

# Brilliant Energy Institute

## BEI Energy News

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

May 16, 2023

### Top News

#### Brilliant Energy Institute News

**BEI Executive Director publishes study on CSA N299 series standards – BEI LinkedIn**

<https://www.linkedin.com/feed/update/urn:li:activity:7063880766056796162>

Decarbonizing our economy means optimizing and integrating technologies like nuclear, hydrogen, renewables and CCUS into effective energy systems. To get there at the speed and scale required, robust supply chains for performance excellence in cost, reliability, environmental management, safety and security are needed. A recently published study authored by BEI Executive Director Jacquie Hoornweg examines the role and implementation of CSA N299 for quality assurance in the nuclear supply chain. It supports suppliers in building best practice across all tiers.

**BEI attends opening event for the McMaster Manufacturing Research Institute – BEI LinkedIn**

<https://www.linkedin.com/feed/update/urn:li:activity:7064274174676013057>

Brilliant Energy Institute participated in the opening event for the new McMaster Manufacturing Research Institute, May 11. Ontario Tech University and McMaster University are strong academic partners in many facets to support energy research, innovation and education. This includes the use of advanced manufacturing to strengthen nuclear technology effectiveness, including our joint participation on the Canadian Advanced Manufacturing in Nuclear Alliance

(CAMiNA) led by Organization of Canadian Nuclear Industries.

## Energy Policy

### **Stellantis stops construction at EV battery plant in Windsor over federal funding – Global News**

<https://globalnews.ca/news/9698820/stellantis-stops-construction-windsor-plant-fed-dispute/>

Stellantis and LG Energy Solution, the two organizations behind Canada's first electric-vehicle battery plant being built in Windsor, announced they have stopped all construction activities and will begin implementing their contingency plans to relocate the facility. The project is valued at CAD\$5 billion and the companies state the federal government has not delivered on its promises. Ontario's Premier Doug Ford has urged the federal government to support the companies the same way they did with Volkswagen.

### **New report finds blue hydrogen is cheaper to produce than grey hydrogen in Europe – Hydrogen Insight**

<https://www.hydrogeninsight.com/production/blue-hydrogen-now-cheaper-to-produce-than-grey-h2-in-europe-due-to-high-carbon-prices-icis/2-1-1451465>

The Independent Commodity Intelligence Services (ICIS) has released a new report titled *ICIS Quarterly European Hydrogen Markets: Q1 2023 Update*. The report finds it would be cheaper to produce blue hydrogen from natural gas with carbon capture and storage than grey hydrogen made with unabated fossil gas using steam methane reformation process, due to high carbon prices in the EU. The report explains this finding as a potential for investment in low carbon hydrogen but notes that current hydrogen production plants are already in operation, where the capital investment may have already been recovered.

### **G7 leaders to target Russia with new sanctions – Energy Now**

<https://energynow.ca/2023/05/g7-leaders-to-target-russian-energy-trade-in-new-sanctions-steps/>

Leaders of the Group of Seven (G7) nations are set to meet at their summit in Japan this week. The leaders plan to announce new measures to target sanctions evasion involving third countries and seek to undermine Russia's future energy production and curb trade that supports Russia's military. On a separate note, the U.S. expects G7 members would agree to adjust their approach to sanctions such that all exports are automatically banned unless they are on a list of approved items.

## Technologies

### Nuclear

#### **SNC-Lavalin's joint venture continues to secure Ontario's clean energy supply with CA\$1.3 billion CANDU refurbishment at Bruce Power – SNC-Lavalin**

<https://www.snclavalin.com/en/media/press-releases/2023/12-05-2023>

Bruce Power has signed a 10-year, CAD\$1.3 billion agreement with Shoreline Power Group, a contractual joint venture between SNC-Lavalin, Aecon, and United Engineers & Constructors. The agreement aims to extend the life of four of Bruce Power's CANDU reactors to 2064. SNC-Lavalin's nuclear division will provide project management services associated with the reactor refurbishment of Units 4, 5, 7 and 8. Shoreline Power Group has worked on the successful life extension of Unit 6 and is currently working on Unit 3.

#### **AECL, CNL and Global First Power unveil the site of GFP's proposed small modular reactor at the Chalk River Laboratories - CNL**

<https://www.cnl.ca/aecl-cnl-and-global-first-power-unveil-the-site-of-gfps-proposed-small-modular-reactor-at-the-chalk-river-laboratories/>

Atomic Energy of Canada Limited (AECL), Canadian Nuclear Laboratories (CNL) and Global First Power (GFP) announced the location at the Chalk River Laboratories to site its proposed Micro-Modular Reactor project. The site is a repurposed parking lot at the Chalk River campus and was chosen as it provides good access to campus utilities and to CNL's many technical

and operational support services. GFP applied for a site preparation licence to the Canadian Nuclear Safety Commission in 2021. Currently, an environmental assessment for the project is under way. GFP expects site preparation and construction to begin in 2025, and operations to begin in 2027.

