



# भारत हेवी इलेक्ट्रिकल्स लिमिटेड

( भारत सरकार का उपक्रम )

## BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

**TCN - 06**

Ref: PSER:SCT:SNG-M1625:TCN-06

Date: 28/11/2014

Sub	Tender change notice (TCN) 06	
Job	Design, engineering, manufacturing, supply/Delivery, erection, Commissioning, trial run, handing over to customer etc of ventilation System for 2x600MW Unit at Singareni STPP, Adilabad , Andhra pradesh .	
Ref	1.0	Tender no PSER:SCT:SNG-M1625:14
	2.0	BHEL's NIT, vide ref no PSER:SCT:SNG-M1625:4039 Dated 11/11/2014
	3.0	BHEL's TCN 01 dated Ref: PSER:SCT:SNG-M1625:TCN-01 Date: 12/11/2014
	4.0	BHEL' s TCN 02 dated ref:PSER:SCT:SNG-M1625:TCN-02 date 18/11/2014
	5.0	BHEL' s TCN 03 dated ref:PSER:SCT:SNG-M1625:TCN-03 date 20/11/2014
	6.0	BHEL's TCN 04 dated PSER:SCT:SNG-M1625:TCN-04 Date: 25/11/2014
	7.0	BHEL's TCN 05 dated PSER:SCT:SNG-M1625:TCN-05 Date: 27/11/2014
	8.0	Other references (if any).

With reference to above, following points , relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 SI No 2.0 of TCN -05 -Clarification to bidder's queries as per ANNEXURE-A to TCN-05 stands superseded.
- 2.0 **BOQ cum price schedule format VOL-III A, PRICE SCHEDULE, REV-0** has been revised as **VOL-III A- PRICE SCHEDULE, REV-01** which is enclosed herewith. **As such you are requested to consider the revised BOQ/price schedule only and quote your price accordingly.** Offer from bidders in superseded price schedule (Vol-III, REV-0) shall not be considered. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid in sealed envelope as per **REVISED price schedule format (VOL-III A , PRICE SCHEDULE , REV-01).**
- 3.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached Format only .
- 4.0 All other terms & conditions shall remain unchanged .

Thanking you,

Yours faithfully,  
For BHARAT HEAVY ELECTRICALS LTD

**DY MGR (SCT)**

Encl

- 1.0 Revised 'No deviation certificate' format.
- 2.0 Vol-III A-REV01

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211495/ 1691

**FORMAT FOR NO DEVIATION CERTIFICATE**  
**(To be submitted in the bidder's letter head)**

BHARAT HEAVY ELECTRICALS LIMITED,  
Power Sector - Eastern Region,  
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Design, engineering, manufacturing, supply/Delivery, erection, Commissioning, trial run, handing over to customer etc of ventilation System for 2x600MW Unit at Singareni STPP, Adilabad , Andhra pradesh .	
Ref	1.0	Tender no PSER:SCT:SNG-M1625:14
	2.0	BHEL's NIT, vide ref no PSER:SCT:SNG-M1625:4039 Dated 11/11/2014
	3.0	BHEL's TCN-01 , vide ref no PSER:SCT:SNG-M1625:TCN-01 Dated 12/11/2014.
	4.0	BHEL's TCN-02, vide ref no PSER:SCT:SNG-M1625:TCN-02 Dated 18/11/2014
	5.0	BHEL's TCN-03, vide ref no PSER:SCT:SNG-M1625:TCN-03 Dated 20/11/2014
	6.0	BHEL's TCN-04, vide ref no PSER:SCT:SNG-M1625:TCN-04 Dated 25/11/2014
	7.0	BHEL's TCN 05 vide ref no PSER:SCT:SNG-M1625:TCN-05 Date: 27/11/2014
	8.0	BHEL's TCN 06 vide ref no PSER:SCT:SNG-M1625:TCN-06 Date: 28/11/2014
	9.0	Other references (if any) .

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void .

