TENDER DETAILS

| ENQUIRY / BID No. | GEM/2024/B/5491028 | ENQUIRY DATE | 10.10.2024 | |
|----------------------|-------------------------------------|--------------------------|---------------------|--|
| DESCRIPTION | Water chiller and oil Chiller units | | | |
| Bid End Date/Time | 21-10-2024 15:00:00 | Bid Opening Date/Time | 21-10-2024 15:30:00 | |

| Sl.No | Item Description | Qty (Nos.) |
|-------|---------------------------------------|------------|
| 1 | Water chiller - 3000 Kcal/hr, (1 TR) | 4 |
| 2 | Water chiller - 6000 Kcal/hr, (2 TR) | 2 |
| 3 | Water chiller -18000 Kcal/hr,(6TR) | 2 |
| 4 | Water chiller - 24000 Kcal/hr, (8 TR) | 2 |
| 5 | Oil chiller -3000 Kcal/hr,(1TR) | 2 |
| 6 | Oil chiller -6000 Kcal/hr,(2TR) | 4 |
| 7 | Oil chiller -9000 Kcal/hr,(3TR) | 3 |
| 8 | Oil chiller -18000 Kcal/hr,(6TR) | 4 |

Note: Enquiry is Floated in GeM portal $\frac{https://gem.gov.in/}{}$. For further details, please visit the above portal.

Technical Specifications

| ANNEXURE-I I Supply, testing and handing over of 1.0 TR(3000Kcal/hr) Oil Chiller unit as per the following specification | | | | | |
|--|--|--------------------------------------|---------------------------|--|--|
| S.No | Description | Specified/ To be confirmed by vendor | Vendor to specify details | | |
| 1 | Application: | | | | |
| 1.1 | Medium to be cooled | Hydraulic oil | | | |
| 1.2 | OIL Chiller - TR capacity & Details: | | | | |
| 1.2(a) | Oil Chiller - 1 TR (3000 kcal/hr) | Vendor to note down | | | |
| 1.3 | Quantity: 02 Nos. | Vendor to note down | | | |
| 1.4 | Hydraulic oil inlet Inlet temperature = 60 Deg C | Vendor to confirm | | | |
| 1.5 | Hydraulic oil out let temperature required = 30 Deg C | Vendor to confirm | | | |
| 1.6 | Ambient condition: 45 degree C | Vendor to confirm | | | |
| 1.7 | Bectrical supply: 415Volts/50HZ/3Ph | Vendor to confirm | | | |
| 2.0 | Compressor: | | | | |
| 2.1 | The package chiller shall comprise of energy efficient, maintenance free compressor of Make: COPELAND/DANFOSS | Vendor to specify | | | |
| 3.0 | Condenser coil : Vee shaped, Air cooled , grooved copper tubes with Aluminium fins. | Vendor to specify | | | |
| 4.0 | Evaporator : Brazed plate type | Vendor to specify | | | |
| 4.1 | Evaporator Make: GEA / KOARI | Vendor to specify | | | |
| 5.0 | Filter drier Make: EMERSON/DANFOSS/SPORLAN | Vendor to specify | | | |
| 6.0 | Expansion valve Make: EMERSON/DANFOSS/SPORLAN | Vendor to specify | | | |
| 7.0 | Refrigerant gas:R134 A/R407 C (Non CFC) | Vendor to confirm | | | |
| 8.0 | Pump : | | | | |
| 8.1 | Pump type : 3 Phase Vane Type or geared pump | Vendor to confirm | | | |
| 8.2 | Pump capacity: 20 litres per minute | Vendor to confirm | | | |
| 8.3 | Pump Make: GRUNDFOSS' DYNAMIC' SIMENS | | | | |
| 9.0 | Interlocks Signals: ON / OFF Cum reset switch, All fault indication in front door. | Vendor to confirm | | | |
| 9.1 | a) Compressor - Overload b) Pump - Overload c) Single phase preventor d) Reverse phase e) Oil Flow Trip f) H.P/ LP | Vendor to confirm | | | |
| 10.0 | Structure | | | | |
| 10.1 | a)Chiller equipment shall be of integrated as a single unit and shound be Wheel mounted with locking provisions | Vendor to confirm | | | |
| 10.2 | Entire content shall be provided in a fabricated structural Painted with red oxide and two coats of apple green paint shall be painted Lifting facility shall be provided in the structural for handling purpose | Vendor to confirm | | | |
| 10.3 | 1 set of oil circulating Pump assemply for each of the 2 Nos. supplied oil chillers seperately as spare. The oil circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | | | |
| 11.0 | TERM S AND CONDITIONS: | | | | |
| 11.1 | The Instalation and commissioning shall be done by the supplier on free of cost | Vendor to confirm | | | |
| 11.2 | Initial charge of refrigerant shall be provided by the vendor | Vendor to confirm | | | |
| 11.3 | vendor shall commission the oil chillers at BHEL works | Vendor to confirm | | | |
| 11.4 | General arrangement diagram with detail for Hydraulic and refrigeration system shall be supplied along with offer | Vendor to confirm | | | |
| 11.5 | Point to point confirmation of technical data shall be offered by the vendor other wise the offer may be rejected | Vendor to confirm | | | |
| 11.6 | Minimum One year service guarantee including refrigerant charging shall be done | Vendor to confirm | | | |
| 11.7 | Oil chiller shall be supplied with 3 set of manual. Manual shall contain Orcuit diagram for refrigerant and hydraulic oil Manual shall contain complete wiring diagram with ferrule no. All mechanical, Bectrical and Bectronic bought out items shall be listed in the manual with part no, make and the supplier address. | Vendor to confirm | | | |
| 11.8 | Necessary tools & tackles etc; required for testing and commissioning the chiller unit are in the supplier's scope. However BHEL will give power supply on free of cost for this work. | Vendor to confirm | | | |

