



# CORY COGENERATION PLANT

Saskatchewan, Canada

## Capacity

- 260 megawatts

## Equipment

- Two – GE PG 7121EA Gas turbines rated at 85 megawatts
- Two – Heat Recovery Steam Generators rated at 140 tonnes per hour
- One – GE Steam Turbine rated at 90 megawatts

## Highlights

- Natural gas fuel interconnection to TransGas system
- Water supply pipeline interconnection to SaskWater system
- Connection to the Saskatchewan transmission grid

## Commissioned

- 2003

## Ownership

- ATCO Power – 50%
- SaskPower International – 50%

In May 2000, ATCO Power Ltd. and SaskPower International Inc. partnered on a world-leading 260-megawatt natural gas-fired, cogeneration power plant at the Potash Corporation of Saskatchewan Inc.'s (PCS) Cory Mine outside Saskatoon.

The cogeneration plant features leading-edge technology and operates in a highly efficient cogeneration mode, a process that allows steam generation and electrical power from the same energy source. The plant is also capable of operating in straight combined-cycle mode, a process that combines a natural-gas turbine and a steam turbine to generate only electricity.

All electricity produced is sold to SaskPower Corporation under a long-term power purchase arrangement.

The plant consists of two natural gas-fuelled combustion turbines and generators. The exhaust gases from each gas turbine are sent through a waste heat recovery boiler to produce steam. This steam is used to power a steam turbine as well as provide all of PCS Cory Mine's steam requirements. The plant is located on PCS's Cory Mine site 6.4 kilometers west of the city of Saskatoon and is connected to the Saskatchewan transmission grid. The Cory Cogeneration Plant's 'state-of-the-art' design enables it to generate electricity efficiently, minimizing the effect on the environment. Both of the gas turbines and heat recovery steam generators are equipped with low NOx combustors to minimize emissions.

The station turns between 55% and 70% of the potential energy into electricity and steam – compared to an average of 35% achieved by conventional power stations – while emissions of 'greenhouse' gases are only about one-third of a similarly sized coal-fired power station. As well, further reduction in 'greenhouse' gases will be realized as PCS will no longer be using direct-fired boilers to produce steam.



**ATCO Power**

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