

TENDER SPECIFICATION

NO: BHE/PW/PUR/HZGG-ELE/751

FOR

HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, TESTING, COMMISSIONING AND HANDING OVER OF ELECTRICAL PACKAGE FOR AND ASSOCIATED ITEMS FOR UNIT #1 OF 1x350 MW HAZIRA CCPP

AT

GUJARAT STATE ENERGY GENERATION LIMITED

NEAR HAZIRA, VILLAGE MORA

POST BHATHA, SURAT HAZIRA ROAD,
DISTT.-SURAT, PIN : 394510
GUJARAT

VOLUME- II - PRICE BID



BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

POWER SECTOR - WESTERN REGION

345, KINGS WAY - NAGPUR 440 001

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THESE TENDER DOCUMENTS CONTAINING VOLUME-II PRICE BID IS ISSUED TO:

M/s.....

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(THESE TENDER DOCUMENTS ARE NOT TRANSFERABLE)

FOR BHARAT HEAVY ELECTRICALS LIMITED

AGM (PURCHASE)

PLACE: NAGPUR

DATE :

BHARAT HEAVY ELECTRICALS LIMITED : PSWR : NAGPUR
TENDER SPECIFICATION No. BHE/PW/PUR/ HZGG-ELE/751
VOLUME-II-PRICE BID

BHARAT HEAVY ELECTRICALS LIMITED : PSWR : Nagpur
T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 1 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
AA	PANELS					I.5.0
A1.1	GT/STG CO2 Fire protection panel 600 x 1200 x 300 MM , 0.1 MT and accessories	2	Nos			I.5.0
A1.2	Diverter Damper control panel , 1000X2354X450 MM, 0.25 MT	1	Nos			I.5.0
A1.3	Guillotine Damper control panel, 1000 X 2354 X 450 MM, 0.25 MT	1	Nos			I.5.0
A1.4	Space Heater Control Panel for GTG (500x300x500)	1	Nos			I.5.0
A1.5	Generator Instrumentation cabinet including annunciator (1230 x 1060 x 2550, 600 Kgs)	1	Nos			I.5.0
A1.6	DC motor starter panels, etc (DC JOP, DC EOP, Seal oil panel), including resistance boxes. Approx weight 0.5 MT each.	3	Nos			I.5.0
A1.7	Generator auxiliary monitoring panel	1	Set			I.5.0
A1.8	T& AVT Panel	1	Set			I.5.0
A1.9	Annunciation System for Generator(2200x1000x800, Wt.500 Kgs. Approx.)	1	Set			I.5.0
A1.10	Continous on-line partial discharge monitoring system	1	Set			I.5.0
A1.11	Electric Heater for Booster Gas Compressor	1	Set			I.5.0
A1.12	Conrol Panel for HP dosing system (1000x800x2000, 3.0 MT)	1	Set			I.5.0
A1.13	LP dosing system	1	Set			I.5.0

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BHARAT HEAVY ELECTRICALS LIMITED : PSWR : Nagpur
T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 2 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
A2	Generator Starting Frequency Converter system consist of LCI panels, AC reactors, DC reactors, LCI transformers, AC breaker cubicle HMI station and printers of LCI and networking interface and associated accessories.	1	Set			1.5.0
A3	GTG -Excitation system consist of -REG Cubicle (1150x1200x2355), FS Cubicle (1150x1200x2355), TY1& TY2 Cubicle (680x1200x2355), RTC Cubicle (1950x1450x2355)	1	Set			1.5.0
A4	STG -Excitation system consist of -REG Cubicle (1150x1200x2355), FS Cubicle (1150x1200x2355), TY1& TY2 Cubicle (680x1200x2355), RTC Cubicle (1950x1450x2355)	1	Set			1.5.0
A5	GENERATOR, GT, ST & UAT PROTECTION & METERING PANELS, ETC					1.5.0
A5.1	Generator Relay panel for GTG 2600(H)x1200(W)x1200(D), Wt.600Kg. Each	4	Nos			1.5.0
A5.2	Generator Relay panel for STG 2600(H)x1200(W)x1200(D), Wt.600Kg. Each	4	Nos			1.5.0
BB	Structural steel fabrication & installation	20	MT			1.4.0
CC	TRANSFORMERS					1.8.0

