

| 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 through indigenous vendor   |     |      |  |                |                |          |  |                          |                          |                |  |
| ITEM DESCRIPTION   | QTY | UNIT | UNIT RATE (EX-WORKS incl packing and forwarding) | Total Ex-works | Total CD (EQU) | Total ED |  | Total CST against C form | Total Service Tax + cess | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 1 The Generating Set shall be 2.5MW, 6.6KV, 0.8 pf (lag) at 50 DEG 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, with Electronic Governor, with pre lube pump, with coupling, with QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD –6nos ,BTD –2nos, NGR Panel, Set mounted control panel, suitable for Air Starting, with AMF feature, with Cooling tower, with 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 and with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water for factory testing. DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC. Alternator rating shall be 3125kVA continuous, 0.8pf, 6.6kV at 50 deg C with class F insulation and temperature rise limited to ClassB.<br><b><u>Supplier to indicate Engine model.</u></b> | 2   | set  |  |                |                |          |  |                          |                          |                |  |
| 2 Compressed Air Starting System with air tanks and accessories as required, common for both DG Sets above. 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  |  |                |                |          |  |                          |                          |                |  |
| 3 Acoustic treatment of DG Room housing both DG Sets as per applicable norms including erection, commissioning and labour required.  | 1   | set  |  |                |                |          |  |                          |                          |                |  |
| 4 Fuel tank of 990 Ltr. Capacity with fuel pipes , gauges ,level switches, heavy duty tubular level sensor/gauges with channel protection and required hardware. 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  |  |                |                |          |  |                          |                          |                |  |
| 5 Necessary fuel, water, air piping with hardware, pipe support from engine to equipment fuel tank, air intake etc inside DG room as required for one DG Set.  | 2   | set  |  |                |                |          |  |                          |                          |                |  |

|   | ITEM DESCRIPTION   |     |      | UNIT RATE<br>(EX-WORKS<br>incl packing<br>and<br>forwarding) |                    |                   |          |  |                                |                                |                   | Total FOR<br>site price<br>incl all<br>taxes,<br>duties,<br>Freight |
|---|--|-----|------|--|--------------------|-------------------|----------|--|--------------------------------|--------------------------------|-------------------|---|
|   |  | QTY | UNIT |  | Total Ex-<br>works | Total CD<br>(EQU) | Total ED |  | Total CST<br>against C<br>form | Total<br>Service<br>Tax + cess | Inland<br>Freight |   |
| 6 | Exhaust piping, insulation & hangers & Support structure with foundation bolts & nuts with necessary hardware as required, starting from engine to out side DG Room as required for one DG Set (height as per applicable norms) 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 temperature within required limits. | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 7 | FRLS HT, LT Power & Control Cables including all accessories like lugs, glands, ties etc, Special Cables, instrument Cables, inside DG Room as required for one DG Set.  | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 8 | Galvanized Cable trays & Slotted channel supports ,steel structural material for Cable trays/Electrical panels with all hardware ,nut –bolt and accessories in side DG room as required for one DG Set-List of cables to be furnished along with the offer   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 9 | Total Earthing materials such as copper cables, GI earthing strips, GI / Cl ear thing electrodes for neutral and body earthing of all equipment pertaining to DG Set and its accessories including panels, cable trays etc and connection to the earth pit etc as required for one DG Set. This includes earthing strip along the cable tray and safety items such as rubber mat, danger boards, buckets, first aid chart etc as required.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |

