



Project Review

Tropik Wood Co-Gen Project

27MW_{th} Wood Fired Steam Boiler

Client: Tropik Wood Industries Ltd
Location: Drasa, Lautoka, Fiji

Background

Tropik Wood Industries commissioned a 12.3MW cogeneration facility at its saw milling complex in Lautoka, Fiji Islands. The steam boiler is fuelled using wood waste from the existing saw milling and wood chip production.

Since there was sufficient stockpile of wood waste and the forecast volume of annual production, all the required fuel would be available on site without further out-sourcing.

Tropik had an existing 3MW generation for its own use and added a further 9.3MW after reaching a power purchase agreement with Fiji Electricity Authority to export approximately 75 gigawatt-hours per annum into the national grid. By installing a dedicated grid injection arrangement, Tropik Wood became the first Independent Power Producer in Fiji.

The Solution

RCR Energy, now Windsor Energy, proposed a B&W Towerpak® steam boiler system (designed and manufactured by RCR Energy under license from Babcock & Wilcox Power Generation Group Inc, USA), including:

- Supply and commissioning of all boiler plant components (installation was by local contractors under RCR supervision);
- Vibrating water-cooled grate combustion system with air-swept fuel spreaders;
- 10m³ pressurized deaerator;
- Recuperative Air Heater with sootblowers;
- Particulate emission control using high efficiency Vorsep multicyclones;
- Grate ash and flyash handling including conveyors to ash storage bins;
- Chimney stack (30m);
- PLC Control system.



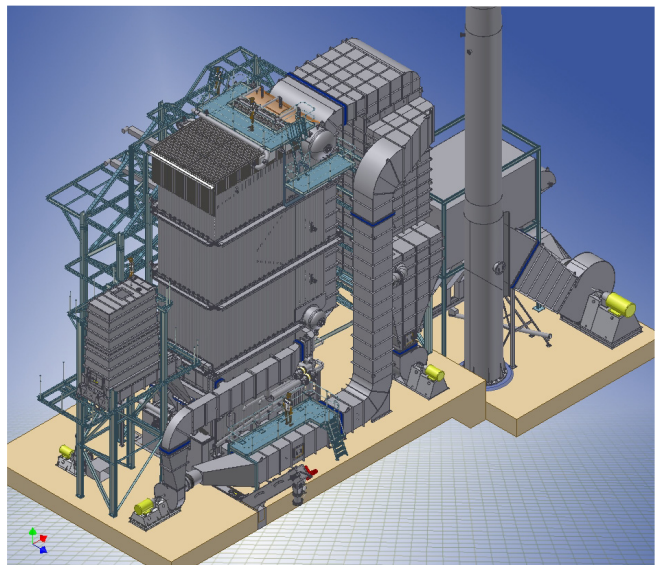


Why Windsor Energy?

As a proven supplier of plant and services worldwide, Windsor Energy offered the following advantages:

- The ability to work locally and internationally and integrate smoothly with local project partners.
- Proven supplier record with large industrial clients.
- Innovative plant design for high efficiency and simple operation.
- Modular plant design optimised for safe and simple shipping and erection.
- Clean burning biomass combustion technology, resulting in low total emissions of contaminants.

Project Name	Tropik Wood Go-Gen Project, Fiji
Project Number	J05555
Date Installed	2007
Boiler Type	B & W Towerpak® Boiler
Combustion System	Water Cooled Vibrating Grate
Thermal Capacity	27 MW
Fuel Source	Wood Biomass
Boiler Design Code	AS 1228
Steam Output	35,000 kg/h
Steam Temperature	400°C (Saturated)
Design Pressure	53 Bar G
Operating Pressure	44 Bar G
Feedwater Temperature	105°C



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