



**भारत हेवी इलेक्ट्रिकल्स लिमिटेड भोपाल**

*Bharat Heavy Electricals Limited, Bhopal*

(A Govt. of India Undertaking)

R.K. Girdonia

Addl.General Manager (HTE)



Ref. AGM (HTE)/RKG/388

6<sup>th</sup> March 2008

Dear Sir,

**Subject: - Long term tie-up / Technology upgradation for Hydro Turbines, Hydro Generators, Pump Turbines and Hydro Generator Motors.**

**Introduction about us:**

Bharat Heavy Electricals Limited (BHEL) is an ISO-9001:2000 certified premier engineering and manufacturing organization with majority share-holding by Government of India. BHEL is catering to the core infrastructure sectors of Indian economy viz. Power Generation and Transmission, Industry, Transportation and Renewable energy. BHEL has been in this business for almost five decades now. In India BHEL has 14 manufacturing units, 4 Power Sector Regions, 8 Service centres and 15 Regional offices besides host of Project sites spread all over India and abroad. BHEL supplied equipment account for more than 65% of the total installed Generating capacity in India and contribute approx. 73% of the total power generation in the country.

The annual turnover of BHEL for the year 2006-07 was US Dollar 4.34 Billion with profit before tax of US Dollar 866.00 Million. With the current deliverable order book exceeding US Dollar 18.00 Billion and still growing, BHEL is poised for excellent future growth. BHEL's highly skilled and committed manpower asset of 42,000 employees, the best of manufacturing facilities and practices together with the latest state of art technologies, has helped BHEL deliver a consistent track record of performance.

Over the years, BHEL has entered into technology transfer agreements with leading original equipment manufacturers (OEMs) like GE-USA (for Gas Turbines, AC variable speed drives), Siemens-Germany (for Steam Turbines, Generators and Electrical Machines), Hitachi-Japan (for Pump Turbines),

Mitsubishi-Japan (for Hydro Generator-Motors), GE-Canada (for Francis type Hydro Turbines), ABB-Sweden (for HVDC Converter Transformers, Smoothing reactors and HVDC transmission systems), Combustion Engineering-USA (for Steam Generators) and recently with Alstom-France (for Super critical Boilers). Besides such technology agreements, BHEL has also promoted two joint venture companies in India – one with GE-USA and another with Siemens-Germany for addressing the after-sales business. More details about the entire range of BHEL's products and operations can be had by visiting our web site [www.bhel.com](http://www.bhel.com).

### **Bharat Heavy Electrical Plant (HEP), Bhopal:**

The Bhopal unit is one of the major plants of BHEL established in 1956 as HE (I) Ltd. In collaboration with AEI-UK, the Heavy Electrical Plant is located at Bhopal (in Central India in the State of Madhya Pradesh). It is manufacturing Hydro Turbines, Hydro Generators, Transformers, Motors, Traction equipment, HVDC system equipment etc. Over the years, BHEL, Bhopal has consolidated its products in the Indian market cornering the major share of Hydro, Transformers, Motors and Traction equipment business.

BHEL, Bhopal has a wide and rich experience of supplying various types of hydro turbines and hydro generators for more than 150 projects. Considering the fact that hydro power is being given strong impetus in India, the annual capacity has recently been augmented from 720 MW to 2500 MW. The manufacturing facilities have been upgraded with latest state of art manufacturing and testing equipment. BHEL also has an in-house NABL-certified model testing laboratory conforming to the relevant international standards.

### **Future Hydro Power Generation in India :**

India is blessed with immense amount of hydro-electric potential and ranks 5<sup>th</sup> in terms of exploitable hydro-potential on global scenario. As per assessment made by CEA, India is endowed with economically exploitable hydro-power potential to the tune of 1,48,700 MW of installed capacity. In addition, 56 number of pumped storage projects have also been identified with probable installed capacity of 94,000 MW. Besides this, hydro-potential from small, mini & micro schemes has been estimated as 6782 MW from 1512 sites. Thus, in totality India is endowed with hydro-potential of about 2,50,000 MW. However, less than 15% of this potential has been exploited so far.

In 1998, Government of India announced "Policy on Hydro Power Development" under which impetus is given to development of hydropower in the country. During October 2001, Central Electricity Authority (CEA) came out with a ranking study which prioritized and ranked the future executable projects. As per the study, 399 hydro schemes with an aggregate installed capacity of 1,06,910 MW were ranked in A, B & C categories depending upon their inter-se attractiveness. During May 2003, Govt. of India launched 50,000 MW hydro initiatives in which preparation of Pre Feasibility Reports of 162 Projects totalling to 50,000 MW was taken up by CEA through various agencies. The PFRs for all these projects have

already been prepared and projects with low tariff have been identified for preparation of DPR.

In order to meet such huge demand and market requirement, BHEL intends to enter into a long term suitable tie-up including Technology transfer with a leading Original Equipment Manufacturer (OEM). The detailed terms and conditions for such cooperation can be mutually agreed upon.

### **The Proposal**

We are now seeking your Expression of Interest (EOI) for entering into a long term suitable tie-up involving technology up gradation with BHEL for Hydro turbines, Hydro generators, Pump-turbines and motors-generator. We look forward to receive a favourable response from you preferably before 27<sup>th</sup> March'2008.

We would appreciate if your initial response is accompanied by details on your Company background, Share-holding pattern, Technical features, Product catalogue, Supply reference list, Annual financial report etc. This can be followed up by your detailed proposal for Tie-up with BHEL. On receipt of your proposal, we can schedule further meetings in India at your convenience to work out the modalities. It may be noted that as a matter of policy we deal only with the principals and not with any agents.

Should you need any further information, please feel free to contact us.

With kind regards,

Yours sincerely,  
For and on behalf of BHEL

(R.K. Girdonia)

### **Contact address:**

Name: R.K. Girdonia  
Designation: Addl. General Manager (HTE)  
Address: Hydro Turbine Engineering Division  
Block – I, Central Annexe, 1<sup>st</sup> Floor  
BHEL, Piplani, Bhopal, Madhya Pradesh, India (462022)  
Phone No.: +91 755 – 4201232, 2502279  
Fax No.: +91 755 – 2505484  
e-mail: girdonia@bhelbpl.co.in