

BEI Energy News

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

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Top news

Ontario Tech News

[Ontario Tech designated as Moose Hide Campaign Ambassador Campus – BEI LinkedIn](#)

Ontario Tech University was recently designated as a [Moose Hide Campaign](#) Ambassador Campus. The Moose Hide Campaign is an Indigenous-led grassroots movement to engage men, boys and all Canadians in ending violence against women and children. Brilliant Energy Institute and Ontario Tech are committed to creating awareness of gender-based violence, taking preventive action to address this across the campus community and the wider community. Show your support for the initiative on May 11 for Moose Hide Campaign Day.

Energy Policy

[Netherlands plans green hydrogen import auction by early 2024 – Hydrogen Insight](#)

The Dutch government plans to host an auction to import green hydrogen or its derivatives at the end of this year or early 2024, backed by €300 million of subsidies. The tender would be held through Germany's H2Global auction platform. The ministry is formulating the key criteria for the tender, whether it would be for green hydrogen or derivatives such as green ammonia and e-methanol. The German government, which owns the platform and led its development, has so far launched three auctions worth a total of €900 million, [another for e-methanol made with green hydrogen, and another for e-SAFs](#).

Energy Systems

Buildings

[Vancouver high-rise Canada's first new commercial build to achieve net-zero status – The Globe and Mail](#)

The Stack is the first new commercial high-rise tower in Canada to be recognized officially as a net-zero emitter of greenhouse-gas-causing carbon from day one of its opening. It was built based on the standards set by the Canada Green Building Council (CAGBC) for design and operational performance. The 37-storey building measures 555,000 square-feet. and achieved full occupancy in the fourth quarter of 2022. The Stack's glass boxes are oriented to get maximum sun exposure to save on heating and lighting. The glass triple glazing, along with the working windows on lower floors, help meet CAGBC's challenge to reduce the building's thermal energy demand intensity. It was developed by Oxford Properties Group and their new net-zero projects include the Hub, a 57-storey, 1.5 million square-foot tower, set to open at 30 Bay St. in Toronto in 2025.

Electric Vehicles

[First all-electric concrete mixer in the U.K. demonstrates pathway to low-carbon logistics – Clean Technica](#)

Renault Trucks U.K. and TVS Interfleet have launched the U.K.'s first all-electric ready-mix concrete mixer, the "e-mixer." It has successfully completed a three-month trial of commercial deliveries across Birmingham for Tarmac, a construction company. It is expected to save 42 tonnes of CO₂ annually, with zero emissions per mile compared to 1.55 kilograms of CO₂ per mile for its fossil fuel equivalent. The mixer forms part of Tarmac's strategy to develop integrated low carbon logistics by offering decarbonized transport for the last mile of a construction project.

Technologies

Nuclear

[New Brunswick and Saskatchewan enhance collaboration on SMRs – World Nuclear News](#)

The governments of Saskatchewan and New Brunswick have signed a Memorandum of Understanding (MoU) to enhance cooperation on the development of small modular reactor (SMR) technologies in both Canadian provinces. This new agreement builds on an earlier MoU signed in December 2019 between New Brunswick, Ontario, and Saskatchewan to collaborate on the advancement of SMRs in Canada with Alberta joining them in April 2021. The provinces released a joint strategic plan in March 2022, outlining the path forward on the development of SMRs. The latest MoU provides the ability for SaskPower and New Brunswick Power to formally share experiences, knowledge and successes on deployment plans, supply chain development, Indigenous relations, labour market development, regulations and other areas.

[NRC starts work on regulatory framework for fusion systems – World Nuclear News](#)

The U.S. Nuclear Regulatory Commission (NRC) will base its regulatory framework for fusion energy systems on its existing process for licensing the use of by-product materials. NRC describes fusion systems as devices that contain nuclear fusion reactions as well as associated radioactive materials and supporting structures, systems and components. These systems generate electricity from the fusion of hydrogen atoms to form helium, rather than the splitting of uranium atoms. These systems fall outside the requirements to be regulated by NRC as nuclear reactors. Earlier this year, NRC staff [outlined three suggested options](#) for the licensing and regulation of fusion systems. NRC is expected to begin a "limited revision" to materials licensing regulations, including consideration of whether the revision should create a new rule category specifically for fusion energy systems, considering fusion systems that already have been licensed and are being regulated by the Agreement States, and those that may be licensed prior to the completion of the rulemaking.