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T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 3 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
C1	Gas Turbine Generator transformer 273 MVA , 230/15.75 KV, with ONAN /ONAF cooling, OLTC ,Neutral side CTs,HV/LV/HVN bushings,bushing CTs, Radiators, Cooling fans, conservators, RTC Control panel, Marshalling Panel,Piping and loose accessories. Dimensions: 15500x8000x8000mm, Shipping Weight (Gas Filled) -170MT Oil quantity -63000 Litres.	1	Nos			
C2	Steam Turbine Generator transformer 153 MVA, 230/15.75 KV , with ONAN /ONAF cooling, OLTC ,Neutral side CTs,HV/LV/HVN bushings,bushing CTs, Radiators, Cooling fans, conservators, RTC Control panel, Marshalling Panel, Piping and loose accessories. Dimensions: 14500x8300x7800mm, Shipping Weight (Gas Filled) -125MT Oil quantity -44830 Litres.	1	Nos			
C3	Unit Auxiliary transformer 20 MVA,15.75/6.9 kV, ONAN Cooling and loose accessories.	2	Nos			
C4	6.6/0.433 KV 2.0 MVA Station service transformer and accessories	2	Nos			
C5	6.6/0.433 KV 1.6 MVA Station service transformer and accessories	4	Nos			
C6	6.6/0.433 KV 1.0 MVA Station service transformer and accessories	2	Nos			

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T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 4 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
DD	ISOLATED PHASE GENERATOR BUSDUCT OF GTG/STG AND TAP OFF BUS DUCT TO UATs COMPROSING OF THE FOLLOWING					1.7.0
D1	Isolated phase bus duct with Alumunium conductor and aluminium enclosure,with cubicle housing NGTs, CTs,PTs, LA and SPs, from generator terminal to generator circuit breaker. The tap- off bus duct form main bus duct to the UAT. Providing canopy over open bus duct area Including structural steel support, hot air blower skid along with acessories etc. Approximate single phase length 50 mts weighth 19 MT, Weight of support structure ; 6 MT. Detail scope of work as specified in tender specification and appendix	2	Set			
EE	NON SEGREGATED LV 415 VOLT BUSDUCTS / NEUTRAL GROUNDING TRANSFORMER / NEUTRAL GROUNDING RESISTANCE Transportation of material from Stores/ storage yard to erection site, Erection, Assembly, Testing & Commissioning of NSP BUS DUCTS for interconnection between service transformer and LT MCC.					1.7.0
E1	LT Busduct, 3000/2500/1600 A 415V, Non-Phase segregated form LV terminals of oil filled LT transformer to switchgear.	10	Set			1.7.0
E2	6.6 KV NGR, 9.96 OHM, 400 A	2	nos.			1.5.0
FF	GENERATOR CIRCUIT BREAKER					1.5.0

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BHARAT HEAVY ELECTRICALS LIMITED : PSWR : Nagpur
T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 5 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
F1	GT Circuit Breaker for Gas Turbine ,Isolated Phase set of three single phase breaker pole assembly along with hydraulic control unit ,beam/floor mounted with mounting brackets, supports and control panel etc. Dimension 4000x3000x2500, approximate weight: 7 MT	1	Set			
GG	AVIATION LAMP AND LIGHTNING ARRESTOR PACKAGE COMPRISING OF Four numbers of Aviation Lamp assembly, Lightning arrestor, Approximately 100 mts of GI conduits, two numbers of JB's, Switch fuse units and its accessories	1	Set			I.10.0
HH	HT SWITCHGEARS					I.5.0
H1	6.6 KV Unit Switchboard 1CA & 1CB : consists of 36 panels. Dimension of EACH PANEL is approx 2692(h) x 2355(d) x 820(w) mm and Approx Weight 1500Kg. per Panel.	1	Set			
II	LT SWITCHGEARS					I.5.0
I1	415 V, 2500 A GTG PMCC-1DA. Approx. dimension 2430(H) X 1444(D) X 16800(W) mm, & WT. 17425 kg.	1	Nos.			
I2	415 V, 1600 A STG PMCC-1DBApprox. dimension 2430(H) X 1444(D) X 18400(W) mm, & WT. 19275 kg.	1	Nos.			
I3	415 V, 400 A ST PMCC-1KA/1KB. Approx. dimension 2430(H) X 1444(D) X 10400(W) mm, & WT. 10025kg.	1	Nos.			

