Brilliant Energy Institute

Office of the Vice President Research and Innovation Ontario Tech University

BEI Energy News

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BEI and Ontario Tech News

Ontario Tech and BEI at the Women in Nuclear Canada annual conference

https://www.linkedin.com/feed/update/urn:li:activity:7120041513899761664

Thank you to Women in Nuclear Canada for including the Brilliant Energy Institute and Ontario Tech University in this year's lineup of speakers and for an incredible learning and networking experience. BEI Executive Director Jacquie Hoornweg spoke yesterday on the Role of Reputation on the Path to Net Zero, while Professor Akira Tokuhiro shared the stage with other recognized WiN allies who have empowered women in the nuclear sector. Ontario Tech's Director of Philanthropy Yvonne Stefanin, also spoke about Ontario Tech's growing Women in STEM program. If you happen to be at the conference, you can still drop by the Ontario Tech booth to see the multi-faceted nuclear expertise, education, training and research presence within Ontario Tech!

Energy Policy

Four new members are joining the Net-Zero Advisory Body

https://www.newswire.ca/news-releases/four-new-members-are-joining-the-netzero-advisory-body-871964157.html

Four new members have joined Canada's Net-Zero Advisory Body to help the country reach its climate goals. Announced by Minister Steven Guilbeault, they'll advise on reducing emissions effectively. The team, diverse in experience, will play a key role in shaping Canada's green future, Guilbeault, says. They'll focus on actionable steps for broader climate strategies, including the 2030 emissions reduction target. Their insights will influence policies ensuring Canada is on track to hit net-zero by 2050. New members are:

- Dr. Louise Comeau, Iris Communications, and Senior Advisor, Re.Climate, for a term of two years
- Dr. Anne de Bortoli, Carbon Neutrality Research Lead, Polytechnique Montréal, for a term of three years
- Robert Hornung, Independent Consultant, for a term of three years
- Shianne McKay, Senior Project Manager, Centre for Indigenous Environmental Resources, for a term of two years

Nuclear

The nuclear dispute driving a wedge between France and Germany

https://www.ft.com/content/b1dbd7b4-d8b9-45eb-bd18-4976f7c9af5e (Paywall)

France and Germany are at odds over nuclear power. France sees it as a key to cutting emissions, but Germany, which made a decision to phase out its use of nuclear power after the Fukushima event in 2011, prefers focusing on renewables. This disagreement is stalling EU's clean energy plans and complicating the European Union's strategy to reduce reliance on Russian gas. The debate is also about money and competition. Lower energy costs from nuclear power could give France an economic edge. Leaders are trying to find common ground, but it's a tough challenge.

Energy Storage

The transatlantic battery battle takes shape

https://www.renewableenergyworld.com/storage/the-transatlantic-battery-battletakes-shape/

The U.S. and EU are racing to expand their battery industries, fueled by the Inflation Reduction Act and the Green Deal Industrial Plan respectively. The U.S. approach centres on tax credits for domestic production, sparking a boom in battery factories. In contrast, the EU is streamlining processes and upskilling workers to boost its battery value chain. However, U.S. subsidies pose a threat to Europe's battery production capacity. Both regions are navigating raw material costs and safety challenges, while exploring battery recycling to enhance supply chains. A South Carolina factory, part of this expansion, is set to begin operations soon, backed by significant funding and policy support. The plant underscores a larger trans-Atlantic push to secure and strengthen regional battery supply chains.

Solar Energy

Solar power fuelling Jordan's Za'atari refugee camp

https://energydigital.com/articles/solar-power-fuelling-jordans-zaatari-refugeecamp

The Za'atari camp in Jordan now houses the largest solar field in a refugee camp, built by the UN Refugee Agency. Home to 80,000 Syrian refugees, the camp's solar field is funded by Germany's KfW Development Bank. The plant reduces CO2 emissions and offers annual savings of US\$5.5m. It's also connected to Jordan's grid, aiding local communities. The 12.9 MW plant increases energy access for camp residents, supporting education and safety. The project, active since 2017, exemplifies sustainable humanitarian aid.

Wind

Offshore wind industry in Atlantic Canada could make region energy powerhouse: report

https://www.cbc.ca/news/canada/nova-scotia/offshore-wind-industry-atlanticcanada-net-zero-emission-1.6996162

A recent report by the Public Policy Forum suggests Atlantic Canada has the potential to become a leader in renewable energy through offshore wind farms. The shallow waters off Nova Scotia's Sable Island could house 1,000 turbines, generating more power than the region currently consumes. Canada lags behind in using wind energy, with countries like the UK and China advancing in this field. There is a challenge of finding a market due to local low demand but reports indicate federal involvement could mitigate this. Completion of the Atlantic Loop, a hydroelectric transmission project, is deemed essential for the success of offshore wind power in the area. However, there's still a need for federal support and a concrete plan for moving forward.

Hydrogen

US Makes \$7 Billion available for Hydrogen Hubs

https://cleantechnica.com/2023/10/16/us-makes-7-billion-available-for-hydrogenhubs/

The U.S. government is investing \$7 billion in seven centres for developing clean hydrogen energy, spread across the country. These centres will make and test hydrogen as a clean energy source, aiming to reduce pollution and create jobs. The funding will be given at each milestone, based on the success of each centre's plans. These projects are a part of the government's effort to reach its climate goals by 2030. Each centre will start their projects once they receive approval for their plans and necessary funding.

World first as Siemens Energy burns 100 per cent hydrogen in industrial gas turbine

https://www.hydrogeninsight.com/power/world-first-as-siemens-energy-burns-100-hydrogen-in-industrial-gas-turbine/2-1-1535850

Siemens Energy has successfully used 100 per cent hydrogen to fuel a gas turbine in France, marking a world first in clean energy development. The trial, part of the Hyflexpower project, used green hydrogen produced by renewable energy. This breakthrough opens doors for large-scale clean energy storage and generation, offering a path to reduce greenhouse gas emissions. Siemens' SGT-400 turbine, central to this achievement, can operate on both natural gas and hydrogen. There's potential for widespread use in various industries aiming for net-zero emissions. Further developments and scaling of this technology are anticipated. Funding and operational commencement details are yet to be announced.

Fossil Fuels

Tourmaline Oil announces deal to buy Bonavista Energy worth \$1.45 billion

https://www.cbc.ca/news/canada/calgary/alberta-calgary-energy-businesstourmaline-bonavista-1.6997259

Tourmaline Oil Corp. has announced a \$1.45 billion deal to acquire Bonavista Energy Corp. The payment will be split equally between cash and shares. This acquisition aligns with Tourmaline's expansion, particularly strengthening its presence in Alberta's Deep Basin. The deal is expected to boost Tourmaline's oil production significantly.

Shareholders are set to benefit from an increased base dividend and a special dividend coming this November. By the end of 2023, the company plans to produce over 600,000 barrels of oil equivalent per day. The acquisition, pending final approvals, is slated to close in late November.

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

Thank you.

The Brilliant Energy Institute news team brilliantenergyinstitute.ca (With a little help from ChatGPT)