| | Supply, testing and handing over of 2.0 TR(6000Kcal/hr) Oil Chiller unit as pe | | F |
|------------|--|--|------------------------------|
| S.No | Description | Specified/To be confirmed by vendor | Vendor to specify details |
| 1 | Application: | | |
| 1.1 | Medium to be cooled | Hydraulic oil | |
| 1.2 | OIL Chiller - TR capacity & Details: | | |
| 1.2(a) | Oil Chiller - 2 TR (6000 kcal/hr) | Vendor to note down | |
| 1.3 | Quantity: 04 Nos. | Vendor to note down | |
| 1.4 | Hydraulic oil inlet Inlet temperature =60 Deg C | Vendor to confirm | |
| 1.5 | Hydraulic oil out let temperature required = 30 Deg C | Vendor to confirm | |
| 1.6 1.7 | Ambient condition : 45 degree C Bectrical supply : 415Volts/ 50HZ/ 3Ph | Vendor to confirm Vendor to confirm | |
| 1.7 | 1 outlet & 1 inlet terminals to be brought out from the chiller unit (Inlet: 1-1/2" BSP thread & Outlet: 1-1/4" BSP thread) | Vendor to confirm | |
| 0.0 | · · | | |
| 2.0 | Compressor: The package chiller shall comprise of energy efficient, maintenance free compressor of Make: COPELAND/DANFOSS | Vendor to specify | |
| 3.0 | Condenser coil :Vee shaped, Air cooled, grooved copper tubes with Aluminium fins. | Vendor to specify | |
| 4.0 | Evaporator : Brazed plate type | Vendor to specify | |
| 4.1 | Evaporator Make : GEA / KOARI | Vendor to specify | |
| 5.0 | Filter drier Make: EMEPSON/DANFOSS/SPORLAN | Vendor to specify | |
| 6.0 | Expansion valve Make: EM ERSON/ DANFOSS/ SPORLAN | Vendor to specify | |
| 7.0 | Refrigerant gas:R134 A/R407 C (Non CFC) | Vendor to confirm | |
| 8.0 | Pump: | | |
| 8.1 | Pump type : 3 Phase Vane Type or geared pump | Vendor to confirm | |
| 8.2 | Pump capacity: 30 litres per minute | Vendor to confirm | |
| 8.3 | Pump Make : GRUNDFOSS/ DYNAMIC/ SIMENS | | |
| 9.0 | Interlocks Signals: ON / OFF Cum reset switch, All fault indication in front door. | Vendor to confirm | |
| 9.1 | a) Compressor - Overload b) Pump - Overload c) Single phase preventor d) Reverse phase e) Oil Flow Trip | Vendor to confirm | |
| 10.0 | f) H.P/ LP | | |
| 10.0 | Structure a)Chiller equipment shall be of integrated as a single unit and shound be Wheel mounted | | |
| 10.1 | with locking provisions Entire content shall be provided in a fabricated structural Painted with red oxide and two | Vendor to confirm | |
| 10.2 | coats of apple green paint shall be painted Lifting facility shall be provided in the structural for handling purpose | Vendor to confirm | |
| 10.3 | 1 set of oil circulating Pump assemply for each of the 4 Nos. supplied oil chillers seperately as spare. The oil circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 11.0 | TERM'S AND CONDITIONS: | | |
| 11.1 | The Instalation and commissioning shall be done by the supplier on free of cost | Vendor to confirm | |
| 11.2 | Initial charge of refrigerant shall be provided by the vendor | Vendor to confirm | |
| 11.3 | vendor shall commission the oil chillers at BHEL works General arrangement diagram with detail for Hydraulic and refrigeration system shall be | Vendor to confirm | |
| 11.4 | supplied along with offer | Vendor to confirm | |
| 11.5 | Point to point confirmation of technical data shall be offered by the vendor other wise the offer may be rejected | Vendor to confirm | |
| 11.6 | Minimum One year service guarantee including refrigerant charging shall be done | Vendor to confirm | |
| 11.7 | Oil chiller shall be supplied with 3 set of manual. Manual shall contain Grcuit diagram for refrigerant and hydraulic oil Manual shall contain complete wiring diagram with ferrule no. All mechanical, Electrical and Electronic bought out items shall be listed in the manual with part no, make and the supplier address. | Vendor to confirm | |
| 11.8 | Necessary tools & tackles etc; required for testing and commissioning the chiller unit are in the supplier's scope. However BHEL will give power supply on free of cost for this work. | Vendor to confirm | |



| | Supply, testing and handing over of 3.0 TR(9000Kcal/hr) Oil Chiller unit as pe | | Wandani |
|------------|---|---------------------------------------|------------------------------|
| S.No | Description | Specified/ To be confirmed by vendor | Vendor to specify details |
| 1 | Application: | | |
| 1.1 | Medium to be cooled | Hydraulic oil | |
| 1.2 | OlL Chiller - TR capacity & Details: | | |
| 1.2(a) | Oil Chiller - 3 TR (9000 kcal/hr) | Vendor to note down | |
| 1.20 | Quantity: 03 Nos. Hydraulic oil inlet Inlet temperature =60 Deg C | Vendor to note down Vendor to confirm | |
| 1.4 1.5 | Hydraulic oil out let temperature = 50 beg C | Vendor to confirm | |
| 1.6 | Ambient condition : 45 degree C | Vendor to confirm | |
| 1.7 | Bectrical supply: 415Volts/50HZ/3Ph | Vendor to confirm | |
| 1.7 | 1 outlet & 1 inlet terminals to be brought out from the chiller unit (Inlet: 1-1/2" BSP thread & Outlet: 1-1/4" BSP thread) | Vendor to confirm | |
| 2.0 | Compressor: | | |
| 2.1 | The package chiller shall comprise of energy efficient, maintenance free compressor of Make: COPELAND/ DANFOSS | Vendor to specify | |
| 3.0 | Condenser coil : Vee shaped, Air cooled , grooved copper tubes with Aluminium fins. | Vendor to specify | |
| 4.0 | Evaporator: Brazed plate type | Vendor to specify | |
| 4.1 | Evaporator Make: GEA / KOARI | Vendor to specify | |
| 5.0 | Filter drier Make: EM ERSON/ DANFOSS' SPORLAN | Vendor to specify | |
| 6.0 | Expansion valve Make: EM ERSON/ DANFOSS' SPORLAN | Vendor to specify | |
| 7.0 | Refrigerant gas:R134 A/ R407 C (Non CFC) | Vendor to confirm | |
| 8.0 8.1 | Pump : | Vandar to confirm | |
| | Pump type : 3 Phase Vane Type or geared pump Pump capacity : 50 litres per minute | Vendor to confirm Vendor to confirm | |
| 3.16 | 1 1 2 1 | vendor to commi | |
| 9.0 | Pump Make: GRUNDFOSS DYNAMIC/SMENS Interlocks Sgnals: ON / OFF Cum reset switch, All fault indication in front door. | Vendor to confirm | |
| 9.1 | Inside panel safety provisions: a) Compressor - Overload b) Pump - Overload c) Single phase preventor d) Reverse phase e) Oil Flow Trip | Vendor to confirm | |
| 10.0 | f) H.P/ LP Structure | | |
| 10.1 | a)Chiller equipment shall be of integrated as a single unit and shound be Wheel mounted with locking provisions | Vendor to confirm | |
| 10.2 | Entire content shall be provided in a fabricated structural Painted with red oxide and two coats of apple green paint shall be painted Lifting facility shall be provided in the structural for handling purpose | Vendor to confirm | |
| 10.3 | 1 set of oil circulating Pump assemply for each of the 3 Nos. supplied oil chillers seperately as spare. The oil circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 11.0 | TERM'S AND CONDITIONS: | | |
| 11.1 | The Instalation and commissioning shall be done by the supplier on free of cost | Vendor to confirm | |
| 11.2 | Initial charge of refrigerant shall be provided by the vendor | Vendor to confirm | |
| 11.3 | vendor shall commission the oil chillers at BHEL works General arrangement diagram with detail for Hydraulic and refrigeration system shall be | Vendor to confirm | |
| 11.4 | supplied along with offer Point to point confirmation of technical data shall be offered by the vendor other wise the | Vendor to confirm | |
| 11.5 | offer may be rejected | Vendor to confirm | |
| 11.6 | Minimum One year service guarantee including refrigerant charging shall be done Oil chiller shall be supplied with 3 set of manual. | Vendor to confirm | |
| 11.7 | Manual shall contain Orcuit diagram for refrigerant and hydraulic oil Manual shall contain complete wiring diagram with ferrule no. All mechanical, Bectrical and Bectronic bought out items shall be listed in the manual with part no, make and the supplier address. | Vendor to ∞nfirm | |
| 11.8 | Necessary tools & tackles etc; required for testing and commissioning the chiller unit are in the supplier's scope. However BHE will give power supply on free of cost for this work. | Vendor to confirm | |



