



At a glance

Project:
Sugar Factory Power
Station

Capacity:
2 x 2000KW @ 13.8KV,
60Hz, 600rpm

EPC Contractor:
China Sfeco Group

Owner:
Belize Sugar Industries
Limited

The Challenges

- Must be multi-functional for peak time power, blackstart, and combined heat and power (CHP).
- Meet client's strict fuel consumption rate demand.

About the project

Belize, North America population of 380,000 depends heavily on sugar factory power generation. In fact, sugar power generation is their main source of power. The 27.5MW biomass facility will burn sugar cane fibre (bagasse) as its primary fuel during both the in-crop period (December – July) and the out-of-crop period (August – November) and will be supplemented with two diesel engines (4MW) using No.6 fuel. Belcogen will generate baseload electricity of 13.5MW to supply the national grid under a signed PPA, and to supply Belize Sugar Industries with its electrical power (9MW) and steam requirements.

Solution

Our diesel generator set provided out-of-crop period supplementary power, as well as blackstart system for the steam turbine power station. To maximise engine efficiency, the engine exhaust, otherwise wasted, are directed and transferred as heat to the steam turbine to reduce steam turbine's operation fuel consumption to generate required heat. This maximises total efficiency which in return lowers total emissions from the steam turbine.

What we provided

- 2 units of 2000KW medium speed Ningdong diesel generator set, with high voltage alternator.
- Full addition of electrical and mechanical equipment for the power station.
- On-site commissioning service.
- Customer engineer training courses.