



Part A (Techno-Commercial Bid)

SECTION – I  
QUALIFYING CRITERIA

The BIDDER has to compulsorily meet the following requirements to get Qualified for submitting an offer. The Vendor's Response Column has to be necessary filled in by the Bidder in the prescribed format as following:

| S. No. | REQUIREMENTS   | Bidder to Confirm / Specify |
|--------|--|-----------------------------|
| 1      | 1.1 Only those vendors, who have supplied and commissioned at least ONE equipment of Rated or higher capacity as specified in Section IV and such equipment is presently working satisfactorily after commissioning (on the date of opening of Tender), should quote<br>OR<br>If such equipment has been supplied to BHEL, then it should be presently working satisfactorily after its commissioning and acceptance (on the date of opening of Tender) in BHEL.<br>1.2 Performance certificate from the customers (preferably 2) regarding satisfactory performance of machines supplied to them should be sent along with technical offer. |                             |
| 2      | Profile of the Company bringing-out the years of Experience of the BIDDER in the field of manufacture, integration and supply of the required equipment.   |                             |
| 3      | Details on the Firm's Registration and the FINANCIAL STRENGTH of the COMPANY (Balance Sheet for the last 2 years) shall be submitted with the TECHNO- COMML.BID  |                             |
| 4      | Indian/International Standards / Design Process Codes/testing method followed in Design and Manufacture of the Equipment.  |                             |

SIGNATURE & SEAL OF TENDERER

भरतेश्वर सिंह धर्मशक्तु M.S. Dharmashaktu  
वरिष्ठ अभियंता (संलग्न) Sr. Engineer (Civil)  
बी.एच.ई.एल. रुद्रपुर BHEL, Rudrapur  
उत्तराखण्ड - 263153 Uttarakhand-263153



## Part A(Techno-Commercial Bid)

## SECTION – II

The BIDDER has to comply with the following, for accepting the Technical Offer for Scrutiny by the Purchaser:

| Sl. | REQUIREMENTS   |   | Bidder's offer / comment |
|-----|--|---|--------------------------|
| 1   | The BIDDER / VENDOR shall submit the offer in TWO PARTS- Technical & Commercial Bid (PART A) and Price Bid(Part B)   | Vendor to Confirm/specify                                   |                          |
| 2   | The Offer shall contain a comparative statement of Technical Specifications given by BHEL and the Offer Details submitted by the Bidder, against each clause.  | Vendor to Confirm/specify                                   |                          |
| 3   | <b>Two Parts Bid</b> -The quotation is invited in <b>Two Parts Bid</b> i.e.:   | Vendor to Confirm   |                          |
|     | (1) <b>Part A( Techno-Commercial Bid) - Section I, Part A-Section II , &amp; Part A-Section III</b> containing the Technical offer along with all Commercial Terms & Conditions mentioning clearly Delivery Terms, F.O.R./Ex Works, Govt Duties(%), Levies(%), Taxes( % ) etc. <b>PLUS Unpriced copy Of Part-B (Price Bid)</b> in separate sealed envelope and superscribing on it <b>Part-A(Techno- Commercial Bid) and</b> | Vendor to Confirm/specify                                   |                          |
|     | (2) <b>Part- B ( Price -Bid)</b> containing <b>only Basic Price</b> , Erection & Commissioning charges ( if any ) in separate sealed envelope superscribing on it <b>Part- B ( Price- Bid) &amp;</b>   | Vendor to Confirm/specify                                   |                          |
|     | (3) And then these two envelopes put inside a Third Big envelope super- scribing Price- Bid And Techno- Commercial Bid against Tender Notice No. ----- Dated----- Due for opening on Dated----- .Offers received in Single Bid or without Techno-commercial or Price bid will not be considered.   | Vendor to Confirm/specify                                   |                          |
| 4   | The <b>Techno- Commercial bid &amp; Price- Bid</b> are required to be submitted strictly as per our attached formats. Each page of the BHEL's formats are to be duly signed & stamped by the tenderers at the bottom of formats as a token of un-equivocal acceptance of the terms & conditions of the Tender. <b>Price Bid</b> of only those Bidders will be opened, whose <b>Techno-Commercial Bid is accepted.</b>        | Vendor to Confirm   |                          |
| 5   | In case of preliminary qualification of the offer, on technical grounds, the BIDDER may be called for a detailed technical discussion on the original technical offer at BHEL Works, with a 07 days notice period.   | Vendor to Confirm/specify                                   |                          |
| 6   | Any <b>Govt. Taxes/ Duties/ Levies</b> to be mentioned as a %age of A/B/C(ref. Part B-Price Bid):  |   |                          |
|     | (a)Custom Duty ( if applicable) @ % of _____   | Vendor to Confirm/specify                                   |                          |
|     | (b)Excise Duty ( if applicable) @ % of _____   | Vendor to Confirm/specify                                   |                          |
|     | (C) Cess on ( if applicable) @% of _____   | Vendor to Confirm/specify                                   |                          |
|     | (d) Sales Tax against Form C @% of _____   | Vendor to Confirm/specify                                   |                          |
|     | (e) If Any other tax/ levy, mention name & % of _____  | Vendor to Confirm/specify                                   |                          |
|     | (f) Packing & forwarding charges,if any % of _____   | Vendor to Confirm/specify                                   |                          |
|     | (g) Freight in % of _____  | Vendor to Confirm/specify                                   |                          |
| 7   | Delivery terms   | FOR BHEL Rudrapur   |                          |
| 8   | Validity of offer  | 60 days from the date of opening of technocommercial bid    |                          |
| 9   | Delivery period  | Supply, I&C within 6 weeks from the date of placement of PO |                          |

