



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN – 02

Ref: PSER:SCT:SDG-M1444:TCN-02

Date: 14-03-2013

Sub	Tender Change Notice (TCN-02).	
Job	Design, engineering, manufacturing, supply/ delivery, erection, commissioning, trial run, handing over to customer etc of Ventilation System for 2x500 MW unit at Sagardighi STPP, WB.	
Ref	01	Tender No. PSER:SCT:SDG-M1444:13.
	02	BHEL's NIT, vide reference no PSER: SCT:SDG-M1444:3162, dated 25-02-2013.
	03	BHEL's TCN-01, vide reference no: Ref: PSER:SCT:SDG-M1444:TCN-01, Dated 04.03.2013.
	04	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 Clarifications to bidder's queries (**ANNEXURE-I**) are attached herewith.
- 2.0 **BOQ cum price schedule format VOL-III, PRICE SCHEDULE, REV-0** has been revised as **VOL-III-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 Offer from bidders in superseded price schedule (Vol-III, REV-0) shall not be considered.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 , 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

ENGINEER (SCT)

Encl

1.0 As above.

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

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 2x500 MW unit at Sagardighi STPP, WB.	
Ref	1.0	Tender No. PSER:SCT:SDG-M1444:13.
	2.0	BHEL's NIT, vide reference no PSER: SCT:SDG-M1444:3162, dated 25-02-2013.
	3.0	BHEL's TCN-01, vide reference no: Ref: PSER:SCT:SDG-M1444:TCN-01, Dated 04.03.2013.
	4.0	BHEL's TCN-02, vide reference no: Ref: PSER:SCT:SDG-M1444:TCN-02, Dated 14.03.2013.
	5.0	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 authorised
representative of the contractor)

2X500 MW SAGARDIGHI THERMAL POWER STATION UNIT 3 & 4 - VENTILATION SYSTEM

BHEL CLARIFICATION TO TECHNICAL SPECIFICATION (ANNEXURE-I)

TENDER NO. PSER:SCT:SDG-M1444:13

Sl. No.	Clause No.	Page No.	BIDDER'S QUERY	BHEL Clarification
1	VOLUME – II – SECTION – C CL. NO. 4.1.1	4 OF 15	Capacity of Centrifugal Fans 100 % instead of 2 x 50 %.	Capacity of Centrifugal Fans shall be 2 x 50 % -- Refer BOQ
2	CL. NO. 4.1.5		Exhaust Fan for the Battery Room shall be either Belt – Driven or Bifurcated type. Since, in belt driven motor will not be in the main air – stream, hence Bifurcated type is not Required if it is belt driven .	Exhaust Fan for the Battery Room shall be Bifurcated type-- Refer BOQ
3	SECTION – II – PAGE NO – 6 [DCPL – K8A07]- C.L.NO. 2.01.04 OF D AND 5.07.01	09 of 15	SECTION – II – PAGE NO – 6 [DCPL – K8A07]- C.L.NO. 2.01.04 OF D AND 5.07.01 Where in you have mentioned Air Washer internals of Fill – Deck Pad type whereas C.L. NO. - 7.4.9 of Section “C” – page no –09 OF 15 – Air Washer internals two bank construction.	Refer Tender Drawing for Air-washer.

VOLUME-III PRICE SCHEDULE, REV-01	
Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units \at Sagardighi STPP, West Bengal.	
TENDER NO - PSER:SCT:SDG-M1444:13	
PREAMBLE	
01	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-IA, Volume-IB, Volume-IC, Volume-ID, Volume-II together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and/ or engineer's instructions.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	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, 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 tender document and this schedule.
05	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing 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.
06	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.
07	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.
08	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.
09	Unless otherwise specified & except for tender on lumpsum basis, for all item rate based tenders, the quantities of the various items mentioned in price schedule are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract including extra items, but excluding any price escalation, remains within +/- 30% (thirty percent) of the contract price given in the LOI/ WO.

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

Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.

