

BEI Energy News

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

Due to the Good Friday holiday, the next issue will be released on Monday

April 5, 2023

Top news

Ontario Tech News

[Ontario Tech launches Women in Research Council – BEI LinkedIn](#)

Recently, Ontario Tech University launched the Women in Research Council (WIRC) to develop and implement programming to support, mentor and help advance women researchers at the university. WIRC also established the Advisory Council that will work on initiatives and programs to identify and endeavour to remove barriers and create gender inclusive environments. On April 4, WIRC's first event welcomed the university's Provost and Vice-President, Academic, Dr. Lori Livingston, who shared her career trajectory and experiences as a senior university leader.

Energy Policy

[Illinois Senate passes bill to lift ban on NPP construction – Nuclear Engineering International](#)

The Illinois Senate in the U.S. has voted to lift a 30-year ban on the construction of new Nuclear Power Plants in the state. The Senate passed Senate Bill 76 by a 39-13 bipartisan vote, and it will now move to the House for further consideration. A similar bill introduced in the House, House Bill 1079, was approved in committee with a bipartisan majority of 18-3. The state's ban came into effect in 1987 and was intended to remain until the federal government identified a national nuclear waste disposal strategy, but they haven't been successful. In 1987, the Congress identified Yucca Mountain in Nevada as a possible site but was unsuccessful due to the opposition for the project. Illinois is one of the 12 states to have a moratorium on the construction of new nuclear power plants.

[Royal Bank of Canada launches Climate Action Institute – Royal Bank of Canada](#)

Royal Bank of Canada has launched a climate research arm that will bring together expertise from various sectors to help reduce emissions, with an initial focus on agriculture. This initiative stems from their forecasting that the Canadian economy is likely to require \$2 trillion in public and private spending to meet Canada's climate goals. The strategy involves developing and scaling up emission-reduction demonstration projects in key industries. RBC has formed a group with Nutrien Inc., Loblaw Cos. Inc. and Maple Leaf Foods called the Canadian Alliance for Net Zero Agriculture, which is researching and publishing reports on the need for net-zero projects in agriculture.

[Edmonton Global announces launch of Hydrogen Innovation Accelerator – Edmonton Global](#)

Edmonton Global and Mount Royal University's Institute for Innovation and Entrepreneurship have announced the launch of the Hydrogen Innovation Accelerator (HIA) program to drive the growth of the hydrogen economy and ensure regional companies benefit from this new

opportunity in the energy sector. The HIA will support the growth of existing small to medium sized (SME) businesses by helping to identify new opportunities related to the hydrogen sector and then helping SMEs to operationalize them. The program receives funding through Prairies Economic Development Canada. The program's first cohort of company teams begin in May 2023 and there will be five cohorts over the next 18 months. The HIA program is suited for Alberta companies with revenues of \$2 to \$200 million per year who also have an interest, or mandate, to participate in the trillion-dollar hydrogen market.

[U.K. launches forum to help freight sector decarbonize – Energy Live](#)

A new government-industry forum called the Freight Energy Forum has been launched to support the freight sector's transition to net-zero by 2050 and ensure its long-term sustainability. The forum will explore solutions to help the sector immediately reduce its emissions and create a plan for future clean energy infrastructure rollout. It intends to bring together representatives from the energy and freight industries to discuss topics such as supply and demand of energy, infrastructure requirements and regional coverage.

Energy Systems

[Kenya and European Commission sign €348 million financing agreement for Electric Bus Rapid Lane – Clean Technica](#)

Kenya and the European Commission have signed an agreement for a €347.6 million financing arrangement for East Africa's first dedicated electric bus rapid lane. The Green Mobility-Nairobi core bus rapid transit line 3 will use zero emission electric buses and will also incorporate intelligent transport management systems and ensure affordable fares to facilitate inclusive access to modern public transport services. The agreement provides a grant from the EU, financing from the European Investment Bank and the French Development Agency. Kenya has committed to 100 per cent clean energy by 2030 and this move is in line with their climate change mitigation plan.

Technologies

Nuclear

[Bruce and Cameco partner for long-term nuclear fuel supply – World Nuclear News](#)

Bruce Power and Cameco have extended their long-term exclusive nuclear fuel supply arrangements, first announced in 2017, for another 10 years. This extends the arrangement to 2040 and ensures decades of nuclear energy supply. This new deal is valued at CAD\$2.8 billion in additional business between 2031 to 2040. This announcement comes as refurbishment work to ensure the long-term operation of the Bruce plant reached a milestone ahead of schedule. The defueling was completed at the second unit to undergo refurbishment at the Bruce nuclear power plant.