|    | ITEM DESCRIPTION  |     |      | UNIT RATE<br>(EX-WORKS<br>incl packing<br>and<br>forwarding) | Total Ex-<br>works | Total CD<br>(EOU) | Total ED |  | Total CST<br>against C<br>form | Total<br>Service<br>Tax + cess | Inland<br>Freight | Total FOR<br>site price<br>incl all<br>taxes,<br>duties,<br>Freight |
|----|---|-----|------|--|--------------------|-------------------|----------|--|--------------------------------|--------------------------------|-------------------|---|
|    |   | QTY | UNIT |  |                    |                   |          |  |                                |                                |                   |   |
| 10 | Commissioning Spares as required (list to be furnished with offer)<br>The following items to be considered anyway. Anything else as required to be given free at the time of commissioning.<br>Lube oil filters – 4no.s<br>Bypass lub oil filter – 2no.s<br>Fuel oil filter kit & its seal ring – 2no.s<br>Seal ring – 2no.s<br>Strip test – 1no.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 11 | Tools &Tackles for one DG Set.  | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 12 | Supervision Of Erection of one entire DG Set Package including AMF panel/ Aux. Dist Board./LPB Station.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 13 | Testing and commissioning, load trail of one entire DG Set Package including AMF Panel/ Aux. Dist. Board/Local PB Station etc.  | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 14 | PG test, all drgs/docs and support required for obtaining statutory clearances from CPCB, CEA and other applicable bodies for one DG Set.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 15 | 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  |  |                    |                   |          |  |                                |                                |                   |   |
| 16 | Float cum Boost Charger for recharging the above battery in 10 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  |  |                    |                   |          |  |                                |                                |                   |   |
| 17 | Maintenance platform for DG Set   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 18 | Storage tank of 10 kilo litre capacity with all required piping, valves, level transmitter, level/pressure gauges, level/pressure switches etc.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 19 | Motorised Fuel transfer pump with all required accessories  | 4   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 20 | Alternator Main & Neutral Terminal Box for one alternator   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 21 | First fill of lub oil at site for one engine  | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 22 | First fill of coolant conditioner/ jacket cooling water at site for one engine.   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 23 | DG AMF CONTROL PANEL for 2.5MW,6.6kV DG Set   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 24 | DG AUXILIARY DISTRIBUTION BOARD   | 2   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 25 | LOCAL PUSH BUTTON STATIONS  | 20  | sets |  |                    |                   |          |  |                                |                                |                   |   |
| 26 | COMMISSIONING SPARES-control panels   | 1   | set  |  |                    |                   |          |  |                                |                                |                   |   |
| 27 | SYNCHRONISING PANEL   | 1   | set  |  |                    |                   |          |  |                                |                                |                   |   |
|    | TOTAL   |     |      |  |                    |                   |          |  |                                |                                |                   |   |

| ITEM DESCRIPTION  | QTY | UNIT | UNIT RATE<br>(EX-WORKS<br>incl packing<br>and<br>forwarding) | Total Ex-works | Total CD<br>(EQU) | Total ED | Total CST<br>against C<br>form | Total<br>Service<br>Tax + cess | Inland<br>Freight | Total FOR<br>site price<br>incl all<br>taxes,<br>duties,<br>Freight |
|---|-----|------|--|----------------|-------------------|----------|--------------------------------|--------------------------------|-------------------|---|
| <b>OPTIONAL PRICES FOR ADDITION/ DELETION</b>   |     |      |  |                |                   |          |                                |                                |                   |   |
| <b>DG SET</b>   |     |      |  |                |                   |          |                                |                                |                   |   |
| The engine shall be 2.5MW, 6.6KV, 0.8 pf (lag) at 50 DEG 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, <b>with coupling for coupling with BHEL Alternator</b> ,with QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD -6nos ,BTD -2nos, NGR Panel, Set mounted control panel, suitable for Air Starting, with AMF feature, with cooling tower, with 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 and with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water etc for factory testing. DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC.<br><b>Supplier to indicate Engine model.</b> | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 1 Compressor for engine starting system   | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 2 Diesel engine for engine starting system  | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 3 Cooling Water pump  | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 4 Recommended spares for two years operation for one DG Set (List to be furnished)  | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 5 Suitable transformer dry type -6.6kV/415V,3ph, 250kVA for auxiliary power supply for auxiliaries of DG Set  | 1   | set  |  |                |                   |          |                                |                                |                   |   |
| 6 <b>DG AUXILIARY DISTRIBUTION BOARD</b>  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| <b>The following shall be full fledged feeders with all required busbar arrangement,wiring, components etc</b>  |     |      |  |                |                   |          |                                |                                |                   |   |
| 7 INCOMER-250A  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 8 INCOMER-400A  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 9 OUTGOING FEEDER 240V,20A(for battery charger)   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 10 OUTGOING FEEDER 240V,6A with power contactor (for jacket water heater )  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 11 OUTGOING FEEDER DOL -2 hp (for pre lub pump)   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 12 Control Supply feeder with 415/110V, 10kVA transformer   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 13 Control Supply feeder with 415/230V, 2.5kVA transformer  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 14 OUTGOING FEEDER DOL -9kW(for compessor)  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 15 OUTGOING FEEDER DOL -3kW(for fuel transfer pump)   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 16 Empty panel of each type   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| <b>DG AMF PANEL/AUXILIARY DISTRIBUTION BOARD</b>  |     |      |  |                |                   |          |                                |                                |                   |   |
| 17 6.6kV VCB  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 18 6.6kV VCB Panel  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 19 6.6KV CT's of each type & rating   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 20 6.6KV PT's of each type & rating   | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 21 415V CT's of each type & rating  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |
| 22 415V PT's of each type & rating  | 1   | no.  |  |                |                   |          |                                |                                |                   |   |