TENDER NO - PSER:SCT:SDG-M1444:13

SCH-1 - TOTAL PRICE

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	TOTAL QUOTED PRICE ()
1.0	Total scope broadly covers design, engineering, manufacturing, inspection & testing, painting, supply/ delivery duly packed at project site including freight, receipt, unloading, storage & handling at site, erection, commissioning, load testing, trial run, handing over, 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 the technical specification and terms & conditions of tender, taking into account all clarifications, confirmations and agreements till date of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.	
NOTE		
1.0	Bidder to note that total price at sl no 1.0 above shall be considered for evaluation & awarding. As such total price at sl no 1.0 should be complete in all respect for the full scope defined and considering all terms and conditions.	
2.0	Bidder shall note that VAT & Service Tax (On service part) shall be paid extra at actual as per tender provision. As such, bidder's price shall be exclusive of these components and evaluation of bidders total price will be done on this basis.	
3.0	Bidder to furnish break-up of total price (1.0 above) in the following schedules. Separate orders will be placed by BHEL for supply part and service part based on subsequent break-up of prices in corresponding schedules.	
3.1	SCH-2 - Total price break-up..	
3.2	SCH-3 - Supply price break-up.	
3.3	SCH-4 - Service price break-up.	
3.4	SCH-5 - O&M price (Optional).	
3.5	SCH-6 - Guaranteed power consumption (GPC) break-up.	
4.0	Break-up of prices of 1.1 & 1.2 should match with 1.0.	
5.0	Subsequent break-up prices shall match with corresponding previous prices.	
6.0	Quoted price for service part in SCH-2 shall be minimum 20 % of total price quoted in SCH-1. In case of any variance in this respect, BHEL will adjust finally accepted price in line with the stated minimum allocation taking into account account of tender provision including taxes, duties, etc.	
7.0	If freight component is not specifically indicated in the relevant section of price schedule, 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 price component (together with item-wise details) 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 the relevant schedule for any other items component required for completion of package, if applicable, 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	Quantity of variable items (marked *) is likely to vary during detailed design & engineering stage mainly due to changes in layout/ dimension, etc. The unit rates quoted & accepted by BHEL for these items shall be considered and no separate unit rates shall be quoted. Unit rates shall be valid throughout contract.	
13.0	Unit rate items, if included, shall not be considered for evaluation. The rates for the Unit rate items shall be applied for addition/ deletion of scope and rates shall be valid through out the contract period, including extension.	
14.0	Other optional items, if included, shall not be considered for evaluation.	
15.0	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.	
16.0	BHEL shall issue requisite document, if required, for imported items, if included, limited to the CIF values furnished by bidder in the relevant schedule.	
17.0	Estimated power consumption figure (EPC) for the system (for working drives only) is specified in the relevant schedule.	
18.0	Bidder shall indicate guaranteed power consumption (GPC) at motor input terminals (not shaft power) in relevant schedule. Indicated GPC shall be demonstrated by successful bidder during performance testing at works/ site. There will be no technical loading for evaluation of bid on power consumption. However, in case total GPC is noted to be higher than total EPC during inspection/ PG test, penalty, @ rate specified in the relevant schedule, shall be levied on vendor.	
19.0	Any item as per scope of work, if not included in the price quoted above and shown separately will not be taken cognizance of and the offer shall be liable for rejection.	
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, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.

TENDER NO - PSER:SCT:SDG-M1444:13

SCH-2 - TOTAL PRICE BREAK-UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUOTED PRICE (₹)			
		BASIC PRICE	CST (As per tender)	FREIGHT	TOTAL
(1)	(2)	(3)	(5)	(6)	(7)=(3) ~ (6)
1.1	Total scope broadly covers design, engineering, manufacturing, inspection & testing, painting, supply/ delivery duly packed at project site including freight, 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 the technical specification and terms & conditions of tender, taking into account all clarifications, confirmations and agreements till date of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.				
1.2	Total scope broadly covers receipt, unloading, storage & handling at site, erection, commissioning, load testing, trial run, handing over, etc, in line with drawings/ documents/ test procedures approved by BHEL/ customer, for the total scope defined in the technical specification and terms & conditions of tender, taking into account all clarifications, confirmations and agreements till date of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.				
TOTAL					

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

Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.