| | Supply, testing and handing over of 6.0 TR(18000Kcal/hr) Oil Chiller unit as pe | er the following specification | |
|------------|--|--------------------------------------|------------------------------|
| S.No | Description | Specified/ To be confirmed by vendor | Vendor to specify details |
| 1 | Application: | | |
| 1.1 | Medium to be cooled | Hydraulic oil | |
| 1.2 | OIL Chiller - TR capacity & Details: | | |
| 1.2(a) | Oil Chiller - 6 TR (18000 kcal/hr) | Vendor to note down | |
| 1.3 | Quantity: 04 Nos. | Vendor to note down | |
| 1.4 | Hydraulic oil inlet Inlet temperature =60 Deg C | Vendor to confirm | |
| 1.5 1.6 | Hydraulic oil out let temperature required = 30 Deg C Ambient condition : 45 degree C | Vendor to confirm Vendor to confirm | |
| 1.7 | Electrical supply : 415Volts/50HZ/3Ph | Vendor to confirm | |
| 2.0 | Compressor: | vendor to commi | |
| 2.0 | The package chiller shall comprise of energy efficient, maintenance free compressor of | | |
| 2.1 | Make : COPELAND/ DANFOSS | Vendor to specify | |
| 3.0 | Condenser coil: Vee shaped, Air cooled, grooved copper tubes with Aluminium fins. | Vendor to specify | |
| 4.0 | Evaporator: Brazed plate type | Vendor to specify | |
| 4.1 | Evaporator Make: GEA / KOARI | Vendor to specify | |
| 5.0 | Filter drier Make: EMERSON/DANFOSS/SPORLAN | Vendor to specify | |
| 6.0 | Expansion valve Make: EM ERSON/DANFOSS' SPORLAN | Vendor to specify | |
| 7.0 | Refrigerant gas:R134 A/R407 C (Non CFC) | Vendor to confirm | |
| 8.0 | Pump: | | |
| 8.1 | Pump type : 3 Phase Vane Type or geared pump | Vendor to confirm | |
| 8.2 | Pump capacity: 120 litres per minute | Vendor to confirm | |
| 8.3 | Pump Make : GRUNDFOSS/ DYNAMIC/ SIMENS | | |
| 9.0 | Interlocks Sgnals: ON / OFF Cum reset switch, All fault indication in front door. Inside panel safety provisions: | Vendor to confirm | |
| 9.1 | a) Compressor - Overload b) Pump - Overload c) Single phase preventor d) Reverse phase e) Oil Flow Trip f) H.P/ L.P | Vendor to confirm | |
| 10.0 | Structure | | |
| | a)Chiller equipment shall be of integrated as a single unit and shound be Wheel mounted | | |
| 10.1 | with locking provisions | Vendor to confirm | |
| 10.2 | Entire content shall be provided in a fabricated structural Painted with red oxide and two coats of apple green paint shall be painted Lifting facility shall be provided in the structural for handling purpose | Vendor to confirm | |
| 10.3 | 1 set of oil circulating Pump assemply for each of the 4 Nos. supplied oil chillers seperately as spare. The oil circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 11.0 | TERM'S AND CONDITIONS: | | |
| 11.1 | The Instalation and commissioning shall be done by the supplier on free of cost | Vendor to confirm | |
| 11.2 | Initial charge of refrigerant shall be provided by the vendor | Vendor to confirm | |
| 11.3 | vendor shall commission the oil chillers at BHEL works | Vendor to confirm | |
| 11.4 | General arrangement diagram with detail for Hydraulic and refrigeration system shall be supplied along with offer | Vendor to confirm | |
| 11.5 | Point to point confirmation of technical data shall be offered by the vendor other wise the offer may be rejected | Vendor to confirm | |
| 11.6 | Minimum One year service guarantee including refrigerant charging shall be done | Vendor to confirm | |
| 11.7 | Oil chiller shall be supplied with 3 set of manual. Manual shall contain Grouit diagram for refrigerant and hydraulic oil Manual shall contain complete wiring diagram with ferrule no. All mechanical, Bectrical and Bectronic bought out items shall be listed in the manual with part no, make and the supplier address. | Vendor to confirm | |
| 11.8 | Necessary tools & tackles etc; required for testing and commissioning the chiller unit are in the supplier's scope. However BHEL will give power supply on free of cost for this work. | Vendor to confirm | |



| | Supply, Testing and Handing over of 1.0 | TR(3000Kcal/ hr) Water Chiller u | unit as per the following specifica | ation |
|-----------------|---|--|--------------------------------------|----------------------|
| SI.No | Description | Specification | Specified/ To be confirmed by vendor | DEVIATIONS/ REM ARKS |
| 1 | Application: | 11095 144 | | |
| 1.1 | Cooled medium Water Chiller - TR capacity & Details: | Utility Water | | |
| 1.2(a) | Water Chiller - 1 TR (3000 kcal/ hr), Qty: 4 Nos. | Vendor to note down | | |
| 2 | Parameters: | | | |
| 2.1 3 | Ambient Temperature : 45 deg.C Chiller Design: | Vendor to note down | | |
| 3.1 | Cooling water temperature required at Chiller outlet: 18 deg.Cto 20 deg.C | Vendor to confirm | | |
| 3.2 | Inlet: 1 " BSP Female thread & Outlet: 1" BSP Female thread preferrable) | Vendor to specify | | |
| 3.3 | Water Bypass line with manual control valve to be provided for water flow regulation | Vendor to confirm | | |
| 4 | The Cooling circuit should have the following features mentioned | Vendor to confirm | | |
| 4.1 | Compressor: | | | |
| 4.1.a | Compressor : Hermetically sealed reciprocating type compressor (3 Phase, 415 V) | Vendor to confirm | | |
| 4.1.b | Compressor make: Copeland / Danfoss | Vendor to confirm & specify the make | | |
| 4.2 | Condenser Coil: Air cooled Top air throw. | Vendor to confirm | | |
| 4.3 | Evaporator: The evaporator should be made up of Copper/SScoil and should be immersed in the water tank. | Vendor to confirm | | |
| 4.4 | Water Tank Details: | | | |
| 4.4(a) | The water tank should be of Stainless steel material with Grade 304 with minmum thickness 1.6mm. | Vendor to confirm | | |
| 4.4(b) | The water tank capacity should be minimum 40 Litres. | Vendor to confirm | | |
| 4.4© | Provisions to be made for visually monitoring the Water level of the tank externally. | Vendor to confirm | | |
| 4.5 | Water pump & Flow Rate: | Variable to see Core O see of | | |
| 4.5(a) | Water pump make: Kirloskar / Tecmo / Grundfoss or Equivalent | Vendor to confirm & specify the pump type | | |
| 4.5(b) | Required Flow rate: Min. 20 lpm @2 bar | Vendor to confirm | | |
| 4.5(c) | Pressure gauge to be provided for visually monitoring the water pressure. | Vendor to confirm | | |
| 4.5(d) | Separate Ball valve to be provided in between the pump suction side & water tank. | Vendor to confirm | | |
| 4.6 | Refrigerant: R134A / R407C | Vendor to confirm & specify the refrigerant type | | |
| 4.7 | Filter drier Make : Emerson/Danfoss/Sporlan or Equivalent | Vendor to confirm & specify the make | | |
| 4.8 | The expansion device shall be Copper capillary tube. | Vendor to confirm | | |
| 4.9 | Expansion valve to be provided. Expansion valve Make: Emerson/Danfoss/Sporlan or | Vendor to confirm & specify the make | | |
| 4.10 | Dimensions: | Vendor to confirm and specify the dimension | | |
| 4.10.a | The available site area is 650 mm X 650 mm. The chiller has to be accomodated in this available area. | Vendor to confirm | | |
| 5 | Control Accessories to be provided: | | | |
| 5.1 | Hand Shut off valve (Both suction & Discharge end of the compressor (for refrigerant) for servicing purpose.) | Vendor to confirm | | |
| 5.2 | LP/ H.P Switch (with resetting provisions) | Vendor to confirm | | |
| 5.3 | Digital Temperature Controller : Preferred make: Dixell / Sub - Zero / Carel | Vendor to confirm & specify the make | | |
| 5.4 | The control cirucit should be operated by Single phase 230 V AC, 50 HZ. | Vendor to confirm | | |
| 5.5 | Bypass valve should be provided for pump to tank should be provided water level indicator for the water | Vendor to confirm | | |
| 5.6 | tank should be provided water level indicator for the water tank should be provided pressure gauge for monitoring the | Vendor to confirm | | |
| 5.7 6 | Pump Pressure Safety Provisions: | Vendor to confirm | | |
| 6.1 | The following safety provision should be provided: | Vendor to confirm | | |
| 6.2 | Compressor Overload | Vendor to confirm | | |
| 6.3 | Pump Over Load | Vendor to confirm | | |
| 6.4 6.5 | Single Phase Preventer AFT Anti freeze | Vendor to confirm Vendor to confirm | | |
| 6.6 | Water level sensor | Vendor to confirm | | |
| 6.7 | H.P/ LPprotection | Vendor to confirm | | |
| 6.8 | How switch Safety interlock. | Vendor to confirm | | |