SIGNATURE &amp; SEAL OF TENDERER

म.स. धर्मशक्ती  
 स.इंजीनियर (स.स.)  
 बी.एल., रुद्रपुर  
 उत्तराखण्ड-249353



# Bharat Heavy Electricals Limited

Enquiry No. :  
 Due Date :  
 Supplier's Ref. :  
 Date :

## Part A (Techno-Commercial Bid) Section III

### Specification cum Compliance Certificate for 100 KVAR APFC Panel

Note:-

1. The 'Offered' Column and where applicable, the 'Remarks' Column of this format shall be filled in by the Bidder and submitted along with the offer. Inadequate / incomplete, ambiguous or unsustainable information against any of the clauses of the specifications / requirements shall be treated as non-compliance.

2. The offer and all documents enclosed with offer should be in English language only.

Name & Address of the supplier:

Telephone No.

Fax No.

e-mail :

Scope: Design, manufacture, supply, installation, testing & commissioning of 100KVAR APFC panel complying with the following specifications.

| S No. | Description - BHEL's Requirement  | Specified                             | Offered | Remarks                             |
|-------|---|---------------------------------------|---------|-------------------------------------|
| 1.0   | Application, Type & Rating  |                                       |         |                                     |
| 1.1   | Application   | Indoor Service connected to LT Panel. |         |                                     |
| 1.3   | Make & model of APFC Panel  | Vendor to specify                     |         |                                     |
| 1.4   | Rating  | 100 kvar                              |         | Pl. also ref. 'Scope' of Section IV |
| 1.5   | The panel shall be of low tension, indoor type, floor mounting, front access, dust and vermin proof with IP54 protection with bus bar of Electro grade Aluminium suitable for 3 phase 4 wire supply. Cable entry from top/ bottom . Bus bars shall be insulated with heat shrinkable PVC colour code sleeves. The panel should be made out of 16-18 gauge CRCA sheets, PRE-TREATED and POWDER COATED with Siemens gray shade REAL 7032. The system power factor after connecting APFC shall come >0.99. | Vendor to Confirm                     |         |                                     |
| 2.0   | Technical specifications  |                                       |         |                                     |
|       | The panel shall be made with 8 stage relay with following capacitor arrangement:  |                                       |         |                                     |
|       | 25 KVAR-01 No.  |                                       |         |                                     |
|       | 15 KVAR-03 Nos.   |                                       |         |                                     |
|       | 10 KVAR-02 Nos.   |                                       |         |                                     |
|       | 5 KVAR-02 Nos.  |                                       |         |                                     |
| 2.1   | The following technical aspects shall be ensured:   |                                       |         |                                     |
| A     | Main Incomer  |                                       |         |                                     |
| 1     | MCB 250A, TP, 36KA, with thermalmagnetic release along with spreader link & extended rotary handle.   |                                       |         | Nos.                                |
| 4     | Cooling Fan with Section Filter 200*200mm   |                                       |         | Nos.                                |
| 5     | Auto manual SS1 2pole 2way switch   |                                       |         | Nos.                                |
| 6     | Auxiliary Contactors with 230v AC Coil  |                                       |         | Nos.                                |
| 7     | ON Delay timer 230V AC  |                                       |         | Nos.                                |
| 8     | Digital 8 stage APFC relay  |                                       |         | Nos.                                |
| 10    | SP 6A Control MCB 10ka  |                                       |         | Nos.                                |
| 11    | Neutral Link  |                                       |         | Nos.                                |
| B     | Metering & Protection   |                                       |         |                                     |
