



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

**NOTICE INVITING EXPRESSION OF INTEREST
FOR WIRING CONTRACTORS FOR LV
SWITCHGEAR.**

**EOI REFERENCE NUMBER
BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00**



**BHARAT HEAVY ELECTRICALS LIMITED,
ELECTRO PORCELAINS DIVISION, BANGALORE-12**



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

1. DISCLAIMER

The information contained in this Expression of Interest document (the “EOI”) or subsequently provided to Applicant(s), whether in documentary or any other form, by or on behalf of BHEL or any of its employees or advisors, is provided to Applicant(s) on the terms and conditions set out in this EOI and such other terms and conditions subject to which such information is provided.

This EOI is not an agreement and is neither an offer nor invitation by BHEL to the prospective Applicants or any other person. The purpose of this EOI is to provide interested parties with information that may be useful to them in the formulation of their application for qualification pursuant to this EOI.

BHEL also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Applicant upon the statements contained in this EOI.

The issue of this EOI does not imply that BHEL is bound to select and shortlist Applicants for next stage or to enter into any technology tie-up agreements with shortlisted Applicants for the Project.

The bidder shall bear all costs associated with the preparation, technical discussion/presentation and submission of bid, the Purchaser/Consultant shall in no case be responsible or liable for these costs regardless of the conduct or outcome of the bidding process.

Canvassing in any form by the Bidder or by any other agency on their behalf may lead to disqualification of their bid.

2. Schedule of Events

- (i) Tender Notification date : 28/7/2015
- (ii) Last date for receipt of Offers : 18/8/2015

3. Mode of Submission of Documents:

In sealed cover to be dropped in EPD tender box so as to reach the contact person on or before the date mentioned above. The cover shall be super-scribed with Reference number **BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00 and the words “EXPRESSION OF INTEREST FOR WIRING CONTRACTORS FOR LV SWITCHGEAR”**(herein called as LV Switchgear) The documents as above should be submitted in a sealed envelope and should bear the name address and telephone number of the Applicant. The envelope should be addressed to :

DGM/CPBG

Electro Porcelains Division,

Bangalore, Karnataka, India, 560012”.

4. ABOUT BHEL:



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

BHEL, an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing companies in India in terms of turnover. It was established in 1964, 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.

We are engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation (Railway), Renewable Energy, Oil & Gas and Defence. We have 16 manufacturing divisions, two repair units, four regional offices, eight service centres and 15 regional centres and currently operate at more than 150 project sites across India and abroad. We place strong emphasis on innovation and creative development of new technologies. Our research and development (R&D) efforts are aimed not only at improving the performance and efficiency of our existing products, but also at using state-of-the-art technologies and processes to develop new products. This enables us to have a strong customer orientation, to be sensitive to their needs and respond quickly to the changes in the market. The high level of quality & reliability of our products is due to adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world including General Electric Company, Alstom SA, Siemens AG and Mitsubishi Heavy Industries Ltd., together with technologies developed in our own R&D centres.

Most of our manufacturing units and other entities have been accredited to Quality Management Systems (ISO 9001:2008), Environmental Management Systems (ISO 14001:2004) and Occupational Health & Safety Management Systems (OHSAS 18001:2007).

We have a share of 57% in India's total installed generating capacity contributing 69% (approx.) to the total power generated from utility sets (excluding non-conventional capacity) as of March 31, 2013.

We have been exporting our power and industry segment products and services for over 40 years. BHEL's global references are spread across over 75 countries. The cumulative overseas installed capacity of BHEL manufactured power plants exceeds 9,000 MW across 21 countries including Malaysia, Oman, Iraq, the UAE, Bhutan, Egypt and New Zealand. Our physical exports range from turnkey projects to after sales services.

We work with a vision of becoming a global engineering enterprise providing solutions for a better tomorrow. To know more about BHEL visit: www.bhel.com

5. DESCRIPTION OF EOI:



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

BHEL-EPD, Bangalore proposes to outsource Wiring job.

