

**Bharat Heavy Electricals Limited
Corporate Information Technology, Noida**

Eol Ref. No: AA:CIT:DC/Eol

Dated: 14.10.2009

**Expression of Interest for Hiring of a Consultant for the Design of Data
Centre**

1. Eol Notice

- a) This Expression of Interest (Eol) is for empanelment of bidders for providing consultancy services for the design of BHEL Corporate Data Centre & its associated infrastructure.
- b) The interested parties may submit their response along with the requisite details latest by **1700 hrs, 30th October, 2009** to **Sh. Ashwini Kumar, Sr.DGM (CIT) at CIT Hall, 2nd Floor, HRD & ESI Complex, Plot No. 25, Sector-16A, Noida-201301. Email: ashwini@bhel.in, Ph. 0120-2510505.**
- c) The interested parties shall specifically submit complete details against each clause as per the prescribed format (Annexure-I & Annexure-II). Incomplete and ambiguous response may be summarily rejected without giving any reason thereof.
- d) Interested bidders are advised to study the EOI document carefully. Submission of EOI shall be deemed to have been done after careful study and examination of the EOI document with full understanding of its implications.
- e) BHEL takes no responsibility for delay, loss or non-receipt of Eol response documents sent by post and also reserves the right to accept or reject any or part of the response without assigning any reason thereof.

- f) The Eol process is for surveying the market for the suitable agency who provide data center consultancy services and BHEL reserves the right to continue or not with the Eol process or the project.
- g) The empanelled agencies will subsequently be issued a tender enquiry and on the basis of that enquiry the consultant will be selected for providing the data center consultancy services.

2. Background

BHEL is the largest **engineering** and manufacturing enterprise in India in the energy-related/infrastructure sector, today. BHEL was established more than 40 years ago, ushering in the indigenous Heavy Electrical Equipment industry in India - a dream that has been more than realized with a well-recognized track record of performance. The company has been earning profits continuously since 1971-72 and paying dividends since 1976-77.

BHEL manufactures over 180 products under 30 major product groups and caters to core sectors of the Indian Economy viz., Power Generation & Transmission, Industry, Transportation, Telecommunication, Renewable Energy, etc. The wide network of BHEL's 14 manufacturing divisions, four Power Sector regional centers, over 100 project sites, eight service centers and 18 regional offices, enables the Company to promptly serve its customers and provide them with suitable products, Systems and services -- efficiently and at competitive prices. The high level of quality & reliability of its products is due to the emphasis on design, engineering and manufacturing to international standards by acquiring and adapting some of the best technologies from leading companies in the world, together with technologies developed in its own R&D centers.

BHEL's vision is to become a world-class engineering enterprise, committed to enhancing stakeholder value. The company is striving to give shape to its aspirations and fulfill the expectations of the country to become a global player.

3. Objective

BHEL intends to establish a Corporate Data Center where all enterprise based mission critical business applications like ERP, Messaging, etc, would be run on 24x7 basis. The objective is to hire a consultant who would guide BHEL in the planning and designing of data centre. The Data Center will also have an extension to seat about 100 persons to man the center of excellence and data center.

4. Experience

- a) The bidder should have been in Data Centre consultancy & design business at least for the last 5 years and should have partnership with major Datacenter OEM vendors, including but not limited to, APC, Cisco, Honeywell, Emerson, etc.
- b) They should have designed at least 5 numbers of tier II/III/IV Data centers in India, and out of which at least 1 datacenter should be fully functional on the date of submission of response to EoI.
- c) Summary of projects executed successfully in the past 5 years; focusing on brief descriptions of assignments, customer name and contact details, etc, to be provided.
- d) Profile of key experts may also be submitted along with the response to the EoI.

5. Firm Registration & Financial Details

The bidder shall submit the Registration Number and the date of registration of the firm.

The annual turnover of the firm in the last 3 years from consultancy and integration services should be at least 8 crores (INR).

The bidder shall submit attested copies of the Audited Balance Sheets for the years 2006-07, 2007-08, 2008-09 as proof.

