GEM RE	FERE	NCE NUMBER: GEM	I/2025/B/602779	2 DT. 17.03.2025					
PRE-BID QUERIES & REPLIES									
Querie s From	SI.No.	Tender Document Ref.	Bidder Queries	C-DOT Replies					
Bidder-1 Bidder-2	1	Data Sheet Engine, Sl.No.1, Page – 39 of tender document	Approval for Additional Makes of Diesel Generator	Manufacturer: Kirloskar /Cummins or equivalent and conforming to IS: 10002 / BS:5514 / ISO 3046 & other relevant standards.					
Bidder-2	2	Data Sheet Engine, Sl.No.27, Page -40 and BOQ h) Acoustic enclosure Page – 43 of tender document	Noise level at 1 m, < 75 dB	As per CPCB standards, for engine manufacturers, the noise level should be ≤ 85 dB					
Bidder-1	3	10. BOQ, SI.No. 26, Page – 47 of tender document	Statutory approvals need to be obtained from CEIG Karnataka or the Chief Electrical Inspector, Central Division, Chennai	Statutory Approvals: Preparation of necessary drawings for DG Set, getting approval from the chief electrical inspector, Central Division, Chennai.					
Bidder-2	4	10. BOQ, SI.No.1, Page– 42 of tender document	a) Engine: Electrical starter motor 12V DC battery charging	Electrical starter motor 24V DC battery charging.					
Bidder-1	5	Approved Makes, Sl.No.2, Page – 41 of tender document	Approval for Additional Makes of Alternator	Alternator: Stamford/ Leroy Somer / KOEL Green or equivalent and confirming to IS: 4722					
Bidder-1	6	Additional	Excepted timeline for the completion of the project	The timeline for completion of the project is 4 months.					
Bidder-1	7	Additional	Payment terms	Payment will be made upon completion of the project					
C-DOT	8	10. BOQ, SI.No. 25, Page – 47 of tender document	SI.No. 25- Breaking floor concrete for cable trench & making proper trench as per the site condition	SI.No.25 . Dismantle and shifting of the existing 625KVA DG set along with the Fuel tank, fuel pipe line, exhaust system, DG Incomer panel ,power cable and all other related accessories to a nearby location approx. 3.0 metres and Breaking floor concrete for Cable trench & making proper trench as per the site condition. *Also vendors to take into account of the change/Addition in scope & factor the same while submitting the financial bid					

Note:

All other Specifications, terms and condition remain same.

^{*}To understand the extent of work involved the bidders may visit the site before submitting their bid if required.

D.S. SPT: 1 Supplying, Installing, testing and commissioning of 1910 EVA Disest Generator set with following specifications (confirming to the relevant CCF8 norms) 2) Engines Disest generating set are rated at 1500 RPM and conforms to 05 2575 specifications. The engines are radiate crossle, but crossle and multi-grading conforms to 105 2596. The crospe of supply includes: Institute the institute state in most 2 VC is battery, changing alternators, Rouch Valley, and the conformation of the conformati	10. <u>Bill of Quantities (BOQ)</u> Name of work: Supply, Installation, Testing and Commissioning of 1 x 1010 KVA Diesel Generator set at C-DOT, Bangalore						
1. Supplying, Installating, Hesting and commissioning of \$10.00 KW Diesel Generator set with following specifications (confirming to the relevant CECN norms) a) Engine Direct generating set are resed at \$10.00 RPM and conform to \$10.00 KW 20.00 KW 10.00	otal Amount (Rs.				Description	i.No	
The engines are radiator cooled, four stroke and multi cylinder, conforming to 50 3046. The scope of supply includes: Exercise statem endor 24 NC Statery-changed anternation, Booch fuel system with mechanical governum, A.C. (State, Spien on labe oil filter, Spin on dual fuel filter with water separating crutical governum, A.C. (State, Spien on labe oil filter, Spin on dual fuel filter with water separating crutical forms of the spin o					Supplying, installing, testing and commissioning of 1010 KVA Diesel Generator set with	1	
S OH. 3 phase, 4 wire systems, conforming tots/EC 60034-1. The Alternator is brushless types. screen protected, revolving field, self-oxed, self-oxed speaked through an AN. The alternator shall have + 1.0 % Voltage regulation (max) in static conditions—19: 23 protections with insulation class + 1, (Make: Stanford, Leavo Soner) d) Mounting arrangement. Engine and alternator are mounted on a common MS fabricated base frame with AVAP pads. e) Control Panel: The control panel is manufactured with 14/16 gauge CRCA sheet and is powder coated for weather-proof and long lasting finish. The control panel consists of the following parts: P50500 Controller, Aluminium bus bars with suitable capacity within/outgoing terminals, indicating lights for 1:aod 07 and 54 Running', instrument fuses duly wired