant's reliability;
- Supervise the guarantee tests to confirm that the plant meets its net capacity guarantees, heat rates, and to define the amount of any penalties, if applicable.

H. Punch list

Punch lists along with EPC shall be prepared and monitor the rectification of the punched item/items within the reasonable time set forth in the meetings.

I. Others

- Establishing in Consultation with BR-Powergen a Procedure for Checking and Approval of Invoice for Payment of the Turnkey Contractor and certifying the same for further necessary action by concerned Project officials.
- Review of as built drawings of the Power Plant submitted by the EPC contractor. Acceptance of "As built drawings" of the Power Plant submitted by the EPC contractor.
- The consultant shall prepare & recommend provisional taking over certificate/ Provisional Acceptance Certificate (PAC) whenever due to the works performed by the contractor & shall inform deficiencies of works to BRPL, if any and shall confirm the remedial measures taken by the contractor and recommend final taking over certificate after expiry of the warranty period.

4. DURATION OF THE PROJECT

The engineering service shall cover the duration of 15 (fifteen) months, starting from commencement of consultancy services to the completion of the project.

(a) Duration of Service: 15 (Fifteen) months

(b) Person-Months:

Senior Mechanical Engineer (Team Leader): 15 Man-months

Senior Civil Engineer: 04 Man-months
Senior Electrical and I&C Engineer: 06 Man-months
Senior I&C and SCADA Engineer: 03 Man-months
Junior Mechanical Engineer: 10 Man-months
Junior Civil Engineer: 06 Man-months
Junior Electrical/ I&C Engineer: 07 Man-months

(c) Working Place:

Main working place will be at Project Site (80%), Sreepur, Gazipur, as well as the Consultant's Dhaka Office (20%), Bangladesh.

5. REPORTING REQUIREMENTS

For construction supervision, the consultant shall provide the following reports:

(a) Inception report (including schedule): The consultant will submit an Inception Report addressing the approach and methodology for the engineering consultancy services including schedule of services.

(b) Prepare of Receiving cum damage inspection Report (RCDR) of all the equipment supplied by EPC Contractor.

(c) Site Construction Report: The consultant shall submit monthly report to BRPL on major issues of the site activities during construction and commissioning.

(d) Performance Guarantee Test Witness Report: The consultant shall submit contractor's performance guarantee test witness report to BRPL within 7 days of the performance test.

6. RESPONSIBILITIES OF THE CLIENT

The consultant shall work under the direct supervision of the Project Director, keeping close liaison with B-R Powergen Limited. The concerned offices of BRPL shall assist the construction supervision team to provide all the necessary data and documents as required.

Technical and project management issues shall be discussed in meeting between BRPL and the Consultant. Any unresolved issue, technical or otherwise, would be taken up through the Project Director.

In case of any unforeseen events, be it in terms of physical or social obstacles at field levels; the concerned field offices of the BRPL will take initiatives to solve them and ensure good working environment.

7. PROPOSED PROFESSIONALS

The required expertise and man-months of the proposed professionals of the construction supervision team of the consultant should include the following:

Serial	Position	Required Qualifications	Man-Months
1	Senior Mechanical Engineer (Team Leader) (One Person)	a. At least B.Sc. Degree in Mechanical Engineering. b. Minimum 15 (Fifteen) years' Experience in Engineering field. c. Minimum 05 (Five) years of Similar Experience in Design Review and Construction Supervision of Power Plant. d. At least 01 (One) year Experience in a 100MW (or above) HFO Based Power Plant Construction Project.	15
2	Senior Civil Engineer (One Person)	a. At least B.Sc. Degree in Civil Engineering. b. Minimum 15 (Fifteen) years' Experience in Engineering field. c. Minimum 05 (Five) years of Similar Experience in Design Review and Construction Supervision of Power Plant. d. At least 01 (One) year Experience in a 100MW (or above) HFO Based Power Plant Construction Project.	04
3	Senior Electrical and I&C Engineer (One Person)	a. At least B.Sc. Degree in Electrical Engineering. b. Minimum 15 (Fifteen) years' Experience in Engineering field. c. Minimum 05 (Five) years of Similar Experience in Design Review and Construction Supervision of Power Plant.	06

Serial	Position	Required Qualifications	Man-Months
		d. At least 01 (One) year Experience in a 100MW (or above) HFO Based Power Plant Construction Project.	
4	Senior I&C and SCADA Engineer (One Person)	a. At least B.Sc. Degree in Electrical Engineering. b. Minimum 15 (Fifteen) years' Experience in Engineering field. c. Minimum 05 (Five) years of Similar Experience in Design Review and Construction Supervision of Power Plant.	03
5	Junior Mechanical Engineer (One Person)	a. At least B.Sc. Degree in Mechanical Engineering. b. Minimum 05 (Five) years' Experience in Engineering field. c. Minimum 01 (One) year of Similar Experience in Design Review and Construction Supervision of Power Plant.	10
6	Junior Civil Engineer (One Person)	a. At least B.Sc. Degree in Civil Engineering. b. Minimum 05 (Five) years' Experience in Engineering field. c. Minimum 01 (One) year of Similar Experience in Design Review and Construction Supervision of Power Plant.	06
7	Junior Electrical/ I&C Engineer (One Person)	a. At least B.Sc. Degree in Electrical Engineering. b. Minimum 05 (Five) years' Experience in Engineering field. c. Minimum 01 (One) year of Similar Experience in Design Review and Construction Supervision of Power Plant.	07
	Total:		**51**