| 7 | Documentation: | | |
|-----|---|-------------------|--|
| 7.1 | Water chiller shall be supplied with 3 set of manual. The Manual shall contain the details of a) Refrigeration Crcuit diagrams b) Complete wiring diagram with Ferrule no. 4) Operation manual with Maintenance details. | Vendor to confirm | |
| 8 | NOTE: | | |
| 8.1 | Testing and handing over shall be done by the supplier at BHEL Works and prove the performance. | Vendor to confirm | |
| 8.2 | Initial charge of refrigerant shall be provided by the supplier. | Vendor to confirm | |
| 8.3 | Vendor has to supply 1 set of Condensor fan assembly (Fan blade + Motor assembly) for each of the 4 Nos. supplied Water chillers seperately as spare. The condenser fan assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.4 | Vendor has to supply 1 set of Water Grculating Pump assemply for each of the 4 Nos. supplied Water chillers seperately as spare. The water circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.5 | General arrangement diagram with detailed refrigeration system shall be supplied along with offer. | Vendor to confirm | |
| 8.6 | Point to point confirmation of technical data shall be offered by the supplier other wise the offer may be rejected. | Vendor to confirm | |



Digitally signed by SHANMUGAM CHANDRALEKA
DN: c=IN, 0=BHARAT HEAVY ELECTRICALS LIMITED, ou=HIGH PRESSURE BOILER PLANT
TRIUCHIARPAPLE, 2348426.0f4ebe8572339a66ae2b30bcc97a5abb03b4f75cb2e56fec82ebc4af,
postalCode=20001, st=Tamil NabiserialNimber=676109E5181007F52CEBC88831E631878BE683E73BD77A76B867B7272C87
4079, cn=SHANMUGAM CHANDRALEKA
Date: 2024.06.20 16.47.25 +0530'

| | Supply, Testing and Handing over of 2.0 TR(6000Kcal/ hr) Water Chiller unit as per the following specification | | | | | | |
|----------|--|---|--|----------------------|--|--|--|
| SI.No | Description | Specification | Specified/To be confirmed by vendor | DEVIATIONS/ REM ARKS | | | |
| 1 | Application: | | | | | | |
| 1.1 | Cooled medium | Utility Water | | | | | |
| 1.2 | Water Chiller - TR capacity & Details: | | | | | | |
| 1.2(a) | Water Chiller - 2 TR (6000 kcal/hr), Qty: 2 Nos. | Vendor to note down | | | | | |
| 2 | Parameters: | | | | | | |
| 2.1 | Ambient Temperature : 45 deg.C | Vendor to note down | | | | | |
| 3 | Chiller Design: Cooling water temperature required at Chiller outlet: 18 deg.C to 20 deg.C | Vendor to confirm | | | | | |
| 3.2 | Inlet: 1 " BSP Female thread & Outlet: 1" BSP Female thread preferrable) | Vendor to specify | | | | | |
| 3.3 | Water Bypass line with manual control valve to be provided for water flow regulation | Vendor to confirm | | | | | |
| 4 | The Cooling circuit should have the following features mentioned | Vendor to confirm | | | | | |
| 4.1 | Compressor: | | | | | | |
| 4.1.a | Compressor : Hermetically sealed reciprocating type compressor (3 Phase, 415 V) | Vendor to confirm | | | | | |
| 4.1.b | Compressor make: Copeland / Danfoss | Vendor to confirm & specify the make | | | | | |
| 4.2 | Condenser Coil : Air cooled Top air throw. | Vendor to confirm | | | | | |
| 4.3 | Evaporator: The evaporator should be made up of Copper/SS coil and should be immersed in the water tank. | Vendor to confirm | | | | | |
| 4.4 | Water Tank Details: | | | | | | |
| 4.4(a) | The water tank should be of Stainless steel material with Grade 304 with minmum thickness 1.6mm. | Vendor to confirm | | | | | |
| 4.4(b) | The water tank capacity should be minimum 60 Litres. | Vendor to confirm | | | | | |
| 4.4 (c) | Provisions to be made for visually monitoring the Water level of the tank externally. | Vendor to confirm | | | | | |
| 4.5 | Water pump & Flow Rate: | | | | | | |
| 4.5(a) | Water pump make : Kirloskar / Tecmo / Grundfoss or Equivalent | Vendor to confirm & specify the pump type | | | | | |
| 4.5(b) | Required Flow rate: Min. 40 lpm @ 2 bar | Vendor to confirm | | | | | |
| 4.5(c) | Pressure gauge to be provided for visually monitoring the water pressure. | Vendor to confirm | | | | | |
| 4.5(d) | Separate Ball valve to be provided in between the pump suction side & water tank. | Vendor to confirm | | | | | |
| 4.6 | Refrigerant: R134A / R407C | Vendor to confirm & specify the refrigerant type | | | | | |
| 4.7 | Filter drier Make : Emerson/Danfoss/Sporlan or Equivalent | Vendor to confirm & specify the make | | | | | |
| 4.8 | The expansion device shall be Copper capillary tube. | Vendor to confirm | | | | | |
| 4.9 | Expansion valve to be provided. Expansion valve Make: Emerson/Danfoss/Sporlan or Equivalent | Vendor to confirm & specify the make | | | | | |
| 5 | Control Accessories to be provided: | | | | | | |
| 5.1 | Hand Shut off valve (Both suction & Discharge end of the compressor (for refrigerant) for servicing purpose.) | Vendor to confirm | | | | | |
| 5.2 | LP/ H.P Switch (with resetting provisions) | Vendor to confirm | | | | | |
| 5.3 | Digital Temperature Controller : Preferred make: Dixell / Sub - Zero / Carel | Vendor to confirm & specify the make | | | | | |
| 5.4 | The control cirucit should be operated by Single phase 230 V AC, 50 HZ | Vendor to confirm | | | | | |
| 5.5 | Bypass valve should be provided for pump to tank | Vendor to confirm | | | | | |
| 5.6 | should be provided water level indicator for the water tank | Vendor to confirm | | | | | |
| 5.7 | should be provided pressure gauge for monitoring the Pump Pressure | Vendor to confirm | | | | | |
| 6 | Safety Provisions: | | | | | | |

| | | | , |
|-----|--|-------------------|---|
| 6.1 | The following safety provision should be provided: | Vendor to confirm | |
| 6.2 | Compressor Overload | Vendor to confirm | |
| 6.3 | Pump Over Load | Vendor to confirm | |
| 6.4 | Single Phase Preventer | Vendor to confirm | |
| 6.5 | AFT Anti freeze | Vendor to confirm | |
| 6.6 | Water level sensor | Vendor to confirm | |
| 6.7 | H.P/ LP protection | Vendor to confirm | |
| 6.8 | Flow switch Safety interlock. | Vendor to confirm | |
| 7 | Documentation: | | |
| 7.1 | Water chiller shall be supplied with 3 set of manual. The Manual shall contain the details of a) Refrigeration Circuit diagrams b) Complete wiring diagram with Ferrule no. 4) Operation manual with Maintenance details. | Vendor to confirm | |
| 8 | NOTE: | | |
| 8.1 | Testing and handing over shall be done by the supplier at BHEL Works and prove the performance. | Vendor to confirm | |
| 8.2 | Initial charge of refrigerant shall be provided by the supplier. | Vendor to confirm | |
| 8.3 | Vendor has to supply 1 set of Condensor fan assembly (Fan blade + Motor assembly) for each of the 2 Nos. supplied Water chillers seperately as spare. The condenser fan assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.4 | Vendor has to supply 1 set of water circulating Pump assemply for each of the 2 Nos. supplied Water chillers seperately as spare. The water circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.5 | General arrangement diagram with detailed refrigeration system shall be supplied along with offer. | Vendor to confirm | |
| 8.6 | Point to point confirmation of technical data shall be offered by the supplier other wise the offer may be rejected. | Vendor to confirm | |
| | | | |

