



AGRICULTURAL RESEARCH COUNCIL

REQUEST FOR QUOTATION:

Supply, delivery and installation of a standby generator at NRE SCW, Arcadia



Generator Set Specifications

1×600 kVA 380V 50 Hz, three phase silent diesel generator, built in automatic mains failure panels (AMF)

Protective relays and Automatic shutdown (*)

- Protected against under and over -voltage supply.
- Protected against under and over frequency.
- Protected against over current.
- Phase sequence.

Warnings and automatic shutdown with Led Indication (*)

- Low oil pressure.
- High cooling temperature.
- Over speed protection.
- Automatic shutdown in case of the above problems.
- Emergency stop.
- Low coolant temperature.

System Management

Controls

- Run/Auto/Stop control.
- Speed and voltage adjustment.
- Engine cycle crank.
- 24V DC operation.
- Text alarm/event description.

Digital indications for:

- RPM.
- DC volts.
- Operating hours.
- Oil pressure.
- Coolant temperature.
- Volts line to line & line to neutral and frequency for Genset and incoming network supply.
- Amps per phase and average.e
- Low coolant temperature.



Communications

- Digital inputs
- Relay outputs
- Digital outputs
- Customer data link
- Remote indications outputs
- Digital input output Module
- Local annunciator
- Remote can annunciator
- Remote serial annunciator
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Diesel fuel metering

- This is for measuring the fuel consumption of the generator system
- Calibrated certificate must be provided for fuel meter, $\pm 2.5\%$ accurate
- Minimum IP 54 protection
- Non-volatile memory
- Fuel tank level indicator
- SMS notification indicating diesel level

Specifications for diesel Engine (As per addendum of each Institute)

- Noise level should be less than 85 ± 3 dB at 3-meter distance from the enclosure.
- Diesel powered
- Water cooled
- The system must be supplied with a full tank of diesel fuel and all types of fluids necessary (e.g. engine oil)
- Maintenance-free battery to start the engine, 24V electric start with charging alternator
- All side panels must be lockable.

Auto change-over control from network to Genset power

Palisade around Carport for Generator

Full installation to be done including ATC and connection to power by the supplier

CIDB grading – 1EP or higher (1PE PE not acceptable)



SITE CLEANING & SAFETY

The site should be clean after commissioning the generator

- The Contractor is liable for the safety of his workers and work conditions according to the OHS Act.
- Remove all building rubble and clean the site after completion of work before the final payment will be processed.

WARRANTY

- One year warranty.
- The service provider shall be liable to conduct the first service once the generator is due for service.

Pricing schedule

Item	Description	Quantity	Amount
1.	Supply, delivery and installation of a 600 kVA 380V 50 Hz, three phase silent diesel generator, built in automatic mains failure panels (AMF). This amount should include civil works.	1	
2.	Contingency amount (N.B: This money belongs to the ARC and might be used for any unforeseen work, arising during the project and is subject to approval by the ARC's Project Manager. The money will be returned to the ARC if not used in whole or in part.)	-	R60 000.00
Sub-total			
VAT			
Grand-total			

