



WESTERN CAPE: STANDBY GENERATOR MAINTENANCE SERVICE

SPECIFICATIONS AND SCOPE OF WORKS

NAME OF CONTRACTOR

STANDBY GENERATOR MAINTENANCE SERVICE & UPGRADE ASSESSMENT

1. SCOPE OF WORKS

1.1 OBJECTIVE

1.1.1 The objective is to appoint a supplier for a period of 12 months (1 year) to service standby generators on a quarterly basis at Bellville Post Office and Once-Off service and upgrade assessment on viability of future use and upgrade for Cape Mail Centre standby generator.

1.1.2 **Cape Mail Centre:** Cnr. Mail & Showground Avenue, Epping Industrial, Cape Town 7460.

Bellville Post Office: Cnr. Rhos and Davies Streets, Bellville, 7530.

1.2 LEGISLATIVE REQUIREMENTS

1.2.1 The supplier must be CIDB **2ME/ or 2EB**.

1.2.2 Supplier with standby generator service experience.

1.2.3 The generator mechanic must be a Diesel Mechanic with a **Trade Test Certificate**.

1.2.4 The supplier must comply in full with Occupational **Health and Safety Act, 1993**.
General Electrical Installation CoC Annexure 1 Department of Labour.

1.2.5 Any Electrical installation must adhere to the **SABS 0142/ SANS 10142-1** as prescribed by the Department of Labour. The Electrician responsible for electrical work must be Electrical Conformance Board (**ECB [SA]**) registered.

1.3 PERFORMANCE

1.3.1 The supplier will be responsible for servicing of the generators.

1.3.2 The supplier must be available for the duration of the contract to respond to generator and generator related electrical equipment breakdowns or defects and complaints about any malfunctioning thereof.

1.3.3 The response time (from the time of the supplier's receipt of an official request, to his attendance on site) must be as follow:

❖ **Emergencies** - Immediate and up to a maximum of 1 hour.

- ❖ Failure by the supplier to meet the above response times or equipment downtimes may result in contractual penalties. SAPO may request alternate service provider for business uninterrupted continuation.
- 1.3.4 The supplier shall provide the Post Office with a Risk Analysis, Safety plan and work schedule for the duration of the service.
- 1.3.5 The supplier must adhere to the following service controls:
- ❖ Promptly submit to SAPO the worksheets and/or job cards of maintenance and repairs at contracted offices attended to.
 - ❖ Proof of sign-off of service by duly authorised SAPO official(s) i.e. Properties Technical staff (Property Manager/Control Works Inspector, Works Inspector, Maintenance Officer)
 - ❖ All defects identified during the maintenance service and repairs of generators must promptly be reported to the duly authorised SAPO official and in writing.
 - ❖ Emergency call out to be claimed on an as and when required basis (i.e. Load Shedding, Power outages, etc.)

1.4 REPLACEMENT PARTS AND CONSUMABLES

- 1.4.1 The supplier must in the event of repairs or replacement of generator and electrical equipment and components, other than defined maintenance, submit a detailed quotation for such additional work to the duly appointed SAPO representative and obtain approval thereof from SAPO, before attending to the additional repairs or replacements.
- 1.4.2 Emergency repairs discovered by the supplier must promptly be reported to the responsible SAPO official for a decision to address the matter.
- 1.4.3 Any substitution for OEM replacement parts must be equivalent or a better quality product. The replacement part may be accepted by SAPO provided that it meets or exceeds all the requirements of the original part and that such substitute will not materially alter the original performance of the generator.
- 1.4.4 All replacement parts, consumables, and workmanship provided must be guaranteed by the supplier to perform the required services, in accordance with standards of the OEM, technical data sheets must be made available to SAPO

1.5 PUBLIC LIABILITY COVER, INSURANCE and COMPENSATION COMMISSION

- 1.5.1 The bidder must provide proof of Public liability insurance to the minimum amount of Twelve Million Rand (R12 million)/ or Five Million Rand per site. If the bidder does not have this currently, the bidder must submit a letter from the bidder's insurance company confirming that they will insure the bidder for this amount upon contract appointment/award. (A quote from the insurance will not be accepted).

1.6 Letter of Good Standing (COIDA) Act, No 130 of 1993

The bidder must submit proof that their company is registered for compensation for occupational injuries which may be sustained, to ensure that the medical expenses incurred will be covered. The Letter of Good Standing submitted must be valid on the date of bid closing and reflect the bidding companies' COIDA registration number.