|    | ITEM DESCRIPTION  | QTY | UNIT | UNIT RATE<br>(EX-WORKS<br>incl packing<br>and<br>forwarding) | Total Ex-<br>works | Total CD<br>(EOU) | Total ED |  | Total CST<br>against C<br>form | Total<br>Service<br>Tax + cess | Inland<br>Freight | Total FOR<br>site price<br>incl all<br>taxes,<br>duties,<br>Freight |
|----|---|-----|------|--|--------------------|-------------------|----------|--|--------------------------------|--------------------------------|-------------------|---|
| 23 | Voltage restraint over current Relay CDV62  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 24 | Reverse Power Relay CCUM21  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 25 | Negative Phase Sequence Relay CTNM12  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 26 | Fuse Failure Relay VAPM31   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 27 | Earth Fault Relay VDG14   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 28 | Master trip relay VAJH13  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 29 | Auxiliary relay VAA11   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 30 | Frequency Relay MFVUM12   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 31 | Voltage Relay VTIGM13   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 32 | Differential Relay CAG34  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 33 | Check Synchronising relay SKE11   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 34 | Timer Relay VTT11   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 35 | MICOM P343  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 36 | Timers of each type & rating  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 37 | Current Transducer  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 38 | Power Factor Transducer   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 39 | Watt Transducer   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 40 | Voltage Transducer  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 41 | Frequency Transducer  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 42 | Temperature Controller  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 43 | Ammeter   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 44 | Voltmeter   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 45 | Wattmeter   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 46 | Watt-hour meter   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 47 | Power Factor meter  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 48 | Frequency meter   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 49 | Auxiliary contactor of each type & rating   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 50 | Push Button of each type  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 51 | Selector Switch of each type & rating   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 52 | Indicating Lamp of each type  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 53 | Hooter  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 54 | Fuses of each type & rating   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 55 | MCB's of each type & rating   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 56 | SFU's of each type & rating   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 57 | MCCB's of each type & rating  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 58 | Double Voltmeter  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 59 | Double Frequency Meter  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 60 | Synchroscope  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 61 | PLC 64 Inputs/32 Outputs with licensed software   | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
| 62 | Level transmitter with 4-20mA output for fuel tank  | 1   | no.  |  |                    |                   |          |  |                                |                                |                   |   |
|    | Anything else not mentioned above but required may be quoted  |     |      |  |                    |                   |          |  |                                |                                |                   |   |
|    | The above list is not exhaustive and anything required for the satisfactory working of the DG set shall be supplied without any commercial implication to BHEL. |     |      |  |                    |                   |          |  |                                |                                |                   |   |
|    | Unit rates for all components for engine/AVR/ Electronic controller/ alternator may be quoted.  |     |      |  |                    |                   |          |  |                                |                                |                   |   |

