

BEI Energy News

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

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Top news

Brilliant Energy Institute Energy News

[BEI Executive Director's provides a country report in Nuclear Engineering International Magazine](#)

On the eve of a federal budget rumoured to have a strong bent toward investment in clean energy transition, Brilliant Energy Institute Executive Director Jacquie Hoornweg examines how the country's willingness to embrace a small modular reactor strategy, coupled with its historical expertise and experience with Canada's own CANDU technology, came together at a serendipitous moment, as the world seeks dependable and scalable low-carbon technologies to decarbonize energy systems.

Ontario Tech Energy News

[Dr. Sheldon Williamson and the STEER Group present at annual Institute of Electrical and Electronics Engineers conference – BEI LinkedIn](#)

Last week, Dr. Sheldon Williamson and his Smart Transportation Electrification and Energy Research Group at Ontario Tech University presented on wireless battery management and battery state estimation, at the Institute of Electrical and Electronics Engineers Applied Power Electronics Conference and Exposition. They also hosted a session on battery electric versus fuel cells.

Clean Energy Policy

[Joint Statement by President Biden and Prime Minister Trudeau – Government of Canada](#)

President Biden and Prime Minister Trudeau have released a joint statement, concluding the President's two-day visit to Ottawa. The statement emphasizes co-operation between the U.S. and Canada in areas surrounding clean energy, jobs, critical minerals and semiconductor supply chains, protection of shared waters and the Arctic, diversity and inclusion, bolstering global alliances, collective defence and security, and management of migration. Activities surrounding clean energy include the launch of a one-year Energy Transformation Task Force to increase cooperation, collaboration in green steel and aluminum, Canada's induction into the Foundational Infrastructure for Responsible Use of Small Modular Reactor Technology, and collaboration in development of zero-emission vehicle standards, charging and hydrogen refuelling infrastructure.

[Spain and IEA to host international Climate and Energy Summit in October aimed at building grand coalition to keep 1.5 C within reach – International Energy Agency](#)

The International Energy Agency (IEA) announced that they will host an international climate and energy summit in Madrid on Oct. 2, 2023, focused on the urgency of accelerating the global clean energy transition. The event will take place during the Spanish Presidency of the Council of the European Union. It will bring together energy and climate ministers, industry, finance and civil society leaders from around the world just weeks before the COP28 Climate Change Conference – with the purpose of building a grand coalition to accelerate momentum towards reaching the Paris Agreement goal of limiting global warming to 1.5 C.

[Newfoundland and Labrador continue to bet big on the offshore, despite net zero commitments drawing closer - CBC](#)

Newfoundland and Labrador released their [budget](#) on Thursday. The budget projects a surplus of \$784 million for the 2022-23 fiscal year, compared to a \$351 million deficit projected in the previous budget. The budget provides \$3.9 billion for healthcare, \$1.1 billion for infrastructure projects and more than \$140 million for housing. The government plans to spend \$50 million in the Offshore Exploration Initiative, designed to encourage oil companies to drill exploration wells and \$4.8 million to conduct a natural gas resource assessment that will help identify the volume of gas within the offshore oil reservoirs in the Jeanne d'Arc Basin. Newfoundland's seismic program, which was suspended earlier, has been provided with \$13 million. The province will spend nearly \$60 million to help homeowners, businesses and the public sector reduce greenhouse gas emissions through rebates and project funding. Around \$3 million has also be earmarked to support the transition to electric vehicles.

[Bruce Power issues an additional \\$600 million in Green Bonds – Bruce Power](#)

Bruce Power has issued \$600 million in Green Bonds as it continues to help the province and country achieve their net zero goals through clean energy projects. This latest issuance comes after Bruce Power became the first nuclear operator in the world to successfully issue Green Bonds in 2021, raising \$500 million. This was invested in accordance with Bruce Power's [Green Financing Framework](#) to finance or re-finance eligible investments associated with life extension and increasing output of existing units, both of which contribute to Canada's prosperous, clean energy future and advance its climate change objectives.

Energy Systems

Battery

[The U.S. Department of Energy & Stellantis announce the Battery Workforce Challenge – Clean Technica](#)

The U.S. Department of Energy and Stellantis announced the launch of the Battery Workforce Challenge, which includes a three-year collegiate engineering competition, vocational training, youth education in science, technology, engineering and math, and career and technical education. Starting in the fall of 2023, the Battery Workforce Challenge includes an advanced battery design and development student competition series that invites universities and vocational schools from across North America to design, build, test and integrate an advanced electric vehicle battery into a future Stellantis vehicle.

[LG Energy Solution to build new battery plant in Arizona – Clean Technica](#)

LG Energy Solution is investing in a new battery manufacturing complex in Arizona. The complex would include manufacturing facilities for cylindrical batteries for electric vehicles (EV),

with capacity of 27 GWh, and lithium-iron-phosphate pouch-type batteries for energy storage systems, with a capacity of 16 GWh. The total investment is valued at \$5.5 billion. It is the largest investment made for a standalone battery manufacturing facility in North America to date. The cylindrical battery manufacturing facility, which is expected to begin mass production in 2025, is a first for a Korean battery manufacturer investing solely in the U.S. The facility's production is mainly aimed at EV makers in North America who require high-quality, high-performance batteries to fulfill the requirements of the Inflation Reduction Act's EV tax credits.