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, Integrity Pact (If applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature , date & seal of authorized  
Representative of the bidder)

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय )  
POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091  
फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

**VOLUME-III  
PRICE SCHEDULE, REV-01**

**Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP , Adilabad, A.P.**

**TENDER NO - PSER:SCT:SNG-M1625:14**

**PREAMBLE**

1	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with Volume-IB, ID, IE , Volume – IF and other tender sections as applicable.
2	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
3	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
4	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes(except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule.
5	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within fifteen percent ( $\pm 15\%$ ) of the awarded price as per LOI .
6	Prior written approval of BHEL shall be sought by the contractor in case quantity variation of any item crosses +50% (plus fifty percent) limit during execution and approval to be obtained before execution of further quantity for this item.
7	In case Sealed /Paper Price Bids are opened for finalisation of the tender, for any Item Rate/BOQ based contract, possibility of variation of quantity/ addition/deletion of items can not be ruled out. Under such circumstances, after execution of work, if it is observed that standing as L-1 is changed based on actual quantity executed, the bidder shall give suitable rebate to maintain your standing as L-1. Since this aspect can be assessed at the end of execution, necessary adjustment will be effected at the end of execution in final bill.This condition shall not be applicable where the tender is finalised through Reverse Auction.
8	BHEL reserve the right to rationalize the rates, quoted by L-1 bidder against unit rate items and/ or other optional items with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.
9	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing , clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same.
10	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language.

11	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up.
12	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
13	No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders.
14	Bidders are not allowed to alter the Price Schedule format including item description, quantity etc. and the offer is liable for rejection if the bidders submit their prices in Price Schedules modified by them. BHEL reserves the right to reject the offers of bidders who submit offers in Price Formats which are modified/altered by them.
15	Bidders to note that for Civil & Structural packages, against a particular item against a ST No. appearing in more than one schedule of the BOQ, same rate must be quoted in all schedules for that particular items with same descriptions. If by error, different rates are quoted in different schedules for same ST No. (i.e. item with same description), then the higher of the rates shall be considered for evaluation but awarding shall be done with the lower rate, if the bidder becomes L-1."
16	In case of Lumpsum contracts, addition or deletion of the scope beyond the variation limit specified shall be derived from the quoted Lumpsum price and the tendered scope of work considering the allowable variation limit.
17	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
18	In case of tender for Civil and/or Structural works, the Non-schedule items are not quoted by the bidder, it will be treated at par with rate of corresponding item of CPWD/PWD/DSR schedule as prescribed in the tender/BOQ cum Rate Schedule.
19	Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items.
20	Bidder's GRAND Total price will be shall be considered for evaluation unless stated otherwise.
21	In case of BOP packages, if Bidder does not quote/indicate the price for freight charges against indicated rate schedule, the same shall be considered as 2% of basic price and adjusted with the total quoted price against each item keeping the total quoted price unaltered.

<b>VOLUME-III PRICE SCHEDULE, REV-01</b>		
<b>Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.</b>		
<b>Tender No. PSER:SCT:SNG-M1625:14</b>		
<b>SCH-1 - TOTAL PRICE</b>		
<b>SL NO</b>	<b>DESCRIPTION OF EQUIPMENT/ ITEM</b>	<b>TOTAL QUOTED PRICE (₹)</b>
1.0	Total price for supply part & service part together for design, engineering, manufacturing, inspection and testing, painting, supply/ delivery duly packed at project site including freight, receipt, unloading, storage & handling at site, erection, commissioning, trial run, handing over to customer etc in line with drawings/ documents/ test procedures approved by BHEL/ customer, including supply of consumables, start-up & commissioning spares, special tools & tackles for maintenance, for the total scope defined in technical specification and terms & conditions of tender, taking into account all clarifications, confirmations and agreements till date for Ventilation System. (This shall match with total price for supply & service part at sl. no. 1.1 of SCH-2)	
2.0	Total Price of Mandatory spares including all taxes , duties etc. (As per Schedule-5 )	
3.0	GRAND TOTAL SL. NO. (1.0+2.0)	
<b>NOTE</b>		
1.0	Bidder to note that total price indicated above at 3.0 shall be considered for evaluation and hence should be complete in all respect for the full scope defined and considering all terms and conditions.	
2.0	While total price at sl no 3.0 as per above will be considered for evaluation, bidder shall furnish further break-up of price in the following schedules.	
3.2	SCH-3 - Supply price break-up.	
3.3	SCH-4 - Service price break-up.	
3.4	SCH-5 - Mandatory Spare	
3.5	SCH-6 - Guaranteed power consumption (GPC).	
3.0	Any item as per scope of work if not included in the price quoted above and shown separately will not be taken into cognizance and the offer shall be liable for rejection.	
4.0	Total price of Supply Price Break up of SCH-3 excluding price of sl. no. 2.1.17, should match with SL NO 2.1 of SCH-02 .	
5.0	Total price of Mandatory supply price break up as per SCH-05 should match with Sl. no. 2.0 of SCH-1 .	
6.0	Total price of Service Price break up at SCH-4 should match with Sl No 2.2 of SCH-2 .	
7.0	If freight component is not specifically indicated, 2 % of total amount will be considered as freight component against each item for further processing.	

