ATCO Power is proposing to build and operate a new 400 megawatt natural gas-fired power station to meet Alberta’s growing electricity demand.

The Project
ATCO Power is proposing to build and operate a 400 megawatt (MW) natural gas-fired power generation station called the ATCO Heartland Generating Station in Strathcona County, Alberta. Our station will use clean and efficient natural gas-fired combined cycle technology that will produce enough electricity to power approximately 400,000 homes in Alberta. Our plan is to begin construction activities in late 2014 with full operation expected in 2017. This will create 300 to 400 full-time jobs during the three-year construction phase and 35 or more full-time jobs for operating the plant on an ongoing basis.

Location
The station is located 14 kilometres northeast of Fort Saskatchewan in Strathcona County within Alberta’s Industrial Heartland region.

The Need
Alberta currently gets its power from a number of different fuel sources: coal, natural gas, hydro and wind. Alberta currently uses a peak of 10,600 MW to power the homes and businesses across the province. With the power demand forecast to increase more than 50% by 2022, and a retiring coal-fired power fleet, Alberta will need to build 7,000 MW over the next 10 years to be sure the province can continue to power our homes and the economy.

ATCO Power is investing in new clean and efficient natural gas-fired power generation technology to meet Alberta’s growing electricity demand. ATCO Power has a proven track record of developing and operating clean, efficient and reliable natural gas-fired power generation.
The plant will utilize state-of-the-art technology to produce a clean, highly efficient, reliable and cost effective source of new electricity.

**Plant Technology**

The ATCO Heartland Generating Station will be built as a combined cycle gas turbine (CCGT) power station. A CCGT power station uses state-of-the-art gas and steam turbine technology to achieve high energy efficiency while producing low air emissions for the amount of electricity produced. In a CCGT power station, natural gas is used in a gas turbine to produce electricity and heat, the heat is then captured in a specialized heat recovery system that produces steam used to produce additional electricity through a steam turbine. Capturing and reusing the heat energy to produce additional electricity ensures consumers get the most electricity out of the energy in the natural gas fuel while producing the least amount of air emissions.

![An artist's rendering of the ATCO Heartland Generating Station](image)

**Environmental Benefits**

The location selected, in Alberta’s Industrial Heartland, has a number of advantages that will help minimize our footprint and provide a clean source of new electricity to Alberta:

- The station will use approximately 30 acres on a 140 acre site – we will work with local farmers to keep as much of the remaining land within the 140 acres in cultivation as productive farmland.
- The need to build additional infrastructure to support the project will be minimized by:
  - Using an existing water intake and pipeline system to provide water to the station
  - Accessing natural gas from an existing gas line located on the site
  - Interconnecting to Alberta’s electrical transmission system located only 3 km north
- The air and water footprint will be minimized by:
  - Reducing water use by recycling water through the station
  - Reducing air emissions by using CCGT technology and state-of-the-art emission control design
ATCO Power is investing now to prepare for the decommissioning of Alberta’s coal-fired power stations starting in 2020.

Consultation Process
ATCO Power is committed to engaging in timely and meaningful consultation with the community regarding this project.

We will work in a collaborative and responsive manner to share information about the ATCO Heartland Generating Station and listen to, understand and address questions and concerns from landholders and other interested parties.

Over the course of the summer and early fall we will contact local landholders directly to provide further project information and to identify any concerns they may have with the station as proposed.

In early fall, when we have completed further station design work and completed environmental studies such as air emissions and noise modeling, we will provide local landholders with a project update and hold an open house in the community.

Proposed Project Schedule
In late 2013, following the completion of environmental studies and public consultation, ATCO Power will submit applications for regulatory approval to the Alberta Utilities Commission (AUC) and Alberta Environment and Sustainable Resource Development (AESRD) to construct and operate the ATCO Heartland Generating Station. Additionally, the project will require a development permit, building permit and heavy industry land rezoning approval from Strathcona County.