[Extract energy from used nuclear fuel, says RePlanet – World Nuclear News](#)

RePlanet, an international environmental campaign group, released their new report titled "[What a waste: How fast-fission power can provide clean energy from nuclear waste.](#)" In their report they find that Europe could generate zero-carbon electricity for up to 1000 years if existing inventories of used nuclear fuel were recycled and repurposed as fuel for advanced fast reactors. The report notes that while the economics of fast reactors are currently unproven, if

resources currently intended for deep geological disposal of used fuel were diverted instead into a fast reactor programme that would enable the re-use of that fuel, "this would turn a burden into a useful part of a legitimate circular economic activity."

[Two more Natrium units for coal-to-nuclear switching – World Nuclear News](#)

PacifiCorp, a U.S. utility company, has increased its ambition for using Natrium advanced reactors in the 2030s, adding two further units to its plans in addition to the demonstration unit already slated for a retiring coal power plant in Kemmerer, Wyoming. The project's operation has been delayed due to the unavailability of non-Russian origin high-assay low-enriched uranium fuel. The company's plan projects that 500 MW would be generated by the 2030s at the site and this would be increased with a 1000 MW of advanced nuclear resources over the long-term. PacifiCorp's plan includes a series of major investments which it said should result in a 70 per cent reduction of greenhouse gas emissions from 2005 levels by 2030 and an 87 per cent reduction by 2035.

Energy Storage

[A 100 MW battery project in Hampshire receives approval – Energy Live](#)

Penso Power, a U.K. developer, has received planning approval for a 100 MW battery storage project at Bramley in Hampshire, U.K. It is expected to begin operations by 2024. The project will connect to Scottish and Southern Energy Network's distribution network and will be capable of deploying more than 250 MWh of battery storage. Penso Power and BW Energy Storage Systems are partners in this project and this project is part of a larger pipeline of large-scale battery storage initiatives in the U.K. committed by this partnership.

[ARENA announces \\$120 million to roll out community batteries across Australia – Clean Technica](#)

Australia is one of the world leaders in adoption of rooftop solar with nearly 1 in 3 homes covered in solar panels. With all this clean solar, the Australian Government now wants to help store some of the excess in community batteries. The Australian Renewable Energy Agency (ARENA) has announced AUD\$120 million in funding that will be made available for [Round 1 of the Community Batteries Funding Program](#). The program aims to support the deployment of community batteries across Australia to lower energy bills, cut emissions and reduce pressure on the electricity grid. ARENA is now seeking applications for up to AUD\$20 million funding to deploy a minimum of five community batteries.

Hydrogen

[Spanish government approves €450 million grant to ArcelorMittal to help decarbonize steel plant with green hydrogen – Hydrogen Insight](#)

The Spanish Council of Ministers have approved a €450 million grant to steelmaker ArcelorMittal to replace its coal-burning facilities at its plant in Gijón, northern Spain, with equipment that can produce so-called "green steel." The plan includes replacing two blast furnaces with a 2.3 million-tonne direct-reduced iron unit that can use green hydrogen to extract iron from ore, rather than coal, and a 1.1 million-tonne hybrid electric arc furnace that can melt iron and scrap steel using renewable energy. The plant will initially use natural gas instead of hydrogen, but ultimately, the plant will be operated using renewable hydrogen with syngas produced from waste and metallurgical gases.

[Hydrogen will be the 'only viable economic choice for zero-emission long-haul trucking': US freight body – Hydrogen Insight](#)

A new report titled “[Hydrogen Trucks: Long Haul’s Future?](#)” by the North American Council for Freight Efficiency finds that both battery electric and hydrogen trucks are required for zero-emission road freight in North America, with hydrogen trucks primarily used for long haul transportation. A chart entitled Optimum Duty Cycle Sweet Spot suggests that battery electric trucks are ideal for payloads of up to 43,000 lbs and 250 miles, while hydrogen vehicles would be suitable for longer journeys with payloads of more than 24,000 lbs. The study also finds that the cost of hydrogen production, transportation storage and dispensing will not be cost competitive with diesel without significant assistance from tax credits and other subsidy mechanisms.

Fossil Fuels

[Iberdrola sells \\$6 billion of power assets in Mexico and pivots to the U.S. – Energy Live](#)

Iberdrola is selling the bulk of its Mexican power generating assets to a state-backed fund for \$6 billion, using the proceeds to accelerate its investments in the U.S. and Europe. Mexico Infrastructure Partners, a fund run by a private asset manager but financed by the government, will take control of 13 combined cycle generation plants (8,436 MW) and one onshore wind farm (103 MW), subject to final details and approvals. The plants involved in the agreement include Monterrey I and II, Altamira III and IV, Altamira V, Escobedo, La Laguna, Tamazunchale I, Baja California, Topolobampo II and Topolobampo III, as well as the wind asset La Venta III. The deal will allow Iberdrola to continue to be the main private generator of renewable energy in Mexico while aligning with its decarbonization commitments.

Thank you.

Regards,
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