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	TOTAL QUOTED PRICE ( )
8.0	Bidder shall quote rate/ price for mandatory spare as per list & as per technical specification, in the relevant schedule, if included. In case, bidder do not quote & indicate `NA' against any item due to non-applicability as per bidder's design, etc, they have to supply such items, if found required on detail engineering or due to any other reason at a later date as per direction of BHEL/ customer.	
9.0	Bidder shall supply special tools & tackles for maintenance as per technical specification, if specified. Price of special tools & tackles for maintenance shall be indicated in the relevant schedule, else their quoted price shall be deemed to be inclusive of this component. In case bidder do not specify price component (together with item-wise details) or indicate `NA', etc in the relevant schedule for special tools & tackles for maintenance, they have to supply such items, if required on detail engineering, at no extra cost to BHEL.	
10.0	In case bidder do not indicate item-wise details together with total price component against this or indicate `NA', etc in the relevant schedule for start-up & commissioning spares, they have to supply such items such items, as per requirement for completion of the package, at no extra cost to BHEL.	
11.0	In case bidder do not indicate price component or indicate `NA', etc in relevant schedule for any other items component required for completion of package, if specified in the schedule, they have to supply & execute such items, if required on detail engineering for completion of the package, at no extra cost to BHEL.	
12.0	Unit rates/ prices (Optional ), if included, shall not be considered for evaluation. Unit rates/ prices for items shall be applied for addition/ deletion of scope and rates shall be valid through out the contract period, including extension.	
13.0	Other optional items, if included, shall not be considered for evaluation.	
14.0	BHEL shall issue requisite document for imported items, if included, limited to the CIF values furnished by bidder in the relevant schedule.	
15.0	Bidder shall note that Service Tax (On service part) shall be paid extra at actual as per tender provision. As such, bidder's price shall be exclusive of this components and evaluation of bidders total price will be done on this basis.	
16.0	There shall be no technical loading for evaluation of bids. However, in case the power consumption is noted higher than estimated power consumption figure (1276 KW) during the inspection/ PG test, the penalty @ Rs. 1,36,206/- per additional KW shall be levied on the vendor.	
17.0	The bidder shall furnish unit rates for variable item (marked *) for necessary adjustment (plus or minus) variation during detailed engineering stage. The quantity of variable items is likely to vary during detailed design & engineering stage mainly due to changes in building layouts/ dimensions etc necessitating change in quantities of variable items as above. The unit rates quoted & accepted by BHEL shall be considered and no separate unit rates shall be quoted. Unit rates shall be valid throughout the contract. Bidder to note that BHEL reserve the right to rationalize the rates quoted by L-1 bidder against variable items and optional item with respect to item-wise lowest rates (amongst the participating bidders), before placement of order.	
18.0	Any item as per scope of work if not included in price quoted above & shown separately will not be taken cognizance of and offer shall be liable for rejection.	
19.0	Offer is liable to be rejected in case bidder fail to furnish item-wise break-up as desired in various schedules and submit price bid complete	
20.0	Price format shall not be changed by bidder in any case, since it may lead to cancellation of bidder's offer.	

