

NOTICE FOR BIDS

Notice is hereby given by the Board of Supervisors of Yalobusha County, Mississippi, that sealed competitive bids shall be received until 9:00 a.m. on August 1, 2022, in the office of the Chancery Clerk of Yalobusha County at the Yalobusha County Courthouse in Water Valley, Mississippi, for the purchase of a Mobile Generator Set. All bids received shall be opened at the above stated date and time.

Specifications of the above are on file with the Clerk of the Board of Supervisors at her office at the Yalobusha County Courthouse in Water Valley, Mississippi, a copy of which may be obtained by calling (662) 473-2091.

The Board reserves the right to reject any and all bids and re-advertise.

This the 27th day of June, 2022.

/s/ Amy F. McMinn

Amy F. McMinn, Clerk of the Board

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SECTION 16232

MOBILE GENERATOR SET

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Engine generator set.
- B. Trailer.
- C. Exhaust silencer and fittings.
- D. Fuel fittings and tank.
- E. Control panel.
- F. Battery and charger.
- G. Weatherproof enclosure.

1.02 REFERENCE STANDARDS

- A. NECA/EGSA 404 - Recommended Practice for Installing Generator Sets; National Electrical Contractors Association; 2007.
- B. NEMA MG 1 - Motors and Generators; National Electrical Manufacturers Association; 2009, Revision 1 - 2010.
- C. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); National Electrical Manufacturers Association; 2008.
- D. NFPA 30 - Flammable and Combustible Liquids Code; National Fire Protection Association; 2008.
- E. NFPA 70 - National Electrical Code; National Fire Protection Association; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- F. NFPA 110 - Standard for Emergency and Standby Power Systems; National Fire Protection Association; 2010.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate electrical characteristics and connection requirements. Show plan and elevation views with overall and interconnection point dimensions, fuel consumption rate curves at various loads, ventilation and combustion air requirements, electrical diagrams including schematic and interconnection diagrams.
- B. Product Data: Provide data showing dimensions, weights, ratings, interconnection points, and internal wiring diagrams for engine, generator, control panel, battery, battery rack, battery charger, exhaust silencer, and vibration isolators.
- C. All material, equipment, and/or accessories necessary for proper operation at the system not specified or described herein shall be provided at no additional contract cost to accomplish the intended function of the system.
- D. Test Reports: Indicate results of performance testing.

1.04 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum twenty years documented experience with service facilities within 100 miles of Project.
- C. Products: Furnish products listed and classified by Underwriters Laboratories as suitable for purpose specified and indicated.

1.05 WARRANTY

- A. The manufacturer shall provide a Two (2) year warranty, to include coverage for the complete package as delivered to the Owner, from the date of equipment start-up.

PART 2 PRODUCTS

2.01 ENGINE GENERATOR SYSTEM

- A. Model: Model shall be a Taylor TMC200 or equal.
- B. Description: NFPA 110, portable stand-by-electric power system (consisting of new and current equipment) to provide emergency power in the event of normal power interruption.
- C. System Three Phase Capacity at 60 Hz: 200 kW, 250 kVA at 277/480 volt, 120/208 volt 3 phase, 4-wire wye and 240 single phase. (at elevation of 100 feet above sea level, continuous rating using engine-mounted radiator).

2.02 ENGINE

- A. Type: Tier 4 Final Liquid-cooled inline or V-type, four stroke cycle, compression ignition diesel internal combustion engine with electric fuel shut-off.
- B. Rating: Sufficient to operate under 10 percent overload for one hour in an ambient of 90 degrees F at elevation of 100 feet.
- C. Fuel System: No. 2 fuel oil.
- D. Engine speed: 1800 rpm.
- E. Safety Devices: Engine shutdown on high water temperature, low oil pressure, overspeed, and engine overcrank. Limits as selected by manufacturer.
- F. Engine Starting: DC starting system with positive engagement, number and voltage of starter motors in accordance with manufacturer's instructions.
- G. Engine Jacket Heater: Thermal circulation type water heater with integral thermostatic control, sized to maintain engine jacket water at 90 degrees F, and suitable for operation on 120 volts AC.
- H. Radiator: Radiator using glycol coolant, with blower type fan, sized to maintain safe engine temperature in ambient temperature of 110 degrees F. Radiator air flow restriction 0.5 inches of water maximum.
- I. Engine Accessories: Fuel filter, positive displacement lube oil pump, lube oil filter, intake air

filter, lube oil cooler, fuel pumps, gear-driven water pump. Include fuel pressure gage, water temperature gage, and lube oil pressure gage on engine/generator control panel.

- J. Mounting: Provide unit with suitable captive mobile type vibration isolators between the engine/generator and the trailer.
- K. The engine shall be emission compliant.

