

PRICE FORMAT

DG-SET PIPAVAV

PRICE FORMAT -VENDORS SHALL STRICTLY SUBMIT SEALED PRICE BIDS EXACTLY IN LINE WITH THIS FORMAT										
NOTE: PLEASE DON'T RETYPE THIS FORMAT. INSTEAD USE THE SOFT COPY IN EXCEL AS SENT BY BHEL. FILL THE PRICE AND SUBMIT THE PRICED AND UNPRICED BIDS. COMMERCIAL TERMS AND CONDITIONS SHALL NOT BE ENCLOSED OR WRITTEN IN PRICE FORMAT. IN CASE IT IS DONE THEN THAT PRICE BID SHALL BE DEEMED INVALID AND REJECTED.										
General: Design, manufacturing, testing, supply,commissioning, performance test of DG sets at site in addition to supervision of erection at site of 6.6KV, 2.5MW DG set at 50 degree centigrade with its complete auxiliaries including commissioning spares, tools and tackles till handing over of site.										
PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT										
Sl. No.	ITEM DESCRIPTION	QTY	UNIT	UNIT RATE (FOR EX- WORKS incl packing and forwarding)	Total FOR Ex-works	Total ED+ cess on ED	Total CST against C form	Total Service Tax + cess	Total Freight	Total FOR site price incl all taxes, duties, Freight
a	OPTION-I (BOTH ENGINE & ALTERNATOR FROM VENDOR)									
I	The Generating Set shall be 2.5MW, 1000 RPM,6.6KV, 0.8 pf (lag) at 500 C ambient , capable of continuous running of which one hour at 10% over load at rated speed in every 12 hours, complete with all accessories& Electronic Governor with pre lube pump motor coupled with flexible coupling with Alternator with ,QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD -6nos ,BTD -2nos, NGR Panel & Set mounted control panel suitable for Air Starting & AMF feature with Engine mounted radiator on common base frame with elastic fastening equipment ,fly wheel, cover , AVMS, Silencer, bellow & water ,fuel , lube oil, Exhaust , air system with piping on skid including all erection hard ware <u>with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water.</u> DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC.	2	set							
	OPTION-II (AVR & ALTERNATOR WILL BE BHEL SUPPLY)									
II	The engine shall be 2.5MW, 1000 RPM,6.6KV, 0.8 pf (lag) at 500 C ambient , capable of continuous running of which one hour at 10% over load at rated speed in every 12 hours, complete with all accessories& Electronic Governor with pre lube pump motor <u>with flexible coupling for coupling with BHEL Alternator</u> with ,QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD -6nos ,BTD -2nos, NGR Panel & Set mounted control panel suitable for Air Starting & AMF feature with Engine mounted radiator on common base frame with elastic fastening equipment ,fly wheel, cover , AVMS, Silencer, bellow & water ,fuel , lube oil, Exhaust , air system with piping on skid including all erection hard ware <u>with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water.</u> DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC.	2								

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b	Compressed Air Starting System common for both DG Sets above Compressed Air starting System (500 litre air bottle-2NOS & 15 litre air bottle- 2NO.S) as per IS:2002 and ASME Sec VIII Div-1. The air pipe lines shall be A 106 Gr. B pipes. All the welds of high pressure(30 bar) shall be 100% radio graphed. The compressor shall be designed for continuous operation. Three no.s compressors are to be provided common for 2 Nos. DG sets. Two no.s compressor shall be electrical motor driven and one no. compressor shall be diesel engine driven	1	set							
c	Acoustic treatment of DG Room	1	set							
d	Recommended Spares-DG Set	1	set							
e	Fuel tank of 990 Ltr. Capacity with fuel pipes, gauges, level switches, heavy duty tubular level sensor/gauges with channel protection and required hard wares. Hand operated pumps with Hose pipes of length 10 mtrs for transferring fuel from storage tankers to 990 Ltrs. Day tank. Inlet of the pump shall have 5m long armored hose with suitable filter	2	set							
f	Necessary fuel, water, air piping with hardware, pipe support from engine to equipment fuel tank, air intake etc within battery limit of inside/outside DG room as required.	2	set							
g	Exhaust piping, insulation & hangers & Support structure with foundation bolts & nuts with necessary hardware as required starting from engine to out side DG Room (minimum 30m height) and also meeting pollution control requirements as per latest Govt of India norms. Inside the DG room aluminum cladding for exhaust pipes shall be given to maintain the required temperature.	2	set							
h	HT, LT Power & Control Cables including all accessories like lugs, glands, ties etc, Special Cables, instrument Cables, inside DG Room size 30 M X 20 M as required(Tentative).	2	set							
i	Galvanized Cable trays & Slotted channel supports, steel structure material for Cable trays, Electrical panel with all hardware, nut-bolt and accessories in side DG room 30M X20 M as required-List of cables to be furnished along with the offer	2	set							
j	Total Earthing materials such as copper cables, GI earthing strips, GI / Cl ear thing electrodes for neutral and body ear thing of all equipment pertaining to DG Set and its accessories includes DG Set, Electrical Panels, Cable trays etc and connection to the Earth Pit, etc as required. This includes ear thing strip along the cable tray and safety items such as rubber mat, fire extinguishers, danger boards, buckets, first aid chart etc as required.	2	set							

