

SCOPE OF WORK

MAINTENANCE OF A 165 KVA DIESEL ENGINE DRIVEN STANDBY GENERATOR (150 KVA RATED OUTPUT) OVER A PERIOD OF ONE (1) YEAR.

1. GENERATOR MANUFACTURER

Cummins.

2. PLANT LOCATION

152 Ann Crescent, Simba, Strathavon, Sandton, 2196.

3. ANNUAL SERVICE

3.1 The service provider shall provide one (1) major service and three (3) minor services in a 12-month period.

4. OUT OF SCOPE REPAIRS/SERVICES

4.1 The service provider shall provide a quotation within 24 hours of discovery of any urgent intervention required for implementation of optimal servicing of the generator. **This will be for any works that is not included in the pricing schedule below.**

4.2 CEF will decide on the process to be followed in sourcing quotations to repair the interventions above. The process can be either RFQ or RFP as guided by the value of the works.

5. GENERATOR SERVICE

3.1 The service provider shall provide a maintenance service, in accordance with the following provisions: -

- a) The service provide shall carry out the operations listed in "Quarterly/Major Service" on each visit and shall visit the plant every three (3) months/quarterly (Maximum of four (4) visits per annum).
- b) There shall be three visits constituting a Minor Service and the one visit per annum for a Major Service.
- c) The generator shall be available and fully accessible to the service provider during

each visit referred to in (a), provided that the CEF is given at least one-week prior notice of the visit.

- d) If any additional visits are required, over and above the agreed visits, the service provider may provide a quote to resolve any equipment issue with no call out fee payable.
- e) The service provider shall carry out the following on each quarterly visit:

3.2 Major Service

- 3.2.1 Major generator service covers all the same checks as the quarterly version, but in much more detail and with additional replacements of wearable parts and consumables. These will include quarterly service elements, inter alia: air, oil, and fuel filters, spark plugs, coolant, etc. wherever required.
- 3.2.2 All equipment, parts, and labour, etc. must be stipulated at the point of tender. Any exclusions will be subjected to a tender process for procurement at a competitive value.

3.3 Quarterly/minor service

- 3.3.1 Enter in the logbook the date of the visit, the tests carried out, and the adjustments made and any other details that may be appropriate.
- 3.3.2 Clean the generator and its components.
- 3.3.3 Grease and Oil moving parts as necessary.
- 3.3.4 Check the air filters and, when necessary, clean the filters and replace the filter or alternatively change the filter elements
- 3.3.5 Check the lubricating oil and top -up if necessary.
- 3.3.6 On the first visit after the generator has run on one oil change for the requisite number of hours stipulated by the manufacturer of the engine of the plant, the sump shall be drained and refilled with lubricating oil of the correct grade. (The readings on the engine running hour meter shall determine the number of hours run by the plant between oil changes).
- 3.3.7 Replace the lubricating oil filter elements at intervals recommended by the engine manufacturer.
- 3.3.8 Check and adjust the valve settings and fuel injection equipment, as necessary i.e.,

- Check the batteries and top-up the electrolyte, as necessary.
- 3.3.9 Report to CEF on any part that has become unserviceable for any reason and as soon as possible submit to the customer a quotation for the repair or replacement of the part. The quotation will be subject to a competitive process.
- 3.3.10 Advise the Customer when a minor/ major engine or alternator overhaul is due and submit a quotation for the service.
- 3.3.11 Check and adjust battery charger voltage/current settings.
- 3.3.12 Check and adjust alternator output voltage.
- 3.3.13 Check operation and setting of cooling water pre-heater.
- 3.3.14 Check operation of pre-lube pump.
- 3.3.15 Check operation and setting of Genset protections and alarms.
- 3.3.16 Operate the generator off load and immediately thereafter on load for 15 minutes at the end of each visit. The Customer must give appropriate warning to the operators of the services powered from the essential distribution board.
- 3.3.17 Arrange a top-up the fuel tank to the "Full" mark at the end of the test run, utilizing, if available. Note that CEF will implement fuel delivery from internal sourced fuel contractor / service provider.
- 3.3.18 Ensure that the bypass switch is set to "Standby" and that the duty selector switch is set to "Auto" before leaving the plant room.
- 3.3.19 Check and refill coolant.

6. PRICING

6.1 Price Schedule

No	Description	Qty	Unit cost	Total Cost
1	The service charge for a major service	Once a year		
2	The service charge for the quarterly/minor service	3 times a year		
	Total maintenance fees (Exc.VAT			
	VAT(@15%)			
	Total maintenance fees (Inc.VAT) -12 months period			

6.2 Unscheduled Breakdown Response

6.2.1 Response shall be defined as presence on site to resolve any technical failure.

6.2.2 At the point of notification time, the service provider shall respond within 20-minutes of generator failure to resolve challenge.

6.3 Price Inclusions

- a) Labour (traveling time counts as working time)
- b) Traveling costs and out-of-town allowances of the Service Engineer (where applicable)
- c) 24 Hour call-out facility.

6.4 Price Exclusions

- a) The costs of all parts not stated below, to be provided on a quotation basis as and when required.
- b) The CEF contracted service provider provides Diesel cost. As such, it must not be quoted for in this tender.

No.	Description	Component/s	Qty	Unit cost	Total Cost
1	Exhaust	Remove existing, supply new, and install exhaust system with clamps (steel exhaust pipes) including ancillary material, labour, testing and commissioning	1		
2	Generator exhaust (bellow element)	Remove existing, supply new, and install new bellow element, including mild steel flanges, pipe ends, and ancillary materials, labour, testing and commissioning.	1		
3	Alternator	Remove existing, supply new, and alternator for generator including ancillary material, labour, testing and commissioning	1		

4	Battery Charger	Model to meet OEM design specifications including ancillary material, labour, testing and commissioning	2		
5	Battery wiring	Battery charger wiring removal and rewiring to meet with OEM design including ancillary material, labour, testing and commissioning and performance level maintenance.	2		
6	Batteries	Remove, supply, and install 24 Volt or size to suit generator OEM battery requirements including ancillary material, labour, testing and commissioning.	2		
7	Water Pump	Removal and installation of new water pump to meet specification including ancillary material, labour, testing and commissioning and performance	1		
8	Water coolant pipes	Remove existing and supply new water coolant pipes to suit OEM design including ancillary material, labour, testing and commissioning and performance requirements	2		
	Total replacement costs for new parts (exc.VAT)				
	VAT (@15%)				
	Total replacement costs (Inc.VAT)				