Technologies

Nuclear

[French parliament votes for nuclear expansion plan – Nuclear Engineering International](#)

The French parliament has voted in favour of the government's nuclear investment plan with a large majority. The first reading of the bill, which focuses on the planned construction of new nuclear reactors, was approved with 402 votes in favour and 130 against. The bill simplifies the procedures for the construction of six new EPR reactors by 2035 and for studies for eight others. The new installations must be located on or near existing nuclear sites. The earlier policy of reducing the share of nuclear energy to 50 per cent from the current 70 to 75 per cent is cancelled. President Macron has said he intends to start construction of an EPR2 nuclear reactor before the end of his second five-year term, as a part of \$56 billion plan to build six new reactors.

[Ontario invests \\$6.8 million to expand McMaster's nuclear capacity – McMaster University](#)

The Ontario government announced \$6.8 million in its budget to strengthen the research capacity at the [McMaster Nuclear Reactor \(MNR\)](#), a leading supplier of medical isotopes used in breakthrough cancer treatments. The investment, spread over three years, is part of the University's \$25 million project to optimize operations of the nuclear reactor to 24 hours a day, five days per week, and increase the diversity and amount of isotopes produced. MNR is Canada's largest nuclear research reactor and has produced, processed, and distributed medical isotopes for the treatment of approximately 70,000 cancer patients every year. The added capacity will also enable more research in clean energy and small modular reactors and increase access to scarce neutron beam time for Canada's world-leading materials science programs.

Solar Energy

[EDF starts operating first solar farms in Ireland – Energy Live](#)

EDF has started operating its first three solar farms in Ireland. The facilities have been built in Kilkenny and Wexford with support from the government's Renewable Electricity Support Scheme. The Irish government has set a target to produce 8 GW of solar power by 2030. These three solar farms have a combined capacity of 17 MW, which will provide enough power for 6,000 homes.

Hydrogen

[New 1.9 GW offshore wind/green hydrogen project unveiled in Swedish Baltic – Hydrogen Insight](#)

Stockholm-based renewables developer OX2 has unveiled plans for a 1.9 GW offshore wind farm in the Swedish Baltic Sea that will produce up to 225,000 tonnes of green hydrogen annually. The Neptunus facility, about 50 km off Sweden's southeast coast, will also output about eight terawatt hours of clean electricity to the Swedish grid — enough to meet roughly 5 per cent of the country's current power needs. An environmental impact assessment will now be carried out, with a view to getting the facility active in the early 2030s.

[Germany and Denmark aim to build hydrogen pipeline between the two nations by 2028 – Hydrogen Insight](#)

Germany and Denmark have agreed to work together to build a hydrogen pipeline between the two countries by 2028 at the earliest. The pipe would send hydrogen across the land border from Jutland, western Denmark, to Schleswig-Holstein, northern Germany, according to the agreement signed in Copenhagen. The pipeline could be linked to the 2 GW Megaton green hydrogen project announced in western Denmark in January by local renewables developer GreenGo Energy, which would be powered by 4GW of wind and solar. A similar agreement was signed in January between Norway and Germany, with that pipeline due to be built by 2030.

Fossil Fuels

[Alberta Energy Regulator issues order against Obsidian Energy, saying disposal caused earthquakes – The Globe and Mail \(Paywall\)](#)

Alberta Energy Regulator has issued an order environmental protection order against Obsidian Energy for causing earthquakes with its oil sands operations in northwestern Alberta, following a study released by Stanford University that attributed the cause of the quake to the oil sand operations. The order relates to a series of quakes that rocked the Peace River region in November and March, including one of the largest ever recorded in Alberta. The [5.6-magnitude quake](#) hit in the early evening on Nov. 29, 2022, and was felt as far as 500 km away in Edmonton. Peace River is Alberta's smallest oil sands region. Deposits there are deeper than around Fort McMurray, so instead of mining them, producers use in-situ methods, in which steam or solvents are injected into the ground to recover the bitumen.

Grid Management

[Hydro One begins community engagement on proposed transmission line in Clarington to support Ontario's growing energy needs – Hydro One](#)

Hydro One has initiated a Class Environmental Assessment to build a new transmission line that can carry up to 500 kV in the Municipality of Clarington. The new line will connect Ontario Power Generation's proposed Darlington New Nuclear Project to the province's electricity grid, which will provide 300 MW of power to the community, enough to energize 300,000 homes. Hydro One has started to engage with the local community to build the new 22 km transmission line. On March 8, the company held its first Community Open House in Courtice, Ontario, to ensure residents and businesses had the opportunity to learn more about the proposed transmission line. During the session, Hydro One provided information about the environment assessment process and listened to residents who had feedback about the project.

Thank you.

Regards,
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