

BEI Energy News

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

The update will now be produced on Tuesdays and Thursdays

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Top news

Ontario Tech News

[Ontario Tech partners with Horizon Aircraft to develop hybrid-electric eVTOL – BEI LinkedIn](#)

In 2021, the transport sector was the second largest source of greenhouse gas emissions, accounting for 22 per cent of the country's total emissions, according to Statistics Canada. Ontario Tech University and Fleming College partnered with Horizon Aircraft Inc. to develop a hybrid electric Vertical Take-off and Landing aircraft. The company is working with the two post-secondaries to improve efficiencies. A half-size model of the aircraft has been built and tested at the ACE Climatic Aerodynamic Wind Tunnel in the ACE Core Research Facility. The ACE facility can re-create a variety of weather conditions, including wind and temperature extremes. Horizon plans to start flight testing by 2025.

Energy Policy

[Minister Wilkinson launches Canada Electricity Advisory Council – Natural Resources Canada](#)

Jonathan Wilkinson, Minister of Natural Resources, launched the Canada Electricity Advisory Council to help build Canada's clean electricity future. It consists of an independent body of 19 experts who will advise the government on actions needed to achieve Canada's 2035 and 2050 net-zero emissions goals pertaining to electricity. The Electricity Council members represent a diverse range of commercial, policy, technical and governance experience and expertise. The council is chaired by Philippe Dunsky, President of Dunsky Energy + Climate Advisors.

[Australia commits US\\$1.35 billion to subsidize green hydrogen production – Hydrogen Insight](#)

The Government of Australia announced AUD\$2 billion to subsidize green hydrogen production under the new Hydrogen Headstart program through their federal [budget](#). The program aims to accelerate large scale hydrogen projects by providing revenue support for investment in renewable hydrogen production through competitive production contracts. The program is described by newspapers as a direct response to the U.S. Inflation Reduction Act's hydrogen tax credit of US\$3/kg, but some reports say Australia would require at least AUD\$15 billion in public funds to compete with the U.S. tax initiatives.

[Cement Association of Canada released its industry action plan to net-zero - CAC](#)

The Cement Association of Canada released its industry action plan to net-zero titled [Concrete Zero](#). The plan aims to ensure Canada's cement and concrete industry achieves its carbon emissions reduction goals by making cement net-zero by 2050. The industry has also charted a course towards achieving its goal of 40 per cent emissions reduction by 2030 as part of the [Roadmap to Net-Zero Carbon Concrete by 2050](#).

Energy Systems

Electric Vehicles

[P.E.I. electric school buses to be used as mobile batteries - CTV](#)

P.E.I. unveiled a pilot program to use its electric school bus fleet as mobile emergency batteries during natural disasters. The North Rustico Lions Club site will be the very first wired building to accept power from electric school buses. The program uses the new vehicle-to-grid technology to use batteries to power buildings. Steven Myers, P.E.I.'s Minister for Environment, Energy and Climate Action, said they expect to complete upgrades to the site by September and expand the program to other community centres from Fall 2023. P.E.I. currently has 80 electric school buses in its fleet.

Technologies

Nuclear

[Bruce Power begins fuelling of Unit 6 to prepare for its restart – Bruce Power](#)

Bruce Power has completed the construction phase of Major Component Replacement part of the refurbishment of Unit 6. The company has now shifted its focus towards fuelling the reactor to return the plant to service, later this year. This is the first of the six units to undergo refurbishment that will extend the life of the site through 2064. The unit was taken offline for refurbishment in January 2020 and the construction phase has been completed on time and on budget, despite the COVID-19 pandemic. Bruce Power will begin refuelling the reactor with 5,760 fuel bundles this month.

[IEA releases new report on Finland, recognizes nuclear's role in climate targets - IEA](#)

The International Energy Agency (IEA) released their energy policy review report titled [Finland 2023](#). The IEA provides a range of energy policy recommendations to help Finland smoothly manage the transition to a secure, efficient and flexible carbon neutral energy system. The report finds Finland's nuclear and renewable power strengths provide a solid foundation for reaching its ambitious climate targets. Nuclear is central to the government's goals to achieve carbon neutrality and reduce energy import dependence. Nuclear amounts to 33 per cent of total generation in 2021. This is expected to rise to 40 per cent, after the start of commercial operations at the Olkiluoto 3 reactor in 2023.

Hydrogen

[Nel announces new 4 GW hydrogen electrolyzer gigafactory in Michigan – Hydrogen Insight](#)

Nel, a Norwegian electrolyzer manufacturer, announced its plan to build a 4 GW gigafactory in Michigan, U.S. The project is estimated to cost up to US\$4 billion. The factory will produce both alkaline and proton exchange membrane machines. The company chose Michigan based on the advantages the state could offer in terms of financial incentives, access to a highly skilled workforce, cooperation with universities, research institutions, and strategic partners, as well as proximity to the Detroit headquarters of their collaborators, General Motors.

Fossil Fuels

[Alberta wildfires impact energy companies – Energy Now](#)

Alberta wildfires have prompted the shutdown of oil and natural gas wells and pipeline systems. Nearly 17 organizations have released operation updates in response to the wildfires. Pembina Pipeline Corp. shut down its Saturn I and II gas plants, related pump stations, gathering systems and supporting infrastructure. Canadian Natural Resources Ltd. has temporarily shut the equivalent of about 39,000 barrels of oil production in locations close to the fires, but their oil sands mining operations remain unaffected. Crescent Point Energy Corp. has shut in 45,000 barrels a day of production. Vermilion Energy Inc. temporarily shut 30,000 barrels a day of production. Paramount Resources Ltd. has shut about 50,000 barrels of oil equivalent a day of production. TC Energy Corp. halted two compressor stations on its Nova Gas system nearest to active wildfires.

[Canadian Natural pilots new technology – Pathways Alliance](#)

Canadian Natural is piloting using solvent for enhanced oil recovery at Kirby South to improve oil recovery in a steam assisted gravity drainage (SAGD) process. When used in combination with heat, solvent technology will increase oil recovery, improve steam efficiency and reduce operating expenses to achieve reductions in greenhouse gas emissions, water use and land footprint. The company is now planning a commercial-scale pilot SAGD pad development at Kirby North, targeting first solvent injection in early 2024.

[IEA releases new report on emissions from oil and gas operations - IEA](#)

The International Energy Agency (IEA) has released their report titled [Emissions from Oil and Gas Operations in Net Zero Transitions: A World Energy Outlook Special Report on the Oil and Gas Industry and COP28](#). The report examines the immediate steps the oil and gas industry need to take to significantly reduce its emissions footprint and help move the world to meet its international energy and climate goals. It identifies tackling methane emissions, eliminating all non-emergency flaring, electrifying upstream facilities with low-emissions electricity, equipping oil and gas processes with carbon capture, utilization and storage, and expanding the use of low-emissions hydrogen in refineries, as key goals to achieve this reduction.

Grid Management

[50Hertz to build Baltic cable – Renewables](#)

50Hertz, the German electricity transmission system operator (TSO), along with its counterparts from Estonia, Latvia and Lithuania, agreed to increase cooperation in offshore wind energy and grid connections. 50Hertz and Elering, the TSO of Estonia, have agreed to cooperate on a joint hybrid submarine cable project called Baltic WindConnector in the Baltic Sea between Estonia

and Germany. The Baltic WindConnector will be 750 kilometres long and will land on the coast of Mecklenburg-Western Pomerania. Using a hybrid interconnector, wind farms can feed electricity into grid system that can be used for European electricity trading. To facilitate this, Estonia will build converters off its coast.

Thank you.

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