SHANMUGAM CHANDRALEKA Digitally signed by SHANMUGAM CHANDRALEKA
DN:-EIN c-BRANATHEAPY ELECTRICAL BUMTED, oui-HIGH PRESSURE BOILER PLANT TRUCHBRAPPALLI,
2.5.4.20-3.480-GH-Gebest 23:390-G6a-21:300-C673-Sabb03b4175:cb2e-56fcd2ze-bc-4af,
postal.Code-600014, st.=framl Nadu,
serialNumber-57-61 99E-18 19/0752/CEBC88831E6318788E683E738D77A76886787272C874C97,
cn=SHANMUGAM-CANGRALEKA
District 2014-00.20 1647-84 +63:39*

| | Supply, Testing and Handing over of 6.0 TR(18000Kcal/ | m, water dimer and appe | Specified/To be | specification |
|----------|--|--|------------------------|---------------------|
| SI.No | Description | Specification | confirmed by vendor | DEVIATIONS/ REMARKS |
| 1 | Application: | | | |
| 1.1 | Cooled medium | Utility Water | | |
| 1.2 | Water Chiller - TR capacity & Details: | | | |
| 1.2(a) | Water Chiller - 6 TR (18000 kcal/hr), Qty: 2 Nos. | Vendor to note down | | |
| 2 | Parameters: | Wardanta sata dana | | |
| 2.1 3 | Ambient Temperature : 45 deg.C Chiller Design: | Vendor to note down | | |
| 3.1 | Cooling water temperature required at Chiller outlet: 18 deg.Cto 20 deg.C | Vendor to confirm | | |
| 3.2 | 1 outlet & 1 inlet terminals to be brought out from the chiller unit linlet: 1 1/2 " BSP Female thread & Outlet: 1 1/2 " BSP Female thread | Vendor to confirm | | |
| 3.3 | Water Byepass line with manual control valve to be provided for water flow regulation | Vendor to confirm | | |
| 4 | The Cooling circuit should have the following features mentioned | Vendor to confirm | | |
| 4.1 | Compressor: | | | |
| 4.1.c | Compressor: Hermetically sealed Scroll type compressor for 3 Phase, 415 V | Vendor to confirm | | |
| 4.1.d | Compressor make: Copeland / Danfoss | Vendor to confirm & specify the make | | |
| 4.2 | Condenser Coil : Air cooled copper tube coil with aluminium fins | Vendor to confirm | | |
| 4.4 | Evaporator: The evaporator should be made up of Copper/SScoil and should be immersed in the water tank. | Vendor to confirm | | |
| 4.5 | Water Tank Details: | | | |
| 4.5.a | The water tank should be of Stainless material with Grade 404 with minmum thickness 1.6mm. | Vendor to confirm | | |
| 4.5.d | the water tank capacity should be minimum 250 Litres. | Vendor to confirm | | |
| 4.5.e | Provisions to be made for visually monitoring the Water level of the | Vendor to confirm | | |
| | tank externally. | vonder to commit | | |
| 4.6 | Water pump & Flow Rate: | | | |
| 4.6.a | Water pump make : Kirloskar / Crompton / Tecmo / Grundfoss | Vendor to confirm & specify the pump type | | |
| 4.6.b | Pump Motor: 3 Phase, 50 Hz, 415 V | Vendor to confirm | | |
| 4.6.d | Required Flow rate m/c 60 lpm, Minimum Pressure 70 PSI | Vendor to confirm | | |
| 4.6.e | Pressure gauge to be provided for visually monitoring the water pressure. | Vendor to confirm | | |
| 4.6.f | Separate Ball valve to be provided in between the pump suction & water tank. | Vendor to confirm | | |
| 4.7 | Refrigerant: R134A / R407C (Non CFC) | Vendor to confirm & specify the refrigerant type | | |
| 4.8 | Filter drier Make : Emerson/Danfoss/Sporlan | Vendor to confirm & specify the make | | |
| 4.9 | Expansion valve Make : Emerson/ Danfoss/ Sporlan | Vendor to confirm & specify the make | | |
| 5 | Control Accessories to be provided: | | | |
| 5.1 | Hand Shut off valve (Both suction & Discharge end (for refrigerant) for servicing purpose.) | Vendor to confirm | | |
| 5.2 | Filter drier | Vendor to confirm | | |
| 5.3 | Expansion Valve | Vendor to confirm | | |
| 5.4 | LP/ H.P Switch (with resetting provisions) | Vendor to confirm | | |
| 5.5 | Digital Temperature Controller : Preferred make: Dixell / Sub - Zero / Carel | Vendor to confirm & specify the make | | |
| 5.6 | The control cirucit should be operated by Single phase 230 V AC, 50 HZ | Vendor to confirm | | |
| 6 6 1 | Safety Provisions: | Vandar to confirm | | |
| 6.1 | The following safety provision should be provided: Compressor Overload | Vendor to confirm Vendor to confirm | | |
| 6.3 | Pump Over Load | Vendor to confirm Vendor to confirm | | |
| 6.4 | Single Phase Preventer | Vendor to confirm | | |
| 6.5 | Fan Over Load | Vendor to confirm | | |
| 6.6 | AFT Anti freeze | Vendor to confirm | | |
| 6.7 | Water level sensor | Vendor to confirm | | |
| 6.9 | H.P/ LP protection | Vendor to confirm | | 1 |

| 7 | Documentation: | | |
|-----|---|-------------------|--|
| 7.1 | Water chiller shall be supplied with 3 set of manual. The Manual shall contain the details of a) Orcuit diagrams of refrigernt b) Orcuit diagram for hydraulic oil, c) Complete wiring diagram with Ferrule no. 4) Operation manual with Maintenance details. | Vendor to confirm | |
| 8 | NOTE: | | |
| 8.1 | Testing and handing over shall be done by the supplier at BHEL Works and prove the performance. | Vendor to confirm | |
| 8.2 | Initial charge of refrigerant shall be provided by the supplier. | Vendor to confirm | |
| 8.3 | Vendor has to supply 1 set of Condensor fan assembly (Fan blade + Motor assembly) for each of the 2 Nos. supplied Water chillers seperately as spare. The condenser fan assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.4 | Vendor has to supply 1 set of water circulating Pump assemply for each of the 2 Nos. supplied Water chillers seperately as spare. The water circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.5 | General arrangement diagram with detail for Hydraulic and refrigeration system shall be supplied along with offer. | Vendor to confirm | |
| 8.6 | Point to point confirmation of technical data shall be offered by the supplier other wise the offer may be rejected. | Vendor to confirm | |



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DN:-ciN, o-BHARAT HEAVY ELCTRICALS LIMITED, ou-HIGH PRESSURE BOILER PLANT
TRUCHHARPALLI
2.5.4.20-354825-0164ebs372333965e22b30bc;9785abb03b4f75cb2e56fec82ebc4af,
postal Code-62001.4, st—Tamil Nation
postal Code-62001.4, st—Tamil Nation
-seriaNklimber-en/519065181907F52CEDC88831E631878BE683E73BD77A76886787272C874C97,
cn-SHANMUGAM-CHANDRALEM
Date: 2024.06.20 16:47-54 +05'30'

