

Invitation of

**Expression of Interest for**  
**Generation of Power**  
**Transformer**  
**Manufacturing Drawing**

**Transformer Engineering Department**  
**BHEL Jhansi**

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## About Bharat Heavy Electrical Limited

BHEL is a premier engineering and manufacturing organization, majority owned by Government of India, catering to core infrastructure sectors of India economy viz Power Generation and Transmission, Industry, Transportation, and Renewable Energy. The company has 14 manufacturing units, 4 Power sector regions, 8 service centers and 15 regional offices, besides host of project sites spread all over India and abroad. BHEL supplied equipments account for 65% of total thermal generation capacity in India and contribute 73% of the total Power generation in the country.

BHEL Jhansi is one of the manufacturing units of BHEL. BHEL Jhansi is having two Main Products i.e. Transformers and Locomotives. The Transformer division is in the market of all type of Transformers i.e. Power Transformer, Rectifier Transformer Dry type transformer, Instrument Transformer, EMU Transformer, Furnace Transformer, ESP Transformer, Earthing Transformer, and Single phase railway Transformer. BHEL Jhansi manufactures Power Transformer of upto 220kV and 250MVA. The Locomotive division is in manufacturing of Electrical and Diesel Locomotives. BHEL Jhansi is presently developing AC EMU coaches for Indian Railways and has developed WAG7 electric loco, DE Shunters in the range of 350 hp to 1400 hp, various other utility vehicles including Rail cum Road Vehicle, Battery Powered Road Vehicle, dynamic track stabilizer, ballast cleaning machine, Hoist assembly for ship lift system etc. BHEL has also done many enhancements in existing products like eye bolt CT, Aluminum foil cast resin Dry type Transformer, 132 KV Live Tank CT, 400KV CT Design, StepLap Core and many more. BHEL Jhansi is also expanding its manufacturing capacity in Power Transformer and Locomotive, and also entering in 400kV Power Transformer market. Presently BHEL Jhansi is having huge order of Transformers and WAG7 Locos.

## Scope of Work

The turnover of Transformer division for financial year 2010-11 is more than Rs.700crores. Power Transformer is a tailor made product and its engineering totally depends upon customer requirement. For each type of transformer detail design/ engineering is done. Transformer Engineering Department (TRE) wants to outsource the complete/ part manufacturing drawings of few Power Transformer designs.

The Party should have domain knowledge of drafting of upto 220kV Power Transformer. The party will have to prepare BHEL drawings as per reference drawings/ sketch/ instructions given by Engineering division in line with ISO and BHEL standard practice. The Parties will be given the relevant parts of Electrical Specification, complete set of Customer drawings, Layout and Standards / Standard drawings as required (case to case basis) for preparation of Complete Set of drawings of transformers. No drawing on computer shall be given to the party for reference purpose except layout. The drawings completed in all respects as per BHEL norms including detailing & bill of material (BOM) is expected from the party as output. The parties may carry out the work inside/ outside BHEL premises. BHEL Jhansi has

Oracle 10G based centralized delinked eBOM system. The BOM is punched in client machine in standard eBOM format. Party has to punch the BOM inside the BHEL premises in eBOM system. In case of inside work other than punching in eBOM, party has to manage their own Computers and all required accessories/ consumables. BHEL will provide space & furniture at any suitable place inside plant.

Complete Set of Drawings of Transformer consist of following drawings

- A.
  - 1. Tank Details
  - 2. Tank Assembly / Top Tank
  - 3. Tank Base / Bottom Tank
  - 4. Tank Cover Assembly & Details
  - 5. Tank Rim Assembly
  - 6. Turrets Assembly - HV
  - 7. Turrets / Cable Box - LV
  - 8. Neutral Turrets - LVN/HVN
  - 9. Bus Duct Hood Assembly (i.e. junction between Transformer & Bus Duct Assembly)
- B.
  - 1. Out Side fittings (M Box, TC Mtg, Ladder Mtg, NRCT Mtg, Thermosyphon Mtg etc) including Blanking Plates
- C.
  - 1. Pipe Work Header Assembly & Details
  - 2. Main Conservator Pipe Work & Details
  - 3. Aux Conservator Pipe Work & Details
- D.
  - 1. HV – Winding
  - 2. IV – Winding
  - 3. LV – Winding
  - 4. Tapping Winding
  - 5. Winding Assembly
- E.
  - 1. HV Terminal Gear Assembly
  - 2. LV Terminal Gear Assembly

Drawing drafted will be checked & approved by BHEL Jhansi personnel. Correction (wherever) required will have to be done by the contractor.

Firm engaged in manufacturing of Power Transformer of 132&220 kV class need not apply.

### Procedure for Registration

Details received will be scrutinized by BHEL and bidders found capable of generation of Power Transformer manufacturing drawing will be registered for this work. Subsequently tender for finalization of this service contract will be issued to all registered contractor.

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**Salient features:-**

- a) The payment shall be made on per drawing basis.
- b) The contractor has to ensure all the Labour Law, minimum wages Act and Bonus Act applicable.
- c) The contractor should have authentic AutoCAD license.
- d) The contract shall be awarded on more than one contractor to smooth and timely completion of manufacturing Drawings.
- e) The qualifying requirements is as under:-  
“Bidders should have knowledge to prepare manufacturing drawings of Power Transformer”.  
“Bidder should not be a Transformer manufacturer”
- f) The bidder has to sign Non Disclosure Agreement with BHEL Jhansi to maintain the confidentiality of the information passed on to them by BHEL.
- g) The tender shall be issued in Two – Bid System.
- h) BHEL Standard LD Clause will be part of tender.
- i) EMD and security deposit shall be as per works policy during the Tender process.
- j) Parties are required to submit PAN, Service Tax & Income Tax of last three years.

**Proposal**

Interested party may submit their Expression of Interest by 1:30 PM on 03<sup>rd</sup> August, 2010.

Expression of Interest should be accompanied by:

- Details on company background
- Experience list (with details) of execution of similar type of work (copy of orders to be enclosed)
- List of technical competent person with specialization in related field
- Annual financial report of at least last two years, etc

The proposal incorporating above details may be sent at following address:

**AGM (TRE&FES)**  
**Transformer Engineering Department**  
**Bharat Heavy Electricals Limited**  
**Jhansi (Uttar Pradesh) – 284129**

Phone No: 0510-2412709  
Fax No: 0510-2412118  
e-mail: [arkuls@bheljhs.co.in](mailto:arkuls@bheljhs.co.in)

Any clarification on technical details may please be addressed to following:

**Amit Khatloiya, Dy Manager (TRE), Phone No: 0510-2412791**  
e-mail: [akhatloiya@bheljhs.co.in](mailto:akhatloiya@bheljhs.co.in)