Brilliant Energy Institute

Office of the Vice President Research and Innovation
Ontario Tech University

BEI Energy News

This update is produced twice weekly by the Brilliant Energy Institute

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Top news

Ontario Tech News

Ontario Tech celebrates its 21st birthday – BEI LinkedIn
https://www.linkedin.com/feed/update/urn:li:activity:7079506983912947713
Ontario Tech University celebrates 21 years of innovation and excellence. Ontario Tech had an exceptional year, with notable achievements that include being recognized as one of Canada's top research universities, celebrating the graduation of the first cohort from the Women for STEM program, and maintaining its position among the world's top 200 youngest universities. The university also made significant strides in advancing clean energy research through the launch of the proposed Subcritical Assembly Project, aimed at enhancing the university's high-tech nuclear facilities.

Ontario Tech's cybersecurity institute attends IAEA computer security conference – BEI LinkedIn
https://www.linkedin.com/feed/update/urn:li:activity:7078484341978247168
Ontario Tech University's Institute for Cybersecurity and Resilient Systems attended the International Conference on Computer Security in the Nuclear World, hosted by the International Atomic Energy Agency (IAEA). The institute's director, Dr. Khalil El-Khatib, showcased and learned about the Canadian expertise, contribution, and impact at an international level in this field.

Energy Policy

Newfoundland launches green transition fund using money from offshore oil sector - The Globe and Mail (Paywall)
https://www.theglobeandmail.com/business/article-newfoundland-labrador-fund-green-transition/
Newfoundland and Labrador's offshore oil sector will assist the province's transition to a green economy through the Green Transition Fund. The CAD$100 million fund, financed through the West White Rose offshore oil expansion project, aims to reduce greenhouse gas emissions. Cenovus, Suncor Energy, and Nalcor Energy have agreed

to invest in the fund as part of a restructuring deal. The annual payment into the fund starts at CAD$6 million in 2023, increasing to CAD$12 million in 2033. The fund will support projects in various sectors to transition to a green economy and help the province achieve its net-zero emissions goal by 2050.

International sustainability board issues new disclosure rules – The Globe and Mail (Paywall)
https://www.theglobeandmail.com/business/article-international-sustainability-board-issues-new-disclosure-rules/
The International Sustainability Board issued its new global sustainability reporting standards for companies, effective from the start of 2024. It aims to set a global baseline for reporting on carbon emissions and other environmental and social issues that have material impact on the financial health of companies. The new standards require disclosure of material information about sustainability-related financial, market and legal risks, reporting of important climate-related factors including risks tied to the transition to lower-carbon energy; physical damage to company assets from natural disasters and opportunities that arise from technological advances.

Canada will soon end 'inefficient' fossil fuel subsidies. But what does that mean? - CBC
https://www.cbc.ca/news/climate/canada-inefficient-fossil-fuel-subsidies-1.6885526
Canada is poised to end "inefficient fossil fuel subsidies" as part of its commitment to climate goals and renewable energy. The federal government is set to release a new policy in July, but the strength of the commitment depends on how "inefficient" and "subsidy" are defined. Environmental groups criticize Canada's high subsidies to the oil and gas industry, and the policy's impact hinges on its alignment with the Paris Agreement goals and support for the transition to renewables. While progress has been made in phasing out certain tax measures, a comprehensive definition and clear timeline are eagerly anticipated.

Energy Systems

Battery Storage

Battery storage installations expected to snowball to 400 GWh by 2030 - Renewable Energy World
https://www.renewableenergyworld.com/storage/battery-storage-installations-expected-to-snowball-to-400-gwh-by-2030-report/
Annual battery storage installations are expected to exceed 400 GWh by 2030, representing a ten-fold increase from current levels, according to Rystad Energy. This growth is driven by the increasing importance of storage in the global energy landscape. In 2022, global battery storage capacity additions grew by 60 per cent, reaching over 43 GWh, with a further 74 GWh expected this year. Government policies, such as the US Inflation Reduction Act and the European Green Deal Industrial Plan, are incentivizing investments and capacity expansion. Asia is projected to account for 58 per cent of annual battery energy storage system installations by 2030, followed by North America

and Europe. Utility-scale and residential installations will play key roles in the energy transition.

