

Project Engineering  
Management

**BHARAT HEAVY ELECTRICALS LTD.**  
(A Govt. Of India Undertaking)  
**PURCHASE ENQUIRY**



REF :	PE-LPE/187
REF. DATE	24/12/2014
DUE DATE	14/01/2015

To,

Dear Madam/Sir,

**Subject: Repair of fire alarm system**

Quotations are Invited in sealed cover with Enquiry No., Enquiry Date, Quotation Due Date & Time, Name/ Address of the Organisation submitting the offer legibly super- scribed on it, for the above- mentioned item so as to reach the Tender Room before 2:00 P.M. on or before the above mentioned Due Date.

**SCOPE:**

Repair of fire alarm system (make Schrack Seconet).

**PAYMENT TERMS**

90% against erection, commissioning & testing and 10% after guarantee period. Security deposit of 10% of contract value shall be payable by the vendor and the same shall be refunded after successful execution of the contract

Please quote the total F.O.R. destination BHEL /PEM, NOIDA inclusive of all taxes, freight, handling packaging, charges, transit insurance etc and shall remain firm without any variation till completion of the contract.

**BID SUBMISSION:**

Completeion Period shall be 4 months from the date of Order

All other terms and condition shall be as per NIT.

Thanking You,

Yours faithfully,  
For and on behalf of BHEL

Vivek Singh Kuntia  
BHEL PEM, Noida

Please reply to:  
Power Project Engineering Institute  
HRD & ESI Complex, Plot No 25, Sector 16 A

Phone:  
Fax No:

Regd. Office:  
BHEL House  
Siri Fort

<b>TERMS AND CONDITIONS</b>
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**1. BID SUBMISSION**

Bids shall be submitted latest by 2 P.M. on or before the due date in two parts as follows:

**PART-1: TECHNO-COMMERCIAL BID (IN DUPLICATE)**

This part shall contain the following:

- a) Technical offer/details
- b) Commercial terms and conditions
- c) Unpriced copy of the price bid with all amounts/figures/ percentages wherever quoted in the price bid being replaced with the word 'Quoted' or 'Q'.

This part shall be submitted in duplicate in two separate Sealed Covers with bidder's distinctive Seal super scribed with correct Enquiry No., Item of supply, due date of opening and 'part-1 : techno-commercial bid'.

Complete tender in all respects duly signed & stamped on each and every page by the authorized signatory of the bidder as a token of acceptance of all the terms and conditions of tender.

**PART -2: PRICE BID**

This part shall contain Prices only and should not contain any technical details and/or Commercial Terms & Conditions. Any technical details and/or Commercial Terms & Conditions, if found in this part shall be ignored as the same are supposed to be contained in PART-I only as indicated above.

This part shall be submitted in a separate Sealed Cover with bidder's distinctive Seal super scribed with correct Enquiry No., Item of supply, due date of opening and 'part -2: price bid'.

**2. BID OPENING**

PART- I (Techno-Commercial Bids) will be opened at 11 a.m. on the due date in the presence of bidders who may like to be present. Date and time of opening of Part - II (Price Bids) shall be communicated separately.

**GENERAL**

3. Prices shall be net F.O.R. destination inclusive of freight, handling and packing charges, transit insurance etc. and remain valid for 3 months from the due date.
4. Taxes and duties (statutory variation as per Annexure-2) payable should be indicated separately, otherwise it will be presumed that the goods quoted are inclusive of all taxes, duty, octroi etc., if any and BHEL in such cases shall not pay any tax, duty, octroi etc.
5. No revision of prices shall be entertained after bids have been opened.
6. Prices shall remain firm without any variation till completion of contract.
7. Manufacturer's name, trade Mark or Patent No., if any, should be specified.
8. Illustrative leaflets giving technical details of items offered should be enclosed, wherever necessary.



