



# REMOTE ACCESS

Gas processor relies on Cat® power in off-grid setting

**W**ith an emphasis on growing and developing clean energy sources, AltaGas Ltd. is actively developing gas-processing infrastructure in support of its Northeast British Columbia strategy.

Calgary-based AltaGas is investing more than C\$1 billion to grow its presence in Western Canada by developing assets that provide producers with a complete energy value chain to move natural gas and natural gas liquids to multiple markets, including new premium markets in Asia.

A key phase of the Northeast B.C. strategy is the development of AltaGas' C\$430 million Townsend Facility, which began commercial operations last July. Located 62 miles north of Fort St. John, the facility has the ability to process 198 million cubic feet of raw gas, which is

delivered from the field via three separate pipelines. The gas comes from wellheads in the Montney resource play—a 55,000-square-mile area straddling northeast British Columbia and Alberta rich in natural gas reserves that are steeped in liquid byproducts.

When the raw gas enters the Townsend Facility, water and liquids are separated by compressing the gas and cooling it in a refrigeration unit down to -40°F, causing liquids to be produced while dehydrating the gas. The processed gas is compressed again and delivered to the export pipeline as sales gas.

Last year, AltaGas received regulatory approval for the doubling of the Townsend Facility to 398 Mmcf/d and to retrofit the existing shallow-cut 198 Mmcf/d facility to a deep-cut facility at a future date. An initial expansion that includes a 100 Mmcf/d shallow-cut gas

processing facility located adjacent to the currently operating Townsend Facility is expected to open this fall.

Another project currently under construction and tied by a pipeline to Townsend is the C\$125-\$135 million

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## CUSTOMER PROFILE

### **AltaGas Ltd.**

Location: Townsend, B.C., Canada

Application: Field gas processing plant

Cat® Equipment: G3520H generator sets (5), Taurus 70 Solar Turbines (4)

**AltaGas**



North Pine Facility, located 25 miles northwest of Fort St. John. Once complete, the North Pine Facility will take liquid byproducts piped from the Townsend Truck Terminal and separate them into propane, butane and condensate, and ship them via connecting rail to various destinations.

This year, AltaGas announced that it will begin construction on Canada's first propane export facility. Located on Ridley Island near Prince Rupert British Columbia, the C\$450-\$500 million terminal will be designed to ship 1.2 million tons of propane per year, and together with AltaGas' northeast facilities, will provide producers new access to premium Asian markets for their propane.

## Off the grid

Due to its remote location, the Townsend Facility is not connected to the utility grid. Therefore, it needs to generate its own power. This is accomplished by utilizing five Cat® G3520H generator sets which operate

on the processed natural gas. Four of the G3520Hs produce a combined 12.5 MW, with the fifth genset in reserve in an N+1 configuration.

Power from the gensets is mainly utilized to power compressors and other ancillary loads, including pumps, motors, heaters, and fans. The facility also includes four 7965 kWe Taurus 70 Solar Turbines, which drive the plant's main gas compressors.

"In this situation, the grid option was not viable—connection to the grid is far from Townsend," said Dave Zoobkoff, Divisional Vice President Operations – Gas at AltaGas. "Our customer had a schedule in place that dictated that we have an onsite power solution in time to meet their schedule."

AltaGas' Cat dealer, Finning, designed the power plant, and supervised the installation of the generator sets and ancillary equipment.

"Finning was very helpful in terms of providing us with what we needed, and making sure the Townsend Facility was commissioned and running smoothly,"



Zoobkoff said. "Everything was on time, and we are very pleased with the genset solution they provided to power to the facility."

Additionally, an electric house is included as part of the solution to tie the gensets into a common bus for

Townsend Facility



## ALTAGAS LTD.

AltaGas Ltd. (AltaGas), is a leading North American energy infrastructure company with a focus on natural gas, power and regulated utilities.

Based in Calgary, Alberta, AltaGas' business strategy is underscored by strong growth in natural gas supply and the growing demand for clean energy. The company has more than 1,700 employees in Canada, Alaska, Michigan, California, Washington State and Texas.

AltaGas is focused on growing through the acquisition and development of energy infrastructure, including infrastructure to provide access to new markets and the potential for higher netbacks to producers in the Western Canadian Sedimentary Basin.

The company has three business lines that include:

- A gas midstream business in Western Canada that moves about 2 billion cubic feet of gas per day.
- A power generation business, with a combined total of 1,688 MW in generation assets.
- A regulated gas distribution business with ownership in five utilities across North America serving more than 570,000 customers.

The gas segment includes natural gas gathering and processing, natural gas liquids extraction and separation, transmission, storage, and natural gas marketing. The gas segment has significant prospects for growth in British Columbia and Alberta.

The power generation business is located across North America with more than 1,600 MW of capacity derived from four fuel types. There are significant opportunities to expand in California and across the U.S., as well as the potential opportunity to develop new gas-fired and renewable generation in Alberta to replace coal.

The utility segment delivers natural gas to homes and businesses in Alaska and Michigan in the United States and to three provinces in Canada.

**“The team at Finning has been responsive and receptive to the critical nature of our facility.”**

**LORNE MONAGLE**  
Plant Operations Manager  
AltaGas Ltd.



distribution of power. The entire package is non-standard, and customized by Finning.

“The generators are the heart of the plant—if they are not working properly, it knocks out production and everything stops,” said plant operations manager Lorne Monagle: “The team at Finning has been responsive and receptive to the critical nature of our facility.”

#### G3520H advantages

G3520H generator sets are designed to be effective in continuous-duty applications. For applications isolated from a primary electric utility such as the Townsend Facility, the G3520H offers industry-leading load acceptance capability. The increased power density of the generator sets provides a compact size that helps reduce installation costs.

Also, the G3520H meets most worldwide emissions requirements down to 0.5 g/bhp-hr NO<sub>x</sub> level without aftertreatment. Multiple NO<sub>x</sub> emissions settings are available.

“Ensuring that we have low emissions engines in place is not only good for the environment, it also decreases our exposure to fuel and carbon taxes,” Zoobkoff said. “For every bit of fuel that we burn, we are taxed on it, and we have to pay for carbon emissions. All of this is reported to the provincial government,

so a penny saved is a penny earned. If we have engines that run efficiently, then we are more cost efficient.”

All routine and ongoing preventive maintenance on the gensets is performed by Finning technicians under a Customer Support Agreement.

“Their mechanics are easy to work with, they know our systems,” Monagle says. “If we encounter an issue, we depend on them to respond quickly and get us back up and running.”

AltaGas has Finning service agreements for maintenance at the Townsend Facility and across Western Canada.

Altogether at its various operations, AltaGas has 29 Cat compressor drivers and 14 gensets with a total installed horsepower of 86,240 hp. The generator sets are capable of producing a combined 32 MW. AltaGas utilizes a total of nine Cat Solar Turbines at its various facilities.

New major projects will add 15 Cat engines with total horsepower of 34,000 hp, including three gensets totaling 4.1 MW.

“We are finding that it pays to have similar equipment in our facilities to lower our operating costs,” Zoobkoff says. “The Cat engines run really well—they have been a very reliable engine for us. And the support we receive from Finning has been great.” 