Sub: Tender enquiry for Fabrication, supply, wiring & installation, testing and commissioning of wall mounted air circulators powered by bus trucking system at various locations of AFD.

Sealed offers are invited for and on behalf of the President of India, for Fabrication, supply, wiring & installation, testing and commissioning of wall mounted air circulators powered by bus trucking system at various locations of AFD. This work includes installation and testing of air circulators at various location of AFD and provision of supply to air circulators using bus trucking system.

**Scope of Work:**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Description</th>
<th>Specification and Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fabrication, supply, wiring &amp; installation, testing and commissioning of wall mounted air circulators powered by bus trucking system at various locations of AFD</td>
<td>As per Annexure -A</td>
</tr>
</tbody>
</table>

**Terms and conditions:**

1. Offer should be valid for minimum 90 days otherwise it will be rejected.
2. Only Lumbsum prices to be quoted.
3. The completion period of this job should be within 6 months from the date of issue of work order.
4. Persons having valid PVC will only be allowed to enter BARC to execute the job.
5. Warranty period should be 12 months (Minimum) after completion of work.
6. The payment will be made after the satisfactory completion of the work.
7. Income Tax and S.C. as applicable will be deducted from the bill.
8. Any delay which is attributed to the contractor is liable for penalty @0.5 % Per Week (Max 5%).
9. Quotations are to be printed on letter head / quotation format which should consist of GST registration number registered with local authority, PAN of the firm. Computer generated quotation shall be considered as invalid & rejected.

10. Sealed offer with tender no and due date legibly written on the sealed envelope should reach through speed/registered post on or before 20/11/2020.

To,

Shri Bhupendra Patidar,
Scientific Officer (F)
Atomic Fuels Division
Bhabha Atomic Research Centre
Trombay, Mumbai 400 085.

b) The contractor shall have to visit the site to comprehend the scope of work and equipment condition. The same will be arranged by the undersigned. The site can be visited between 11/11/2020 to 13/11/2020 on working days between 10:30am to 4:00 pm. however prior intimation of at least three working days is necessary.(Tel : 022 25597410, email: bpatidar@barc.gov.in)

c) Supplier shall have valid electrical license and previous experience of installation & commissioning of hybrid APFC panel/similar work with documentary evidence. Without documents for above work execution, site visit shall not be considered.

The quotation submitted without site visit will not be considered.

Details and Confidentially & Publicity Clause

I. No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as “proprietary” in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-contractor, consultant, adviser or employees engaged by a party with equal force

II. “Restricted information” categories under section 18n of the Atomic Energy Act, 1962 and “Official Secret under Section 5 of the Official Secret Act, 1923:

Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequence under the aforesaid legislation.

III. Prohibition against use of BARC’s name without permission for the publicity purpose:

The contractor, sub-contractor, consultant, adviser or the employees engaged by the contractor, shall not use BARC’s name for any publicity purpose through any public
media like press, Radio, T.V. or Internet without the prior written of BARC. Contractor shall obtain Police verification certificate for all his employees including his supervisors and workers engaged in the work.

(B. Patidar)

SO/E, TSS, AFD

For & On behalf of President of India
Annexure-A

1. Fabrication, supply, wiring & installation, testing and commissioning of wall mounted air circulators powered by bus trucking system at various locations of AFD.

<table>
<thead>
<tr>
<th>Sr. no.</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>600 mm Wall mounting air circulator</td>
<td>1 set</td>
</tr>
<tr>
<td></td>
<td>- Voltage: 230 V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Frequency : 50 Hz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Power : 180 W</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Speed : 1440 RPM</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Air Deflection : 270 m³/min</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- No. of blade : 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- No. of speed : 3 (using Push button)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Aluminium alloy one-piece blade</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Double ball bearing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Vertical Angle adjustment from 22⁰ to 45⁰</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 90⁰ oscillation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sturdy close-mesh guard</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Bus trucking system : 165 meter</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Voltage : 440 V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Current : 40 A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Conductor material : copper</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Neutral : 100 %</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Insulation voltage : 690 V</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Straight Length 3 mtr Pieces with 5 plug in hole arrangement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- End feed Unit (Suitable for Cable termination along with Flange end and End cap)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Bracket for threaded rod</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Tap of unit - 10A, 1 single phase with Phase selection option</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- MS Fabrication support/ Gripple support</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Power distribution board : 1 no</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- No of way : 18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Main MCB : 63 A, 4 pole</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>-------------</td>
<td></td>
</tr>
</tbody>
</table>
| 1.  | Outgoing : 32 A, 4 Pole  
IP rating : IP43  
As per IEC 61439-3  
Copper Busbar: 100 A  
Fully shrouded Neutral bars  
Double door structure |
| 2.  | Power distribution board : 2 no  
No of way : 18  
Main MCB : 32 A, 4 pole  
Outgoing : 20 A, 2 Pole  
IP rating : IP43  
As per IEC 61439-3  
Copper Busbar: 100 A  
Fully shrouded Neutral bars  
Double door structure |
| 3.  | Flexible copper cable: 150 m.  
Core : 3  
Size : 2.5 sq mm  
Insulation : FRLS  
Voltage : 1100 V |
| 4.  | 1 inch PVC pipe : 100 m |
| 5.  | 5 A switch socket board : 50 Nos |

