

Brilliant Energy Institute

Office of the Vice President Research and Innovation
Ontario Tech University

BEI Energy News

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BEI News

BEI and Global Partners Unite for a Net-Zero Future at Brazil Trade Mission

The Brilliant Energy Institute (BEI) team reaffirmed their commitment to a net-zero future during the Brazil Trade Mission to Durham. Representatives from ABDAN, Azmul, A TECH, Diamante Energia, INB, and Curtiss-Wright Nuclear Canada joined the delegation to tour Ontario Tech University's nuclear labs and discuss Canada's leadership in nuclear energy. By fostering international collaboration and sharing expertise with these companies, BEI aims to expand the industry's role in sustainable development, contributing to global efforts to reduce emissions and achieve climate goals.

OTU News

Bruce Power expands partnership with Ontario Tech University through generous capital investment - OTU News

<https://news.ontariotechu.ca/archives/2024/05/bruce-power-expands-partnership-with-ontario-tech-university-through-generous-capital-investment.php>

The Bruce Power Thermal Hydraulics Laboratory at Ontario Tech University's Energy Research Centre was renamed in honor of Bruce Power during a ceremony on May 7, 2024. With a generous \$250,000 donation, Bruce Power supports advanced nuclear energy research, emphasizing safety and reliability. This investment aligns with Ontario Tech's 'tech with a conscience' ethos, promoting ethical technological advancement and reinforcing the partnership between Bruce Power and Ontario Tech.

Energy Policy

TransAlta scraps wind farm project as energy market changes loom for Alberta - CBC

<https://www.cbc.ca/news/canada/calgary/transalta-alberta-calgary-renewable-energy-1.7193578>

TransAlta, a power producer based in Alberta, has recently taken action in response to provincial regulations. These regulations, introduced in February, include a 35-kilometre buffer around protected viewsapes and other restrictions impacting renewable energy projects. As a result, TransAlta has cancelled the Riplinger wind farm project near Cardston, which aimed to generate 300 MW by 2027. The company has paused three other energy initiatives: the 180 MW WaterCharger battery facility near Cochrane, the 99 MW Tempest wind farm near Stirling, and the 44 MW Pinnacle generator near Edmonton. TransAlta has clarified that these projects are on hold pending further regulatory clarification regarding market structures.

Building Infrastructure

SaskPower announces investments totalling \$1.6 billion in electricity system

<https://globalnews.ca/news/10480103/saskpower-announces-investments-totalling-1-6b-in-electricity-system/>

SaskPower will invest \$1.6 billion in its electricity system for the 2024-25 fiscal year, increasing its budget by \$433 million from last year. This funding will focus on enhancing the grid's reliability, modernizing infrastructure, and reducing carbon emissions. Projects include the construction of the Aspen Power Station and the commissioning of the Great Plains Power Station. The company will introduce the province's first battery energy storage system and expand renewable energy with the Bekevar Wind Energy Project. These efforts support SaskPower's commitment to a clean energy transition.

Battery Storage

Ontario Completes Largest Battery Storage Procurement in Canada to Meet Growing Electricity Demand - Ontario News

<https://news.ontario.ca/en/release/1004567/ontario-completes-largest-battery-storage-procurement-in-canada-to-meet-growing-electricity-demand>

The Ontario government has completed Canada's largest battery storage procurement to meet the province's growing energy needs through 2030. The procurement secured 2,195 megawatts (MW) of capacity, including 1,784 MW of clean energy storage across ten projects ranging from 9 to 390 MW. Combined with previous procurements and the Oneida Battery Storage Facility, Ontario will have 26 storage facilities totaling 2,916 MW. The latest procurement secured 411 MW of natural gas and biogas generation to ensure reliability. The new resources are expected to be operational by 2028 to meet the projected 60 per cent increase in electricity demand over the next 25 years.