2. SPECIFICATIONS

2.1 SPECIFICATIONS (GENERAL SCOPE OF WORK) FOR GENERATOR SERVICE.

The Scope of Work for Generator service shall be in accordance to OEM prescribed service methods, processes & procedures and industry best practices standards and as set out in these specifications:

2.1.1 Major Maintenance of Generator

Description
Maintenance and Servicing
Replace engine oil. Remove and dispose used oil from the SAPO site in a regulatory compliant manner by local municipal recycling centre disposal by-laws.
Replace oil, fuel and coolant filters and add corrosion inhibitors.
Replace lube oil in hydraulic governors (where applicable)
Replace all spark plugs, service ignition condenser, cap, rotor, wires and points, clean and adjust.
Service Cooling Systems
Service Radiator/ heating exchange. Seal leaks and service all components.
Replace Coolant – Add corrosion inhibitor checks and servicing
Replace hose and seal connections checks and servicing
Replace all fan belts.
Jacket water heater checks and servicing
Service water pump
Thermostat checks and servicing
Fuel Systems
Inspect Fuel Tank
Service fuel lines connections
Inspect Governor and Controls
Supply and install new fuel filters – Primary/ Secondary
Check & test fuel pressure pump
Air Intake and Exhaust System
Replace all air filters.
Check and service air filter service indicator
Check and service air inlet system
Check and service turbocharger
Check and service exhaust manifold
Check and service exhaust system valves & valve rotators
Lube Oil System
Top up oils with new to the prescribed level
Engine oil to be changed when indicated to be necessary by result of oil analysis or when specified by engine manufacturer, which ever period occurs first.
Engine Oil Components
Test oil pressure
Check crank case breather
Perform oil sample analysis
Check starting system
Batteries, Starters, Alternators & Engine Management
Batteries – specific gravity
Check, and service Battery charger
Check, and service Starter motor

Check, and service Alternator
Check, and service engine monitor & safety controls
Gauges
Check, and service Safety controls
Check, and service Remote annunciators/Alarms
Check and Service Bearings, Space Heaters and Vibration Isolators
Check and service bearings
Check and service space heater
Check and service vibration Isolators
Control panel
Check and service start control – manual/ Auto
Check and service voltmeter
Check and service ammeter
Check and service frequency meter
Check and service circuit breaker
Check and service auto transfer switch
General
Perform all minor service requirements as detailed below. Major service to cover all minor service and as per manufacture.

2.1.2 Minor Maintenance of Generator

Description
Perform oil and coolant sample analysis. Test results must be provided to SAPO
Check engine coolant for proper levels and condition
Check air filter and crankcase breathers
Check and adjust belts as required
Check governor, stability, linkage and oil
Check fuel tanks, pumps and lines for leaks or damage
Check engine, heaters, radiator, hoses and heat exchanger (if applicable) for coolant
Check for leaks and condition
Check generator set and transfer switch for loose, bare, broken wiring or connections
Test transfer switches operation and time delays, where applicable.
Check unit for proper frequency/speed, voltage and amperage.
Submit a written report to SAPO and advice of any further work required.
Report to duly appointed SAPO representative and enter in the logbook in the Control room the date of the visit, the tests carried out, and the adjustments made and any other details that may be appropriate.
Clean the generator, its components and the generator room, as necessary. In major mail centres, the generator room should be cleaned more regularly (refer to detailed specifications).
Grease and oil moving parts, as necessary
Check the air filters and, when necessary, clean the filters and replace the filter oil, or alternatively change the filter elements.
On the first visit after the plant has run on one oil change for the requisite number of hours stipulated by the manufacturer of the engine of the plant, the sumps must be drained and refilled with lubricating oil of the correct grade. (The readings on the engine running hour meter must determine the number of hours run the plant between oil changes)

Check the lubricating oil level, top-up as necessary
Replace the lubricating oil filter elements at intervals recommended by the engine manufacturer
Check and adjust the valve settings and the fuel injection equipment, as required.
Check the batteries and top-up the electrolyte, at a maximum required level
Check the lubricating oil level, top-up at a maximum required level
Report to the duly appointed SAPO representative on any unserviceable part, and as soon as possible submit a quotation for the repair or replacement of the part
Advise the duly appointed SAPO representative when a minor or major engine / alternator overhaul is due and submit a quotation for this settings
Check and adjust battery charger voltage
Check and adjust alternator output voltage
Check operation and setting of cooling water pre-heater
Check operation of pre-lube pump
Check operation and setting of Gen-set protections and alarms
Inspect the plant visually and report to SAPO any fault, which, in the opinion of the representative, cannot be left until the next maintenance visit, major faults would include: Mechanical damage to engine, alternator, or switchboard. major water, fuel or oil leaks, overheated cables, etc.
Check engine lubricating oil level and top up at a maximum required level
Check radiator water level and top up at a maximum required level
Check battery electrolyte level. If the level is very low or if the battery is gassing excessively, report to the company immediately
The supplier should conduct a full load test on a quarterly basis which should take place after hours and as per arrangement. To submit a report to the duly appointed SAPO representative.
The supplier should give reasonable and arranged notice of such a load test. Where power shut downs are involved, the contractor must first obtain approval and agreed arrangements from SAPO.
Operate the plant off - load for 15 minutes at the end of each visit in close collaboration with the duly appointed SAPO representative.
Ensure that the bypass switch is set on "Standby" and that the duty selector switch is set to "Auto" before leaving the standby plant room.

3. EQUIPMENT DETAIL

3.1 CAPE MAIL CENTRE

Make/Brand DETROIT

Model 92 V16

Ratings [KVA] 850 KVA

3.2 BELLVILLE POST OFFICE

Make/Brand JOHN DEER

Model J165

Ratings [KVA] 165 KVA