Solar Energy

[Cape Town launches \\$66 million solar PV project – Clean Technica](#)

The City of Cape Town is in its final phase of a three-phase procurement plan to protect residents from the first four stages of Eskom's load-shedding within three years. The city announced that it will design, build, and operate a \$66 million solar photovoltaic (PV) plant with battery storage capable of providing up to a full stage of load-shedding protection. This is one of two projects that received support from the C40 Cities Finance Facility, which offers cities technical and financial assistance in support of a green and just transition. The Paardevlei ground mounted solar PV and battery storage project will yield up to 60 MW of renewable energy. The feasibility study will be completed by the end of 2023 and full commissioning of the plant is expected by August 2026.

Hydrogen

[Sunfire to develop industrial-scale AEM electrolyzers that produce 'cost-effective' green hydrogen – Hydrogen Insight](#)

Sunfire, a German electrolyser manufacturer, has announced plans to develop an anion-exchange membrane (AEM) electrolyser suitable for industrial-scale applications. They currently produce both pressurized-alkaline and solid-oxide electrolyzers. The company launched the Integrate project to develop and validate a new AEM electrolyser with the Fraunhofer Institute for Manufacturing Technology and Advanced Materials in Bremen, Canadian materials specialist Ionomr Innovations, the National Research Council of Canada, the Simon Fraser University in Western Canada, and the University of Alberta. The project is funded by the German Ministry of Education and Research.

[Nuclear hydrogen could be made in the U.S. for less than \\$0.50/kg – Hydrogen Insight](#)

Lazard, a French Bank, estimates upcoming tax credits will enable electrolyzers powered by atomic power to deliver hydrogen at a cheaper price than grey hydrogen. The bank's regular levelized cost of energy (LCOE) report estimated that hydrogen made with electricity sourced from nuclear power plants (pink hydrogen) could produce hydrogen at \$0.48 per kilogram using a 100 MW alkaline electrolyser, with subsidies granted under the U.S.'s Inflation Reduction Act. By comparison, subsidized green hydrogen could be produced at \$0.83 per kilogram with an alkaline electrolyser, based on average LCOE of an onshore wind plant, oversized for the purpose of electrolyser operation.

Fossil Fuels

[Tourmaline and Clean Energy announce \\$70 million joint development agreement to build CNG stations in Western Canada – Energy Now](#)

Tourmaline Oil Corp. and Clean Energy Fuels Corp. announced a \$70-million Joint Development Agreement to build and operate a network of compressed natural gas (CNG) stations along key highway corridors across Western Canada. The companies expect to construct and commission up to 20 CNG stations over the next five years, allowing heavy-duty trucks and other commercial transportation fleets that operate in the area to transition to the use of CNG. Through this initiative, around 3,000 natural gas-powered trucks could be fueled using CNG every day. This reduces around 72,800 tonnes of CO₂ equivalent usage per year. This is equivalent to removing 15,690 passenger vehicles from the road.

[Chevron seeks drilling ship to expand gas search in Eastern Mediterranean – The Globe and Mail](#)

U.S. oil major Chevron is seeking a drillship to explore for natural gas off Cyprus, Egypt, and Israel in the Eastern Mediterranean. The company and its partners already operate in these areas and is looking to accelerate the development of the Aphrodite gas field and nearly double production from the Leviathan field by 2027. They have issued a bid for a drillship in 2024 with an option to extend for several years. The development of new resources in the Eastern Mediterranean follows growing demand in Europe since Moscow's invasion of Ukraine in February 2022, which prompted a shift in Russian energy.

Carbon Capture

[Canadian CCUS policy requires further detail to support advancing projects – Energy Now](#)

Canada's 2023 budget contains additional measures to support the development of large-scale carbon capture, utilization and storage (CCS/CCUS) projects, but Canada's policy framework still requires key details to spur private-sector investment. The Knowledge Centre has delivered a [primer](#) on the federal budget that provides a detailed breakdown of the government's proposed investment tax credit. The primer finds that there remains significant uncertainty regarding how the investment tax credit may affect provincial policies and incentive programs that exist or are in development. It also notes critical gaps including the lack of long-term certainty on the cost of carbon emissions, and the need for a more robust protocol for sharing the valuable knowledge and lessons generated by major CCS projects to lower costs and improve the performance of these projects.

[U.S. bets billions on direct air capture – Energy Now](#)

The U.S. government has offered \$3.5 billion in grants to build the factories that will capture and permanently store the CO₂ and expanded a tax credit to \$180 per tonne to bolster investment in the technology. The sums involved dwarf funding available in other regions, such as Britain which pledged up to \$124 million for Direct Air Capture research and development. The U.S. government said it wants to back four hubs, and interviews with more than 20 state, federal, company and investor sources show at least nine applications have been filed in a first round, with two major Occidental Petroleum projects seen as strong contenders.

Thank you.

Regards,
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