| 1     | Digital Ammeter 250/5A  |                                       |         | Nos.                                |
| 3     | Digital Voltage Meter 0-500V  |                                       |         | Nos.                                |
|       | Digital Power factor meter  |                                       |         |                                     |
| 7     | Phase Indication Lamps  |                                       |         | Nos.                                |
| 10    | Short circuit Protection  |                                       |         | Nos.                                |
|       | Over voltage Protection   |                                       |         |                                     |
|       | Earth fault protection  |                                       |         |                                     |
|       | Emergency Stop  |                                       |         |                                     |
| C     | Outgoing 100 KVAR capacitor bank  |                                       |         |                                     |
| c.1   | Outgoing 25 KVAR CAPACITOR 1Nos.  |                                       |         |                                     |
| 1     | MCB 63A TP 10 KA  |                                       |         | Nos.                                |
| 2     | Capacitor duty contactor 25kvar TP, 230V coil with 1NO+1NC  |                                       |         | Nos.                                |
| 3     | ON,OFF indicator lamp LED type  |                                       |         | Nos.                                |
| 4     | Start/Stop PB, Button   |                                       |         | Nos.                                |
| 5     | 06A SP MCB for control supply   |                                       |         | Nos.                                |
| 6     | Neutral Link  |                                       |         | Nos.                                |
| 7     | 25 KVAr Capacitor MPP-heavy duty With Discharge Resistance ( Aluminium Round Enclosure )  |                                       |         | Nos.                                |
| c.2   | Outgoing 15 KVAR CAPACITOR 3Nos.  |                                       |         |                                     |
| 1     | MCB 40A TP 10kA   |                                       |         | Nos.                                |
| 2     | Capacitor duty contactor 15kvar TP, 230V coil with 1NO+1NC  |                                       |         | Nos.                                |
| 3     | ON,OFF indicator lamp LED type  |                                       |         | Nos.                                |
| 4     | Start/Stop PB, Button   |                                       |         | Nos.                                |
| 5     | 06A SP MCB for control supply   |                                       |         | Nos.                                |
| 6     | Neutral Link  |                                       |         | Nos.                                |
| 7     | 15 KVAr Capacitor MPP-heavy duty With Discharge Resistance ( Aluminium Round Enclosure )  |                                       |         | Nos.                                |
| c.3   | Outgoing 10 KVAR CAPACITOR 2Nos.  |                                       |         |                                     |
| 1     | MCB 32A TP 10kA   |                                       |         | Nos.                                |
| 2     | Capacitor duty contactor 12.5kvar TP, 230V coil with 1NO+1NC  |                                       |         | Nos.                                |
| 3     | ON,OFF indicator lamp LED type  |                                       |         | Nos.                                |
| 4     | Start/Stop PB, Button   |                                       |         | Nos.                                |
| 5     | 06A SP MCB for control supply   |                                       |         | Nos.                                |

  
 M.S. Dhamashastu  
 Electrical Engineer (Jr.)  
 BHEL, Rudrapur  
 उत्तराखण्ड - 263153 Uttarakhand-263153



# Bharat Heavy Electricals Limited

Enquiry No. :  
 Due Date :  
 Supplier's Ref. :  
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## Part A (Techno-Commercial Bid) Section III

### Specification cum Compliance Certificate for 100 KVAR APFC Panel

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Name & Address of the supplier:

Telephone No.