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T.S. No. BHE/PW/PUR/HZGG-ELE/751
VOLUME-II-PRICE BID (Page 6 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
I4	415 V, 250 A HRSG MCC-1HA/2HA. Approx. dimension 2430(H) X 1444(D) X8000(W) mm, & WT. 7250kg.	1	Nos.			
I5	415, 3000A STATION SERVICE SWGR-0DA. Approx. dimension 2430(H) X 1444(D) X 8000(W) mm, & WT. 8650 kg.	1	Nos.			
I6	415, 3000A COOLING WATER SYSTEM PMCC-0DB. Approx. dimension 2430(H) X 1444(D) X 15200(W) mm, & WT. 17175 kg.	1	Nos.			
I7	415, 630A AC VENT. MCC-0SA/0SC. Approx. dimension 2430(H) X 1444(D) X 10400(W) mm, & WT. 10025 kg.	1	Nos.			
I8	415, 400A MISC. MCC -0S B/0SD. Approx. dimension 2430(H) X 1444(D) X 10400(W) mm, & WT. 10025 kg.	1	Nos.			
I9	415, 400A CHLORINATION PLANT MCC-0WA. Approx. dimension 2430(H) X 1444(D) X 8000(W) mm, & WT. 7250 kg.	1	Nos.			
I10	415, 630A RWPH MCC-0WB. Approx. dimension 2430(H) X 1444(D) X 8800(W) mm, & WT. 9375 kg.	1	Nos.			
I11	415, 1000A EMERGENCY SWITCHGEAR-0EA. Approx. dimension 2430(H) X 1444(D) X 6400(W) mm, & WT. 7400 kg.	1	Nos.			
I12	220 STATION DCDB- 0FA. Approx. dimension 2430(H) X 144(D) X X8800(W) mm, & WT. 7325 kg.	1	Nos.			
I13	125V GT DCDB-1 -1FA/2FA. Approx. dimension 2430(H) X 144(D) X 4800(W) mm, & WT. 2700 kg.	1	Nos.			
I14	125V GT DCDB-2 -1FA/2FA. Approx. dimension 2430(H) X 144(D) X 2400(W) mm, & WT. 1350 kg.	1	Nos.			

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VOLUME-II-PRICE BID (Page 7 of 7)

SN	DESCRIPTION	TOTAL QTY.	UOM	Unit Rate	TOTAL AMOUNT (Rs.)	Applicable term of payment
I15	415V GT MCC (16000x1250x2430, 20 MT)	1	Set			
JJ	DC AND UPS SYSTEM					I.5.0
J1	220 V DC System consisting chargers, battery bank of 170 CELLS, 220V Ni-Cd, high discharge battery of min 840AH rating 1.14 ECV of 10 hrs discharge rate with all accessories & MS racks with anti-corrosive paint .	2	Set			
kk	JUNCTION BOXES/LOCAL PB BOX/POWER DISTRIBUTION BOX (weather/flame-proof)					I.3.0
k1	Junction boxes upto 48 way	114	Nos.			
k2	Junction boxes above 48 way	24	Nos.			
LL	COMMISSIONING SERVICES					
L1	Electric Actuators	50	Nos			I.10.0
L2	Local Push Button Station (Type A/B/C/D)	120	Nos			I.3.0
L3	Genrator system testing	2	Set			I.10.2
L4	Testing and commissioning of 6.6 KV and 2.4 KV HT motors including dryout	13	Nos			I.9.0
L5	Testing and commissioning of 415 V LT motors including dry out	60	Nos			I.9.0
GRAND TOTAL IN FIGURES IN Rs						
GRAND TOTAL IN WORDS IN RS						

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