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k	Commissioning Spares for DG Set as required (list to be furnished with offer) The following items to be considered anyway. Anything else as required to be given free at the time of commissioning. Lube oil filters – 4no.sBypass lub oil filter – 2no.sFuel oil filter kit & its seal ring – 2no.sSeal ring – 2no.sStrip test – 1no.	2	set							
l	Tools &Tackles	2	set							
m	Supervision Of Erection of entire DG Set Package including Control panel/ Aux. Dist Board./LPB Station.	2	set							
n	Testing and commissioning, PG test, statutory clearances for explosive, electrical etc, handing over of the entire DG Set Package to customer (entire DG Set Package includes AMF Panel/ Aux. Dist. Board/Local PB Station etc.)	2	set							
o	180AH minimum (or as required) lead acid maintenance free battery for control supply. Battery shall be provided with its accessories such as stand, gloves, specific gravity measuring instrument, distilled water etc.	4	set							
p	Float cum Boost Charger for recharging the above battery in 15 hours. Charger shall be provided with voltmeter, ammeter, automatic voltage stabilizer, necessary filters and chokes and suitable input transformer impedance to automatically reduce charging current, as battery gradually charges up and to prevent overcharging of battery. Charger shall be protected by suitable current limiting device.	4	set							
q	Maintenance platform for DG Set	2	set							
r	Storage tank of 10 kilo litre capacity with all required piping, valves, level/pressure gauges, level/pressure switches etc.	2	set							
s	Motorised Fuel transfer pump with all required accessories	4	set							
t	DG AMF CONTROL PANEL for 2.5MW,6.6kV DG Set	2	set							
u	DG AUXILIARY DISTRIBUTION BOARD	2	set							
v	LOCAL PUSH BUTTON STATIONS	20	no.s							
w	COMMISSIONING SPARES-control panels	1	set							
x	RECOMMENDED SPARES-control panels	1	set							
y	SYNCHRONISING PANEL	1	set							
			TOTAL=							
	OPTIONAL PRICES									
	UNIT RATES OF ADDITION/DELETION									
	DG SET									
a	Motorised Fuel Transfer Pump									
b	Compressor for engine starting system									
	DG AUXILIARY DISTRIBUTION BOARD									
	The following shall be full fledged feeders with all required busbar arrangement,wiring, components etc									
a	INCOMER-500A	1	no.							
b	INCOMER-250A	1	no.							
c	OUTGOING FEEDER 240V,20A(for battery charger)	1	no.							
d	OUTGOING FEEDER 240V,6A with power contactor (for jacket water heater)	1	no.							

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e	OUTGOING FEEDER DOL -1 hp (for pre lub pump)	1	no.							
f	Control Supply feeder with 415/110V, 10kVA transformer	1	no.							
g	Control Supply feeder with 415/230V, 2.5kVA transformer	1	no.							
h	OUTGOING FEEDER DOL -9kW(for compessor)	1	no.							
i	OUTGOING FEEDER DOL -3kW(for fuel transfer pump)	1	no.							
j	Empty panel of each type	1	no.							
	DG AMF PANEL/AUXILIARY DISTRIBUTION BOARD									
1	6.6kV VCB	1	no.							
2	CT's of each type & rating	1	no.							
3	PT's of each type & rating	1	no.							
4	Voltage restraint over current Relay CDV62	1	no.							
5	Reverse Power Relay CCUM21	1	no.							
6	Negative Phase Sequence Relay CTNM12	1	no.							
7	Fuse Failure Relay VAPM31	1	no.							
8	Earth Fault Relay VDG14	1	no.							
9	Master trip relay VAJH13	1	no.							
10	Auxiliary relay VAA11	1	no.							
11	Frequency Relay MFVUM12	1	no.							
12	Voltage Relay VTIGM13	1	no.							
13	Differential Relay CAG34	1	no.							
14	Check Synchronising relay SKE11	1	no.							
15	Timer Relay VTT11	1	no.							
16	MICOM P343	1	no.							
17	Timers of each type & rating	1	no.							
18	Current Transducer	1	no.							
19	Power Factor Transducer	1	no.							
20	Watt Transducer	1	no.							
21	Voltage Transducer	1	no.							
22	Frequency Transducer	1	no.							
23	Temperature Controller	1	no.							
24	Ammeter	1	no.							
25	Voltmeter	1	no.							
26	Wattmeter	1	no.							
27	Watt-hour meter	1	no.							
28	Power Factor meter	1	no.							
29	Frequency meter	1	no.							
30	Auxiliary contactor 24V DC/220V DC/110V AC/230V AC of each type & rating	1	no.							
31	Push Button of each type	1	no.							
32	Selector Switch of each type & rating	1	no.							
33	Indicating Lamp of each type	1	no.							
34	Hooter	1	no.							
35	Fuses of each type & rating	1	no.							
36	MCB's of each type & rating	1	no.							
37	SFU's of each type & rating	1	no.							
38	MCCB's of each type & rating	1	no.							
39	Double Voltmeter	1	no.							

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40	Double Frequency Meter	1	no.							
41	Synchroscope	1	no.							
42	PLC 64 Inputs/32 Outputs with licensed software	1	no.							
43	Anything else not mentioned above but required may be quoted	1	no.							