- 9 BHEL shall be under no obligation to accept the lowest or any other bid and shall have the right to accept or reject any bid in part or in full without assigning any reason whatsoever.
10. Late tenders will be rejected.
11. BHEL reserves the right to split the order for individual item(s) with different bidders and also increase/decrease the quantities.
12. Product with I.S.I certification marks will be preferred.
13. **PACKING AND MARKING**: Vendor shall arrange for sound packing and marking the goods to avoid any loss or damage during transit.
14. **PAYMENT**: The payment will be made after verification and acceptance of work on basis of actual measurement at site. After submission of bill, cross check measurement in the presence of the party will be done and bill will be passed for payment within a month.
15. **SUBMISSION OF INVOICE**: All Invoices along with specified documents shall be submitted in triplicate, to HR-GAX Deptt. Of BHEL/PEM, BHEL, PPEI, NOIDA-201301.
16. **LIQUIDATED DAMAGES**: It is clearly understood among the parties to the contract that time is the essence of the contract. Therefore, the delivery of the works specified in the Order should be made within the stipulated delivery period. Where work is done after the stipulated period, the Purchaser shall be under no obligation to accept the works. However, if accepted, Liquidated Damages at the rate of 0.5% per week of delay or part thereof shall be levied on the value of works delayed limited to 10% (excluding taxes) of the total contract value, without prejudice to any other relief or compensation due to the Purchaser under any other condition of the Purchase Order.
17. **PRICE DISCREPENCY**:
  - (a) If, in the price structure quoted for the required goods/services/works, there is discrepancy between the unit price and the total price (which is obtained by multiplying the unit price the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price., in which case the total price as quoted shall govern and the unit price corrected accordingly.
  - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
  - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in the words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above.
  - (d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date up to which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.
  - (e) Taxes and duties if not specified clearly as extra shall be considered as include in the basis price and, therefore, shall not be reimbursed.
18. **SECURITY DEPOSIT**: 10% of order value without taxes & duties shall need to be submitted by vendor after award of contract, to BHEL/PEM to cover the due performance of Order/ Contract and to fulfil the guarantee conditions stipulated in the Order/Contract. Security deposit shall be refunded after successful completion of the contract.



19. **EARNEST MONEY DEPOSIT**

Bidders are required to remit Earnest Money Deposit of Rs. 20,000.00 in the form of DD / Pay Order payable in favour of "M/s BHEL" on any scheduled bank, Noida. **No interest shall be payable by BHEL on EMD amount.** The EMD shall be forfeited in case of:

- a) After opening the tender, the tenderer revokes his tender within the validity period or increases his earlier quoted rates.
- b) The tenderer does not commence the work within the period as per LOI/Contract. In case the LOI/contract is silent in this regard within 15 days after award of contract.

20. **RISK PURCHASE**: Purchaser will have the option to terminate the contract and purchase from elsewhere at the risk and cost of the Vendor, either the whole or part of the goods which the Vendor has failed to deliver or despatch within the stipulated delivery period or if the same were not available, the best and the nearest available substitute thereof. The Vendor would be liable to compensate the Purchaser for any loss which the Purchaser may sustain by reason of such risk purchase, in addition to Liquidated Damages at the rate mentioned above.

21. **STATUTORY VARIATION:**

- i) If the rates for taxes and duties in respect of the quoted materials and/ or services assumed by the Seller/ Contractor are less than the tariff prevailing at the time of tendering, Seller/ Contractor will be responsible for such under quotations. However, if the rates assumed are higher than the correct rates prevailing at the time of tendering, the difference will be to the credit of the Purchaser.
- ii) Statutory Variations in Service Tax only on self-manufactured items/ services rendered by vendor himself on the rates prevailing at the time of delivery/ completion in comparison to the date of offer, will be to the account of the Purchaser. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the Purchaser.
- iii) Notwithstanding the above, where the actual completion of the supply occurs beyond the period stipulated in the Order/ Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Seller/ Contractor alone shall bear the impact for the upward revisions and for downward revisions; purchaser shall be given the benefit of reduction in taxes/duties. This will be without prejudice to the levy of penalty for delay in delivery/completion schedule.
- iv) Any new tax structure (like Goods & Services Tax) as and when implemented by the Government shall become applicable in addition to or in lieu of existing tax structure.

**NOTE:**

It is presumed that the bidder has accepted all the instructions, Terms and conditions and Technical Specifications covered in this Tender Enquiry, unless the deviations are specifically indicated in the bid on a separate sheet.