| | Supply, testing and handing over of 8.0 TR(24000Kcal/ | hr) Water Chiller unit as pe | r the following | specification |
|--------------------|---|--|---|----------------------|
| SI.No | Description | Specification | Specified/To be confirmed by vendor | DEVIATIONS/ REM ARKS |
| 1 | Application: | | | |
| 1.1 | Cooled medium | Utility Water | | |
| 1.2 | Water Chiller - TR capacity & Details: | We add the selection | | |
| 1.2(a) 2 | 8 TR (24000 Kcal/ hr) , Qty: 2 nos. Parameters: | Vendor to note down | | |
| 2.1 | Ambient Temperature : 45 deg.C | Vendor to note down | | |
| 3 | Chiller Design: | | | |
| 3.1 | Cooling water temperature required at Chiller outlet: 18 deg.Cto 20 deg.C | Vendor to confirm | | |
| 3.2 | 1 outlet & 1 inlet terminals to be brought out from the chiller unit lnlet : 1 1/2 " BSP Female thread & Outlet : 1 1/2 " BSP Female thread) | Vendor to confirm | | |
| 3.3 | Water Bypass line with manual control valve to be provided for water flow regulation | Vendor to confirm | | |
| 4 | The Cooling circuit should have the following features mentioned | Vendor to confirm | | |
| 4.1.c | Compressor: Compressor: Hermetically sealed Scroll type compressor for 3 Phase, 415 V | Vendor to confirm | | |
| 4.1.d | Compressor make: Copeland / Danfoss | Vendor to confirm & specify the make | | |
| 4.2 | Condenser Coil : Air cooled copper tube coil with aluminium fins | Vendor to confirm | | |
| 4.4 | Evaporator: The evaporator should be made up of Copper/SScoil and should be immersed in the water tank. | Vendor to confirm | | |
| 4.5 | Water Tank Details: | | | |
| 4.5.a | The water tank should be of Stainless material with Grade 404 with minmum thickness 1.6mm. | Vendor to confirm | | |
| 4.5.b | 8 TRWater Chiller ,the water tank capacity should be minimum 310 Litres. | Vendor to confirm | | |
| 4.5.e | Provisions to be made for visually monitoring the Water level of the tank externally. | Vendor to confirm | | |
| 4.6 | Water pump & Flow Rate: | Vendor to confirm & specify the | | |
| 4.6.a | Water pump make : Kirloskar / Crompton / Tecmo / Grundfoss | pump type | | |
| 4.6.b | Pump Motor: 3 Phase, 50 Hz, 415 V | Vendor to confirm | | |
| 4.6.c | Required Flow rate 8 TR Water Chiller: 80 lpm, Pressure 3 to 5 bar | Vendor to confirm | | |
| 4.6.e | Pressure gauge to be provided for visually monitoring the water pressure. | Vendor to confirm | | |
| 4.6.f | Separate Ball valve to be provided in between the pump suction & water tank. | Vendor to confirm | | |
| 4.7 | Refrigerant: R134A / R407C (Non CFC) | Vendor to confirm & specify the refrigerant type | | |
| 4.8 | Filter drier Make : Emerson/Danfoss/Sporlan | Vendor to confirm & specify the make | | |
| 4.9 | Expansion valve Make : Emerson/Danfoss/Sporlan | Vendor to confirm & specify the make | | |
| 5 | Control Accessories to be provided: Hand Shut off valve (Both suction & Discharge end (for refrigerant) | | | |
| 5.1 | for servicing purpose. | Vendor to confirm | | |
| 5.2 | Filter drier | Vendor to confirm | | |
| 5.3 | Expansion Valve | Vendor to confirm | | |
| 5.4 | LP / H.P Switch (with resetting provisions) Digital Temperature Controller : Preferred make: Dixell / Sub - Zero / | Vendor to confirm Vendor to confirm & specify the | | |
| 5.5 | Carel The control cirucit should be operated by Single phase 230 V AC, 50 | make | | |
| 5.6 | HZ | Vendor to confirm | | |
| 6 | Safety Provisions: | | | |
| 6.1 | The following safety provision should be provided: | Vendor to confirm | | |
| 6.2 | Compressor Overload Pump Over Load | Vendor to confirm Vendor to confirm | | |
| 6.4 | Single Phase Preventer | Vendor to confirm | | |
| 6.5 | Fan Over Load | Vendor to confirm | | |
| 6.6 | AFT Anti freeze | Vendor to confirm | | |
| 6.7 | Water level sensor | Vendor to confirm | | 1 |

| 6.9 | H.P/ LP protection | Vendor to confirm | |
|-----|---|-------------------|--|
| 7 | Documentation: | | |
| 7.1 | Water chiller shall be supplied with 3 set of manual. The Manual shall contain the details of a) Circuit diagrams of refrigernt b) Circuit diagram for hydraulic oil, c) Complete wiring diagram with Ferrule no. 4) Operation manual with Maintenance details. | Vendor to confirm | |
| 8 | NOTE: | | |
| 8.1 | Erection and Commissioning shall be done by the supplier at BHEL. Works and prove the performance. | Vendor to confirm | |
| 8.2 | Initial charge of refrigerant shall be provided by the supplier. | Vendor to confirm | |
| 8.3 | Vendor has to supply 1 set of Condensor fan assembly (Fan blade + Motor assembly) for each of the 2 Nos. supplied Water chillers seperately as spare. The condenser fan assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.4 | Vendor has to supply 1 set of water circulating Pump assemply for each of the 2 Nos. supplied Water chillers seperately as spare. The water circulating Pump assembly should be the same as the one originally provided in the equipment. | Vendor to confirm | |
| 8.5 | General arrangement diagram with detail for Hydraulic and refrigeration system shall be supplied along with offer. | Vendor to confirm | |
| 8.6 | Point to point confirmation of technical data shall be offered by the supplier other wise the offer may be rejected. | Vendor to confirm | |



Digitally signed by SHANMUGAM CHANDRALEKA
Dix:-c:IN, o=8HARAH FEAVY ELECTRICAS LIMITED, ou=HIGH PRESSURE BOILER PLANT TIRUCHIRAPPALLI,
2.5.4.20—31458.000 febes/373:3986.000-310506.078.018.000.014/17/5.tb.2e56fe.62.ebc.4d,
postaCode=620014, st=Tami Nadu,
seriall/number=075-09CS1 81907-52.5EBCS8831E631878BE693E738D77A76886787272CS74C97,
crs-STANMUGAM CHANDRALEKA
Dix: 2.02.40.20.20.10.480.09 vi 03 90

Annexure B

Pre-Qualification Criteria

| SL. No | Pre-Qualification Criteria | Vendor's Confirmation /Acceptance | | |
|-----------|--|-----------------------------------|--|--|
| Only th | Only those vendors who satisfy the following conditions will get qualified to participate | | | |
| in the | in the tender. If the vendor does not qualify as per PRE-Qualification criteria, the | | | |
| techni | technical offer of such BIDDER / VENDOR offer will be rejected. | | | |
| 1. | The Vendor / Bidder should submit following details which are necessary for qualifying their offer. | | | |
| 2. | The Vendor / Bidder should submit atleast one Purchase Order reference towards the supply of atleast 1 no. of Water chiller or Oil chiller of minimum 1 TR capacity in the last 7 years to BHEL (or) anyother Organisation. The Purchase order should be in the name of the Bidder. | | | |
| 3. | BHEL reserves the right to visit the vendor's works for verifying the manufacturing facilities and any other credential furnished by the vendor. In case the information furnished with the offers found to be false / incorrect, the offer shall be rejected. | | | |

Supplier's Signature & Seal

Annexure – A- Additional Terms and Conditions for GeM Enquiry

The terms and condition mentioned in this document are applicable in addition to the GeM General Terms and Conditions. Bidders shall furnish pointwise confirmation/details.