This EOI is published for seeking response from interested parties in this field, who are willing to be associated with BHEL-EPD, Bangalore for the above requirement.

The EOI process involves qualification of interested parties/ groups who make an application in accordance with the provisions of this EOI (the "Applicant"). At the end of this process, BHEL expects to short-list suitable pre-qualified Applicants and finalize the vendor list.

The EOI in 2 copies (original plus one) shall be submitted on or before Bid Submission date. EOI received after the due date for submission (and any extension thereof) will not be considered.

Any request for further information or clarification on the EOI document may be submitted in writing via mail to sm@bhelepd.com, bala@bhelepd.com, trinath@bhelepd.com and djkumar@bhelepd.com. BHEL may respond to the queries raised/clarifications sought to the best of its ability. However, no extension of the time or date of EOI submittal would be granted on the ground that BHEL has not responded to any query/clarification raised by any party. BHEL at its discretion may extend the due date for submission of EOI and the decision of BHEL in this respect would be final & binding on the Applicants.

No oral modification or interpretation of any provisions of this EOI shall be valid. Written communication shall be issued by BHEL regarding changes, clarifications or amendment to the EOI document, if any, is deemed necessary by BHEL at its sole discretion.

EOI submittals should be in English duly signed and sealed on each page of the documents by authorized representative. Emphasis should be on (a) conformance to EOI instructions; (b) responsiveness to the EOI requirements; (c) completeness and clarity of content.

BHEL is authorised to seek clarification at any stage of evaluation from the perspective bidders and same shall be furnished by the said bidder in reasonable time limit to complete the evaluation process.

EOI which is found to be incomplete in content and/or attachments and/or authentication etc. is liable to be rejected.

All technically qualified bidders after BHEL assessment will be empanelled as BHEL-EPD Drafting services contractors.

6. INSTRUCTION TO APPLICANTS:

6.1 Qualifying Criteria

The applicant should meet following Qualifying criteria

1. Technical Criteria
2. Experience

6.1.1 The Applicant for pre-qualification under the EOI may be (i) a single entity; or (ii) a **Group of Entities ("GOE")** coming together to meet the scope of the EOI. The GOE shall elect one of their members as the lead member of the GOE. The term Applicant used herein



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

would apply to both a single entity and the GOE. The technology transfer agreement would be entered into with the single entity applicant or the lead member of the GOE. The copy of agreement between participants of GOE shall be furnished to BHEL and it should be valid for at least the period mentioned in the agreement of EOI. The lead member of the GOE would be responsible to BHEL for the entire scope of work and shall ensure back to back tie ups with other members of the GOE.

6.1.2 An Applicant shall not have a conflict of interest that affects the EOI Process. Any Applicant found to have a conflict of interest shall be disqualified. An Applicant shall be deemed to have a conflict of interest if a constituent of such Applicant is also a constituent of another Applicant.

6.2 Right to accept or reject any or all Applications:

6.2.1 Notwithstanding anything contained in this EOI, BHEL reserves the right to accept or reject any Application and to annul the EOI Process and reject all Applications, at any time without any liability or any obligation for such acceptance, rejection or annulment, and without assigning any reasons therefore. In the event that BHEL rejects or annuls all the Applications, it may, at its discretion, invite all eligible Bidders to submit fresh Applications.

6.2.2 BHEL reserves the right to disqualify any Applicant during or after completion of EOI process, if it is found there was a material misrepresentation by any such Applicant or the Applicant fails to provide, within the specified time, supplemental information sought by BHEL.

6.2.3 BHEL reserves the right to verify all statements, information and documents submitted by the Applicant in response to the EOI. Any such verification or lack of such verification by BHEL shall not relieve the Applicant of his obligations or liabilities hereunder nor will it affect any rights of BHEL.