**VOLUME-III  
PRICE SCHEDULE, REV-01**

**Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.**

**Tender No. PSER:SCT:SNG-M1625:14**

**SCH-2 (SUPPLY & SERVICE BREAK UP)**

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	Percentage of total price	TOTAL PRICE IN RS.
1.1	Total lumpsum firm prices for equipment & Services as specified, Comprising Engineering, design, manufacturing, inspection & Testing at manufacturer's/subvendor's works, Painting at manufactures works, duly packed for transportation, delivery to site, unloading, storage & handling at site, fabrication, erection and commissioning, minor civil works as required, performance and guarantee testing, submission of as built drawing, carrying out acceptance tests at site, and final painting of complete and handing over of Ventilation system on turnkey basis as per specification PE-TS-381-554-A001 including, special tool & tackles for maintenance, commissioning spares, all taxes, duties etc. (Without mandatory spare - As per Schedule -5 ).	<b>100%</b>	
2.0	<b>BREAK-UP OF PRICES GIVEN IN 1.1 ABOVE (To be used during contract execution for payment)</b>		
2.1	Total lump sum firm price for <b>EQUIPMENT (SUPPLY)</b> for Engineering, design, manufacturing, inspection & Testing at manufacturers works/subvendor's work, Painting at manufactures works, duly packed for transportation, delivery to site, unloading storage & handling at site, for the complete scope of supply of Ventilation system and as defined in the technical specification ( PE-TS-381-554-A001) for 2x600 MW SCCL TPP AT ADILABAD including special tool & tackles for maintenance, commissioning spares, all taxes, duties etc..	<b>80%</b>	
2.2	Erection & commissioning, carrying out acceptance tests at site, final painting and handing over to customer the complete ventilation system on turnkey basis as per specification PE-TS-381-554-A001 including all taxes, duties etc.	<b>20%</b>	
3.0	<b>Break-up (%) of prices given at SI No-2.1 above (To be used during contract execution for payment)</b>	<b>Percentage of total price of SL No 2.1 above (which shall match with Total price of SCH-3 excluding price of SI. No. 2.1.17 of SCH-03)</b>	
3.1	Air washer and UAF - (Item no 2.1.1 and 2.1.2 OF SCH-3)	<b>23.00%</b>	
3.2	GSS Duct work - (Item no 2.1.3.1 to 2.1.3.4 OF SCH-3 )	<b>25.00%</b>	
3.3	MS duct and grills, louvers etc (Item no 2.1.3.5 to 2.1.3.9 OF SCH-3)	<b>5.00%</b>	
3.4	Fire damper, VCD, (Item no 2.1.4 to 2.1.5 OF SCH-3)	<b>1.90%</b>	
3.5	Thermal Insulation (Item no 2.1.6 OF SCH-3)	<b>3.00%</b>	
3.6	RE units (Item no 2.1.7 of OF SCH-3)	<b>10.00%</b>	
3.7	Supply air fans (Item no 2.1.8 and 2.1.9 OF SCH-3)	<b>15.00%</b>	
3.8	Exhaust fans (Item no 2.1.10,2.1.11 and 2.1.12 OF SCH-3)	<b>15.00%</b>	
3.9	Manually operated, platform trolley (Item no 2.1.13 OF SCH-3)	<b>0.10%</b>	
3.10	Commissioning Spares & Tools tackles (Item no 2.1.14 & 2.1.15 OF SCH-3)	<b>1.00%</b>	
3.11	Instruments and accessories (Item no 2.1.16 OF SCH-3)	<b>1.00%</b>	

**VOLUME-III  
PRICE SCHEDULE, REV-01**

**Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.**

**TENDER NO. PSER:SCT:SNG-M1625:14**

**SCH-3 - SUPPLY PRICE BREAK-UP(Price break-up of 2.1 of SCH-3)**

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	QUOTED PRICE (₹)						
				UNIT BASIC PRICE	BASIC PRICE (1)	ED (If any, as per tender) (2)	CST (If any, as per tender) (3)	VAT (If any, as per tender) (4)	FREIGHT (5)	TOTAL (6)=(1) ~ (5)
2.1	<b>VENTILATION SYSTEM</b>									
2.1.1	Sheet metal type air washer unit with centrifugal fan with motor, pumps with motors, dry panel filters (fabric type pre-filter), complete with fixing frame, air washer internals, inlet air louvers, piping as per IS:1239 pt I (heavy class galvanised), motorised valves for auto start of standby equipment, valves, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping, etc as per spec. (fan capacity 2,50,000 CMH at 75 mmwc static pressure) as specified.The air washer and fan casing shall be spray galvanised on inside and outside.	8	NO							
2.1.2	Unitary air filtration unit with centrifugal fan with motor, pumps with motors, dry panel filters (fabric type pre-filter), UAF internals, MS structures, piping as per IS:1239 pt I (heavy class galvanised), valves including motorised valves for auto start of standby equipment, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping etc as per spec (fan capacity 75,000 CMH at 50 mmwc static pressure) as specified.The UAF and fan casing shall be spray galvanised on inside and outside.	2	NO							
2.1.3*	Supply air ducting (finished GSS (zinc coating 275 gms/ sqm) ) for above area complete with dampers, grills (with VCD & without VCD), supports (painted) and all accessories as specified.									
2.1.3.1*	18 G.	6000	SOM							
2.1.3.2*	20 G.	6000	SOM							
2.1.3.3*	22 G.	1000	SOM							
2.1.3.4*	24 G.	2000	SOM							
2.1.3.5*	MS duct (20 G) with epoxy paint for battery room.	200	SOM							
2.1.3.6*	Extruded Aluminum grilles with VCD.	200	SOM							
2.1.3.7*	Extruded Aluminu grilles without VCD.	10	SOM							
2.1.3.8*	MS air-intake louvers for aux bldgs.	5	SOM							
2.1.3.9*	Wall mounted dampers (gravity operated) for Aux. Bldgs. only.	30	SOM							
2.1.4*	<b>FIRE DAMPERS</b>									
2.1.4.1*	Fire dampers (motor operated) with auto resetting, limit switch, indicating lamps etc as specified.	30	SOM							
2.1.4.2*	Motorized actuator with control panel with single phase power supply for the above fire damper.	45	NO							
2.1.5*	GI volume control dampers for ducts	15	SOM							
2.1.6*	Thermal insulation 25 mm thk mineral wool & finish as specified for supply air duct.	2000	SOM							
2.1.7*	Roof extractor units (axial flow type) with hood, disconnect switch and all accessories as specified. <b>Following fan shall have 15 mmwc static pressure.</b>									
2.1.7.1*	Capacity 50,000 CMH with Motor rating 5.5 KW (roof opening of 1320 mm dia shall be provided)	20	NO							
2.1.7.2*	Capacity 40,000 CMH with Motor rating 5.5 KW	4	NO							
2.1.7.3*	Capacity 20,000 CMH with Motor rating 2.2 KW	2	NO							
2.1.8*	Axial flow supply fans with pre and fine filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen and all other accessories (suitable for 415V/3-phase supply). <b>Following fan shall have 30 mmwc static pressure.</b>									
2.1.8.1*	Capacity 10,000 CMH with Motor rating 2.2 KW	2	NO							
2.1.8.2*	Capacity 7,500 CMH with Motor rating 1.5 KW	2	NO							
2.1.8.3*	Capacity 6,000 CMH with Motor rating 1.1 KW	10	NO							
2.1.8.4*	Capacity 4,000 CMH with Motor rating 0.75 KW	6	NO							
2.1.9*	Axial flow supply fans with pre filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen and all other accessories (suitable for 415V/3-phase supply). <b>Following fan shall have 20 mmwc static pressure.</b>									
2.1.9.1*	Capacity 10,000 CMH with Motor rating 1.5 KW	35	NO							
2.1.9.2*	Capacity 7,500 CMH with Motor rating 1.1 KW	10	NO							
2.1.9.3*	Capacity 6,000 CMH with Motor rating 1.1 KW	5	NO							

