

# BEI Energy News

This update is produced three times weekly by the Brilliant Energy Institute

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## Top news

### Ontario Tech University News

#### [Research on the deployment of SMRs and its challenges has been published – Ontario Tech University](#)

Ontario Tech University's PhD candidate, Elaheh Shobeiri, and professors, Filippo Genco, Daniel Hoornweg and Akira Tokuhiko, have published their research titled *Small Modular Reactor Deployment and Obstacles to Be Overcome*. The paper does a deep analysis to examine and identify challenges for the quick deployment of Small Modular Reactors (SMRs) such as the technology choice, licensing, public acceptance, etc.

### Energy Policy

#### [Doug Ford government wants new gas plants to boost Ontario's electricity system – CBC](#)

Ontario is currently [soliciting bids](#) for additional gas-fired electricity generation as Premier Ford's government plans to expand the share of natural gas in the grid. Ontario's Minister for Energy, Todd Smith, says the province needs natural gas plants for the short term to provide reliability during the shutdown of the nuclear stations during their refurbishments. He also said that the Independent Electricity System Operator (IESO) has indicated it's likely much of the new gas-fired power supply will be built at the sites where gas plants are currently located, possibly by expanding existing facilities.

#### [Prairie provinces sign MoU to improve transportation corridors – Energy Now](#)

Alberta, Saskatchewan and Manitoba have signed a [memorandum of understanding](#) (MoU) in April to improve Western Canada's interconnected road, rail, air, energy and port corridors. This initiative could benefit energy trade with other countries and provides a new platform to advocate mutual interests at the federal level. The long-term goals include expanding the West's export-based economy, strengthening the region's global markets participation, and building relationships with international trading partners.

### Energy Systems

#### Electric Vehicles

## [ENMAX Power concludes Alberta's first EV smart charging pilot - ENMAX](#)

ENMAX power has concluded Alberta's first electric vehicle (EV) smart charging pilot. The pilot, partnered with researchers from the University of Calgary and University of Alberta, was intended to study charging behaviour and the overall effect EVs have on Calgary's power grid. The *Charge Up* pilot involved over 160 EV owners in Calgary, broken into three groups. The results suggest many EV users required short top-up charges averaging 9.4 kWh and very few required a full charge, with roughly 70 per cent of charging taking place overnight when grid demand is lowest.

## Education and Training

### [Illinois launches job-training programs in clean energy and construction sectors – Inside Climate News](#)

Governor Pritzker and the Illinois Department of Commerce and Economic Opportunity [announced US\\$16 million in funds](#) last week toward clean energy workforce development programs and boosting diversity in the industry. It follows the passage of the Climate and Equitable Jobs Act in 2021. Among the allocated funds, US\$10 million will go toward the Climate Works Pre-Apprenticeship Program to create centres through which selected job-training providers will recruit, pre-screen and train participants free of charge. The remaining US\$6 million will fund the Barrier Reduction Program to provide participants with a stipend and other support services. The state expects enrollments between 500 and 700 pre-apprentices during its first year and intends to serve 1,000 pre-apprentices each year after that.

## Technologies

### Fusion

#### [Jacobs to design maintenance systems for ITER – Nuclear Engineering International](#)

Jacobs, a U.S. based engineering firm, has been chosen to design and engineer remotely operated tools for the International Thermonuclear Experimental Reactor (ITER) under construction at Saint-Paul-les-Durance in Southern France. The work covers up to 25 diagnostic ports and systems, under their four-year contract with a possible extension for two more years. The company aims to capitalize on their extensive remote-handling experience and knowledge of the diagnostics and port cell areas gained from previous work.

### Hydrogen

#### [Analyzing Alberta's hydrogen export opportunity – Emissions Reduction Alberta](#)

Emissions Reduction Alberta and Alberta Innovates have co-written and published a white paper titled *Hydrogen as an Alberta Export Opportunity: Gap Analysis* during the 2023 Canadian Hydrogen Convention in Edmonton, last week. The paper finds that both hydrogen and ammonia present promising export opportunities for Alberta, with ammonia as more promising than liquid hydrogen if used directly, instead of being converted back to hydrogen near point of end use.

## TotalEnergies to co-develop the world's largest liquid-hydrogen carrier vessel – Hydrogen Insight

TotalEnergies, a French multinational energy company, is collaborating with GTT, a French gas technology provider, Bureau Veritas, a certification body, and naval architect LMG Marin to study the prospects of transporting hydrogen as a liquid. Total will work on defining the vessel's specifications, GTT will design the membrane containment system that will keep the liquid hydrogen at -253°C, LMG Marin will design the vessel in accordance with TotalEnergies and GTT's specifications, and Bureau Veritas will review the design and conduct a risk assessment to secure an Approval in Principle. Currently, Kawasaki Heavy Industries' *Suiso Frontier* is the only liquid hydrogen carrier in the world.

## **Critical Minerals**

### Hydro One to invest in critical electricity infrastructure to support mining operations in Northwestern Ontario – Hydro One

Hydro One announced last week that they received a letter from the Independent Electricity System Operator (IESO) confirming the need to build Phase 2 of the Waasigan Transmission Line project. Phase 1 of the project is a proposed new double-circuit 230 kV transmission line between Lakehead TS, Municipality of Shuniah, and Mackenzie TS, Town of Atikokan, with an in-service date towards the end of 2025. Phase 2 of the project is a proposed new single-circuit 230 kV transmission line between Mackenzie TS and Dryden TS in the City of Dryden. Hydro One is currently conducting an environmental assessment to identify a final route for the transmission line, predict and assess potential effects, and identify measures to minimize and eliminate potential negative impacts on the environment.

## **Fossil Fuels**

### Enbridge acquires gas storage facility in British Columbia for CA\$400 million – Energy Now

Enbridge Inc., a Canadian pipeline operator and utility firm, intends to acquire Aitken Creek natural gas storage facility in British Columbia from FortisBC Holdings Inc. for CA\$400 million. It is an underground storage reservoir with a working storage capacity of 77 billion cubic feet. It is in the Montney area and is connected to all three major long-haul natural gas transportation lines in Western Canada including Enbridge's Westcoast Pipeline and Alliance Pipeline.

## **Grid Management**

### Alectra invests over CA\$22 million in the electricity grid to improve reliability in Mississauga – Alectra Utilities

Alectra is investing approximately CA\$22.1 million in infrastructure modernization projects in the City of Mississauga, as parts of the city's grid systems reach the end of its life cycle. The utility plans to invest CA\$12.2 million towards rehabilitating underground cables via cable injection, CA\$8.5 million to renew aging infrastructure including poles, switchgear equipment, and transformers, and CA\$1.4 million to install new automated devices for faster restoration.

Thank you.

The Brilliant Energy Institute news team

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