TENDER SPEC. NO. PE-TS-PPEI-552-A001-00

**D**

**REPAIR OF FIRE DETECTION SYSTEM FOR PPEI BUILDING, Plot No.25, Sector-16A, Noida**

**PRICE SCHEDULE (REV. 00) : BREAK UP PRICE OF SUPPLY & E&C**

Clause No.	DESCRIPTION	Qty.	Unit	Unit Rate (Rs.)	Total Ex-Works Price (Rs)	Excise Duty	CST / VAT	Freight	Total "FOR" Site Prices (Supply) (Rs.)
1.1.0	Total lump sum price for <b>supply of items</b> inclusive of inspection & testing at manufacturer's works/his sub-vendor's works, packing, forwarding, and transportation to (PPEI Building, Sector-16A, Noida) of Fire Detection System included in spec. PE-TS-PPEI-552-A001 with further break-up:	1	2	3	4=(1*3)	5	6	7	4+5+6+7 =8
1.1.1	Upgrade Kit (Comprising of Mother Board Unit (B5-MCU32E) and Power Supply Unit (B5-PSYU) with Bus Bar	1	Set						
1.1.2	Supply of Manual Call Point (MCP545X)	2	Nos.						
1.1.3	Supply of Multi-Sensor Detector (Model No. MTD533X)	60	Nos.						
1.1.4	Any other item required to make Fire Detection System functional, but not mentioned in specification	1	Lot						
1.1.5	Installation, Programming and Commissioning of the System	1	Lot						
	<b>TOTAL</b>								
Notes									
1)	In case, price indicated above (1.1.0) does not match with the total of item wise break-up given at 1.1.1 to 1.1.5, the highest price so calculated shall be considered for evaluation but in case of order, the same shall be placed at the lowest price.								
2)	Bidder to quote for each item separately.								
3)	Price format shall not be changed by bidder.								

**BHEL Specification No. PE-TS-PPEI-552-A001 (Rev.00)**

**Technical Specification for Fire Detection System at PPEI, Building**

**1.0.0** M/s Schrack, Austria Make Fire Detection System (FDS) has been installed at PPEI Building (at First & Second Floor), Sector-16A, Film City, Noida in year 2005 during construction of PPEI Building. FDS system comprise of Fire Alarm Control Panel, multi-sensor detectors, manual call points, hooters, control cables etc. The system is approved/listed by VdS, Germany. Presently FDS system is not working and need to be repaired for failed components of Fire Alarm Control Panel, detectors, MCPs, hooters etc. in order to make it functional. **Following is the brief specification for Fire Detection and Alarm System:**

**1.1.0 Upgrade Kit for Fire Alarm Panel:** For upgrading existing Integral (B3) control panels to Integral IP MX (B5) control panels. The upgrade kit consists of a module rack with built-in B5-MCU main processor unit, B5-PSU power supply unit, bus circuit board and relay circuit board.

**1.2.0 MULTI SENSOR DETECTOR with BASE:**

The Multi Sensor Detector shall be deployed as a smoke detector, heat detector or as a combination detector, as per the site requirement.

- a) Principle of function shall be "Scattered light" and "NTC sensor"
  - Smoke detection shall also always involve temperature evaluation

- In the event of a rapid increase in temperature fires shall also be detected without the formation of smoke

- Smoke and temperature sensors would be able to be activated and disabled separately

- Automatic changeover shall be possible based on time of day or clock time

- The highest degree of safety shall be possible by detecting smoke particles of all sizes

- Detectors shall have in-built integrated short circuit isolator which shall ensure, in the event of a wire break or a short circuit, the fault is localized and that the operation the loop circuit continues unimpeded.

b) Sensitivity: The detectors shall constantly monitor their surrounding conditions with regard to absolute highest temperature and relative temperature increase and shall calculate the optimum smoke and heat sensitivity for the area it is deployed in based on these factors. The sensitivity of the smoke detection part shall permanently and automatically adapt to the surrounding conditions i.e. if the temperature increases above the absolute or relative values, the sensitivity of the smoke detection chamber shall automatically increase and if the temperature falls again, the smoke chamber shall become less sensitive again. The sensitivity shall always remain within the range set out in standards.

