CARC

هيئة تنظيم الطيران المدني
CIVIL AVIATION REGULATORY COMMISSION

Supply, Install and commissioning of Standby Generator at Q.A.I.A. TOWER Building

Environment & Safety First

The contractor shall apply and afford the costs of all of the safety requirements including the following.

- Occupational Health & Safety – OHS.
- Personal Protective Equipment – PPE.
- Isolating the working.
- Any CARC safety requirements as per mentioned in the contractor Documents

Civil Aviation Regulatory commission (CARC) wants to purchase, Install, operate and Commissioning 300 KVA standby diesel generator

GENERAL CONDITIONS

Specialized Electromechanical companies should implement the project, the company should provide the CARC with a design drawing for civil, electrical, mechanical, and safety work before the work starts for the CARC's approval and an as-built drawing after implementation of the works. The supplier shall visit the location to identify and evaluate the work prior to submitting his offer. Work will be according to the operations affording hours, which shall be into consideration by the contractor.

- All related documents should be submitted to CARC such as material data sheets, priced spare parts list, maintenance manuals, and operations manuals.
- The project includes all civil, electrical, mechanical and safety work and all needed actions to implement the project.

Work Description:

The contractor shall Supply, Install, Commissioning and Operate 300 KVA standby Generator as per the main technical specifications below.

- Engine Fuel Diesel Engine.
- Rated Power 300KVA (240KW).
- Rated Voltage 400V/230V ±10%.
- Rated Frequency 50Hz.
- Connection Type Star Y.
- Number of poles 4.
- Number of phases 3 phase.
- Speed 1500 rpm.
- Current 360 A.
- Power factor minimum 0.8.
- Ambient Temperature -20C° to 50C°
- Alternator: self-excited and self-regulated, brushless with automatic voltage regulator.
- Starting battery 12V DC- lead type.
- IP 54
- Fuel capacity: 8 Hours continuous run time at full load.
- Four pole circuit breaker MCCB (360A) for the magnetic and thermal protection of the alternator.

➢ Automatic Transfer Switch, 4-pole 360A/400V change-over switch panel, including changeover switch mains/Generating set carried out with motorized circuit breakers mechanically and electrically interlocked.

➢ Manual Transfer Switch to operate the old generator in a failure case (site survey is necessary)

➢ Electric automatic start/stop control panel (Electronic pad screen), with a programmable microprocessor card (through push buttons)، able to start the genset within few seconds in case of failure of the mains voltage. Main features shall be such as but not limited to the following:

- ✓ Display to show alarms, predispositions, and electric parameters (mains 3 phases voltage/generating set 3 phases voltage/battery charger circuit voltage, Amperage, consumption KW).
- ✓ Fully automatic battery charger with automatic cross-over point.
- ✓ Control circuit for engine jacket water preheating system.
- ✓ Oil pressure and temperature and water temperature gauge

- ✓ Built-in fuel tank diesel level gauge.
- Testing and commissioning including a variable load bank test to cover up to 110% of rated power.
- The Generator shall be complied with IEC standards 60034-1.
- The price including all the required installations for an optimum operation of the generator and connection to the main network source and loads.
- Price include clean and clear the work site from any obstructions (Materials, pipes ...etc.)
- The price including all necessary materials and works to complete the installations as per CARC supervision engineer.
- Construction of reinforced concrete footing with a minimum height of 20 cm from the face of the natural ground using 250kg/cm2 strength concrete reinforced with 10 mm / 250mm steel in both directions, the footing dimension shall be same as the generator dimensions and extended 50 cm all around the generator, the price shall include all preparatory works including but not limited to the ground preparation, excavation, a layer of compacted based coarse and polythene sheet under the footing **(if needed)**
- The contractor shall uninstall the existing one of generators and install the new one instead of.
- The contractor shall provide warranty for three years as minimum
- The warranty shall include Preventive maintenance including all necessary tasks as per manufacturer, Recommended actions and frequency per each task.
- The price shall be itemized per item
- The contractor shall provide training for 10 technician persons on site
- The contractor shall be providing an alarm in case generator loaded
- FIRE SYSTEM REQUIERMENT (optional)
- Site Survey is necessary
- Supply and install additional fuel tank (1000 liters) and connecting it to the generator
- American or European brand