

# Brilliant Energy Institute

Office of the Vice President Research and Innovation  
Ontario Tech University

## BEI Energy News

Produced twice weekly by the Brilliant Energy Institute

July 11, 2023

### Top News

#### **Ontario's new plan to power growth puts low-carbon generation front and centre – Government of Ontario**

<https://news.ontario.ca/en/release/1003253/province-launches-plan-to-power-ontarios-growth>

Just days after announcing about 6,000 MW of potential new nuclear generation, the Ontario government released a report highlighting the addition of new wind and solar projects as well as other non-emitting sources. The report says participation and support of municipalities and Indigenous communities will be a “key feature” as these projects advance. The *Powering Ontario's Growth* report emphasizes zero-emissions electricity generation, long duration storage, and transmission lines to deliver reliable, cost-effective, and clean power as the province prepares for a potential doubling of electricity by 2050, when federal legislation will require net zero carbon emissions. The province is planning another round of electricity generation procurement between 2025 and 2026, which will also include hydroelectric, and biogas.

### Brilliant Energy Institute News

#### **BEI asks the experts: Markus Piro – BEI LinkedIn**

<https://www.linkedin.com/feed/update/urn:li:activity:7084191220679274496>

BEI has started a new feature where we ask energy experts what they are reading, watching or listening to. First up, Dr. Markus Piro:

**The Expert:** Dr. Markus Piro, Chair of the Energy and Nuclear Engineering Department and Canada Research Chair in Nuclear Fuels and Materials at [Ontario Tech University](https://www.ontariotechu.ca/), specializes in nuclear fuels and materials of conventional and advanced nuclear reactors. His work supports both academic grants and industrial projects.

**Markus' recommendation:** Mike Rencheck's (CEO, Bruce Power) appearance on the Titans of Nuclear podcast: <https://lnkd.in/dAk3fdQg>

**Why this piece?** “This podcast talks about three key themes in the Canadian nuclear industry:

combating climate change, supporting life-saving medical isotope production, and delivering large scale construction projects on-time and on-budget. The last point is particularly apt given the recent exciting announcement by Bruce Power for new large-scale nuclear construction in Ontario.”

## Energy Policy

### **Alberta’s Minister of Environment tasked with prioritizing oil sands cleanup – The Globe and Mail (Paywall)**

<https://www.theglobeandmail.com/business/article-emissions-reduction-focus-alberta-energy/>

Alberta Premier Danielle Smith has tasked Minister of Environment and Protected Areas, Rebecca Schulz, to develop an accelerated strategy for oil sands mine water management and tailings pond reclamation. The strategy aims to address concerns regarding more than one trillion litres of tailings-laced water in Alberta’s oil sands. The plan includes three priorities: Improve the certification process for the cleanup of old oil and gas wells; establish new protocols to develop and trade carbon credits; and implement a regulatory framework for small modular reactors.

## Indigenous and Community Engagement

### **Indigenous leaders strive for economic growth as they tout BC LNG – The Globe and Mail (Paywall)**

<https://www.theglobeandmail.com/business/article-lng-export-indigenous-leaders/>

Indigenous leaders in British Columbia, are promoting the export of liquefied natural gas (LNG) to boost economic growth while addressing climate concerns. They argue that a robust economic foundation is essential for reconciliation and progress. Their support extends to projects such as Woodfibre LNG, backed by the Squamish Nation. Despite climate warnings from organizations like the David Suzuki Foundation, the leaders assert that LNG exports are compatible with climate action. Their efforts aim to advance Indigenous energy leadership on the world stage and contribute to the economic development of British Columbia.

## Technologies

### **Nuclear**

### **NWMO makes recommendations on Canada's waste plans – World Nuclear News**

<https://www.world-nuclear-news.org/Articles/NWMO-makes-recommendations-on-Canada-s-waste-plans>

Recommendations from the Nuclear Waste Management Organization (NWMO) to Canada's Minister of Natural Resources highlight the importance of obtaining local community and Indigenous consent, protecting water resources, and taking immediate action.

In its recently released Integrated Strategy for Radioactive Waste, the NWMO aims to address gaps in the disposal plans for low, intermediate, and non-fuel high-level radioactive waste in Canada. NWMO recommends a deep geological repository for intermediate-level and non-fuel, high-level waste, along with multiple near-surface disposal facilities for low-level waste. The NWMO approach is informed by scientific research, public input, and international best practices.

### **Ontario plans to build more SMRs – Government of Ontario**

<https://news.ontario.ca/en/release/1003248/ontario-building-more-small-modular-reactors-to-power-provinces-growth>

The Ontario government and Ontario Power Generation are collaborating to add three more small modular reactors (SMRs) at the Darlington nuclear site in addition to the previously announced 300 MW GE Hitachi BWRX, expected to be the first grid-scale reactor built in Canada. The project aims to meet rising electricity demand and fuel the province's economic growth. The four SMRs, including the unit under development, will generate a total of 1,200 MW, powering 1.2 million homes. Pending regulatory approvals, the additional units are expected to come online between 2034 and 2036, benefiting from cost savings and shared infrastructure.

## **Critical Minerals**

### **Canadian startup proceeds with deep-sea mining despite concerns – The Globe and Mail (Paywall)**

<https://www.theglobeandmail.com/business/article-as-the-world-gathers-to-discuss-the-perils-of-deep-sea-mining-a/>

The International Seabed Authority (ISA) is convening in Kingston, Jamaica to discuss the contentious issue of deep-sea mining, a venture that enables access to highly demanded minerals like copper, nickel and cobalt. Conservation groups are urging a moratorium, while The Metals Company (TMC), a Vancouver-based mining startup company, hopes to begin mining in 2024. The ISA regulates international waters and their mineral resources. The Pacific country of Nauru triggered a provision requiring the ISA to finalize mining regulations within two years, potentially paving the way for mining applications. However, TMC stated it will not file an application until the ISA completes its regulations.

## **Hydrogen**

### **Toronto Pearson announces Ontario's first public hydrogen refueling station – Renew Canada**

<https://www.renewcanada.net/toronto-pearson-announces-ontarios-first-public-hydrogen-refuelling-station/>

Greater Toronto Airports Authority and Carlsun Energy, a construction management company in Ontario, are set to build Ontario's first public hydrogen refueling station for both light and heavy-duty vehicles at Toronto Pearson Airport. The project is supported by a \$1 million federal

investment from Natural Resources Canada. Carlsun Energy will oversee the construction and operation of the station. The initiative aims to address emissions from Ontario's transportation sector and promote clean energy solutions.

## **Carbon Capture**

### **Top international students to study CCS with experts in Saskatchewan – Energy Now**

<https://energynow.ca/2023/07/top-international-students-to-study-carbon-capture-and-storage-with-world-leading-experts-in-saskatchewan-canada/>

The annual International Energy Agency Greenhouse Gas R&D Programme's Carbon Capture and Storage (CCS) Summer School is underway in Regina, Sask. More than 40 students from 29 countries were competitively selected to immerse themselves in learning about-CCS technology. The program covers various aspects of CCS, including capture, transport, storage, policy, and financing. Participants will visit the Boundary Dam Unit 3 Carbon Capture and Storage Facility, a world-leading CCS project that has stored more than 5 million tonnes of CO<sub>2</sub> since 2014.

*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)*