

Bear Creek Cogeneration Plant



Bear Creek is an industrial cogeneration plant situated on Weyerhaeuser's Grande Prairie Pulp and Sawmill Complex, 10 km south of Grande Prairie, Alberta. The power plant is configured around a 58 MW natural gas fired turbine. The turbine exhaust passes through a heat recovery steam generator to produce high-pressure and low-pressure superheated steam. The steam combines with steam from Weyerhaeuser's wood waste fired boiler to power a 32 MW condensing steam turbine generator.

The Bear Creek project imports biomass-derived steam from the pulp mill to augment its power output, enabling Weyerhaeuser to significantly reduce the amount of wood waste sent to landfill.

TransCanada Energy Ltd. participates in Alberta's competitive electricity market.

Facility Highlights

Configuration:

1 x 1 combined-cycle cogeneration with steam augmentation from a wood waste boiler.

Location:

Weyerhaeuser's Grande Prairie Pulp and Sawmill Complex, 10 km south of Grande Prairie, Alberta.

In-Service Date:

February 2003.

Capacity:

90 MW electrical and 75 tonnes/hr of steam.

Fuel:

Natural gas and wood waste.

Environmental Features:

Highly fuel efficient – 60% at design conditions. Uses wood waste, that would otherwise be landfilled, to generate a portion of the electrical output. Wet low NO_x combustion technology to minimize air emissions.

Owner:

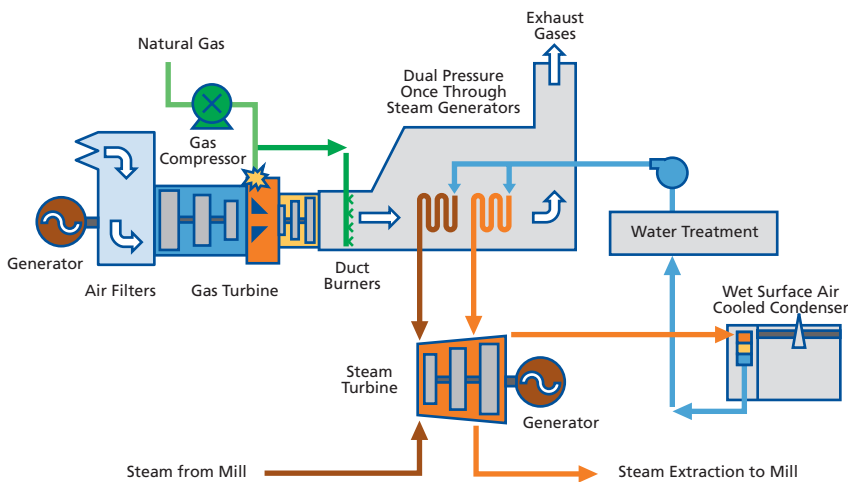
TransCanada Energy Ltd.

Operator:

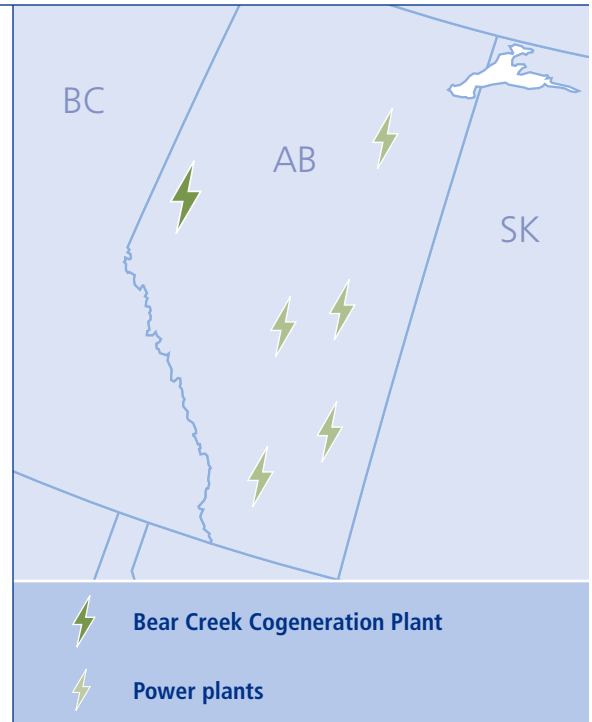
TransCanada Energy Ltd. (through contract with Weyerhaeuser).

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The cogeneration plant is configured around a single 58 megawatt (MW) natural gas-fired Rolls Royce Trent gas turbine generator equipped with a wet low emissions system. The turbine exhaust passes through a heat recovery steam generator to produce high-pressure and low-pressure superheated steam. This steam combines with steam from Weyerhaeuser's wood waste-fired boiler to power a 32 MW condensing steam turbine generator. Streams of medium- and low-pressure steam are returned to Weyerhaeuser for use in the pulping process.



Bear Creek Plant Schematic



- ⚡ Bear Creek Cogeneration Plant
- ⚡ Power plants

For further information on this facility, contact:

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