- Detectors shall be capable of constant self tests

- Detectors shall have resistant against environmental influences

- All detector data and events shall be saved



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## Annexure-3

- Pre-alarm levels shall be possible to be set at 30% or 75%. A pre-alarm signal shall be possible to be sent to the fire alarm control panel
- Virtual loop fire zones shall be possible to be defined as required
- Monitoring of the detector's contamination state shall be possible
- Detector's supply voltage monitoring shall be possible
- Detectors shall have in-built overvoltage protection
- Temperature classes shall be possible to set in accordance with EN 54 using software
- LED alarm indicator shall be viewable from 360°
- Response / Parallel indicator or base-mounted sirens shall be possible to be connected
- Protection class shall be IP 44 with base
- Operating Ambient temperature range shall be -25° to +60°C

Detectors shall be approved by VdS, as per EN54

### 1.3.0 MANUAL CALL POINT

Manual Call Point (MCP) shall be used to manually trigger a fire alarm and shall be suitable for connection to OEMs loop technology. The MCPs shall contain a **short circuit isolator** and a red alarm LED. The alarm shall be triggered by smashing the glass panel, with the alarm remaining in alarm state until a new glass panel is inserted.

Approval: VdS or LPC in accordance with EN 54-11

### 1.4.0 MONITOR / INPUT MODULE

The input module shall contain 4 inputs for the monitored and non-monitored querying of potential-free contacts. It shall contain an integrated short-circuit isolator. Its operating mode shall be able to set separately for every input in Loop Assistant. The inputs shall be suitable for detecting switching states of longer than 330ms, with the addressing of the module and the setting of its parameters being carried out from the fire alarm control panel by means of PC software. The protection class of Input module shall be IP 66 with case and operating Ambient temperature range shall be -20 to +60°C and Approved by VdS.

### 1.5.0 CONTROL / RELAY MODULE

The relay module shall contain 4 relays each containing a potential-free double-throw contact with a fail-safe, with the power supply also being internally monitored on the loop circuit for under voltage. It shall contain an integrated short-circuit isolator. Both the addressing of the module, and the setting of its parameters are carried out using PC software via the fire alarm control panel. The protection class of Input module shall be IP 66 with case and operating Ambient temperature range shall be -20 to +60°C and Approved by VdS

### 1.6.0 ADDRESSABLE LOOP POWERED SOUNDER

Addressable signal emitter for acoustic signaling of a fire alarm in indoor areas, suitable for direct connection to the loop. The siren shall be red in colour, with four different types of tone and the volume being set using DIP switches.

Parameters:



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**Annexure-3**

- Signal volume: 89 to 99 dB / 1 m (dependent on sound)
- Short Circuit Isolator: Integrated

**1.7.0 Bill of Quantities:**

Tentative BOQ for items which are required to make the system functional is attached as Annexure-I. Bidder to note that BOQ enclosed is indicative and may vary to some extent. Bidder to ensure that it has to provide each and every item to make the FDS System functional.

S.No.	Description of Item	Quantity	Unit
1.0	Mother Board Unit (B5-MCU32E)	1	Set
2.0	Power Supply Unit (B5-PSYU) with Bus Bar	1	Set
3.0	Supply of Manual Call Point (MCP545X)	2	Nos.
4.0	Supply of Multi-Sensor Detector (Model No. MTD533X)	60	Nos.
5.0	Any other item required to make Fire Detection System functional, but not mentioned in specification	1	Lot
6.0	Installation, Programming and Commissioning of the System	1	Lot

**1.8.0 Approval/Listing:**

Components of Fire Alarm Control Panel shall be listed/approved by VdS, Germany.



PRE-QUALIFYING REQUIREMENTS

Fire Alarm and Detection System (Microprocessor based) should have been successfully in use for at least one year in commercial complex/multi-story industrial building etc. The supplied Fire Alarm Control Panel shall be UL/FM/LPCB/VdS approved/listed. For this the supplier has to submit either of following supporting documents meeting below mentioned conditions.

Copy of minimum two performance certificate from the end-user along with copy of related purchase order specifying that the Fire Detection and Alarm System is running successfully for one (1) year from date of commissioning.

OR

Minimum three customer's/ third party inspection reports along with purchase order copy meeting the minimum pre-qualifying requirement.

OR

Minimum three purchase orders (placed with minimum gap of 6 months from previous purchase order) from same purchaser meeting the minimum pre-qualifying requirement.