and ferruled. MCCB of suitable rating with overload and short circuit protections. f) Genset Controller: Microprocessor based generator set monitoring and control system. The control provides a simple operator interface to the generator set, manual and remote start/ stop control, shutdown fault indication, and an ICD hour counter. The integration of all functions into a single control systems. This control has been designed and tested to meet harsh environment in which genets are the provide palement of the control provides a simple operator interface to the generator set. The integration of all functions into a single control systems. This control has been designed and tested to meet harsh environment in which genets are typically applied resources. Functions, protections 16 character x iz line alphanumenic ICD display with ICD Backlight. g) Operator interval sortings, Current (1 ph or 3 ph), IVA (3 ph and total), Fraquency, Provide Engine on the source of the					The engines are radiator cooled, four stroke and multi cylinder, conforming to ISO 3046. The scope of supply includes: Electrical starter motor 24V DC battery charging alternator, Bosch fuel system with mechanical governor, A1 Class. Spin-on lube oil filter, Spin-on dual fuel filter with water separator, Turbocharger, Charge air cooler, Silencer (Hospital grade),Dry type air cleaner, Shutoff Coil, Flywheel and flywheel housing, First fill of lube oil and coolant, Safety for low lube oil pressure, Safety for high water temperature, Permissible overload of 10% for one hour in 12 hours of operation. b) Capacity of Fuel Tank: Inbuilt Fuel tank capcity shall be for 990 Ltrs. with the float over flow control as per the detailed specification.		
costed for weather-proof and long lasting finish. The control panel consists of the following parts:-89050 Controller, Alminishim bus bars with suitable capacity within/outgoing terminals, indicating lamps for 'Load On' and 'Set Running', Instrument fuses duly wired and ferruled, MCCB of suitable rating with overload and short circuit protections. 1) Genset Controller: Microprocessor based generator set monitoring and control system. The control provides a simple control system provides enhanced reliability and performance compared to conventional generator set control systems. This control has been designed and tested to meet harsh environment in which generate are by pically applied. Features, Functions, protections 16 character x 2 line alphanumenic LCD display with LED Backlight. g) Operator interface: Provide a record of most recent fault conditions. Fault history stored in the control non volatile memory, Provide Alternator Data. Voltage (1 ph or 3 ph line to line and line to neutral voltage, Current (1 ph or 3 ph). VAI G ph and totally. Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Service adjustment and calibration of DG control functions, Voltage, frequency selection, Configurable input and output set up, Meter calibration, Engine controls, Power Start operates on 12 UCD batteries. h) Acoustic enclosure: The acoustic enclosure shall be made of 14/16 SWG thick CRCA sheets in suitable approved shade and as tructural/sheet metal base frame painted in black. The walls of the enclosure are insulated with fire retardant Comes on as to comply with the SGBA at 1 mtr sound levels specified by Ministry of Environment & Forest. The enclosure has the following features: Specially designed to operate at rated land made on special purpose CNC machines for consistency in quality and workmanship, Powder coating, can withstand externe environment. Use of special hardware for longer life, inculation material meets exact					50 Hz, 3 phase, 4 wire systems, conforming tolS/IEC 60034-1. The Alternator is brushless type, screen protected, revolving field, self excited, self regulated through an AVR. The alternator shall have + 1.0 % Voltage regulation (max) in static conditions- IP: 23 protections with insulation class H. (Make: Stamford/ Leroy Somer) d) Mounting arrangement: Engine and alternator are mounted on a common MS fabricated base frame with AVM pads. e) Control Panel: The control panel is manufactured with 14/16 gauge CRCA sheet and is powder coated for weather-proof and long lasting finish. The control panel consists of the following parts:- PS0500 Controller, Aluminium bus bars with suitable capacity within/outgoing terminals, Indicating lamps for 'Load On' and 'Set Running', Instrument fuses duly wired and ferruled, MCCB		
