



LOCATION:

The Portlands Energy Centre (PEC) is located on 470 Unwin Avenue, in the eastern industrial section of the, Port lands area of Toronto, Ontario.

HISTORY:

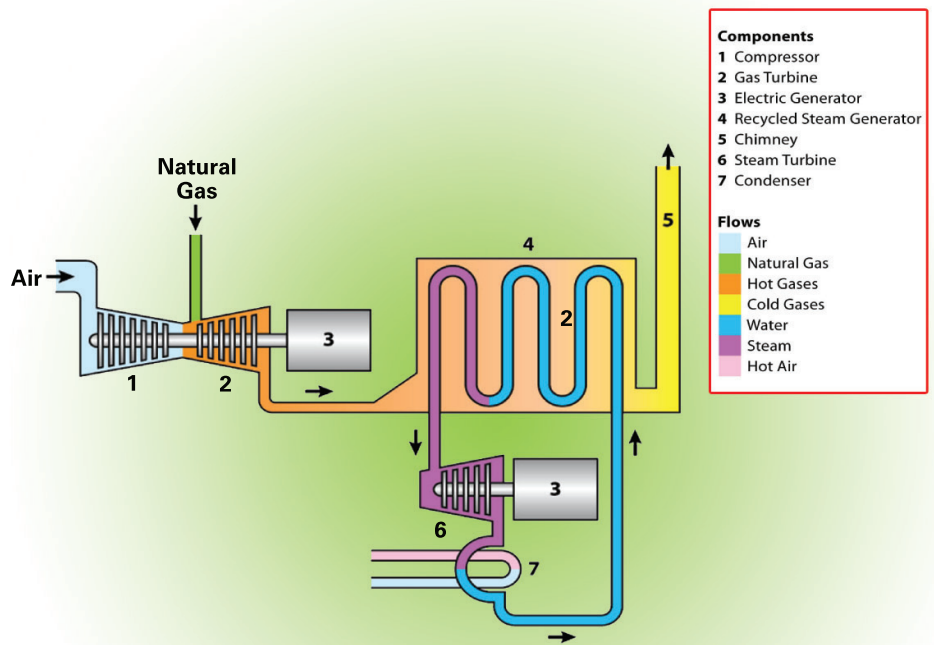
The natural gas - combined cycle plant is operated by PEC, which is owned equally by Ontario Power Generation Inc. and TransCanada Energy Ltd. PEC began construction in 2006 and the plant produced electricity for the first time in May 2008. Final construction will be complete in early 2009.

OUTPUT:

PEC generates 550 megawatts (net) of electricity, enough to meet the needs of approximately 550,000 homes. When called upon, ready to meet the electricity needs of Toronto.

HOW IT WORKS:

In a combined cycle power plant, natural gas is burned to produce electricity in two ways (or cycles). Cycle 1, in the gas turbine, natural gas is piped into the plant and combusted to turn a gas turbine. The rotation drives the electric generator. The burnt gas is then exhausted from the gas turbine at a temperature of 649 Celsius. The hot exhaust gas is sent to a steam generator where it boils water and makes steam. Cycle 2, in the steam turbine, steam is used to rotate a steam turbine, rotating an electric generator thus producing the second cycle of electricity.



FACT SHEET

ABOUT PORTLANDS ENERGY CENTRE

- ❖ Construction Cost to Build: \$730 million
- ❖ Engineer/Constructor: SNC/Lavalin
- ❖ Gas Turbine Manufacturer: General Electric
- ❖ Steam Turbine Manufacturer: Alstom
- ❖ Plant Employees: Approximately 25 personnel
- ❖ Heat Recovery Steam Generator Stacks (HRSG)
- ❖ Height: 75 meters
- ❖ Diameter: 6 meters (interior)
- ❖ Total Powerhouse Building Area: 12,561 square meters
- ❖ Discharge Canal: Approximately 167 m long, 30 m wide and 4 m deep.
- ❖ Building Height (Stack Area): 37 meters
- ❖ Cooling Water Flow (shipping channel): Approximately 405,460 litre per minute.
- ❖ PEC Owner Controlled Area: 12 hectares

