

# Brilliant Energy Institute

Office of the Vice President Research and Innovation

Ontario Tech University

## BEI Energy News

Weekly newsletter

November 29, 2024

### Top News

#### Hydrogen

##### **Hydrogen-heated home near Edmonton lays ground for low-carbon communities – CityNews Everywhere**

<https://edmonton.citynews.ca/2024/11/21/hydrogen-heated-home-alberta-sherwood-park/>

In a pioneering project in Sherwood Park, Alberta, a new home has been equipped to be heated entirely by hydrogen, marking a significant milestone in the province's green energy initiatives. This initiative, which showcases the practical application of hydrogen in residential heating, aims to set a precedent for sustainable home heating solutions, contributing to Alberta's energy diversification and emission reduction goals. The project tests the viability of hydrogen heating in everyday settings and reflects a broader commitment to transitioning towards cleaner energy sources within the community and potentially across the province.

#### Nuclear

##### **Northwestern Ontario communities chosen for Canada's nuclear waste storage site - CBC**

<https://www.cbc.ca/news/canada/thunder-bay/nuclear-waste-storage-site-chosen-1.7395660>

Northwestern Ontario has been selected to host Canada's first deep geological repository for nuclear waste, marking a significant advancement in the country's nuclear waste management. The Nuclear Waste Management Organization (NWMO) announced that the Wabigoon Lake Ojibway Nation and the township of Ignace will host the multibillion-dollar facility, intended to store nuclear waste securely underground. This decision concludes a lengthy and contentious selection process that began in 2010, involving extensive community engagement and facing considerable opposition from environmental groups and local residents. The project now moves into a rigorous regulatory review phase, aiming for operational status by the early 2040s, with the promise of significant local job creation and adherence to strict safety and environmental standards.

##### **Canada's Bold Bet on Nuclear Energy – OilPrice.com**

<https://oilprice.com/Alternative-Energy/Nuclear-Power/Canadas-Bold-Bet-on-Nuclear-Energy.html>

Canada is making a strategic shift towards nuclear energy with a bold initiative to increase its

nuclear capacity as part of a broader effort to meet its net-zero emissions targets. The country's investment in small modular reactors (SMRs) and other nuclear technologies is crucial in shaping its clean energy portfolio. This move is driven by the need to stabilize the power supply and reduce carbon emissions while navigating the challenges of public perception and regulatory hurdles. The potential benefits, technological advances, and economic implications of embracing nuclear power as a sustainable energy solution are explored, highlighting Canada's commitment to a cleaner energy future.

### **Is Alberta's workforce ready for the challenges of nuclear power? - CBC**

<https://www.cbc.ca/news/canada/edmonton/is-alberta-s-workforce-ready-for-the-challenges-of-nuclear-power-1.7375480>

As Alberta eyes a future with nuclear energy, experts assert the province's robust oil and gas sector has cultivated a workforce well-prepared for nuclear industry demands. The transition to nuclear energy is supported by Alberta's stringent safety standards and its network of post-secondary institutions, like NAIT, is adept at aligning educational programs with emerging energy trends. These institutions are pivotal in ensuring the skilled workforce is ready to design, build, and operate nuclear facilities. The province's commitment to expanding its skilled trades workforce further complements this readiness, positioning Alberta to effectively meet the technical and safety demands of nuclear power development.

## **Energy Policy**

### **Ontario Generating More Energy to Meet Soaring Demand – Ontario.ca**

<https://news.ontario.ca/en/release/1005403/ontario-generating-more-energy-to-meet-soaring-demand>

Ontario has announced plans to ramp up its energy production in response to soaring demand across the province. The initiative, outlined by the provincial government, involves expanding renewable and non-renewable energy sources to ensure a stable and sufficient power supply. The strategy includes significant investments in new technologies and infrastructure to enhance grid reliability and efficiency. This proactive approach addresses the dual challenges of growing energy needs and environmental sustainability, positioning Ontario as a leader in innovative energy management and development.

### **Why Germany is betting on Canadian clean energy tech – GlobalNews**

<https://globalnews.ca/news/10882092/canadian-clean-energy-technology-germany/>

The town of Geretsried, Germany, is harnessing Canadian technology to pioneer the Eavor-Loop system, a cutting-edge geothermal energy project aimed at generating significant power from underground heat. This system, developed from Alberta's oil industry knowledge, circulates water in a deep underground loop to produce heat and electricity sustainably. With the potential to power about 20,000 homes, this project aligns with Germany's aggressive renewable energy goals. This sets a global benchmark for geothermal energy, addressing common challenges like water contamination and scaling without disturbing the subsurface. If successful, Geretsried's initiative could revolutionize clean energy generation and facilitate the global transition from fossil fuels.

### **Québec landfill to invest in methane-to-energy system – Waste Today**

<https://www.wastetodaymagazine.com/news/rmr-quebec-canada-waga-energy-landfill-gas-to->

[natural-rng-contract/](#)

The Régie des Matières Résiduelles du Lac-Saint-Jean and Waga Energy have embarked on a landmark project to transform landfill gas into renewable natural gas (RNG) at the Hébertville-Station Landfill in Québec. Utilizing Waga Energy's innovative Wagabox technology, the initiative aims to convert organic waste from 50 municipalities and the Mashteuiatsh community into enough RNG to power 2,280 households annually. In 2026 this system will prevent the release of approximately 10,000 metric tons of CO<sub>2</sub>-equivalent each year, aligning with Québec's climate objectives and contributing significantly to the province's 2030 Green Economy Plan.

### **Canada's biggest battery powers up – Canada's National Observer (Paywall)**

<https://www.nationalobserver.com/2024/11/26/analysis/canada-biggest-battery-power-grid-electricity>

Ontario is set to revolutionize its energy landscape by activating Canada's largest battery energy storage system, the Oneida project, in 2025. Positioned in Jarvis, Ontario, this \$800 million initiative features a capacity of 250 megawatts, capable of powering approximately 200,000 people. Constructed with Tesla's advanced battery technology, Oneida will play a pivotal role in stabilizing Ontario's power supply by storing energy during off-peak periods and releasing it during high demand. The project aligns with Canada's goal to expand its energy storage capabilities and reflects a strategic shift toward integrating more renewable resources into the province's grid.

### **Clean energy will deliver a reliable grid - Canada's National Observer (Paywall)**

<https://www.nationalobserver.com/2024/11/26/opinion/clean-energy-grid-reliability>

Ontario is at the forefront of transforming its power grid to meet rising demand with clean, renewable energy, promising environmental and economic benefits. New research by Pollution Probe emphasizes the critical role of innovative clean energy technologies, such as waterpower and digitally optimized resources, in delivering reliable electricity. The report outlines practical methods to integrate these resources effectively, advocating for regulatory reforms and competitive procurement of reliability services. This approach modernizes Ontario's electricity system and ensures it remains cost-effective and capable of meeting future challenges.

*Do you have any milestones, events, or news updates to share with the energy community? Email your submission to [BrilliantEnergy@ontariotechu.ca](mailto:BrilliantEnergy@ontariotechu.ca) for consideration in an upcoming edition.*

Thank you.

The Brilliant Energy Institute news team

[brilliantenergyinstitute.ca](http://brilliantenergyinstitute.ca)

*(With a little help from ChatGPT)*