



Project Review Silver Fern Farms - EFI Project

$8.5 MW_{th}$ Bubbling Fluidized Bed (BFB) Boiler

Client: Energy for Industry Ltd Location: Finegand, Near Balcutha, New Zealand

Background

The move away from fossil fuels has seen the completion of a new energy plant at the Silver Fern Farms (formerly PPCS) meat processing plant at Finegand, near Balcutha in southern New Zealand.

SFF, New Zealand's largest meat processor, had been dependent on two coal-fired boilers for process steam, but with the older of these reaching the end of its economic life, a solution was urgently sought.

The Solution

Silver Fern Farms consulted energy solutions provider Energy for Industry (EFI) who proposed using the sludge and wood biomass waste fuels (primarily sawdust) as a viable boiler fuel provided a suitable firing technology was applied.

RCR Energy Systems, Windsor Energy's former name, and EFI had previously co-operated on energy projects with challenging fuels and again worked together to design the fuel handling system and boiler plant.

RCR proposed a B&W Towerpak® boiler (designed by RCR under license from Babcock & Wilcox Power Generation Group Inc, USA) featuring:

- Fluidized bed combustion system;
- Very high efficiency boiler with economiser;
- · Recuperative air heater; and
- Particulate emission control using a bag filter.



Windsor Energy





Why Windsor Energy?

As a proven supplier of plant and services worldwide, Windsor 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 with very low emissions.

Project Name	EFI for PPCS Finegand
Project Number	P06199
Date Installed	2008
Boiler Type	B & W Towerpak® with BFB Boiler
Combustion System	Bubbling Fluidized Bed (BFB)
Thermal Capacity	8.5 MW
Fuel Source	Sludge & Sawdust
Boiler Design Code	AS 1228
Steam Output	12,670 kg/h
Steam Temperature	203°C (Saturated)
Design Pressure	17.5 Bar G
Operating Pressure	16.0 Bar G
Feedwater Temperature	90°C
Emissions Guarantee Particulates	< 50 mg/Nm ³
Turn Down	3:1



Contact Us

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