| | To be fi | illed by bidder | |
|---------------------------|--|--|---|
| Desci | ription of the Equipment: | | |
| | Tender No. & Date | | |
| Name of the firm (Bidder) | | : | |
| Addr | ess | : | |
| | | | |
| Conta | act person 1 | Contact person 2 | |
| Name | e: | Name: | |
| Desig | nation: | Designation: | |
| | e Phone: | Office Phone: | |
| Mobi | | Mobile: | |
| e-ma | | e-mail: | |
| Offer | /Quotation reference with date | <u>:</u> | |
| SI | Terms and condition | ons | Vendor's |
| 1. | | | confirmation |
| - | Payment terms: Payment terms for Non MSME Supple Consignee Receipt and Acceptance Consignee Receipt and Acceptance Department of the Consignee Receipt and Acceptance By Bill & Subjected to Material acceptance By Bill & Subjected Micro & State of Consignee Receipt (Against submission of GST invoices Movement e-Way Bill & Subjected to Material Acceptance Provided Invoices Consignee Receipt and Acsubmission of GST invoices, GeM involved Way Bill & Subjected to Material acceptance | ertificate (Against submission of Last Movement e-Way Bill & HEL). mall Enterprises (MSEs): 45 days pt and Acceptance Certificate s, GeM invoice, LR copy, Last Material acceptance by BHEL). Enterprises: 60 days from the cceptance Certificate (Against bice, LR copy, Last Movement e- | |
| 2. | Note: a) In case of MSME, the supplier should Status. b) Since scope includes activities like etc., CRAC (Consignee Receipt completion of all activities as indicessful supplier who will be awarded to successful supplier who successful supplier who successful supplier who successful supplier who suc | Supply, installation, commission and Acceptance Certificate) wated in the technical specification | ning, Testing, handing over will be made only after |
| ۷. | tender, while updating the dispatch details delivery proof (since CRAC is to be made activities as per the technical specifications delivery proof, it shall be uploaded only activities as per the technical specifications.) | s in GeM portal shall not upload only after completion of all the s). If the supplier wish to upload y after completion of all the | |

| 3. | Delivery Period: Within 60 days from the date of GeM contract. | |
|----|--|------------------|
| | All the activities (like Supply, installation, commissioning, Testing, handing | |
| | over etc.) as applicable as per the technical specifications to be completed | |
| | within the above delivery period requirement. | |
| | ,, , | |
| | Note: Site will be ready for installation from the date of receipt of material | |
| | at BHEL stores. | |
| 4. | Liquidated Damages: As per GeM portal terms. @ 0.5% of the contract | |
| | value of delayed quantity per week or part of the week of delayed period | |
| | as pre-estimated damages not exceeding 10% of the contract value of | |
| | delayed quantity without any controversy/dispute of any sort whatsoever. | |
| | | |
| | Note: LD will be calculated for the period from Contract delivery due date | |
| | to the date of completion of all activities as applicable as per the technical | |
| | specifications. | |
| 5. | Response to Tenders for Indigenous supplier will be entertained only if | GST Registration |
| | the vendor has a valid GST registration number which should clearly | No |
| | mentioned in the offer. Indicate the GST registration number. If any | |
| | specific exemption is available, a declaration with due supporting | |
| | documents need to be furnished for considering the offer. | |
| 6. | Performance Bank Guarantee: Not Applicable | |
| δ. | Performance bank Guarantee: Not Applicable | |
| 7. | Kindly Indicate the USN Code for all items | HSN CODE : |
| 7. | Kindly Indicate the HSN Code for all items | HSN CODE : |
| 8. | Rate quoted in GeM portal should be inclusive of prices for all the | |
| | activities as indicated in the technical specifications and on FOR | |
| | destination basis inclusive of all taxes, P&F, freight etc. Transit | GST in %: |
| | | |
| | Insurance is under Supplier scope. Please indicate how much GST | |

Vendor's Seal & Signature

Bid Specific Additional Terms and Conditions

| 1. | Technical: |
|----|--|
| | Scope of supply shall be as per technical Specifications given in the enquiry. |
| | Bidder shall comply the technical specification as per the enquiry. Any clarifications/deviations to |
| | the specification requirements are to be clearly indicated. |
| 2. | Vendor offers will be considered for price bid opening subject to fulfilment of techno commercial suitability. |
| 3. | Delivery period: As indicated in GeM bidding document/Annexure A only. |
| 4. | Firm Price: |
| | The quoted / finalised rates shall be Firm till execution of the contract. Offer with PVC clause will not be considered. |
| 5. | Evaluation will be on Item wise/Total value wise/Group wise total as applicable as per the enquiry. |
| | a) In case of Total value wise evaluation, the supplier to quote for all the items in the enquiry. Else the offer will be rejected. |
| | b) In case of Item wise evaluation, the supplier may quote for all the items or only for the item(s) that they wish to participate. |
| | c) In case of Group wise total evaluation, the supplier may quote for all the groups or only for the group(s) they wish to participate. But to quote all the items in that/those groups. In case of deviation, offer will be rejected for the particular group(s) against which offer was not submitted for all the items. |
| 6. | Payment terms: |
| | a) Payment terms for Non MSME Suppliers: 90 days from the date of Consignee Receipt |
| | and Acceptance Certificate (Against submission of GST invoices, GeM invoice, LR copy, Last Movement e-Way Bill & subjected to Material acceptance by BHEL). |
| | b) Payment terms for Eligible Micro & Small Enterprises (MSEs): 45 days from the date of Consignee Receipt and Acceptance Certificate (Against submission of GST invoices, GeM invoice, LR copy, Last Movement e-Way Bill & subjected to Material acceptance by BHEL). |
| | c) Payment terms for Eligible Medium Enterprises: 60 days from the date of Consignee Receipt and Acceptance Certificate (Against submission of GST invoices, GeM invoice, LR copy, Last Movement e-Way Bill & subjected to Material acceptance by BHEL). |
| | Note: |
| | i. In case of MSME, the supplier should upload UDYAM Registration Certificate in proof of their MSME Status. |
| | ii. Since scope includes activities like Supply, installation, commissioning, Testing, handing over etc., CRAC (Consignee Receipt and Acceptance Certificate) will be made only after |
| | completion of all activities as indicated in the technical specifications. |
| 7. | Successful supplier who will be awarded with GeM contract against this tender, while updating the dispatch details in GeM portal shall not upload delivery proof (since CRAC is to be made only after completion of all the activities as per the technical specifications). If the supplier wish to |
| | upload delivery proof, it shall be uploaded only after completion of all the activities as per the technical specifications. |
| 8. | Liquidated Damages: As per GeM portal terms. @ 0.5% of the contract value of delayed quantity |
| | per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever. |
| | Note: LD will be calculated for the period from Contract delivery due date to the date of completion of all activities as applicable as per the technical specifications. |
| 9. | Rate quoted in GeM portal should be inclusive of prices for all the activities as indicated in the technical specifications and on FOR destination basis inclusive of all taxes, P&F, freight etc. Transit Insurance is under Supplier scope. |

- 10. If Guarantee / Warranty period is applicable as per tender specification, No deviation is permitted and deviated offers are liable for rejection.
- 11. **Repair & replacements:** Within the guarantee period vendor has to replace / rectify the defective/damaged items on free of cost within a reasonable time of reporting from our end.

12. Documents are to be submitted along with technical bid (Part-1)

- 01. Duly Filled, signed and stamped Annexure A (Additional Terms and Conditions for GeM Enquiry), Annexure-B (Pre-Qualification Criteria) and Specification document along with supporting documents. Annexure A and B are available along with specification document.
- 02. Documents required as per technical specification
- 03. Product Catalogues (if any).
- 04. MSME UDYAM Certificate (if applicable).
- 05. If MII Purchase Preference is applicable as per the GeM enquiry, Self-certification for local content declaration as per Make In India Policy, bidder shall submit Local content certificate with details of minimum local content percentage and Location at which the local value addition is made.

Note: All the pages of documents are to be signed and sealed by authorized signatory of the company. Any query during enquiry stage shall be replied within two days failing which offer may be rejected as non-responsive.

13. Inspection and testing requirements:

Inspection and testing requirements are to be carried out as per the specification and BHEL Technical specifications in the enquiry. If applicable all test certificates are to be submitted while supply. If required by BHEL, test certificates to be produced before supply.

14. PACKING AND MARKING:

The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit. (Wherever if applicable). Also, Supplier to comply for packing & marking as per Technical specification.