TENDER NO - PSER:SCT:SDG-M1444:13

SCH-3 - SUPPLY PRICE BREAK-UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	QUOTED UNIT RATE (₹)				QUOTED AMOUNT (₹)			
			BASIC	CST (As per tender)	FREIGHT	TOTAL	BASIC	CST (As per tender)	FREIGHT	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4) - (6)	(8)	(9)	(10)	(11)=(8) - (10)
Price break-up of 1.1 of SCH-2.										
1.1.1	Sheet metal type air washer unit with centrifugal fan (DIDW) with motor, pumps with motors, air washer internals, inlet air louvers, filters, piping as per IS:1239, Part-I (heavy class galvanised), valves, nozzles, level switch, temp indicators, back wash arrangement, galvanised drain piping, etc as per specification of capacity 2,00,000 CMH. Each air washer has 2 no centrifugal fan (2 x 50% duty) of capacity 1,00,000 CMH at 75 mm SP.	8	NO							
1.1.2	Relay based control panel for air washers as specified (1 no common panel for 2 no air washer in BC bay of uni # 3, 1 no common panel for 2 no air washer in A row side, unit # 3, 1 no common panel for 2 no air washer in BC bay of unit # 4, 1 no common panel for 2 no air washer in A row side of unit # 4.	4	NO							
1.1.3	Unitary air filtration unit with centrifugal fan (SISW) with motor, pumps with motors, Nylon type Water repellent filter with frame and support, UAF internals, piping as per IS:1239 Part-I (heavy class galvanised), valves for auto start of standby equipment, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping etc as per specification. Fan capacity 75,000 CMH at 50 mmwc static pressure.	2	NO							
1.1.4	Relay based control panel for UAF as specified (1 no control panel for 1 no UAF in ESP building of unit # 1, 1 no control panel for 1 no UAF in ESP building unit # 4.	2	NO							
1.1.5*	Ducting, diffuser/ grill, thermal insulation for duct									
1.1.5.1*	Finished GSS (zinc coating 180 gms/ sqm) ducting with support structure etc.									
1.1.5.1.1*	18 G.	7000	SQM							
1.1.5.1.2*	20 G.	8000	SQM							
1.1.5.2*	MS duct With Epoxy paint for battery room.	200	SQM							
1.1.5.3*	MS grilles with VCD.	200	SQM							

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	QUOTED UNIT RATE (₹)				QUOTED AMOUNT (₹)			
			BASIC	CST (As per tender)	FREIGHT	TOTAL	BASIC	CST (As per tender)	FREIGHT	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4) - (6)	(8)	(9)	(10)	(11)=(8) - (10)
1.1.5.4*	MS grilles without VCD.	10	SQM							
1.1.5.5*	Thermal insulation 25 mm expanded polystyrene finished with sand cement plaster as specified for supply air duct.	2000	SQM							
1.1.5.6*	Wall mounted dampers (gravity operated) for different areas.	30	SQM							
1.1.5.7*	Inlet Louvres	5	SQM							
1.1.6*	Fire damper									
1.1.6.1*	Fire damper.	30	SQM							
1.1.6.2*	Motorized actuator with single phase power supply for the above fire damper with auto resetting, limit switches, indication lamps etc.	45	NO							
1.1.6.3*	Fusible link type fire damper.	15	SQM							
1.1.7*	Roof extractor units (Axial flow type) with hood, disconnect switch and all accessories as specified.									
1.1.7.1*	50,000 CMH at 15 mmwc.	20	NO							
1.1.7.2*	40,000 CMH at 15 mmwc.	4	NO							
1.1.7.3*	20,000 CMH at 15 mmwc.	2	NO							
1.1.8*	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).									
1.1.8.1*	10,000 CMH at 15 mmwc.	35	NO							
1.1.8.2*	7,500 CMH at 15 mmwc.	10	NO							
1.1.9*	Axial flow supply fans with pre filter & 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) as specified.									
1.1.9.1*	10,000 CMH at 30 mmwc.	2	NO							
1.1.9.2*	6,000 CMH at 30 mmwc.	10	NO							
1.1.9.3*	4,000 CMH at 30 mmwc.	6	NO							
1.1.10*	Axial flow exhaust fans (Bifurcated type , Spark proof construction wall mounted belt driven with explosion proof motor), complete with casing, mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified.									
1.1.10.1*	15,000 CMH at 20 mmwc.	4	NO							
1.1.10.2*	7,500 CMH at 20 mmwc.	4	NO							

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	QUOTED UNIT RATE (₹)				QUOTED AMOUNT (₹)			
			BASIC	CST (As per tender)	FREIGHT	TOTAL	BASIC	CST (As per tender)	FREIGHT	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)	(7)=(4) + (5) + (6)	(8)	(9)	(10)	(11)=(8) + (9) + (10)
1.1.11*	Axial flow exhaust fans (Flame proof construction, wall mounted) complete with casing, flame proof motors & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified.									
1.1.11.1*	15,000 CMH at 10 mmwc.	6	NO							
1.1.11.2*	7,500 CMH at 10 mmwc.	4	NO							
1.1.12*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl with bird screen, wire guard at inlet and all other accessories as specified (suitable for 415V/3-phase supply).									
1.1.12.1*	10,000 CMH at 7 mmwc.	5	NO							
1.1.12.2*	6,300 CMH at 7 mmwc.	30	NO							
1.1.12.3*	2,000 CMH at 7 mmwc.	6	NO							
1.1.13*	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).									
1.1.13.1*	1,200 CMH at 5 mmwc.	40	NO							
1.1.14	Total price for special tools & tackles for maintenance. (Bidder to submit item-wise un-priced break-up in techno-commercial offer and price offer, if no list is furnished in technical specification. Otherwise, bidder shall supply as per list of technical specification).	1	LOT							
1.1.15	Total price for start-up and commissioning spares. (Bidder to submit item-wise un-priced break-up in techno-commercial offer and price offer)	1	LOT							
TOTAL										