control provides a simple operator interface to the generator set, manual and remote starty stop control, subutdown fault indication, and an LOD hour counter. The integration of all functions into a single control system provides enhanced reliability and performance compared to conventional generator set control systems. This control has been designed and tested to meet hards environment in which genests are typically applied. Features, Functions, protections 16 character x 2 line alphanumeric LCD display with LED Backlight. g) Operator interface: Provide a record of most recent fault conditions. Fault history stored in the control non volatile memory, Provide Alternator Data. Voltage (1 ph or 3 ph line to line and line to neutral voltage, Current (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Servernt (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Servernt (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Servernt (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Control functions, Voltage, Frequency selection, Configurable input and output set up, Meter calibration, Engine controls, Power Start operates on 12 VDC batteries. h) Acoustic endosure: The acoustic enclosures shall be made of 14/16 SWG thick CRCA sheets in suitable approved shade and a structural sheet metal base frame painted in black. The walls of the enclosure: The acoustic enclosure in black. The walls of the enclosure in suitable to exhibit styling resident in the set of the enclosure in the following features: Specially designed to meet stringent MOEF (CRCB norms of 85dB							
the control non volatile memory, Provide Alternator Data. Voltage (1 ph or 3 ph line to line and line to neutral voltage, Current (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine e Imp. Engine col pressure, Control includes provision for Service adjustment and calibration of DG control functions, Voltage, frequency selection, Configurable input and output set up, Meter calibration, Engine controls, Power Start operates on 12 VDC batteries. h) Acoustic enclosure: The acoustic enclosure shall be made of 14/16 SWG thick CRCA sheets in suitable approved shade and a structural/ sheet metal base frame painted in black. The walls of the enclosure are insulated with fire retardant foam so as to comply with the 85/8BA at 1 mtr sound levels specified by Ministry of Environment & Forest. The enclosure has the following features: Specially designed to meet stringent MOEF/ CPCB norms of 85/8BA @ 1 mtr at 75% load under free field conditions, Two point lifting for easy handling at customer site, Designed to have optimum serviceability, fair intel touvers specially designed to operate at rated load made on special purpose CNC machines for consistency in quality and workmanship, Powder coated for long lasting service life and superior finish, With UV resistant powder coating, can withstand extreme environment. Use of special hardware for longer life, insulation material meets exacting IS 8183 specifications for better sound attenuation, Flush styling - no projections, Fluid drains for lube billion and fuel, Fuel filling point inside the enclosure. Exhaust Pipe: Manufacture, Supply, Transportation, Installation, Testing, Commissioning of MS exhaust piping with rain water cap, bends& painting with 2 coats of Heat resistance antirust epoxy paint suitable to exhaust temperature. The sizes of the Exhaust piping shall be as per the manufacturer's guidelines / recommendations. The exhaust pipie, shall be as per the manufacturer's guidelines / recommendatio	0.00		Job	1	control provides a simple operator interface to the generator set, manual and remote start/ stop control, shutdown fault indication, and an LCD hour counter. The integration of all functions into a single control system provides enhanced reliability and performance compared to conventional generator set control systems. This control has been designed and tested to meet harsh environment in which gensets are typically applied. Features, Functions, protections 16 character		
suitable approved shade and a structural/ sheet metal base frame painted in black. The walls of the enclosure are insulated with fire retardant foam so as to comply with the \$5dBA at 1 mtr sound levels specified by Ministry of Environment & Forest. The enclosure has the following features: Specially designed to meet stringent MOEF/ CPCB norms of \$5dBA @ 1mtr at 75% load under free field conditions, Two point lifting for easy handling at customer site, Designed to have optimum serviceability, Air inlet louvers specially designed to operate at rated load made on special purpose CNC machines for consistency in quality and workmanship, Powder coated for long lasting service life and superior finish, With UV resistant powder coating, can withstand extreme environment. Use of