| 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 FOR FOREIGN vendor   |   |     |          |  |  |                       |                    |                          |   |                                  |                |  |
| Sl. No.   | ITEM DESCRIPTION  | QTY | UNIT     | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & ccess on CVD (EOU) | Education ccess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 1   | The Generating Set shall be 2.5MW, 6.6KV, 0.8 pf (lag) at 50 DEG 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, with Electronic Governor, with pre lube pump, with coupling, with QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD –6nos ,BTD –2nos, NGR Panel, Set mounted control panel, suitable for Air Starting, with AMF feature, with Cooling tower, with 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 and with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water for factory testing. DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC.<br>Alternator rating shall be 3125kVA continuous, 0.8pf, 6.6kV at 50 deg C with class F insulation and temperature rise limited to ClassB.<br><b><u>Supplier to indicate Engine model.</u></b> | 2   | set      |  |  |                       |                    |                          |   |                                  |                |  |
| 2   | Cost of Inspection of DG set <b><u>at manufacturer's works ABROAD</u></b> (per person) including a) To & Fro travelling charges b) Boarding & Lodging c) Local Conveyance at the place of inspection d) Local conveyance in india e) Incidental charges per person  | 3   | perso ns |  |  |                       |                    |                          |   |                                  |                |  |
| 3   | Compressed Air Starting System with air tanks and accessories as required, common for both DG Sets above. 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      |  |  |                       |                    |                          |   |                                  |                |  |
| 4   | Acoustic treatment of DG Room housing both DG Sets as per applicable  | 1   | set      |  |  |                       |                    |                          |   |                                  |                |  |

| PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT FOR FOREIGN vendor |  |     |      |  |  |                       |                    |                          |  |                                  |                |  |
|---|--|-----|------|--|--|-----------------------|--------------------|--------------------------|--|----------------------------------|----------------|--|
| Sl. No.   | ITEM DESCRIPTION   | QTY | UNIT | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & ccess on CVD (EOU) | Education cess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 5   | Fuel tank of 990 Ltr. Capacity with fuel pipes , gauges ,level switches, heavy duty tubular level sensor/gauges with channel protection and required hardware. 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  |  |  |                       |                    |                          |  |                                  |                |  |
| 6   | Necessary fuel, water, air piping with hardware, pipe support from engine to equipment fuel tank, air intake etc inside DG room as required for one DG Set.  | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 7   | Exhaust piping, insulation & hangers & Support structure with foundation bolts & nuts with necessary hardware as required, starting from engine to out side DG Room as required for one DG Set (height as per applicable norms) 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 temperature within required limits. | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 8   | FRLS HT, LT Power & Control Cables including all accessories like lugs, glands, ties etc, Special Cables, instrument Cables, inside DG Room as required for one DG Set.  | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 9   | Galvanized Cable trays & Slotted channel supports ,steel structural material for Cable trays/Electrical panels with all hardware ,nut –bolt and accessories in side DG room as required for one DG Set-List of cables to be furnished along with the offer   | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 10  | Total Earthing materials such as copper cables, GI earthing strips, GI / CI ear thing electrodes for neutral and body earthing of all equipment pertaining to DG Set and its accessories including panels, cable trays etc and connection to the earth pit etc as required for one DG Set. This includes earthing strip along the cable tray and safety items such as rubber mat, danger boards, buckets, first aid chart etc as required.   | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 11  | Commissioning Spares as required (list to be furnished with offer)<br>The following items to be considered anyway. Anything else as required to be given free at the time of commissioning.<br>Lube oil filters – 4no.s<br>Bypass lub oil filter – 2no.s<br>Fuel oil filter kit & its seal ring – 2no.s<br>Seal ring – 2no.s<br>Strip test – 1no.  | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 12  | Tools &Tackles for one DG Set.   | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |
| 13  | Supervision Of Erection of one entire DG Set Package including AMF panel/ Aux. Dist Board./LPB Station.  | 2   | set  |  |  |                       |                    |                          |  |                                  |                |  |

| PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT FOR FOREIGN vendor |   |     |      |  |  |                       |                    |                          |   |                                  |                |  |
|---|---|-----|------|--|--|-----------------------|--------------------|--------------------------|---|----------------------------------|----------------|--|
| Sl. No.   | ITEM DESCRIPTION  | QTY | UNIT | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & ccess on CVD (EOU) | Education ccess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 14  | Testing and commissioning, load trial of one entire DG Set Package including AMF Panel/ Aux. Dist. Board/Local PB Station etc.  | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 15  | PG test, all drgs/docs and support required for obtaining statutory clearances from CPCB, CEA and other applicable bodies for one DG Set.   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 16  | 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  |  |  |                       |                    |                          |   |                                  |                |  |
| 17  | Float cum Boost Charger for recharging the above battery in 10 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  |  |  |                       |                    |                          |   |                                  |                |  |
| 18  | Maintenance platform for DG Set   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 19  | Storage tank of 10 kilo litre capacity with all required piping, valves, level transmitter, level/pressure gauges, level/pressure switches etc.   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 20  | Motorised Fuel transfer pump with all required accessories  | 4   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 21  | Alternator Main & Neutral Terminal Box for one alternator   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 22  | First fill of lub oil at site for one engine  | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 23  | First fill of coolant conditioner/ jacket cooling water at site for one engine.   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 24  | DG AMF CONTROL PANEL for 2.5MW,6.6kV DG Set   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 25  | DG AUXILIARY DISTRIBUTION BOARD   | 2   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 26  | LOCAL PUSH BUTTON STATIONS  | 20  | sets |  |  |                       |                    |                          |   |                                  |                |  |
| 27  | COMMISSIONING SPARES-control panels   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 28  | SYNCHRONISING PANEL   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
|   | TOTAL   |     |      |  |  |                       |                    |                          |   |                                  |                |  |
|   | <b>OPTIONAL PRICES FOR ADDITION/ DELETION</b>   |     |      |  |  |                       |                    |                          |   |                                  |                |  |
|   | <b>DG SET</b>   |     |      |  |  |                       |                    |                          |   |                                  |                |  |

| PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT FOR FOREIGN vendor |  |     |      |  |  |                       |                    |                          |   |                                  |                |  |
|---|--|-----|------|--|--|-----------------------|--------------------|--------------------------|---|----------------------------------|----------------|--|
| Sl. No.   | ITEM DESCRIPTION   | QTY | UNIT | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & ccess on CVD (EOU) | Education ccess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 1   | The engine shall be 2.5MW, 6.6KV, 0.8 pf (lag) at 50 DEG 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, <b>with coupling for coupling with BHEL Alternator</b> ,with QDCT-2nos , NCT/ VT-1no ,Differential CTs- 6nos ,RTD –6nos ,BTD –2nos, NGR Panel, Set mounted control panel, suitable for Air Starting, with AMF feature, with cooling tower, with 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 and with first fill of lub oil, fuel oil, coolant conditioner, jacket cooling water etc for factory testing. DG Set Shall be suitable for parallel operation and have provision for remote operation for Start / Stop , Voltage & Frequency RAISE / LOWER ETC. <b>Supplier to indicate Engine model.</b> | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 2   | Compressor for engine starting system  | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 3   | Diesel engine for engine starting system   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 4   | Cooling Water pump   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 5   | Recommended spares for two years operation for one DG Set (List to be furnished)   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
| 6   | Suitable transformer dry type -6.6kV/415V,3ph, 250kVA for auxiliary power supply for auxiliaries of DG Set   | 1   | set  |  |  |                       |                    |                          |   |                                  |                |  |
|   | <b>DG AUXILIARY DISTRIBUTION BOARD</b>   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
|   | <b>The following shall be full fledged feeders with all required busbar arrangement,wiring, components etc</b>   |     |      |  |  |                       |                    |                          |   |                                  |                |  |
| 7   | INCOMER-250A   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 8   | INCOMER-400A   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 9   | OUTGOING FEEDER 240V,20A(for battery charger)  | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 10  | OUTGOING FEEDER 240V,6A with power contactor (for jacket water heater )  | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 11  | OUTGOING FEEDER DOL -2 hp (for pre lub pump)   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 12  | Control Supply feeder with 415/110V, 10kVA transformer   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 13  | Control Supply feeder with 415/230V, 2.5kVA transformer  | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 14  | OUTGOING FEEDER DOL -9kW(for compessor)  | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 15  | OUTGOING FEEDER DOL -3kW(for fuel transfer pump)   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
| 16  | Empty panel of each type   | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |
|   | <b>DG AMF PANEL/AUXILIARY DISTRIBUTION BOARD</b>   |     |      |  |  |                       |                    |                          |   |                                  |                |  |
| 17  | 6.6kV VCB  | 1   | no.  |  |  |                       |                    |                          |   |                                  |                |  |

| PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT FOR FOREIGN vendor |  |     |      |  |  |                       |                    |                         |  |                                  |                |  |
|---|--|-----|------|--|--|-----------------------|--------------------|-------------------------|--|----------------------------------|----------------|--|
| Sl. No.   | ITEM DESCRIPTION                           | QTY | UNIT | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & cess on CVD (EOU) | Education cess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 18  | 6.6kV VCB Panel                            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 19  | 6.6KV CT's of each type & rating           | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 20  | 6.6KV PT's of each type & rating           | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 21  | 415V CT's of each type & rating            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 22  | 415V PT's of each type & rating            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 23  | Voltage restraint over current Relay CDV62 | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 24  | Reverse Power Relay CCUM21                 | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 25  | Negative Phase Sequence Relay CTNM12       | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 26  | Fuse Failure Relay VAPM31                  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 27  | Earth Fault Relay VDG14                    | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 28  | Master trip relay VAJH13                   | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 29  | Auxiliary relay VAA11                      | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 30  | Frequency Relay MFVUM12                    | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 31  | Voltage Relay VTIGM13                      | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 32  | Differential Relay CAG34                   | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 33  | Check Synchronising relay SKE11            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 34  | Timer Relay VTT11                          | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 35  | MICOM P343                                 | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 36  | Timers of each type & rating               | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 37  | Current Transducer                         | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 38  | Power Factor Transducer                    | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 39  | Watt Transducer                            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 40  | Voltage Transducer                         | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 41  | Frequency Transducer                       | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 42  | Temperature Controller                     | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 43  | Ammeter                                    | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 44  | Voltmeter                                  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 45  | Wattmeter                                  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 46  | Wathhour meter                             | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 47  | Power Factor meter                         | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 48  | Frequency meter                            | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 49  | Auxiliary contactor of each type & rating  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 50  | Push Button of each type                   | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 51  | Selector Switch of each type & rating      | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 52  | Indicating Lamp of each type               | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 53  | Hooter                                     | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 54  | Fuses of each type & rating                | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 55  | MCB's of each type & rating                | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 56  | SFU's of each tyep & rating                | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |

| PRICE FORMAT for DG SET-PIPAVAV COMBINED CYCLE POWER PLANT FOR FOREIGN vendor |   |     |      |  |  |                       |                    |                         |  |                                  |                |  |
|---|---|-----|------|--|--|-----------------------|--------------------|-------------------------|--|----------------------------------|----------------|--|
| Sl. No.   | ITEM DESCRIPTION  | QTY | UNIT | Unit rate (incl packing and forwarding ) | Total price at Mumbai (port of entry) including marine Freight | Port clearnce charges | Customs duty (EOU) | CVD & cess on CVD (EOU) | Education cess on aggregate customs duty (EOU) | Special addl. Customs duty (EOU) | Inland Freight | Total FOR site price incl all taxes, duties, Freight |
| 57  | MCCB's of each type & rating  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 58  | Double Voltmeter  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 59  | Double Frequency Meter  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 60  | Synchroscope  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 61  | PLC 64 Inputs/32 Outputs with licensed software   | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
| 62  | Level transmitter with 4-20mA output for fuel tank  | 1   | no.  |  |  |                       |                    |                         |  |                                  |                |  |
|   | Anything else not mentioned above but required may be quoted  |     |      |  |  |                       |                    |                         |  |                                  |                |  |
|   | The above list is not exhaustive and anything required for the satisfactory working of the DG set shall be supplied without any commercial implication to BHEL. |     |      |  |  |                       |                    |                         |  |                                  |                |  |
|   | Unit rates for all components for engine/AVR/ Electronic controller/ alternator may be quoted.  |     |      |  |  |                       |                    |                         |  |                                  |                |  |
|   | PRICE SHOULD BE QUOTED FOR INDIGENOUS / IMPORTED ITEMS SEPARATELY IN THEIR RESPECTIVE FORMAT ONLY   |     |      |  |  |                       |                    |                         |  |                                  |                |  |