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUOTED PRICE (₹)							TOTAL (6)=(1) ~ (5)	
		QUANTITY	UNIT	UNIT BASIC PRICE	BASIC PRICE (1)	ED (If any, as per tender) (2)	CST (If any, as per tender) (3)	VAT (If any, as per tender) (4)		FREIGHT (5)
2.1.9.4*	Capacity 4,000 CMH with Motor rating 0.75 KW	5	NO							
2.1.10*	Axial flow exhaust fans (Bifurcated type, spark proof construction, wall mounted) complete with casing, flame proof motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply). <b>Following fan shall have 15 mmwc static pressure.</b>									
2.1.10.1*	Capacity 15,000 CMH with Motor rating 2.2 KW	4	NO							
2.1.10.2*	Capacity 10,000 CMH with Motor rating 1.5 KW	2	NO							
2.1.10.3*	Capacity 7,500 CMH with Motor rating 1.1 KW	4	NO							
2.1.10.4*	Capacity 2,000 CMH with Motor rating 0.55 KW	2	NO							
2.1.11*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. <b>Following fan shall have 10 mmwc static pressure.</b>									
2.1.11.1*	Capacity 15,000 CMH with Motor rating 1.1 KW	2	NO							
2.1.11.2*	Capacity 10,000 CMH with Motor rating 0.75 KW	5	NO							
2.1.11.3*	Capacity 7,500 CMH with Motor rating 0.55 KW	2	NO							
2.1.11.4*	Capacity 6,000 CMH with Motor rating 0.55 KW	30	NO							
2.1.11.5*	Capacity 2,000 CMH with Motor rating 0.37 KW	6	NO							
2.1.12*	Exhaust fan (propeller type) completes with induction motor & mounting frame MS rain protection cowl, bird screen and all other accessories as specified (suitable for 240V/ 1 phase). <b>Following fan shall have 5 mmwc static pressure.</b>									
2.1.12.1*	Capacity 1200 CMH with Motor rating 100 watts	40	NO							
2.1.13*	Manually operated, platform trolley of 1 Ton capacity with base area 2m x 1.5m	4	NO							
2.1.14	Total lumpsum price for commissioning spares inclusive of packing forwarding, transportation up to site, etc. (Bidder shall submit item-wise price break-up).	1	LOT							
2.1.15	Total lumpsum price for special tools & tackles for maintenance inclusive of packing forwarding, transportation up to site, etc. (Bidder shall submit item-wise price break-up).	1	LOT							
2.1.16	Instruments and accessories for complete hookup of ventilation system with main central control system.	1	LOT							
2.1.17	Any other item not indicated above, but required to complete Ventilation package as per system requirements.	1	LOT							
<b>TOTAL</b>										