2.03 GENERATOR

- A. Generator: NEMA MG 1, three phase, reconnectable brushless synchronous generator with brushless exciter and complying with UL 1446.
- B. Rating: 200 kW, 250 kVA, at 0.8 power factor, 60 Hz at 1800 rpm.
- C. Insulation Class: H (fungus resistant epoxy varnish).
- D. Temperature Rise: 130 degrees C Continuous.
- E. Enclosure: NEMA MG 1, open drip proof.
- F. Voltage Regulation: Include generator-mounted volts per hertz solid-state exciter-regulator to match engine and generator characteristics, with voltage regulation plus or minus 1 percent from no load to full load. Include manual controls to adjust voltage droop, voltage level (plus or minus 5 percent) and voltage gain. The regulator must be sealed from the environment and isolated from the load to prevent tracking when connected to "SCR" loads.
- G. The generator shall be capable of sustaining at least 300% of rated current for at least 10 seconds under a three phase symmetrical short by inherent design or by the addition of a permanent magnet pilot (PMG) exciter.
- H. The generator shall be directly connected to the flywheel housing with a semi-flexible coupling between the flywheel and rotor, with maintenance free bearing.

2.04 ACCESSORIES

- A. Trailer: Provide a 10,000 pound capacity, tandem axle trailer with an integral 232 gallon diesel fuel storage tank complying with all DOT mobile tank requirements. And a 20 Gallon DEF Tank. Both axles shall be spring type with electric brakes and easy lube bearings. Provide ball hitch, safety chains, DOT lighting, storage box (at the front of the trailer), front tongue jack, and two rear stabilizer jacks rated 5,000 lbs. Each with large sand shoes. Jacks shall be capable of lifting the complete trailer. The trailer shall be equipped with a rear cable storage space inside the trailer enclosure. The rear shall allow for cable deployment with door closed and locked.
- B. Exhaust Silencer: Critical type silencer mounted inside enclosure, with muffler companion flanges and flexible stainless steel exhaust fitting, sized in accordance with engine manufacturer's instructions. (External silencer is unacceptable)
- C. Batteries: Heavy duty, diesel starting type lead-acid storage batteries, 170 ampere-hours minimum capacity. Match battery voltage to starting system. Include necessary cables and clamps.
- D. Battery Charger: Provide a Deltran Battery Tender Charger mounted on unit inside weather Housing (5 Amp 12 Volt)

- E. Generator Main Circuit Breaker: Molded case circuit breaker on generator output with integral thermal and instantaneous magnetic trip in each pole; UL listed. Unit mounted in enclosure to meet NEMA 250, Type 1 requirements.
- F. Generator control panel shall have Digital instruments to monitor AC voltage, AC frequency, and percent of load. The analog engine instruments shall monitor oil pressure, water temperature, battery voltage, fuel level, and run time/hour meter. Safety shutdowns shall be provided with red LED indication for overspeed, overcrank, low oil pressure, and high coolant temperature. Provide green LED indication of engine running. Control switch shall be provided for local and remote starting with 3 position run/off/remote switch.
- G. Weather-Protective Enclosure: Reinforced steel housing allowing access to control panel and service points, with lockable doors and panels. The enclosure shall be constructed of 14 Gauge galvanized steel with powder coat paint and stainless steel hardware.
- H. Cam-Locs Mounted to Generator LCB.
- I. One 20 Amp 120 VAC GFI receptacle w/breaker.

PART 3 EXECUTION

3.01 FACTORY TESTS

- A. All factory tests shall be performed before the unit ships and performed at rated load.
- B. Factory tests shall include: run at full load, maximum power, voltage regulation, transient and steady-state governing, single step load pick-up, and safety shutdowns.

3.02 FIELD QUALITY CONTROL AND ONSITE ACCEPTANCE TEST

- A. Provide the services of manufacturer's representative to prepare, start, and test the engine/generator set.
- B. The complete engine/generator set shall be tested for compliance with the specifications.

- C. The Owner and the Engineer shall be notified five (5) days in advance of the onsite acceptance test.
- D. The acceptance test shall include a "cold start" test with the load available at the Owner's site.

3.03 ADJUSTING

- A. The manufacturer's representative shall adjust generator output voltage and engine speed.

3.04 CLOSEOUT ACTIVITIES

- A. The manufacturer's representative shall demonstrate operation to Owner's operating personnel during the onsite acceptance test.
- B. Closeout Submittals: Two (2) copies of the complete operational and maintenance manuals, in hardback binders or cd, shall be provided. These manuals shall cover the engine, the generator, all accessories, and the trailer.

END OF SECTION