ATCO Power is designing the ATCO Heartland Generating Station to meet or exceed all provincial environmental requirements. Environmental studies are currently underway including air quality and noise assessments. Our regulatory application will include an air quality assessment demonstrating that Alberta’s air emission standards for electricity generation and ambient air quality standards will be met.

Over the coming months, we will conduct a noise impact assessment to support our regulatory application which will meet the standards set by the AUC. Furthermore, the Northeast Capital Industrial Association has recently developed a Regional Noise Management Plan for the Industrial Heartland Region which we will also incorporate into our project’s noise assessment. Results of the environmental studies including the air quality and noise assessment will be shared as part of our public consultation program.

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<th>Proposed Project Schedule</th>
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ATCO Power is an experienced builder, owner and operator of 15 independent power generation plants in Canada and the United Kingdom. As an Alberta based company, ATCO has invested more than $10 billion dollars over the past decade to help grow the economy, create jobs and develop the key infrastructure needed for the continuing growth of the province.

Safety is the first consideration in everything we do. It is a part of any decision we make and every action we take. We manage the impact of our facilities on the environment through activities such as pollution prevention, energy efficiency, waste minimization and research and development.

**ATCO Power Generation Facilities**

- **Natural Gas Facilities**
  - Battle River 3, 4 & 5: 670 MW
  - Brighton Beach: 580 MW
  - Cory: 260 MW
  - Joffre: 480 MW
  - McMahon: 120 MW
  - Muskeg River: 170 MW
  - Oldman River: 32 MW
  - Poplar Hill: 45 MW
  - Primrose: 85 MW
  - Rainbow Lake 2: 38 MW
  - Rainbow Lake 4 & 5: 90 MW
  - Scotford: 170 MW
  - Sheerness 1 & 2: 760 MW
  - Valleyview 1 & 2: 90 MW
  - Barking: 1,000 MW

- **Total Generating Capacity**
  - 4,590 MW

- **Total Generating Capacity Owned**
  - 2,550 MW

**ATCO In Alberta’s Industrial Heartland**

ATCO Power is part of the ATCO Group of Companies. For more than 100 years, ATCO companies have been providing energy and other services to more than 300 communities and more than one million customers in Alberta, demonstrating the “can-do spirit” that has made this province a great place to live.

ATCO’s involvement as part of the Strathcona County community began in 1948 with ATCO Gas providing natural gas service to the Fort Saskatchewan area. Today we have many employees in the area providing natural gas services, operating power stations and industrial facilities as well as a pipeline system.

Today, some of the highlights of our operations include:

- ATCO Gas, with offices in the City of Fort Saskatchewan, supports more than 10,000 natural gas distribution customers in the city and surrounding towns and hamlets.
- ATCO Power owns and operates the Scotford Cogeneration Facility within the Shell Scotford Site.
- ATCO Energy Solutions operates the Fort Saskatchewan Ethylene Extraction Plant and a water infrastructure system.
- ATCO Pipelines owns and operates the Salt Caverns natural gas storage facility and 280 kilometres of high-pressure natural gas pipeline serving local distribution companies and industrial customers.
- ATCO Electric is currently building the Eastern Alberta DC Transmission Line and Heathfield Converter Station in the region.
We Want To Hear From You

Your questions and feedback are important to our decision-making and project planning process.

An important component of our submission to the Alberta Utilities Commission will be the feedback we receive from you – online, on the phone, or in person. ATCO Power is committed to engaging in timely and meaningful consultation with the community regarding this project.

We welcome your questions, feedback and suggestions. You can reach us by phone, email, online or by mail.

Lead Project Contacts
David Carmichael
ATCO Power, Business Development

Shannon Wever
ATCO Power, Business Development

Call our feedback number at: 1-855-509-6996 or 403-209-6996
Email us directly at: Heartland@atcopower.com
Find additional information at: www.atcopower.com/Projects/Heartland

Mail your comments to:
Heartland Generating Station
ATCO Power
400, 919-11 Avenue SW
Calgary, Alberta T2R 1P3