### **McMaster, AECL and CNL establish Undergraduate Nuclear Research Experience Program – McMaster University**

<https://www.aecl.ca/mcmaster-aecl-and-cnl-establish-undergraduate-nuclear-research-experience-program/>

McMaster University, Atomic Energy of Canada Limited (AECL) and Canadian Nuclear Laboratories (CNL) have launched the CNL Nuclear Undergraduate Research Experience program as a part of the partnership established last year between them to advance nuclear research, education and training. The program provides funding to allow students enrolled in Level II or above in the Faculties of Engineering and Science to develop research and technical skills in the nuclear field. The eight-week program pairs students with an employee from CNL to provide mentorship and guidance on their research projects.

### **Wind Energy**

#### **Vattenfall, OX2 Granted Permission to Build 1.6 GW of Offshore Wind in Sweden – Offshore Wind**

<https://www.offshorewind.biz/2023/05/16/vattenfall-ox2-granted-permission-to-build-1-6-gw-of-offshore-wind-in-sweden/>

Vattenfall, a Swedish multinational power company, and OX2, a European renewable energy company, have received permission from the Swedish government to build their offshore wind projects. Vattenfall received approval for its 1.2 GW Kattegat Syd offshore wind farm, which is comprised of 80 wind turbines and estimates an annual production of around 4.7 TWh, amounting to 2.5 to three per cent of Sweden's current total electricity production. OX2 received approval for the northern 400 MW part of its Galatea-Galene project, which is comprised of 101 wind turbines in total and has a total capacity of 1.7 GW.

## Hydrogen

### **Second billion-euro green hydrogen project announced in Spain – Hydrogen Insight**

<https://www.hydrogeninsight.com/production/second-billion-euro-green-hydrogen-project-announced-in-spain-this-month-that-will-replace-existing-grey-h2-supplies/2-1-1450391>

Soto Solar, a Madrid-based developer, and Power 2X, an Amsterdam-based developer, have announced a 500 MW green hydrogen project called ErasmoPower2X, powered by a 1.2 GW solar array. The project is aimed to replace grey hydrogen from unabated fossil gas. The project is valued over €1 billion and will produce 55,000 tonnes of green hydrogen a year for industrial users. The facility will be located close to the industrial area of Puertollano, Spain. The project is currently under development and expects to produce hydrogen in late 2027.

### **Wood Plc and SGN accelerate their U.K. plans to adopt hydrogen – Energy Digital**

<https://energydigital.com/renewable-energy/wood-plc-and-sgn-accelerate-their-uk-plans-to-adopt-hydrogen>

Wood Plc., an engineering consultant firm, and SGN, a gas distribution company, are collaborating to implement vital hydrogen transmission infrastructure in Scotland and Southern England. Wood Plc. plans to undertake three preliminary front-end engineering design (pre-FEED) studies to determine the most suitable route and design for dedicated hydrogen pipelines and associated transmission infrastructure, over the next year. The pre-FEED studies would involve the H2 Caledonia project to assess the feasibility of producing low-carbon hydrogen across Scotland and integrate seamlessly with the ongoing Aberdeen Vision study and the H2 Connect project to facilitate the development of an optimized design for a hydrogen network in central Southern England.

## Critical Minerals

### **To meet EV demand, industry turns to technology long deemed hazardous – The Washington Post**

<https://www.washingtonpost.com/world/interactive/2023/ev-nickel-refinery-dangers/>

Indonesia is considering the use of High-Pressure Acid Leaching process to convert low-grade laterite nickel ore into a higher-grade material suitable for batteries, to strengthen their country's future in the electric vehicle industry. This technology has never been tested in Indonesia and it is a country where earthquakes, heavy rainfall and landslides are frequent. This can make it difficult to transport and store hazardous waste, which contain harmful heavy metals, such as certain types of chromium, linked to respiratory illnesses and an increased risk of cancer. The process is energy-intensive and produces about 20 tons of carbon dioxide per ton of nickel, or about double the amount of the prevailing processing method. The article is produced by reporters Rebecca Tan and Dera Menra Sijabat and photographer Joshua Irwandi, as they journeyed together to the Obi Islands in eastern Indonesia to explore the impact of securing minerals on local communities, workers and the environment.

## **Fossil Fuels**

### **Cyprus and Israel working on deal for a natural gas pipeline – Associated Press News**

<https://apnews.com/article/cyprus-israel-natural-gas-pipeline-liquefaction-mediterranean-3d74bbc70e512e6aa1dba70aadb1c6e0>

The Cypriot Energy Minister, Giorgos Papanastasiou, announced Cyprus and Israel have plans to build a pipeline that will transport natural gas between the countries and a liquefaction plant to export natural gas to Europe. The pipeline project is expected to be completed in 18 months and the liquefaction plant in two and a half years, upon signing the deal.

Thank you.

The Brilliant Energy Institute news team

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