Solar Energy

More and faster: Electricity from clean sources reaches 30 per cent of global total - National Post

<https://nationalpost.com/pmnl/news-pmnl/more-and-faster-electricity-from-clean-sources-reaches-30-of-global-total>

In 2023, renewable energy sources like solar and wind accounted for 30 per cent of global electricity production, marking a record high. Despite hydroelectric dams being the primary renewable source, droughts caused a five-year low in hydroelectric output. Solar energy remained the leading new clean energy source, outpacing coal additions for the 19th consecutive year. China led in renewable capacity additions and contributed significantly to global coal generation. Fossil fuels dominate electricity production, resulting in a one per cent increase in global power sector emissions. Analysts forecast further renewable energy adoption in 2024, potentially reducing reliance on fossil fuels.

UOttawa researchers discover way to boost solar panel energy - City News

<https://ottawa.citynews.ca/2024/05/07/uottawa-researchers-discover-way-to-boost-solar-panel-energy/>

University of Ottawa researchers have discovered a method to enhance the efficiency of solar panels by incorporating artificial ground reflectors. Published in Progress in Photovoltaics journal, the study demonstrates how this innovation can significantly improve energy production and efficiency, making solar projects more economically viable, especially in regions like Canada where snow cover persists for several months annually. Lead author Mandy Lewis highlights the importance of maximizing solar energy production in densely populated areas, emphasizing the benefits of reflective ground covers studied in collaboration with the National Renewable Energy Laboratory. The research shows that placing highly reflective surfaces directly under solar panels can increase energy output by up to 4.5 per cent, contributing to the global transition to zero-emission power sources.

Fossil Fuels

US's largest public utility ignores warnings in moving forward with new natural gas plant

<https://nationalpost.com/pmnl/news-pmnl/uss-largest-public-utility-ignores-warnings-in-moving-forward-with-new-natural-gas-plant>

The Tennessee Valley Authority proceeds with plans for a new natural gas plant in Tennessee despite concerns from the Environmental Protection Agency about the project's compliance with federal law. The decision comes amid calls for increased investment in renewables and a recent protest by environmental groups. Despite warnings and requests for a re-evaluation, TVA opts to move forward with the gas plant, citing time constraints and dismissing recent shifts in the energy sector towards renewables. Critics argue for a greater focus on solar energy and battery storage, highlighting successful examples in other regions.

Grid Management

Will Stewart: The lasting legacy of Mike Harris' energy deregulation – National Post

<https://nationalpost.com/opinion/the-lasting-legacy-of-mike-harris-energy-deregulation>

Will Stewart reflects on the transformative energy market reforms initiated during Mike Harris' tenure as premier of Ontario. Stewart highlights the challenges inherited by Harris, including an overcapacity electricity system and significant public debt. Under Harris, Ontario embarked on restructuring its electricity sector, breaking up Ontario Hydro and ushering in competition across generation, transmission, and distribution. Despite initial successes, such as capping electricity prices, challenges emerged, particularly in the retail market, leading to political backlash. Nevertheless, Harris's legacy endures, shaping Ontario's market-driven electricity system and facilitating successful public-private partnerships, ultimately making Ontario's grid one of the cleanest globally.

Indigenous and Community Engagement

Government of Canada Releases New Report Showing the Impacts of Climate Change and Necessity of Indigenous-Led Climate Change Adaptation - NRCAN

<https://www.canada.ca/en/natural-resources-canada/news/2024/05/government-of-canada-releases-new-report-showing-the-impacts-of-climate-change-and-necessity-of-indigenous-led-climate-change-adaptation.html>

The *For Our Future: Indigenous Resilience* Report underscores that Indigenous-led climate action and the integration of Indigenous Knowledge Systems are critical in mitigating the severe impacts of climate change. Released by the Government of Canada, this report draws from Indigenous knowledge and perspectives to highlight the disproportionate effects of climate change on First Nations, Inuit, and Métis communities while emphasizing their pivotal role in leading adaptation strategies. It forms part of the Canada in a Changing Climate assessment, aligning with the federal National Adaptation Strategy.

Do you have any milestones, events, or news updates to share with the energy community? Email your submission to BrilliantEnergy@ontariotechu.ca for consideration in an upcoming edition.

Thank you.

The Brilliant Energy Institute news team

brilliantenergyinstitute.ca

(With a little help from ChatGPT)