Ford qualifies for USD$9.2 billion DOE loan to build three US battery factories – Clean Technica
https://cleantechnica.com/2023/06/23/ford-qualifies-for-9-2-billion-doe-loan-to-build-3-us-battery-factories/
The US Department of Energy (DOE) Loan Program Office has conditionally approved a USD$9.2 billion loan for Blue Oval SK, a joint venture between Ford and SK On, the Seoul-based electric vehicle (EV) battery manufacturer, to build three battery factories in the US. The factories will be in Tennessee and Kentucky and are expected to create jobs for 5,000 construction workers and employ 7,500 individuals once operational. The loan supports President Biden's clean energy agenda, aiming for 50 per cent EV sales by 2030 and achieving net-zero electricity by 2035. The factories will produce 120 GWh of batteries annually for Ford and Lincoln EVs, displacing 455 million gallons of gasoline per year.

Manufacturing

Low-carbon solar certification attracts leading manufacturers - Renewable Energy World
https://www.renewableenergyworld.com/solar/low-carbon-solar-certification-attracts-leading-manufacturers/
Leading solar manufacturers Qcells, Solarge, and First Solar are pursuing the Electronic Product Environmental Assessment (EPEAT) label by the Global Electronics Council. The EPEAT for Solar ecolabel demonstrates their commitment to sustainable manufacturing and low-carbon supply chains. First Solar was the first company to have its product included in the EPEAT Photovoltaic Modules and Inverters category in 2020 and is now working to meet the new EPEAT carbon footprint criteria. The Ultra Low-Carbon Solar Alliance announced additional members, including Hemlock Semiconductor, REC Silicon, and Wacker Chemie, plan to pursue the Solar ecolabel. This collective effort aims to promote eco-friendly solar production and foster a greener future.

Technologies

Nuclear

Alabama site chosen for USNC reactor factory - World Nuclear News
https://www.world-nuclear-news.org/Articles/Alabama-site-chosen-for-USNC-reactor-factory
Ultra Safe Nuclear Corporation (USNC) has selected Gadsden, Alabama, for a USD$232 million plant to manufacture Micro-Modular Reactors (MMRs). The plant will employ 250 workers and have the capacity to produce up to 10 MMR units annually. Construction is scheduled to start next year and the facility aims to be operational by

2027. The MMR is a high-temperature gas-cooled reactor capable of generating 15 MW thermal and five MW electrical power. The selection of Gadsden highlights Alabama's reputation for innovative manufacturing operations, creating local job opportunities and reinforcing the state's economy. USNC is currently working on deployment projects in Canada and the US.

Hydrogen

'Coal-based steel will have an advantage over hydrogen-derived green steel due to EU carbon allowance scheme' - Hydrogen Insight
https://www.hydrogeninsight.com/industrial/coal-based-steel-will-have-an-advantage-over-hydrogen-derived-green-steel-due-to-eu-carbon-allowance-scheme/2-1-1474678
Sweden's green steel producer H2 Green Steel has urged the European Union (EU) to expedite reforms to its carbon trading mechanism to avoid disadvantaging the hydrogen-based green steel industry. H2 Green Steel emphasizes the need for a level playing field and equal emission allowances for near-zero emissions steel producers. The current system favors pig iron producers until 2026, when new rules will be implemented. The company also advocates for breaking up incumbent steel mills and importing hydrogen-based sponge iron from regions with better renewable resources. These reforms are crucial for the growth of the green steel industry and incentivizing decarbonization investments.

Fossil Fuels

Indigenous leadership and Canada’s low-carbon LNG featured at global industry event - Energy Now
https://energynow.ca/2023/06/indigenous-leadership-and-canadas-low-carbon-lng-featured-at-global-industry-event/
Indigenous leadership in Canadian Liquified Natural Gas (LNG) takes centre stage at LNG2023 in Vancouver, BC. Chief Crystal Smith of the Haisla Nation, owner of Cedar LNG, joins the panel on *Reconciliation and Canadian LNG: Indigenous Energy Leadership on the World Stage*. Cedar LNG, the first Indigenous majority-owned facility, aims to produce low-carbon LNG for Asia-Pacific markets. Chief Sharleen Gale of Fort Nelson First Nation and representatives from Woodfibre LNG and FortisBC are also part of the panel. The conference provides a platform for Indigenous leaders to discuss partnership and promote intergenerational expertise and wealth in their communities.

Thank you.

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