

## TransAlta Relies on Honeywell's Simulation Technology for Onsite Training



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**Larry Fedorek, Project Manager, TransAlta, Poplar Creek**

### Benefits

TransAlta's Poplar Creek gas-fired plant had to find a way to transfer the intellectual property and knowledge of its soon-to-be-retiring workforce that manned the facility. The plant needed to expedite training and offset the large proportion of its new operator base. The company turned to Honeywell for its proven simulation technology and services to help the plant save both time and money. Simulation benefits include:

- Reduced startup time due to operator and engineer familiarity of processes
- Reduced downtime due to operator learning curve
- Reduction in time of onsite, real-world operator training from one year to just three months
- Retained investment in Honeywell automated control system
- Operator confidence in running real-world plant simulations
- Identification of design flaw saved significant monetary investment
- Improved status reports, issue logs and other documentation
- Supported third-party systems to benefit TransAlta
- Fidelity of simulation models able to accurately simulate real-world experiences

### Background

TransAlta Power is a power generation and wholesale marketing company focused on creating long-term shareholder value. Its focus is to efficiently operate its coal-fired, gas-fired, hydro and renewable facilities in order to provide customers with a reliable, low-cost source of power. For more than 90 years the company has been a responsible operator and a proud contributor to the communities where its employees work and live.

TransAlta owns and operates the \$315 million cogeneration facility at Suncor's oil sands site near Fort McMurray in Alberta, Canada. TransAlta also operates Suncor's 70-megawatt (MW) utility plant, which existed prior to the cogeneration facility. Any surplus power not used by Suncor is available for sale directly to the Alberta power grid.



TransAlta's Poplar Creek facility relies on Honeywell simulation technology for onsite training and testing.

## Challenge

Faced with a large portion of its workforce due to retire, TransAlta had to find a quick, easy and cost-effective way to train new control room operators and bring their skill level up to its high standards. Training and practicing for an event at its Poplar Creek gas-fired plant in Fort McMurray was a must, yet the typical amount of time to train a control room operator for every possible scenario was at least a year.

"There are a limited number of operating procedures that you can practice in real time. Practicing for an event or upset to occur is not possible without actually experiencing the event and we struggled with finding a way to develop people skills for it," said Mike Hutchen, Training Manager, TransAlta.

## Solution

To help better understand its simulation training needs, TransAlta first asked Honeywell to provide an engineering study that described the key requirements for simulating processes. This study gave the TransAlta team a greater appreciation for the high fidelity required to meet its simulation training goals.

After investigating various simulation technologies and vendors, TransAlta selected Honeywell's proven simulation technology based on experience and performance. TransAlta selected Honeywell's UniSim™ simulation technology designed to support improved performance throughout the lifecycle of the plant, from offline use in steady-state design simulation, control check-out and operator training to online use in control and optimization, performance monitoring and business planning. UniSim software is built from the best simulation technologies available, including Honeywell's Shadow Plant® simulation engine.

## For More Information

To learn more about Honeywell's UniSim simulation technology, visit [www.honeywell.com/ps](http://www.honeywell.com/ps) or contact your Honeywell account manager.

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"There were several factors that affected our decision to go with Honeywell--service, expertise, technology, price and people," said Larry Fedorek, Project Manager, TransAlta. "With Honeywell we felt that we were going to get the service that we needed and high model fidelity to simulate live plant training, something that was unique to Honeywell."

The simulators are not only used for training, but also as diagnostic tools to verify system design and help re-engineer systems if there is any issue. According to Hutchen, the simulator is already showing signs of return on investment. Through the development of the simulation models, a design flaw was identified that presented a load restriction problem. After discovering there was a control issue at the top of one of the boilers, TransAlta redesigned in a second valve and was able to use the simulator to test if the new design would work. This type of simulation scenario saved time, money and resources.

Concluded Fedorek, "We selected Honeywell based on its proven simulation technology, engineering expertise, ease of use and project budget. Our simulator already shows clear signs of returning our investment, saving TransAlta both time and money and we couldn't ask for a better partner. The project management team did an excellent job and always looked for ways to make our job easier, anticipating our needs and delivering on time and on budget. Their experience and capabilities exceeded all our expectations."

"What took us a year of training now only takes three months to train and investigate various 'what-if' scenarios with our operators, a significant amount of savings in both time and money," said Hutchen.

