



For immediate release

March 11, 2015

Alberta's largest natural gas-fuelled electricity generation facility now operational

Calgary and Edmonton, Alta. – ENMAX Corporation (ENMAX) and Capital Power Corporation (TSX: CPX) (Capital Power) are pleased to announce that the Shepard Energy Centre (Shepard) located in east Calgary is now fully operational and capable of generating over 800 megawatts (MW) of electricity to the Alberta grid. Fuelled by [natural gas](#), the facility is the largest of its kind in the province and an important step in Alberta's transition away from aging coal-fired generation facilities.

"We delivered Shepard as planned without a lost-time injury in the more than 4.3 million hours of work required to complete the project," said Gianna Manes, ENMAX President and CEO. "With this crucial infrastructure added to Alberta's electricity system, we will bring reliable electricity to Albertans for decades to come."

First announced by ENMAX in 2007, the project became a joint venture when Capital Power agreed to become a 50 per cent owner in late 2012.

"Congratulations and thanks to the team at ENMAX for their excellent work on completing Shepard on time and on budget with zero lost time incidents, which is a major accomplishment in the Alberta market," said Brian Vaasjo, President and CEO of Capital Power. "We look forward to continuing to work with ENMAX to deliver Genesee 4 & 5, Alberta's next large natural gas-fuelled generation facility near the end of the decade."

Powered by natural gas, Shepard features combined-cycle technology that has two combustion turbines to generate electricity plus makes use of waste heat through a steam turbine for further electricity production. This configuration makes the Shepard gas-fuelled facility approximately 30 per cent more efficient than conventional coal plants, all while reducing overall fuel costs. Additionally, it emits less than half the CO₂ emissions per megawatt hour of a conventional coal plant, as well as fewer carbon monoxide, sulphur dioxide, and nitrogen dioxide gases. The facility's cooling towers also use 14 million litres of reclaimed water daily from The City of Calgary's Bonnybrook Wastewater Treatment Plant.

Timeline

April 2007	ENMAX announces plans to build a natural gas-fuelled generation facility
January 2009	Mitsubishi announced as supplier of two 240 MW natural gas-fuelled turbines, one 320 MW steam turbine and associated generators
November 2010	All approvals to proceed are announced by the Alberta Utilities Commission
April 2011	Alberta Environment approvals received
April 2011	Kiewit Black & Veatch announced as contractors to build the facility
July 2011	Preliminary site preparation begins
October 2011	Construction begins in the Shepard industrial district of east Calgary



June 2012	All turbines and generators arrive in Calgary from Japan
December 2012	Joint venture formed between ENMAX (50 per cent interest) and Capital Power (50 per cent interest) in Shepard
September 2013	Switchyard to connect Shepard to the province-wide electrical grid is completed
September 2013	After 11 hours of execution, both exhaust stacks are lifted by crane, securely placed and welded together, a critical step towards completion
August 2014	Natural gas-fuelled turbines are fired for the first time
October 2014	Final phase of testing and commissioning begins
March 2015	Shepard begins commercial operations

Fast facts

The people

- Approximately 2,630 people contributed over 4.3 million hours of work over the course of construction, all without a lost-time injury.
- Number of workers peaked at almost 1,110 during summer 2014.
- Almost 90 per cent of Shepard's trade and technical workers call Alberta home.
- Safety record: The Total Recordable Injury Frequency (TRIF) was an impressive 0.85, extremely low for a project of this magnitude.

The equipment

- Each natural gas-fuelled turbine weighs 334,000 kilograms (736,000 pounds). Comparatively, the maximum takeoff weight of a 737 aircraft is 79,000 kg (174,000 lbs).
- Each natural gas generator weighs 256,000 kg (564,000 lbs).

The water

- At full capacity, the cooling towers will use approximately 14 million litres of water daily. This is the first use of reclaimed water for power production in Alberta, replacing the need for using potable water, thereby aiding in long-term water conservation.
- The water originates from The City of Calgary's Bonnybrook Wastewater Treatment Plant. Fourteen kilometres (km) of underground pipelines were laid between the two sites. This process also included drilling a tunnel underneath the Bow River and Deerfoot Trail.



Even more numbers

- 24 km of pipe, 149 km of power cable and 278 km of instrument/control cable housed inside main building
- 4,400 tonnes of structural steel, 20,000 cubic metres of concrete and 1,007 concrete pilings used to construct the facility
- The height of each exhaust stack equivalent to a 22-storey building.

About ENMAX

ENMAX Corporation, through its subsidiaries, generates, distributes, and sells electricity to residential, small business and large commercial customers and is headquartered in Calgary, Alberta, with offices in Edmonton. ENMAX Power Corporation owns and operates transmission and distribution infrastructure in Calgary and ENMAX Energy Corporation owns diverse electricity generation facilities throughout the province. Since 2007, ENMAX has been named one of Alberta's Top Employers. ENMAX Energy is currently the retailer of choice for both The City of Calgary and The City of Edmonton.

About Capital Power

Capital Power (TSX: CPX) is a growth-oriented North American power producer headquartered in Edmonton, Alberta. The company develops, acquires, operates and optimizes power generation from a variety of energy sources. Capital Power owns more than 3,100 megawatts of power generation capacity at 16 facilities across North America and owns 371 megawatts of capacity through a power purchase agreement. An additional 90 megawatts of owned wind generation capacity is under construction in Ontario.

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