- 15. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration Number (GSTIN) which should be clearly mentioned in the offer. If the dealer is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Dealers under composition scheme should declare that he is a composition dealer supported by the screen shot taken from GSTN portal. The dealer has to submit necessary documents if there is any change in status under GST.
- Supplier shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No. which is linked/uploaded in GSTN network shall be clearly indicated), Billed to party (with GSTIN) & Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc. Wherever E-Invoice is applicable, the tax invoice/ CN / DN submitted by the vendor must contain the QR code generated in E-Invoice Portal & IRN.
- 17. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- 18. Invoices will be processed only upon completion of statutory requirement and further subject to following:
 - Vendor declaring such invoice in their GSTR-1 Return/ IFF
 - Receipt of Goods or Services and Tax invoice by BHEL.
- 19. As the continuous uploading of tax invoices in GSTN portal (in GSTR-1/ IFF) is available for all (i.e. both Small & Large) tax payers, all invoices raised on BHEL may be uploaded immediately in GST portal on dispatch of material /rendering of services. The supplier shall ensure availability of Invoice in GSTN portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GSTR-2A/ GSTR-2B).

| 20. | In case of discrepancy in the data uploaded by the supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL. |
|-----|---|
| 21. | In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor |
| 22. | In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor. |
| 23. | Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor. |
| 24. | GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 –Central Tax dated 13.09.2018. GST TDS certificate will be generated in GSTN portal subsequent to vendor accepting the TDS deduction in the GSTN portal & the vendor can directly download the Certificate from the GSTN Portal. |
| 25. | As per the provisions of Section 194Q of the Income Tax Act, we BHARAT HEAVY ELECTRICALS LIMITED, HPBP, TRICHY having PAN AAACB4146P, had turnover in the preceding financial year for more than Rs 10 Crores. |
| | Hence, we are liable as buyer to deduct tax at source on the payment for invoices issued by Supplier on or after 1st July 2021. Accordingly, discontinue charging TCS u/s 206C(1H) on invoices issued from 1st Jul 2021 onward. |
| | We shall deduct the eligible TDS u/s 194Q on the payments for invoices issued on or after 1st Jul 2021. TDS deducted so, shall be deposited to the Income Tax Department, and TDS certificate to this effect. Tax credit of such TDS shall reflect in FORM26AS of the supplier at the end of same quarter in which TDS is deducted. |
| | For Suppliers who have not filed Income Tax returns for the last 2 preceding assessment years, TDS deduction at higher rates will be applicable as per Section 206AB and Section 206CCA of Income-tax act. |
| 26. | BHEL will be deducting TDS u/s 194Q TDS. Hence TCS shall not be claimed in Supplier's Invoice. |
| 27. | GST CREDIT: Suppliers are advised to get registered to GSTN portal. Tenderer under "GST credit" shall be preferred. |
| 28. | Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected. |
| 29. | MSE /START-UP VENDOR: UDYAM Registration certificate shall be submitted by MSE vendors to avail MSE benefits. Start-up category certificate shall be submitted by start-up companies to avail exemption (if applicable as per GeM enquiry) in Annual Turnover/Past experience (if PQC stipulates requirement of Annual Turnover/Past experience). |

30. Make in India Policy:

Refer the Tender document regarding public procurement policy (Preference to Make in India), Order 2017. If MII Purchase Preference is applicable as per the tender documents, Bidders shall ensure to apply for Make In India preference while quoting through GeM portal. Otherwise offer will not be considered.

The local supplier at the time of tender, bidding or solicitation shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the Location(s) at which the local value addition is made."

31. Fraud Prevention Policy

Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website http://www.bhel.com and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

32. Breach of contract, Remedies and Termination:

In case of breach of contract, wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:

- a. from dues available in the form of Bills payable to defaulted supplier against the same contract.
- b. from the dues payable to defaulted supplier against other contracts in the same Region/Unit /any other region/unit
- c. In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier.

Further, levy of liquidated damages, debarment, termination, de-scoping, short-closure, etc., will be applied as per provisions of the contract

33. CONFLICT OF INTEREST:

A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- a) they have controlling partner (s) in common; or
- b) they receive or have received any direct or indirect subsidy financial stake from any of them; or
- c) they have the same legal representative/agent for purposes of this bid; or
- d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- e) Bidder participates in more than one bid in this bidding process, Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid: or
- f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:
 - 1. The principal manufacturer directly or through one Indian agent on his behalf; and
 - 2. Indian/foreign agent on behalf of only one principal;

or

g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, or

h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/Management, only one unit shall quote. Similar restrictions would apply to closely related sister companies. Bidder must proactively declare such sister/common business/ management units in same/similar line of business.

34. Resolution of Disputes:

The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the contract/tender which the Parties are unable to settle mutually), arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.

Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Annexure X to this Terms and conditions.

The Annexure X together with its appendices will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this terms and conditions.

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to other Party, refer such dispute or difference to sole arbitration of an arbitrator appointed as per the Arbitration and Conciliation Act, 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties.

This contract shall be governed, construed and interpreted in accordance with the laws of India. Subject as aforesaid, the provisions of Arbitration & Conciliation Act 1996 (India) or statutory modification or re-enactment thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceeding under this clause.

The seat of arbitration shall be Trichy, Tamil Nadu, India

The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to arbitration in terms of clause above, the Courts at Trichy, Tamil Nadu, India shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or difference and/or reference for the arbitration, the vendor/contractor shall proceed with and continue without hindrance the performance of its obligation under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.

In Case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/Port Trusts inter se and also between CPSEs and Government Departments/Organizations (Excluding disputes concerning Railways, Income Tax, Customs & Excise Departments, such dispute or difference shall be taken up by either party for its resolution through AMRCD as mentioned in DPE OM No.05/003/2019-FTS-10937 dtd. 14TH December, 2022 and the decision of AMRCD on the said dispute will be binding on both the parties."

| 35. | Set off: BHEL shall have the right to recover any money which in the sole opinion of BHEL is due from the supplier from any money due to the supplier under this Contract or any other contract or from the Security Deposit/BG furnished by the supplier under this Contract or any other contract. |
|-----|--|
| 36. | Cartel Formation: The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines. |
| 37. | The offers of the bidders who are under suspension and also the offers of the bidders, who engage the services of the banned firms /principal/agents, shall be rejected. The list of banned firms is available on BHEL web site www.bhel.com |
| 38. | The following documents are to be sent along with consignment to store: One Original for Recipient copy of tax invoice + One Duplicate for Transporter copy of tax invoice + One extra copy of tax invoice + Delivery challan + LR COPY+E-Way bill (Part A & Part B)+ Test Certificates (if applicable). |
| 39. | Seller Tax invoice, LR copy, E-Way bill, Courier docket etc. are to be uploaded in GeM portal while updating dispatch details in GeM portal |
| 40. | Seller Tax invoices (Original for Recipient + Duplicate for Transporter) either in Original hard copies or Digitally Signed Soft copies along with copy of LR/Courie docket + Part B of E-Way bill are to be sent to the buyer for bill processing |
| 41. | Bidder financial standing: The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid. |
| 42. | Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any. |
| 43. | Any other conditions which might have been quoted by the seller and are in contravention to the terms prescribed in the Enquiry documents and which have not been specifically accepted in by purchaser will not be applicable to the contract. |
| 44. | Without prejudice to Buyer's right to price adjustment by way of discount or any other right or remedy available to Buyer, Buyer may terminate the Contract or any part thereof by a written notice to the Seller, if: The Seller fails to comply with any material term of the Contract. The Seller informs Buyer of its inability to deliver the Material(s) or any part thereof within the stipulated Delivery Period or such inability otherwise becomes apparent. The Seller fails to deliver the Material(s) or any part thereof within the stipulated Delivery Period and/or to replace/rectify any rejected or defective Material(s) promptly. The Seller becomes bankrupt or goes into liquidation. The Seller makes a general assignment for the benefit of creditors. A receiver is appointed for any substantial property owned by the Seller. The Seller has misrepresented to Buyer, acting on which misrepresentation Buyer has placed the Purchase Order on the Seller. |
| 45. | BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL. |
| 46. | In case of any queries before bid submission, the supplier may reach us at the mail id govindaraj@bhel.in |