6.3 Documents to be submitted with EOI:

6.4 The EOI process shall be governed by, and construed in accordance with, the laws of India and the Courts at New Delhi shall have exclusive jurisdiction over all disputes arising under, pursuant to and/ or in connection with the EOI process.

7. SCOPE OF APPLICANT/BIDDER:

The following jobs are to be executed at BHEL EPD, Bangalore.

SCOPE OF WORK FOR WIRING:

- i. Wires, Terminal Blocks, Lugs, Ferrules Tubes, Cable Ties, Ferrule Ink rolls and Component identification stickers are in scope of Vendor.
- ii. Power Wiring and Control wiring and Earth wiring for all modules at BHEL EPD are in scope of Vendor.
- iii. TBs for Non D/O module are in scope of Vendor.
- iv. Cable Alley space heater wiring is not in scope of vendor.



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

- v. Wiring shall be of Bunch Type and for bunching Cable Ties/Belt buttons Type shall be used.
- vi. Ferrules at both ends of wire shall be provided. Ferrules shall be of white tubes. Ferrule shall be provided for each individual wire even two or more wires are terminating at same point.
- vii. Cables Ties shall be provided at regular intervals as per requirement of BHEL.
- viii. Spirals shall be used at doors.
- ix. Saddles with necessary screws shall be considered for holding the wire bunch to mounting plate.
- x. One Module of each type shall be made ready and BHEL acceptance shall be obtained before going ahead with wiring of all modules.
- xi. Mounting of Components provided by BHEL in all types of modules are in scope of vendor.
- xii. Power wiring sizes shall be submitted for BHEL approval before start of wiring.
- xiii. More than two wires shall not be terminated at any terminal block or component.
- xiv. All the necessary tools required to complete the job shall be arranged by vendor only. BHEL will not provide any tools for wiring job.
- xv. Shrouding of Modules at O/G side terminals in Cable Alley, CST feeder, Bus PT feeder, Incoming side terminals, Rear side of Breaker verticals and front side of Breaker Chamber shall be considered in scope of vendor. Material shall be of Acrylic sheet or of FRP sheet.
- xvi. The wiremen shall be familiar with LV Switchgear wiring as per the schemes.

SCOPE OF WORK FOR TESTING:

- i. All the modules shall be tested for continuity, HV, IR and Functional as per BHEL drawing and check list and certification shall be obtained from BHEL representative at BHEL EPD.
- ii. 415V AC supply and 220V DC supply will be provided by BHEL EPD.
- iii. Supply testers, Multifunction meters and Continuity testers shall be arranged by vendor.
- iv. Any modification carried out during testing in the wiring shall be informed to BHEL representative and updated drawing will be released by BHEL for the same.
- v. The workmen deputed will be parallel supervised by BHEL, the contract is bound to replace the workmen if found workmanship is not satisfactory.

WIRES:

- i. Wires shall be of Flexible 1100V grade, PVC insulated Switch Board Wires with Stranded copper wires of 2.5mm Sq.
- ii. Make of Wire and shall be of Finolex and Polycab.
- iii. Colour coding Control Circuit and power circuit: AC (control circuit)-Black; DC-Grey; CT & PT and Power wiring: R, Y, B and Black.

LUGS:



EOI Reference Number:

BHEL-EPD/CPBG/EOI/2015-16/WC/03, REV 00

- i. Lugs shall be of insulated type. Make shall be 3D/Dowells/Commet /Hex.
- ii. Wherever required ring type/U type/Pin Type/Snap Type shall be selected by vendor.

TERMINAL BLOCKS:

- i. Terminal blocks shall be of Flexible type, Screw type, Din rail mounting with both ends possible for terminating Voltage grade: 1100V.
- ii. Make shall be of Connectwell /Elmex
- iii. For 2.5Sqmm. wire TB size shall be 4Sq.mm, For 4Sq.mm wire TB size shall be 6Sq.mm
- iv. For CT circuits CTTBs of Disconnecting type shall be used.
- v. End plates and End clamps shall be provided at starting and end of TB series.
- vi. TB markers of Strip type on both sides shall be provided.