special hardware for longer life, Insulation material meets exacting IS 8183 specifications for better sound attenuation, Flush styling - no projections, Fluid drains for lube oil and fuel, Fuel filling point inside the enclosure. Exhaust Pipe: Manufacture, Supply, Transportation, Installation, Testing, Commissioning of MS exhaust piping with rain water cap, bends& painting with 2 coats of Heat resistance antirust epoxy paint suitable to exhaust temperature. The sizes of the Exhaust piping shall be as per the manufacturer's guidelines / recommendations. The exhaust piping shall be as per the manufacturer's guidelines / recommendations. The exhaust piping shall be with 50mm thick Glass wool insulation covered with 26 SWG Aluminium cladding for Exhaust piping. a) MS Exhaust pipe - 14" ERW B Class Pipe with cladding 3 b) 14" MS Bend 4 c) 10" MS ERW B Class Pipe 5 Nos 6 e) 10" x 14" Y joint to connect the exhaust pipe. 1 Nos 0. d) Supply, fabrication and erection & Installation of MS support suitable for exhaust pipe,					the control non volatile memory, Provide Alternator Data. Voltage (1 ph or 3 ph line to line and line to neutral voltage, Current (1 ph or 3 ph), kVA (3 ph and total), Frequency, Provide Engine Data, Starting battery voltage, Engine running hours, Engine Temp, Engine oil pressure, Control includes provision for Service adjustment and calibration of DG control functions, Voltage, frequency selection, Configurable input and output set up, Meter calibration, Engine controls,		
Exhaust Pipe: Manufacture, Supply, Transportation, Installation, Testing, Commissioning of MS exhaust piping with rain water cap, bends& painting with 2 coats of Heat resistance antirust epoxy paint suitable to exhaust temperature. The sizes of the Exhaust piping shall be as per the manufacturer's guidelines / recommendations. The exhaust pipe shall be with 50mm thick Glass wool insulation covered with 26 SWG Aluminium cladding for Exhaust piping. a) MS Exhaust pipe - 14" ERW B Class Pipe with cladding 3 b) 14" MS Bend 1 Nos 0. 4 c) 10" MS ERW B Class Pipe 6 Mtrs 0. 5 d) 10" MS Bend 5 Nos 0. 6 e) 10" x 14" Y joint to connect the exhaust pipe. 1 Nos 0. 9 Joyly, fabrication and erection & Installation of MS support suitable for exhaust pipe,					suitable approved shade and a structural/ sheet metal base frame painted in black. The walls of the enclosure are insulated with fire retardant foam so as to comply with the 85dBA at 1 mtr sound levels specified by Ministry of Environment & Forest. The enclosure has the following features: Specially designed to meet stringent MOEF/ CPCB norms of 85dBA @ 1mtr at 75% load under free field conditions, Two point lifting for easy handling at customer site, Designed to have optimum serviceability, Air inlet louvers specially designed to operate at rated load made on special purpose CNC machines for consistency in quality and workmanship, Powder coated for long lasting service life and superior finish, With UV resistant powder coating, can withstand extreme environment. Use of special hardware for longer life, Insulation material meets exacting IS 8183 specifications for better sound attenuation, Flush styling - no projections, Fluid drains for	:: :: :: :: :: :: :: :: :: :: :: :: ::	
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3 b) 14" MS Bend 1 Nos 0. 4 c) 10" MS ERW B Class Pipe 6 Mtrs 0. 5 d) 10" MS Bend 5 Nos 0. 6 e) 10" x 14" Y joint to connect the exhaust pipe. 1 Nos 0. d) Supply, fabrication and erection & Installation of MS support suitable for exhaust pipe, 0.	0.00		Mtrs	8	exhaust piping with rain water cap, bends& painting with 2 coats of Heat resistance antirust epoxy paint suitable to exhaust temperature. The sizes of the Exhaust piping shall be as per the manufacturer's guidelines / recommendations. The exhaust pipe shall be with 50mm thick Glass wool insulation covered with 26 SWG Aluminium cladding for Exhaust piping.	2	
4 c) 10" MS ERW B Class Pipe 6 Mtrs 0. 5 d) 10" MS Bend 5 Nos 0. 6 e) 10" x 14" Y joint to connect the exhaust pipe. 1 Nos 0. d) Supply, fabrication and erection & Installation of MS support suitable for exhaust pipe, 0. 0.	0.00		Nos	1		2	
5 d) 10" MS Bend 5 Nos 0. 6 e) 10" x 14" Y joint to connect the exhaust pipe. 1 Nos 0. d) Supply, fabrication and erection & Installation of MS support suitable for exhaust pipe,	0.00						
d) Supply, fabrication and erection & Installation of MS support suitable for exhaust pipe,	0.00		Nos	5	d) 10" MS Bend		
	0.00		Nos	1		6	
coat of zinc chromate primer and 2 coats of black enamel paint. Fuel System: 1 " MS Class 'C' .ERW pipes conforming to IS :1239(Part-1) including plain flange	0.00		Kgs	1200	residential silencer, etc. using angles/ channels, steel sections, U Clamps etc. complete with one coat of zinc chromate primer and 2 coats of black enamel paint.	7	