<b>VOLUME-III A</b>					
<b>PRICE SCHEDULE, REV-01</b>					
<b>Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.</b>					
<b>TENDER NO. PSER:SCT:SNG-M1625:14</b>					
<b>SCH-4 - SERVICES PRICE BREAK-UP (Price break-up of 2.2 of SCH-4)</b>					
SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT	QUOTED PRICE	
				UNIT RATE	TOTAL PRICE
				(4)	(5)=(4)x(3)
2.2.1	Sheet metal type air washer unit with centrifugal fan with motor, pumps with motors, dry panel filters (fabric type pre-filter), complete with fixing frame, air washer internals, inlet air louvers, piping as per IS:1239 pt I (heavy class galvanised), motorised valves for auto start of standby equipment, valves, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping, etc as per spec. (fan capacity 2,50,000 CMH at 75 mmwc static pressure) as specified.The air washer and fan casing shall be spray galvanised on inside and outside.	8	NO		
2.2.2	Unitary air filtration unit with centrifugal fan with motor, pumps with motors, dry panel filters (fabric type pre-filter), UAF internals, MS structures, piping as per IS:1239 pt I (heavy class galvanised), valves including motorised valves for auto start of standby equipment, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping etc as per spec (fan capacity 75,000 CMH at 50 mmwc static pressure) as specified.The UAF and fan casing shall be spray galvanised on inside and outside.	2	NO		
2.2.3*	Supply air ducting (finished GSS (zinc coating 275 gms/ sqm) ) for above area complete with dampers, grilles (with VCD & without VCD), supports (painted) and all accessories as specified.				
2.2.3.1*	18 G.	6000	SQM		
2.2.3.2*	20 G.	6000	SQM		
2.2.3.3*	22 G.	1000	SQM		
2.2.3.4*	24 G.	2000	SQM		
2.2.3.5*	MS duct (20 G) with epoxy paint for battery room.	200	SQM		
2.2.3.6*	Extruded Aluminum grilles with VCD.	200	SQM		
2.2.3.7*	Extruded Aluminu grilles without VCD.	10	SQM		
2.2.3.8*	MS air-intake louvers for aux bldgs.	5	SQM		
2.2.3.9*	Wall mounted dampers (gravity operated) for Aux. Bldgs. only.	30	SQM		
2.2.4*	<b>FIRE DAMPERS</b>				
2.2.4.1*	Fire dampers (motor operated) with auto resetting, limit switch, indicating lamps etc as specified.	30	SQM		

<b>VOLUME-III A</b>					
<b>PRICE SCHEDULE, REV-01</b>					
<b>Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.</b>					
<b>TENDER NO. PSER:SCT:SNG-M1625:14</b>					
<b>SCH-4 - SERVICES PRICE BREAK-UP (Price break-up of 2.2 of SCH-4)</b>					
SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUOTED PRICE			
		QUANTITY	UNIT	UNIT RATE	TOTAL PRICE
2.2.4.2*	Motorized actuator with control panel with single phase power supply for the above fire damper.	45	NO		
2.2.5*	GI volume control dampers for ducts	15	SQM		
2.2.6*	Thermal insulation 25 mm thk mineral wool & finish as specified for supply air duct.	2000	SQM		
2.2.7*	Roof extractor units (axial flow type) with hood, disconnect switch and all accessories as specified. <b>Following fan shall have 15 mmwc static pressure.</b>				
2.2.7.1*	Capacity 50,000 CMH with Motor rating 5.5 KW (roof opening of 1320 mm dia shall be provided)	20	NO		
2.2.7.2*	Capacity 40,000 CMH with Motor rating 5.5 KW	4	NO		
2.2.7.3*	Capacity 20,000 CMH with Motor rating 2.2 KW	2	NO		
2.2.8*	Axial flow supply fans with pre and fine filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen and all other accessories (suitable for 415V/3-phase supply). <b>Following fan shall have 30 mmwc static pressure.</b>				
2.2.8.1*	Capacity 10,000 CMH with Motor rating 2.2 KW	2	NO		
2.2.8.2*	Capacity 7,500 CMH with Motor rating 1.5 KW	2	NO		
2.2.8.3*	Capacity 6,000 CMH with Motor rating 1.1 KW	10	NO		
2.2.8.4*	Capacity 4,000 CMH with Motor rating 0.75 KW	6	NO		
2.2.9*	Axial flow supply fans with pre filter (wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl, bird screen and all other accessories (suitable for 415V/3-phase supply). <b>Following fan shall have 20 mmwc static pressure.</b>				
2.2.9.1*	Capacity 10,000 CMH with Motor rating 1.5 KW	35	NO		
2.2.9.2*	Capacity 7,500 CMH with Motor rating 1.1 KW	10	NO		
2.2.9.3*	Capacity 6,000 CMH with Motor rating 1.1 KW	5	NO		
2.2.9.4*	Capacity 4,000 CMH with Motor rating 0.75 KW	5	NO		
2.2.10*	Axial flow exhaust fans (Bifurcated type, spark proof construction, wall mounted) complete with casing, flame proof motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply). <b>Following fan shall have 15 mmwc static pressure.</b>				