Fax No.

e-mail :

Scope: Design, manufacture, supply, installation, testing & commissioning of 100KVAR APFC panel complying with the following specifications.

| S No. | Description - BHEL's Requirement  | Specified                 | Offered | Remarks |
|-------|---|---------------------------|---------|---------|
| 6     | Neutral Link  |                           |         | Nos.    |
| 7     | 10 KVAR Capacitor MPP-heavy duty With Discharge Resistance ( Aluminium Round Enclosure )  |                           |         | Nos.    |
| c.4   | Outgoing 5 KVAR CAPACITOR 2Nos.   |                           |         |         |
| 1     | MCCB 25A, TP 10kA   |                           |         | Nos.    |
| 2     | Capacitor duty contactor 8.5 kvar TP, 230V coil with 1NO+1NC  |                           |         | Nos.    |
| 3     | ON/OFF indicator lamp LED type  |                           |         | Nos.    |
| 4     | Start/Stop PB. Button   |                           |         | Nos.    |
| 5     | 06A SP MCB for control supply   |                           |         | Nos.    |
| 6     | Neutral Link  |                           |         | Nos.    |
| 7     | 5 KVAR Capacitor MPP-heavy duty With Discharge Resistance ( Aluminium Round Enclosure )   |                           |         | Nos.    |
| D     | <b>Wiring &amp; Accessories :</b>   |                           |         |         |
|       | The APFC panel shall be complete with all the wiring, ferrules, terminal strips. The busbars support shall be Epoxy Moulded DMC/SMC. Panel shall has appropriate neoprene rubber gaskets, panel door locks, filter for air louvers, lifting hooks.  |                           |         |         |
| 2.2   | <b>Routine Inspection test for following shall be carried out on APFC panel at BHEL Site:</b>   |                           |         |         |
| 2.7.1 | Operational & Functional Test   | Vendor to Confirm         |         |         |
| 2.7.2 | Insulation Test at 1 KV   | Vendor to Confirm         |         |         |
| 2.7.3 | HV Test at 2.5 KV for 01 Minute   | Vendor to Confirm         |         |         |
| 2.7.4 | Load Test   | Vendor to Confirm         |         |         |
| 3.0   | <b>Installation and Commissioning of APFC Panel at BHEL works (Civil foundation work by BHEL)</b>   |                           |         |         |
| 3.1   | The installation includes installation of APFC panel, connection of cables to LT Panel (Cables in BHEL Scope), connection of earthing system (earth pits & earthing strip shall be provided by BHEL), and any other job required to be carried out for installation of the APFC Panel at BHEL works. Unloading & shifting by BHEL in presence of supplier.  | Vendor to Confirm         |         |         |
| 3.2   | Successful working of full capacity of the APFC panel by the supplier shall be considered as part of commissioning.   | Vendor to Confirm         |         |         |
| 3.3   | Tools, Tackles, instruments and other necessary equipments required to carry out all above activities should be brought at installation site by the supplier on returnable basis.   | Vendor to Confirm         |         |         |
| 3.4   | Commissioning spares if required for commissioning of the APFC within stipulated time, shall be brought by the supplier on returnable basis.  | Vendor to Confirm         |         |         |
| 3.6   | <b>Training</b>   |                           |         |         |
| 3.6.1 | Demonstration of all features of the equipment, control system & accessories & training of BHEL operators after installation at BHEL site for efficient and effective use of the equipment by supplier after commissioning of equipment.  | Vendor to Confirm         |         |         |
| 4.0   | <b>Packing &amp; Transportation</b>   |                           |         |         |
| 4.1   | Packing & transportation shall be done for all items of complete machine with all Accessories and other supplied items to avoid any damage/loss. When machine is despatched, all small loose items shall be suitably packed in boxes. Any loss/damage occurred during transit/unloading, then same shall be borne by supplier.  | Vendor to Confirm/specify |         |         |
| 5.0   | <b>Guarantee</b>  |                           |         |         |
| 5.1   | Guarantee for 24 months from the date of acceptance of the equipment after I&C at BHEL works. During Guarantee period, at least 2 visits per year and/or whenever called by BHEL (within 48 hours of call) by the service engineer of the supplier to be made & the parts, items, spares etc. needing replacement to be replaced by the supplier free of cost. In support a Performance Bank Guarantee of 10% of Basic Value of P.O. valid for 24 months from the date of commissioning will have to be furnished by the supplier | Vendor to Confirm/specify |         |         |
| 6.0   | <b>Drawings and documents to be furnished by the tenderer</b>   |                           |         |         |
| 6.1   | Following documents (Hard copies) in English language should be supplied along with the machine. Only originals shall be supplied. Photocopies will not be accepted.  | Vendor to Confirm         |         |         |
| 6.1.1 | General Technical leaflets/details of APFC Panel.   | Vendor to Confirm         |         |         |
| 6.2   | <b>After placement of order - 03 sets</b>   |                           |         |         |
| 6.2.1 | Outline dimensional drawing showing the general arrangement and indicating the space required for detachable type cable end box, base dimension details, details of foundation, etc.  | Vendor to confirm         |         |         |
| 6.2.2 | Drawings of major components, Terminal arrangement, control schematic and wiring diagram  | Vendor to confirm         |         |         |
| 6.2.6 | Operation and maintenance manual  | Vendor to Confirm         |         |         |