CABLE TIES:

- i. Make of Cable Ties shall be of KSI, KSS, KEI.

COMPONENT IDENTIFICATION STICKERS:

- i. Component identification stickers shall be provided and they shall be of yellow colour and height of 9mm.
- ii. Ink rolls required shall be considered in vendor scope.

8. Pre-qualification criteria:

- i. The vendor would have completed atleast two projects in last 2 years, where in each project a minimum of 75 verticals are present.
- ii. Vendor shall have a local office with representative in Bangalore for ease of communication.
- iii. Vendor shall have a minimum of 6000 sq.ft. Shop floor space at his works.
- iv. Vendor shall have tools as per below list:

TOOLS

1	HEAT SHRINK GUN	BOSCH GHG 500-2 PROF.	HS	1
2	MULTIMETER	TAKUMI PALMISZE	MM	1
3	DIGITAL CLAMP METER	MASTECH M266 SERIES	DCM	1
4	MEEGER	RISHABH INSU20	MG	1
5	HT KIT 5KV		HT	1
6	INSULATED CRIMPING TOOL	ASWINI HT 960	ICT	1
7		VAPS YAC5	ICT	1
8	NON-INSULATED CRIMPING TOOL	3D	NICT	1
9	POWER CABLE CUTTER 25SQ.MM		PCC	1
10	PNUEMATIC GUN	SLI ST 553A	PG	1
11	TORQUE WRENCH 20 TO 100LBFT	TORQUE MASTER TM100R	TW	1
12	RATCHET KIT 8 TO 32MM	UNISON 4528MR02US	RK	1
13	DRILL GUN UPTO 10MM	BOSCH GSB10RE	DLG	1
14	DRILL GUN UPTO 13MM	HITACHI DB13VSS	DLG	1
15	JICKSAW 400W	SKIL 4170	JS	1
16	BATTERY OPERATED SCREW TIGHT GUN	DUROGOLD	BOS	1
17	BUSBAR/TRUF CUTTING MACHINE	HITACHI CC14STD	BCM	1
18	POWER CRIMPING TOOL 25 TO 75SQ.MM		PCT	1
19	TUBULAR SPANNER 7MM		TS	1
20	TUBULAR SPANNER 8MM			1
21	TUBULAR SPANNER 9MM			1
22	TUBULAR SPANNER 11MM			1
23	TUBULAR SPANNER 12MM			1
24	TUBULAR SPANNER 13MM			1
25	RING SPANNER 6-7MM		RS	1
26	RING SPANNER 8-9MM			3

27	RING SPANNER10-11MM			1
28	RING SPANNER12-13MM			1
29	RING SPANNER13-14MM			1
30	RING SPANNER16-17MM			1
31	RING SPANNER18-19MM			2
32	RING SPANNER20-22MM			1
33	OPEN SPANNER 6-7MM		OS	1
34	OPEN SPANNER 8-9MM			2
35	OPEN SPANNER10-11MM			2
36	OPEN SPANNER12-13MM			6
37	OPEN SPANNER13-14MM			1
38	OPEN SPANNER16-17MM			1
39	OPEN SPANNER18-19MM			1
40	OPEN SPANNER20-22MM			1
41	OPEN RING SPANNER 12-12MM		ORS	1
42	OPEN RING SPANNER 15-15MM			1
43	OPEN RING SPANNER 18-18MM			1
44	MALLET HAMMER		MH	1
45	TAPARIA SCREW DRIVER SET		SDK	2
46	6SQ.MM WIRE STRIPPER		WS	4
47	6SQ.MM SIDE CUTTER		SC	3
48	6SQ.MM POWER CABLE CUTTER		PCC	2
49	CONNECTOR 902		CN	12
50	CONNECTOR 912			3
51	CONNECTOR 211			3
52	CONNECTOR 825			1
53	ALLIGN KEY SET		AK	1