<b>VOLUME-IIIA</b>					
<b>PRICE SCHEDULE, REV-01</b>					
<b>Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.</b>					
<b>TENDER NO. PSER:SCT:SNG-M1625:14</b>					
<b>SCH-4 - SERVICES PRICE BREAK-UP (Price break-up of 2.2 of SCH-4)</b>					
SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUOTED PRICE			
		QUANTITY	UNIT	UNIT RATE	TOTAL PRICE
2.2.10.1*	Capacity 15,000 CMH with Motor rating 2.2 KW	4	NO		
2.2.10.2*	Capacity 10,000 CMH with Motor rating 1.5 KW	2	NO		
2.2.10.3*	Capacity 7,500 CMH with Motor rating 1.1 KW	4	NO		
2.2.10.4*	Capacity 2,000 CMH with Motor rating 0.55 KW	2	NO		
2.2.11*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motor & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified. <b>Following fan shall have 10 mmwc static pressure.</b>				
2.2.11.1*	Capacity 15,000 CMH with Motor rating 1.1 KW	2	NO		
2.2.11.2*	Capacity 10,000 CMH with Motor rating 0.75 KW	5	NO		
2.2.11.3*	Capacity 7,500 CMH with Motor rating 0.55 KW	2	NO		
2.2.11.4*	Capacity 6,000 CMH with Motor rating 0.55 KW	30	NO		
2.2.11.5*	Capacity 2,000 CMH with Motor rating 0.37 KW	6	NO		
2.2.12*	Exhaust fan (propeller type) completes with induction motor & mounting frame MS rain protection cowl, bird screen and all other accessories as specified (suitable for 240V/ 1 phase). <b>Following fan shall have 5 mmwc static pressure.</b>				
2.2.12.1*	Capacity 1200 CMH with Motor rating 100 watts	40	NO		
2.2.13*	Manually operated, platform trolley of 1 Ton capacity with base area 2m x 1.5m	4	NO		
2.2.14	Instruments and accessories for complete hookup of ventilation system with main central control system.	1	LOT		
2.2.15	Any other item not indicated above, but required to complete Ventilation package as per system requirements.	1	LOT		
<b>TOTAL PRICE</b>					

**VOLUME-III  
PRICE SCHEDULE, REV-01**

Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad,A.P.

TENDER NO. PSER:SCT:SNG-M1625:14

**SCH-5 - MANDATORY SPARES**

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	TOTAL PRICE (₹)							
			UNIT BASIC PRICE	BASIC PRICE	ED (If any, as per tender)	CST (If any, as per tender)	VAT (If any, as per tender)	FREIGHT	TOTAL PRICE	
				(1)	(2)	(3)	(4)	(5)	(6)=(1) ~ (5)	
<b>2.3.1</b>	<b><u>MECHANICAL AND GENERAL</u></b>									
<b>2.3.1.1</b>	<b>Air Washer unit</b>									
<b>2.3.1.1.1</b>	<b>Supply air fan</b>									
2.3.1.1.1.1	V-belt for supply air fans	2 sets								
2.3.1.1.1.2	Supply air fan bearing	1 set								
<b>2.3.1.1.2</b>	<b>Air washer pump</b>									
2.3.1.1.2.1	Pump bearing	1 set								
2.3.1.1.2.2	Shaft sleeves	2 sets								
2.3.1.1.2.3	Gland packing for pump	2 sets								
<b>2.3.1.1.3</b>	<b>Metalic or fabric (as applicable) filters</b>	1 set (quantity to suit one no. of air washer)								
<b>2.3.1.1.4</b>	<b>Spray nozzle</b>	5% of total population or 1 no whichever is higher								
<b>2.3.1.1.5</b>	<b>Air Washer pump inlet water strainer</b>	1 no.								
<b>2.3.1.1.6</b>	<b>Brass suction screen/strainer for air washer tank</b>	1 set								
<b>2.3.1.2</b>	<b>Unitary air filtration unit</b>									
<b>2.3.1.2.1</b>	<b>Supply air fan</b>									
2.3.1.2.1.1	V-belt for supply air fans	2 sets								
2.3.1.2.1.2	Supply air fan bearing	1 set								
<b>2.3.1.2.2</b>	<b>UAF pump</b>									
2.3.1.2.2.1	Pump bearing	1 set								
2.3.1.2.2.2	Shaft sleeve	1 set								
2.3.1.2.2.3	Gland packing for pump	1 set								
<b>2.3.1.2.3</b>	<b>Nylon filter</b>	1 set								
<b>2.3.1.2.4</b>	<b>Spray nozzle</b>	5% of total population or 1 no whichever is higher								
<b>2.3.1.2.5</b>	<b>water strainer</b>	1 no.								
<b>2.3.1.2.6</b>	<b>Brass suction screen/strainer for Unitary air filtration tank</b>	1 set								
<b>2.3.2</b>	<b><u>CONTROL AND INSTRUMENTATION</u></b>									
<b>2.3.2.1</b>	<b>Electronics transmitters</b>									
2.3.2.1.1	Transmitters of all types and model no.( for the measurement of pressure,differential pressure,flow,level temp etc.)	5% or 1 no of each type and model whichever is more (to be devided into various ranges in proportion to main population								

