

# BEI Energy News

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

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## Top news

### Ontario Tech News

#### [Faculty of Engineering and Applied Science hosts a capstone competition – BEI LinkedIn](#)

Ontario Tech University's fourth-year engineering students presented their innovative ideas at the Annual Engineering Capstone Systems Design Exhibition and Competition, Monday, April 10. More than 400 engineering students showcased their creative solutions and prototypes to other students, faculty, judges and industry representatives. This included 30 students from the Department of Energy and Nuclear Engineering and other faculties with energy-related capstones. Many of these graduating engineers will be going into careers in the energy sector.

### Energy Policy

#### [IEA releases its country report on Australia – IEA](#)

The International Energy Agency (IEA) has released its country report on Australia. They have reviewed the Australian government's policies and strategies aimed to fast-track the country's energy transition. The report finds that Australia can make sufficient progress on emissions reductions by 2030 to align with the goal of net zero by 2050, with improvements in energy efficiency and increase in clean energy investments. The IEA recommends an updated net zero emissions reduction plan for 2050 to guide implementation across all parts of government and a national energy and climate information system to track progress towards reaching these targets.

#### [EU and Norway sign historic 'Green Alliance' – Energy Live](#)

The European Union (EU) and Norway [signed a 'Green Alliance'](#) today, committing to work together on tackling climate change, protecting nature and developing the technologies needed to transition away from fossil fuels. Critical raw materials will also be covered by the Green Alliance as part of ongoing work to build a strategic partnership between Norway and the EU. Both countries reaffirmed their commitments to their respective 2030 targets of reducing greenhouse gas emissions by at least 55 per cent compared to 1990 levels and achieving climate neutrality by 2050.

#### [U.S. EPA plans to eliminate greenhouse gas emissions from power plants by 2040 – Earth.com](#)

President Biden's administration is reportedly planning to announce limits on greenhouse gas emissions from power plants that could compel them to capture the pollution from their smokestacks. If implemented, the proposed regulation would be the first time the federal government has restricted carbon dioxide emissions from existing power plants. It would also apply to future plants. The regulation, proposed by the Environmental Protection Agency (EPA), is being reviewed by the White House's Office of Management and Budget, and could still be

adjusted. The proposal comes after two other Biden administration plans to cut tailpipe emissions dramatically by speeding up the country's transition to electric vehicles, and curb methane leaks from oil and gas wells.

## Energy System

### Electric Vehicles

#### [Canada invests in Zero Emission Public Transit Infrastructure in Toronto – Infrastructure Canada](#)

Government of Canada announced a joint investment of \$700 million with the City of Toronto towards electrification of the Toronto Transit Commission's (TTC) bus fleet. This enables the TTC to purchase 340 zero emission buses and 248 bus chargers and support upgrades to related infrastructure in eight bus garages, including site upgrades, equipment procurement, and charger installations. This investment will help the TTC work towards electrifying its entire operations by 2040, and help Canada achieve net-zero emissions by 2050.

#### [Canada announces new EV charging stations at Ikea parking lots in Ontario and Quebec – Natural Resources Canada](#)

Government of Canada announced a \$300,000 investment in Ikea to install 40 EV chargers in Ontario and Quebec, four of which are located at the Ottawa location. The funding is provided through the Zero-Emission Vehicle Infrastructure Program and compliments Ikea's investment of \$305,000. These Level 2 and fast chargers are now available for use. Ikea also unveiled their new electric trucks purchased from Lion Electric. The battery packs were manufactured by Canadians and received an investment of \$100,000 in 2021.

### Battery

#### [Europe's first LFP battery factory is unveiled – Energy Digital](#)

ElevenEs, a company specializing in Lithium Iron Phosphate (LFP) cathode battery technology, has launched Europe's first industrial plant to produce LFP battery cells. The facility is located in Subotica, Serbia and is supported by EIT InnoEnergy, an investment firm. The plant will specialize in creating high-quality LFP prismatic cells, which are used in electric cars, buses, trucks, and energy storage systems. These cells are produced without nickel or cobalt. Hence, they are more sustainable, safer, and less expensive, with a lifespan that is three times longer than that of other technologies.