मोहोर सिंह धर्मशक्तु M.S. Dharmashaktu  
 ज्येष्ठ अभियंता (मैके) Sr. Engineer (ME)  
 बी.एम.ई.एल. बंगला BHEL, Rudrapur  
 उत्तराखण्ड - 263153 Uttarakhand-263153



# Bharat Heavy Electricals Limited

Enquiry No.:

Due Date:

Supplier's Ref.:

Date:

## Part A (Techno-Commercial Bid)

## Section III

### Specification cum Compliance Certificate for 100 KVAR APFC Panel

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Name &amp; Address of the supplier:

Telephone No.

Fax No.

e-mail :

Scope: Design, manufacture, supply, installation, testing &amp; commissioning of 100KVAR APFC panel complying with the following specifications.

| S No. | Description - BHEL's Requirement   | Specified                 | Offered | Remarks |
|-------|--|---------------------------|---------|---------|
| 7.0   | General  |                           |         |         |
| 7.1   | Length x Width x Height of APFC Panel  | Vendor to specify         |         |         |
| 7.3   | The electrical components used shall be from reputed international makes as per annexure-P and shall be in accordance with DIN/IEC Standards.                                      | Vendor to Confirm/specify |         |         |
| 8.0   | All other items not specified here but, necessary for safe, satisfactory and uninterrupted operation of APFC Panel shall be supplied & installed by the supplier.                  | Vendor to Confirm         |         |         |
| 9.0   | The design and operational features of the equipment offered shall also comply with the provisions of latest issue of the Indian Electricity Rules and other statutory regulations | Vendor to Confirm         |         |         |

NOTE:(1) BIDDERS MAY VISIT BHEL-CFP SITE FOR ACTUAL SITE CONDITIONS BEFORE SUBMISSION OF OFFER

(2) Offers with deviation to BHEL specifications, terms &amp; conditions of tender enquiry are liable to be rejected.

Signature &amp; Seal of Bidder

मनोहर सिंह धर्मशक्ती  
 सचिव अभियंता (सि.एन.)  
 सी.एन.ई.एल. ब्लॉक  
 उत्तराखण्ड - 263153

M.S. Dharmshakti  
 Sr. Engineer (S.N.)  
 BHEL, Rudrapur  
 Uttarakhand-263153