6. Presence

The bidder shall have a registered office in India and should have at least one branch office in NCR. All discussions and interaction with BHEL shall take place in NCR.

7. Legal Awareness

The bidder should be fully conversant with all the applicable building & construction laws, local govt. and municipal codes, environmental laws, electrical and other regulations applicable for the construction of a data centre.

8. The successful bidder, who is hired as consultant, cannot participate in the subsequent tender(s) for the construction of the data centre.

9. Scope of Work

The brief scope of work is as under:

- a) **Civil:** Shall design Civil, Structural, Architecture, Water Supply, Water Treatment, Sewage disposal, soil and environment investigation, landscaping, etc for the entire data centre. The design specifications should be based on Tier III guidelines and should comply to TIA / EIA and ISO Standards.
- b) **Electrical:** Shall design Electrical Distribution, Panels, Cabling, Switchgears, Transformers, UPS, lighting, DG Set, Controls, Earthing, etc, for the entire data centre. Power calculation using Tier III methodology should be done to ensure sufficient power availability. Grounding of entire data center and individual equipments shall be part of electrical design.

Annexure-I

- c) **Mechanical:** Shall design HVAC (heating, ventilation & air conditioning, Precision Air Conditioning for DC & Comfort Air Conditioning for Office Area), pumps, filters, piping, ducts, insulation system, etc, for the entire data centre.

Cooling requirements in terms of TR should be detailed. Air flow using Hot – Cold aisle approach should be part of design. HVAC output to BMS should be compliant with Open platform approach and should be compatible with BACNet / Modbus over IP standards.

- d) **Interiors:** Shall design Interiors for Data Center, Competency Center and associated buildings (Wall paint/Office Space/Furniture/file storage cabinets/Manager's room, etc.)

- e) **Building Management System:** Shall design Building Management and Control system for the entire data centre.

BMS should be able to integrate all physical and electronic systems in datacenter over an IP platform. A Mediator platform should be incorporated to ensure the information flow between various devices and systems.

- f) **Security:** Shall design Access Control System, Surveillance System, Attendance System, building security, etc, for the entire data centre.

All systems and sub-systems for security shall be designed for IP platform integration.

- g) **Fire Detection & Suppression System:** Shall design fire detection, suppression and alarm system for the entire data centre.

- h) **Office Space and Amenities:** Shall design office space and amenities with complete data, voice & electrical wiring and associated requirements for about 100 persons.

Annexure-I

- i) **Hardware & Networking:** Shall design LAN, Internet Connectivity and other data & voice connectivity, drawing specifications of hardware, networking devices, security devices, Server Racks, Network Racks, etc, required for the data centre.
- j) **Network Operations Centre (NOC):** Shall design the Network Operations Centre (NOC) and prepare specifications for all the hardware & software components required for it.
- k) **Disaster Recovery (DR):** Shall design the near-site and far-site DR plans for the Data Center.
- l) **RFP:** Shall prepare RFP for all the above packages /components.
- m) **Bid Evaluation:** Shall help in the evaluation of offers in response to the RFP.
- n) **Site Supervision:** Shall supervise during the construction and commissioning of the data centre. Shall also carry out the audit to ensure that all activities and components have been carried out as per the specification.
- o) **Data Centre Compliance:** The data centre design should be **tier 3** and should comply to **TIA-942** standard. The individual components like LAN Cabling, Electrical Wiring, etc, should be as per the international standards.
- p) **Best Practices:** Shall frame best practices for the day to day operation of the Data Centre.

10. Minimum In-House Capability

- a) In the Scope of Work at Clause 9, for points (a) to (k), the bidder should have in-house expertise in at least 5 areas. For the rest of the areas, if the bidder is associating with any 3rd parties, the

name, contact details, experience and antecedents of those parties should be submitted along with the response in the prescribed format.

11. Associate / Partner Consultant's Experience

- a) The requirement of experience of the associated consultants (3rd parties) shall be identical in terms of number and type of data centers worked in as the main consultant.
- b) The profile and expertise of the key persons of the associated (3rd party) consultants who shall be working on the design along with the main consultant shall also be identical as the main consultant.