**II. General Condition**

1. Low voltage switch gear shall complied IEC 60947.
2. All wire and cable used in electric panel shall be FRLS type.
3. All wires and cables used in panels shall be of suitable colour code.
4. Spacing between electrical components in panel shall be as per the IEC standard (60439).
5. Two earthing points shall be provided on electrical panel.
6. Electrical components used in the panel shall be of reputed make.
7. Panel shall be coated in Siemens gray/ standard with seven tank processing.
8. Proper cooling arrangement shall be made inside the panel to limit temperature with in 40\(^o\)C.
9. The panel shall be designed for continuous operation (24 hrs X 7 Days).
10. All unwanted, removed fittings, parts, panels are to be disposed as per the instruction of departmental engineer.
11. All panelling and other installation works include earthing as per I.S standard with bare copper conductor.
12. Submit all catalogues, brochures and datasheet of the offered products along with offer.

III. Inspection and test
1. Before leaving the manufacturing work, all equipments shall have been inspected and tested and the results recorded in test report.
2. The manufacturer shall provide test report of each and every electrical components of power panel and submit at the time of inspection / execution.

IV. Following test shall be carried out,
2. Continuity test
3. Insulation test
4. High voltage test

The On-Site acceptance test (On-SAT) will be conducted after system installation on site and is intended to assure that no damage occurred to the system during shipment, that the system is correctly installed and that the system requirements are satisfied when connected to “live” field inputs/outputs. Actual testing of the complete system with actual load or equivalent operation/function must be done to validate the system at the purchaser’s site.

V. Documentation and training
1. The manufacturer shall supply at least following drawing /documents in the quantities indicated.
   1.1. Bill of material
   1.2. Transport, installation, commissioning, operation, maintenance instruction and fault finding procedure.
   1.3. Single line diagram
   1.4. As built control and power wiring diagram
   1.5. Manual of air circulator and bus trucking system
   1.6. List of recommended spare parts
   1.7. Test certificate of each components
2. Supplier shall provide to training to three persons that will covers all aspect of air circulators and bus trucking system such as system feature, operation & maintenance procedures and safety criteria.
VI. Warranty and support services
1. Supplier shall provide minimum one year of warranty of air circulators, bus trucking system and accessories.
2. The supplier shall indicate the organization, manpower and other resources of customer support division.
3. The supplier shall have support from the principal for a period of 5 years. The address of the principal may also be mentioned.
4. Supplier shall provide list of customers along with the name, address and contact details to whom similar or higher capacity system supplied.
5. The supplier shall further ensure the availability of all spares for at least 5 years from the date of acceptance of the system.

VII. Services available
1. Electrical: 415V, 3-phase, 50Hz & 230V, 1-phase, 50Hz are available.
2. Compressed air at 6 kg/cm^2 is available.
3. Cooling water at 2 kg/cm^2 is available.
4. Vendor shall mention the Electrical power requirement, voltage, current, connection method, line size etc.
5. Vendor shall also mention the other services required for the operation of press like compressed air requirement, cooling water requirement etc.
6. Vendor shall inform the services requirements in advanced for appropriate arrangement to be made by purchaser.

VIII. Packing and forwarding
All the items shall be divided into several shipping sections for protection and ease of handling during transportation. The equipment shall be properly packed for transportation by ship or rail or trailer. Electrical items shall be wrapped in polyethylene sheet before being placed in the wooden crates or cases to prevent damage to the finish. This side up, centre of gravity, weight, owner particulars, purchase number, shall be clearly marked on the package together with other detail as per purchase order.