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	TOTAL PRICE ( )							
			UNIT BASIC PRICE	BASIC PRICE	ED (If any, as per tender)	CST (If any, as per tender)	VAT (If any, as per tender)	FREIGHT	TOTAL PRICE	
				(1)	(2)	(3)	(4)	(5)	(6)=(1) ~ (5)	
2.3.2.2	Temp. elements									
2.3.2.2.1	RTD's	5% or 1 no whichever is more **								
2.3.2.2.2	Thermo well *(with head assembly terminal block and nipple)	5% or 1 no whichever is more ** **to be divided into various insertion lengths in proportion to main population								
2.3.2.2.3	All type of local indicators	5% or 1 no of each make model and type whichever is more (to be divided to various ranges in proportion to main of all make model type population )								
2.3.2.4	<b>Process actuated switch devices include all types of pressure differential pressure, flow temp. and differential temp. level switch devices.</b>	5% or 1 no of each type and model whichever is more								
2.3.2.5.1	Relative humidity sensors	2 nos								
2.3.2.5.2	Geysterstats	2 nos								
2.3.2.5.3	Local humidity/temperature indicators	2 nos each								
2.3.3	<b>PROCESS CONNECTION PIPING (FOR IMPULSE PIPING/TUBING SAMPLING PIPING/TUBING AND AIR SUPPLY PIPING AS APPLICABLE)</b>									
2.3.3.1	Valves	10 % or 1 no of each type class size and model whichever is more								
2.3.3.2	2 way/3 way manifolds	10 % or 1 no of each type class size and model whichever is more								
2.3.3.2	Fittings	10 % or 1 no of each type class size and model whichever is more								
2.3.4	<b>ELECTRICAL ACTUATOR</b>									
2.3.4.1	Actuator	10 % or 1 no of type model and rating whichever is more								
<b>TOTAL</b>										

**VOLUME-III  
PRICE SCHEDULE, REV-01**

**Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x600 MW unit at Singareni STPP, Adilabad , A.P.**

**TENDER NO. PSER:SCT:SNG-M1625:14**

**SCH-6- GUARANTEED POWER CONSUMPTION**

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY (WORKING)	POWER CONSUMPTION AS GUARANTEED (KW) AT MOTOR INPUT TERMINAL	TOTAL POWER CONSUMPTION AS GUARANTEED (KW)
		(3)	(4)	(5)=(3)x(4)
1	Centrifugal fans for air-washer units, 2,50,000 CMH at 75 mmwc	8		
2	Pumps for above air-washer	8		
3	Centrifugal fans for UAF units, 75,000 CMH at 50 mmwc	2		
4	Pumps for above UAF	2		
5	<b>RE Units.</b>			
5.1	50,000 CMH at 15 mmwc	20		
<b>TOTAL CONSUMPTION (KW)</b>				<b>1276</b>

Notes: 1.Estimated power consumption (EPC) figure for the system (for working drives only) has been considered as 1276 KW.

2. Bidder's guaranteed power consumption at motor input terminals (not shaft power) as furnished in relevant schedule shall be demonstrated by the successful bidder during performance testing at works/ site. In case power consumption is noted higher than EPC during inspection/ PG test, penalty @ Rs. 1,36,206 per additional KW shall be levied on vendor.