

# Brilliant Energy Institute

Office of the Vice President Research and Innovation  
Ontario Tech University

## BEI Energy News

Weekly newsletter

April 5, 2024

### Building Infrastructure

#### **Alberta government considering conventional nuclear power plants, minister says**

<https://www.cbc.ca/news/canada/edmonton/alberta-government-considering-conventional-nuclear-power-plants-minister-says-1.7159777>

The Alberta government is considering adding conventional nuclear power plants to its energy strategy, a departure from previous focus on small modular reactors. Minister Nathan Neudorf acknowledges the high initial costs but sees potential long-term benefits. Critics caution against nuclear's uncertainties and environmental impacts, advocating for prioritizing renewable energy solutions. As discussions unfold, Alberta faces a complex decision balancing energy needs and environmental concerns.

#### **CNSC President in Conversation with Transition2Zero**

<https://www.cnsccsn.gc.ca/eng/resources/news-room/feature-articles/conversation-transition-2-zero/>

President Rumina Velshi of the Canadian Nuclear Safety Commission (CNSC) engaged in a conversation with Transition2Zero co-founder Laetitia Cash on March 10, 2023, discussing CNSC's initiatives for small modular reactor (SMR) readiness and emphasizing the significance of global collaboration. Velshi emphasized CNSC's leadership in promoting international harmonization and standardization in the nuclear industry. She underscored critical focus areas for the successful implementation of new nuclear technologies in Canada, emphasizing the importance of establishing trust. To watch the full video interview, visit <https://safercleanerplanetseries.com>.

### Nuclear

#### **CNL aims for carbon-neutrality of Chalk River site**

<https://www.world-nuclear-news.org/Articles/CNL-aims-for-carbon-neutrality-of-Chalk-River-site>

Canadian Nuclear Laboratories (CNL) aims to achieve carbon-neutral operations at the Chalk River Laboratories site in Ontario by 2040, outlined in its 2023 ESG Report. This initiative supports the Canadian government's commitment to achieving net-zero emissions by 2050. CNL will reduce emissions by approximately 90 per cent through various strategies, including updating engineering standards, improving energy performance, and electrifying its vehicle fleet. Additionally, CNL is exploring the potential to connect to a small modular reactor (SMR) proposed for construction at the site, leveraging clean energy to offset its carbon footprint further. This ambitious target aligns with CNL's broader sustainability objectives, guided by stakeholder engagement and a comprehensive ESG materiality assessment completed in 2023.

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

<https://www.world-nuclear-news.org/Articles/X-energy,-TransAlta-to-assess-use-of-Xe-100-in-Alb>

X-Energy Reactor Company and TransAlta Corporation are collaborating to assess the feasibility of deploying an X-energy Xe-100 advanced small modular nuclear reactor at a repurposed fossil fuel power plant in Alberta. The study, supported by Canada-based firms and funding from Emissions Reduction Alberta, will evaluate economic viability, regulatory impacts, and licensing requirements. Alberta's commitment to reaching net-zero carbon emissions by 2050 has spurred interest in advanced nuclear technologies, with X-energy targeting deployment of the first reactor in Alberta by the early 2030s. This initiative underscores efforts to transition towards clean energy solutions while enhancing grid flexibility and sustainability in the province.

### **Think powering a nuclear sub is hard? Try running a utility**

<https://www.theglobeandmail.com/business/rob-magazine/article-think-powering-a-nuclear-sub-is-hard-try-running-a-utility/>

David Hutchens, CEO of Fortis Inc., draws parallels between managing utilities and running a nuclear sub's power plant, highlighting the complexity of both tasks. With extensive experience in nuclear power, Hutchens emphasizes the importance of adaptability amidst evolving energy landscapes and regulatory challenges. Fortis prioritizes clean energy initiatives, anticipating increased demand and investing in nuclear technology to support its growth trajectory. Hutchens envisions Fortis playing a larger role in clean energy investments, positioning the company for continued innovation and expansion in the nuclear sector.

## **Critical Minerals**

**Uranium is being mined near the Grand Canyon as prices soar and the US pushes for more nuclear power**

<https://toronto.citynews.ca/2024/03/30/uranium-is-being-mined-near-the-grand-canyon-as-prices-soar-and-the-us-pushes-for-more-nuclear-power/>

Uranium mining near the Grand Canyon is intensifying as global demand and prices surge. While the Biden administration supports expanding nuclear power, concerns about environmental impact and Native American community welfare persist. Despite legal battles and opposition, Energy Fuels Inc. pushes forward with the Pinyon Plain Mine project. Critics argue for stricter regulation and cleanup efforts in affected regions, emphasizing the need for transparent environmental justice policies.

## **Government of Canada Announces Funding to Support Domestic Critical Minerals Value Chains and Create Good Jobs in the Northwest Territories**

<https://www.canada.ca/en/natural-resources-canada/news/2024/03/government-of-canada-announces-funding-to-support-domestic-critical-minerals-value-chains-and-create-good-jobs-in-the-northwest-territories.html>

The Government of Canada has announced a \$714,500 investment in Fortune Minerals Limited to bolster the production of cobalt sulphate and bismuth ingot products in the Northwest Territories and Alberta. This investment will enhance the supply of critical battery metals essential for domestic electric vehicle value chains. The project will implement a pilot-scale hydrometallurgical program to optimize processing conditions, create job opportunities, and introduce sustainable technology. Funding is provided through the Critical Minerals Research, Development, and Demonstration program to support the development of zero-emission vehicle value chains in Canada. This investment aligns with Canada's commitment to fostering strong domestic value chains for critical minerals and advancing towards a sustainable, low-carbon future.

## **Fossil Fuels**

### **No water, no oil: How the parched western provinces could hamper the oilpatch**

<https://www.cbc.ca/news/canada/calgary/bakx-drought-oilpatch-wti-deloitte-1.7161067>

A new report by Deloitte warns that persistent drought in Western Canada could severely impact the oil and gas sector, raising concerns about limited water supply for production. With below-average snowpack levels exacerbating the situation, companies may face challenges in sourcing and transporting water, potentially leading to more expensive operations. The implications extend beyond industry, with communities already on alert for drought-related impacts on drinking water and agriculture. As climate change exacerbates water scarcity, stakeholders are exploring alternative water sources and conservation measures to mitigate risks to both industry and ecosystems.

*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)*