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

Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.

TENDER NO - PSER:SCT:SDG-M1444:13

SCH-4 - SERVICE PRICE BREAK-UP

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT RATE ([₹])	AMOUNT ([₹])
Price break-up of 1.2 of SCH-2.				
1.2.1	Sheet metal type air washer unit with centrifugal fan (DIDW) with motor, pumps with motors, air washer internals, inlet air louvers, filters, piping as per IS:1239, Part-I (heavy class galvanised), valves, nozzles, level switch, temp indicators, back wash arrangement, galvanised drain piping, etc as per specification of capacity 2,00,000 CMH. Each air washer has 2 no centrifugal fan (2 x 50% duty) of capacity 1,00,000 CMH at 75 mm SP.	8	NO	
1.2.2	Relay based control panel for air washers as specified (1 no common panel for 2 no air washer in BC bay of uni # 3, 1 no common panel for 2 no air washer in A row side, unit # 3, 1 no common panel for 2 no air washer in BC bay of unit # 4, 1 no common panel for 2 no air washer in A row side of unit # 4.	4	NO	
1.2.3	Unitary air filtration unit with centrifugal fan (SISW) with motor, pumps with motors, Nylon type Water repellant filter with frame and support, UAF internals, piping as per IS:1239 Part-I (heavy class galvanised), valves for auto start of standby equipment, nozzles, level switch, pressure switches, temp indicators, back wash arrangement, galvanised drain piping etc as per specification. Fan capacity 75,000 CMH at 50 mmwc static pressure.	2	NO	
1.2.4	Relay based control panel for UAF as specified (1 no control panel for 1 no UAF in ESP building of unit # 1, 1 no control panel for 1 no UAF in ESP building unit # 4.	2	NO	
1.2.5*	Ducting, diffuser/ grill, thermal insulation for duct			
1.2.5.1*	Finished GSS (zinc coating 180 gms/ sqm) ducting with support structure etc.			
1.2.5.1.1*	18 G.	7000	SQM	
1.2.5.1.2*	20 G.	8000	SQM	
1.2.5.2*	MS duct With Epoxy paint for battery room.	200	SQM	
1.2.5.3*	MS grilles with VCD.	200	SQM	
1.2.5.4*	MS grilles without VCD.	10	SQM	
1.2.5.5*	Thermal insulation 25 mm expanded polystyrene finished with sand cement plaster as specified for supply air duct.	2000	SQM	
1.2.5.6*	Wall mounted dampers (gravity operated) for different areas.	30	SQM	
1.2.5.7*	Inlet Louvres	5	SQM	
1.2.6*	Fire damper			
1.2.6.1*	Fire damper.	30	SQM	
1.2.6.2*	Motorized actuator with single phase power supply for the above fire damper with auto resetting, limit switches, indication lamps etc.	45	NO	
1.2.6.3*	Fusible link type fire damper.	15	SQM	
1.2.7*	Roof extractor units (Axial flow type) with hood, disconnect switch and all accessories as specified.			

SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT RATE (₹)	AMOUNT (₹)
1.2.7.1*	50,000 CMH at 15 mmwc.	20 NO		
1.2.7.2*	40,000 CMH at 15 mmwc.	4 NO		
1.2.7.3*	20,000 CMH at 15 mmwc.	2 NO		
1.2.8*	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).			
1.2.8.1*	10,000 CMH at 15 mmwc.	35 NO		
1.2.8.2*	7,500 CMH at 15 mmwc.	10 NO		
1.2.9*	Axial flow supply fans with pre filter & 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) as specified.			
1.2.9.1*	10,000 CMH at 30 mmwc.	2 NO		
1.2.9.2*	6,000 CMH at 30 mmwc.	10 NO		
1.2.9.3*	4,000 CMH at 30 mmwc.	6 NO		
1.2.10*	Axial flow exhaust fans (Bifurcated type , Spark proof construction wall mounted belt driven with explosion proof motor), complete with casing, mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified.			
1.2.10.1*	15,000 CMH at 20 mmwc.	4 NO		
1.2.10.2*	7,500 CMH at 20 mmwc.	4 NO		
1.2.11*	Axial flow exhaust fans (Flame proof construction, wall mounted) complete with casing, flame proof motors & mounting frame, MS rain protection cowl, bird screen and all other accessories epoxy painted (suitable for 415V/3-phase supply) as specified.			
1.2.11.1*	15,000 CMH at 10 mmwc.	6 NO		
1.2.11.2*	7,500 CMH at 10 mmwc.	4 NO		
1.2.12*	Axial flow exhaust fans (Wall mounted) complete with casing, TEFC sq cage induction motors & mounting frame, MS rain protection cowl with bird screen, wire guard at inlet and all other accessories as specified (suitable for 415V/3-phase supply).			
1.2.12.1*	10,000 CMH at 7 mmwc.	5 NO		
1.2.12.2*	6,300 CMH at 7 mmwc.	30 NO		
1.2.12.3*	2,000 CMH at 7 mmwc.	6 NO		
1.2.13*	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).			
1.2.13.1*	1,200 CMH at 5 mmwc.	40 NO		
1.2.14	Any other item not indicated above, but required to complete system as per requirements. (Bidder to submit item-wise un-priced break-up in techno-commercial offer and price offer)	1 LOT		
TOTAL				

VOLUME-III				
PRICE SCHEDULE, REV-01				
Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.				
TENDER NO - PSER:SCT:SDG-M1444:13				
SCH-5 - O&M SCOPE PRICE (OPTIONAL)				
SL NO	DESCRIPTION OF EQUIPMENT/ ITEM	QUANTITY	UNIT RATE (₹)	AMOUNT (₹)
1.0	Total lumpsum price for O&M service as per tender.	6	MONTH	

VOLUME-III				
PRICE SCHEDULE, REV-01				
Design, engineering, manufacturing, supply, erection, commissioning, handing over, etc of Ventilation System Package for 2x500 MW units at Sagardighi STPP, West Bengal.				
TENDER NO - PSER:SCT:SDG-M1444:13				
SCH-6 - GUARANTEED POWER CONSUMPTION				
SL NO	DESCRIPTION	QUANTITY (WORKING)	POWER CONSUMPTION AS GUARANTEED (KW) AT MOTOR INPUT TERMINAL	TOTAL POWER CONSUMPTION AS GUARANTEED (KW)
1.0	Centrifugal Fan of capacity 1,00,000 cmh at 75 mmwc static pr for air washers.	16	NO	
2.0	Centrifugal pumps for above.	8	NO	
3.0	Centrifugal fan of capacity 75,000 cmh at 50 mmwc static pr for air washers.	2	NO	
4.0	Centrifugal pumps for above.	2	NO	
5.0	RE units.			
5.1	50,000 cmh at 15 mmwc.	20	NO	
5.2	40,000 cmh at 15 mmwc.	4	NO	
5.3	20,000 cmh at 15mmwc	2	NO	
6.0	Axial flow supply fans.		NO	
6.1	10,000 cmh at 15 mmwc.	35	NO	
6.2	7,500 cmh at 15 mmwc.	10	NO	
6.3	10,000 cmh at 30 mmwc.	2	NO	
6.4	6,000 cmh at 30 mmwc.	10	NO	
6.5	4,000 cmh at 30 mmwc.	6	NO	
7.0	Axial flow exhaust fans.		NO	
7.1	15,000 cmh at 20 mmwc.	4	NO	
7.2	7,500 cmh at 20 mmwc.	4	NO	
8.0	Axial flow exhaust fans.		NO	
8.1	15,000 cmh at 10 mmwc.	6	NO	
8.2	7,000 cmh at 10 mmwc.	4	NO	
9.0	Axial flow exhaust fans.		NO	
9.1	10,000 cmh at 7 mmwc.	5	NO	
9.2	6300 cmh at 7 mmwc.	30	NO	
9.3	2,000 cmh at 7 mmwc.	6	NO	
10.0	Propellor fan 1200 cmh at 5 mmwc.	40	NO	
TOTAL				950
NOTE				
1.0	Estimated power consumption for the system (for working drives only) is considered as 950 KW.			
2.0	Rate of penalty is @ Rs 2.20 lac per additional KW.			