## Technologies

### Nuclear

#### [Mass deployment of SMRs in Ukraine - Ukrinform](#)

Up to 20 Holtec SMR-160 plants will be built in Ukraine under a cooperation agreement signed between Holtec International and Ukrainian national nuclear operator Energoatom on April 21. The first plant is planned to begin supplying power by March 2029. The agreement also mentions the plan will establish a manufacturing facility in the country for localizing the

production of various equipment required to build SMR-160 reactors. This also involves a joint project office to be established to begin work required for licensing and deployment of Holtec's SMR-160s throughout Ukraine, with a focus on former coal generation sites.

#### [Japan adopts national strategy on nuclear fusion – Nuclear Engineering International](#)

Japan has adopted its first-ever national strategy on nuclear fusion. The strategy calls for the wider participation of the private sector in fusion energy research and development. The government plans to establish a fusion industry council by March 2024 to develop the related industries, as well as create guidelines for ensuring the safety of fusion technology. The country plans to increase industry-academia collaboration and prioritize fusion energy education at domestic universities to develop specialists in the field and attract talent from institutions overseas and from other academic disciplines.

#### [Could nuclear power be the solution to climate change? – Radio Canada](#)

Radio-Canada Decouverte TV's broadcast on April 23 focuses on the need for nuclear to address climate change. The documentary by a journalist with an engineering degree provides a fact-based review of what is going on around the world with nuclear and reports on a new trend of environmentalist support for nuclear. This episode is in French.

## Energy Storage

#### [U.K. battery storage set to surge with \\$20 billion investments by 2030 – Energy Live](#)

The U.K.'s battery storage market is growing exponentially, with capacity expected to reach 24 GW by 2030. According to an analysis by Rystad Energy, this is expected to attract investments up to \$20 billion. The combined energy reserves of these utility-scale battery systems will be sufficient to power 18 million homes for a year and make the U.K. account for nearly nine per cent of all global capacity installations.

## Wind Energy

#### [U.S. investors back Ardersier port upgrade with £300 million - reNEWS](#)

Quantum, a U.S. private equity fund has committed £300 million to help redevelop the Ardersier port near Inverness as a site for the rollout of North Sea wind power, marking a significant investment in the Scottish supply chain for renewable energy. The Ardersier Port's McDermott construction yard was key to the development of the North Sea oil and gas sector in the 1970s and 1980s but shut over 20 years ago as demand for new platforms dried up. But the U.K.'s accelerating push into offshore wind aims to give the 450-acre site new life, with the investment designed to transform it for the deployment of turbines and the decommissioning of old oil and gas assets.

## Hydrogen

#### [U.S. – Korean partners to build SMR-powered hydrogen production facility – World Nuclear News](#)

U.S.'s Ultra Safe Nuclear Corporation (USNC), South Korea's Hyundai Engineering and SK E&C have signed a Memorandum of Understanding to conduct joint research and development for the commercialization of Hydrogen Micro Hubs over the next five years. The three

companies plan to construct the first Hydrogen Micro Hub at SK E&C's headquarters in Seoul, South Korea. The companies plan to conduct research and development on the Micro-Modular Reactor – Solid Oxide Electrolysis Cells integrated plant for the next five years, to examine the establishment of a competitive hydrogen production system and promote continuous research and development and verification for future hydrogen production and supply businesses.

## **Grid Management**

### [Alectra Utilities invests \\$18.7 million in Brampton power grid – Alectra Utilities](#)

In 2023, Alectra is investing \$18.7 million in Brampton to construct and renew their grid infrastructure. Many parts of Brampton's grid infrastructure are reaching the end of its life cycle and require upgrades to ensure stability and reduce outage impacts to the community. Understanding this, Alectra has decided to invest in capital renewal projects across Brampton amounting to \$18.7 million. Among the planned projects, Central North Brampton receives \$9.2 million to renew infrastructure including switchgear equipment, poles, and transformers.

Thank you.

Regards,  
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