

# Brilliant Energy Institute

Office of the Vice President Research and Innovation  
Ontario Tech University

## BEI Energy News

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### BEI News

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### Indigenous and Community Engagement

#### **Ontario promises to add 5 more First Nations to power grid, end reliance on diesel**

<https://www.cbc.ca/news/canada/thunder-bay/ontario-promises-to-add-5-more-first-nations-to-power-grid-end-reliance-on-diesel-1.7162604>

Ontario Premier Doug Ford unveiled plans to integrate five more remote First Nations communities into the provincial power grid, ending their reliance on expensive diesel fuel. With the completion of the Wataynikaneyap Power Transmission project imminent, Ford pledged collaboration with Matawa communities and stressed the importance of consultation throughout the process. Representatives from the First Nations emphasized the need for thorough involvement in decision-making, advocating for ownership of generation and transmission assets on their land. Energy Minister Todd Smith recognized the gradual process of transitioning these communities away from diesel, indicating the beginning of a meaningful dialogue. The Wataynikaneyap Power project, expected to conclude by 2024, signifies a significant step towards sustainable energy solutions, addressing the challenges faced by remote communities relying on costly diesel generators.

### Nuclear

#### **X-energy and TransAlta to assess use of Xe-100 SMRs in Alberta**

<https://www.neimagazine.com/news/newsx-energy-and-transalta-to-assess-use-of-xe-100-smrs-in-alberta-11658926/>

X-energy Reactor Company and TransAlta Corporation are teaming up to assess the deployment of X-energy's Xe-100 small modular reactors (SMRs) in Alberta. Supported by funding from Emissions Reduction Alberta (ERA), the study aims to repurpose a fossil fuel power plant site for an Xe-100 plant, contributing to Alberta's goal of reaching net-zero carbon emissions by 2050. The Xe-100, a high-temperature gas-cooled reactor, offers scalable power generation and utilizes advanced TRISO-X fuel. The partnership will evaluate various aspects, including economics, regulatory impacts, and supply chain partnerships, with support from Canada-based firms. This initiative underscores the potential of advanced nuclear technology in reducing emissions and enhancing energy sustainability in Alberta's evolving energy landscape.

### **Federal minister says nuclear power is key part of renewable energy expansion**

[https://www.thestar.com/news/canada/federal-minister-says-nuclear-power-is-key-part-of-renewable-energy-expansion/article\\_f303398e-a862-5b8f-bc97-a4382059311c.html](https://www.thestar.com/news/canada/federal-minister-says-nuclear-power-is-key-part-of-renewable-energy-expansion/article_f303398e-a862-5b8f-bc97-a4382059311c.html)

In an interview, Federal Minister François-Philippe Champagne emphasized the importance of nuclear power as part of Canada's renewable energy expansion efforts. He sees nuclear energy, hydro, wind, and solar power as crucial for supporting the country's transition to a modern economy. While acknowledging concerns about sustainability, Champagne highlighted nuclear's role in attracting global investments and ensuring a reliable energy supply. Critics, however, question the sustainability and safety of nuclear energy, advocating for a more cautious approach to its inclusion in Canada's green energy strategy.

### **New IAEA publication discusses molten salt reactor technology**

<https://www.neimagazine.com/news/newsnew-iaea-publication-discusses-molten-salt-reactor-technology-11671135/>

The recent publication by the IAEA explores the current global landscape of molten salt reactor (MSR) technology, highlighting its potential advantages such as a reduced waste footprint and passive safety features. Originating from the Oak Ridge National Laboratory, MSR technology has undergone development, though commercial deployment remains pending. MSR designs, leveraging molten salts as coolants and/or fuels, offer promising avenues for enhanced efficiency and industrial applications. Several MSR projects globally approach deployment readiness, and challenges like safety standards and supply chain development persist, underscoring the need for continued research and regulatory harmonization efforts by organizations like the IAEA.

## **Energy Storage**

### **These giant batteries store energy, but not as electricity**

<https://www.cbc.ca/news/science/thermal-storage-explainer-1.7163743>

A groundbreaking thermal energy storage project in Toronto's underground, known as "The Well," is challenging traditional battery systems by storing heat in massive water-filled tanks. Unlike lithium or lead batteries, these thermal batteries capitalize on water's heat retention properties, providing low-cost, safe, and efficient energy storage for heating and cooling systems. With the potential to smooth out renewable energy fluctuations and optimize energy usage, thermal batteries offer a versatile solution for a sustainable energy future.

## Hydrogen

### **Controversial wind-powered hydrogen project gets final approval in Newfoundland**

[https://www.thestar.com/news/canada/controversial-wind-powered-hydrogen-project-gets-final-approval-in-newfoundland/article\\_f2728eef-2e50-52e5-80e3-50da1a884fc8.html](https://www.thestar.com/news/canada/controversial-wind-powered-hydrogen-project-gets-final-approval-in-newfoundland/article_f2728eef-2e50-52e5-80e3-50da1a884fc8.html)

The Newfoundland government has granted final approval for a contentious wind-powered hydrogen project in the province's west coast, led by World Energy GH2. The project, involving two wind farms and an ammonia production plant, will establish Canada's first commercial producer of green hydrogen and ammonia. Despite opposition from some residents citing ecological concerns, the project received federal support and faced scrutiny due to Premier Andrew Furey's connections with its directors.

## Grid Management

### **What's behind Alberta's grid alerts?**

<https://edmonton.citynews.ca/2024/04/05/whats-behind-albertas-grid-alerts/>

Alberta recently experienced two electricity grid alerts, prompting concerns and criticisms from residents. Premier Danielle Smith explained that the alerts were caused by low predictions for solar and wind energy, underscoring the difficulties of relying solely on renewables without adequate support from natural gas. The alerts, which led to the possibility of rolling blackouts, were attributed to factors such as including insufficient renewable energy, planned outages, maintenance, and a thermal unit tripping offline. Despite efforts to stabilize electricity supply, the grid operator warns that similar situations could occur again. While reforms in the electricity market are anticipated, the premier emphasizes the importance of natural gas and backup options for ensuring baseload power reliability, suggesting that renewables alone may not suffice.

*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  
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*(With a little help from ChatGPT)*