8 one set (table E) gaskets bolts nuts washer (4.6Grade) considered for connection at every 6 30 Mtrs mtrs of piping. (Including Hardware)	0.00				one set (table E) gaskets bolts nuts washer (4.6Grade) considered for connection at every 6 mtrs of piping. (Including Hardware)		
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11	DG Incomer Panel: Fabrication, Supply, Installation, Testing and Commissioning of 3 Phase, 4 wire, 415 V, 50Hz indoor ACB panel with necessary Digital Multi Function meters, Voltmeter, Earth Leakage Relay, UV/OV Relay, Timer, suitable CTs, LED type RYB & ON-OFF Trip Indicators, Auto/Manual selector switch, Emergency Stop and having busbars of 1600 A capacity and other accessories. The fabrication shall be made up of CRCA sheet with thickness of 2.0mm frame, front door with components, 1.6mm all other partition, Powder coated. Approval shall be obtained for the panel design before manufacturing. Incomer: 1600A ACB, 4P, 50KA, mp based OC-SC-EF release BusBar: Rated for 1600A Outoing Bus Bar: Suitable for connection of SRx3.5Cx400 Sq.mm Al. Armoured XLPE cable	1	Job		0.00
12	Supplying and laying of 3.5C x 400 Sq.mm AL. Armoured 1.1 KV LT UG cable, A2XFY Configuration, XLPE Insulated as per IS 7098(Part 1) 1988, in existing trench etc as required.	150	Mtrs		0.00
13	Supplying and making end termination with brass double compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade. 3½ X 400 sq. mm (82mm)	10	Set		0.00
14	Supplying and Laying of Control Cables of following sizes, Stranded Copper,PVC insulated, Armoured, PVC outer sheathed cables over existing cabletrays/trench including double compression brass cable glands and termination lugs etc as required for interconnection of bidder supplied electrical panels and equipment. Biddershall asses the required quantity as per their equipment and layout. a) 2C X 4 Sq.mm	15	Mtrs		0.00
15	b) 4C x 2.5 Sq.mm	45	Mtrs		0.00
16	c) 12C x 2.5 Sq.mm	30	Mtrs		0.00
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	2	Nos		0.00
18	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required as per IS 3043.	2	Nos		0.00
19	Supplying and laying 50 mm X 6 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washerspaced at 50mm).	45	Mtrs		0.00
20	Supplying and laying 50 mm X 6 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washerspaced at 50mm)	45	Mtrs		0.00
21	Supply and laying of 8 SWG Cu. Wire with accessories for Gland earting.	10	Mtrs		0.00
22	Supply, fabrication and erection & Installation of 22 Gauage ducting with suitable bend, supports as per the acoustic hot air oulet cutout size, using angles/ channels, Clamps etc., as per the OEM recommendation.	1	Job		0.00
23	Civil Work: Providing and laying in position plain cement concrete for levelling course for all works in foundation for 1010KVA DG bed as per the OEM recommendation at site.	1	L/s		0.00
24	Breaking wall suitable size for hot air outlet, Silencer and complete with proper finishing	1	L/s		0.00
25	Dismantle and shifting of the existing 625KVA DG set along with the Fuel tank, fuel pipe line, exhaust system, DG Incomer panel ,power cable and all other related accessories to a nearby location approx. 3.0 metres and Breaking floor concrete for Cable trench & making proper trench as per the site condition.	1	L/s		0.00
26	Statutory Approvals : Statutory Approvals: Preparation of necessary drawings for DG Set, getting approval from the chief electrical inspector, Central Division, Chennai before taking up work and to furnish completion report, arranging for inspection, giving trial run on load, obtaining approval for commissioning the sets by paying necessary fees for inspection etc., as required.	1	Job		0.00
27	Supply and installation of Fire and Safety Equipment's: a) Shock treatment chart laminated (Regional language, English and Hindi) on 8mm Thick wooden board (24"x36")	1	No		0.00
28	b)415V Danger board as per the regulations with local language (8"x8")	2	No		0.00
29	c) ISI marked 4.5 Kg capacity Portable CO2 Fire Extinguisher with bracket etc.	2	No		0.00
30	d) Fire buckets of 3 Nos set with Stand filled with sand and water with roof top cover	1	set		0.00
31	e) First aid kit with ABS plastic body, portable, transparent, wall mounting with allstandard first aid materials	1	No		0.00
\vdash				Total	0.00
<u> </u>	NOTE Management will be used a constitution of the			GST @ 18%	0.00
	NOTE: Measurements will be made as per the site execution Please refer highlighted cells for changes/addition made.			Grand Total	0.00