

Brilliant Energy Institute

Office of the Vice President Research and Innovation
Ontario Tech University

BEI Energy News

Produced weekly

May 24, 2024

BEI News

Join us on June 10 2024, to explore the history of Oppenheimer and the intersection of history, cinema, and the nuclear sector as we discuss the intricacies of mythmaking and its impact on our perceptions of nuclear science and technology.

Building Infrastructure

Eastern Ontario gas, battery projects get approvals to go ahead

<https://www.cbc.ca/news/canada/ottawa/eastern-ontario-gas-battery-projects-get-approvals-to-go-ahead-1.7206757>

~~The Independent Electricity System Operator (IESO) has approved two major energy projects in eastern Ontario. Two significant energy projects in eastern Ontario have been approved by the Independent Electricity System Operator (IESO).~~ Edwardsburgh-Cardinal will host Canada's largest battery energy storage system with a capacity of 390 megawatts, while Napanee will see the addition of a 430-megawatt turbine at its natural gas generating station. The Edwardsburgh-Cardinal project, initiated by Potentia Renewables, aims to support ~~potential~~ electric vehicle manufacturing and will involve consultations with the Algonquins of Pikwakanagan First Nation. Both projects ~~are expected to be~~ will be operational by 2028, ensuring Ontario meets its energy demands and progresses toward a net-zero future.

Climate-resilient designs future-proof buildings in Canadian cities

<https://www.theglobeandmail.com/business/article-climate-resilient-designs-future-proof-buildings-in-canadian-cities/>

Canadian cities are adapting building designs to withstand climate change, driven by record wildfires and floods. Ryan Zizzo of Mantle Developments emphasizes the need for resilient infrastructure, as seen in Toronto's LEED-certified YMCA facilities with efficient systems and green roofs. Cities like Montreal are implementing "sponge parks" to manage stormwater. The construction industry, led by firms ~~including like~~ PCL Construction, is innovating with climate risk assessments and resilient designs, such as Edmonton's net-zero Windermere Fire Station. National building codes ~~are set to~~ will

include climate resiliency by 2026, with current guidelines and ESG goals propelling immediate progress.

Boeing's \$240M investment in Quebec lands on drones, greener planes

https://www.thestar.com/business/boeings-240m-investment-in-quebec-lands-on-drones-greener-planes/article_2a0e8cbb-3a0a-5a56-9d38-b2d208c485a4.html

Boeing Co. has committed \$240 million to a new aerospace innovation zone in ~~the~~ Montreal ~~area~~, part of a \$415 million investment from the private sector and Quebec government. The initiative ~~aims to position~~ positions Quebec as a leader in drone and green aircraft development. This investment also fulfills part of Boeing's obligations under a federal surveillance plane contract. The innovation zone will include three hubs dedicated to advanced aerospace research, specifically focusing on electric vertical take-off and landing (eVTOL) aircraft and hydrogen-powered aviation. ~~The innovation zone will feature three hubs focused on advanced aerospace research, including electric vertical take-off and landing aircraft and hydrogen-powered aviation.~~ Major industry players like Airbus and Bombardier are also participating in the project.

The Government of Canada, CUTRIC, and the City of Sarnia to support a planning project to transition to zero emissions public transit buses

<https://www.canada.ca/en/office-infrastructure/news/2024/05/the-government-of-canada-cutric-and-the-city-of-sarnia-to-support-a-planning-project-to-transition-to-zero-emissions-public-transit-buses.html>

The Government of Canada, the Canadian Urban Transit Research and Innovation Consortium (CUTRIC), and the City of Sarnia announced a joint investment of \$188,116 to develop a strategy for transitioning Sarnia's public transit fleet to zero-emission buses. This project supports Sarnia's Climate Change Action Plan and aims to explore the economic, technological, and environmental benefits of switching to electric vehicle fleets. ~~This project aligns with Sarnia's Climate Change Action Plan and aims to explore the economic, technological, and environmental benefits of fleet electrification.~~ The federal government is contributing \$150,493 through the Zero Emission Transit Fund, with Sarnia adding \$37,623. This initiative supports Canada's broader goals for reducing greenhouse gas emissions and advancing sustainable transportation.

Nuclear

IAEA's Grossi opens International Conference on Nuclear Security 2024

<https://www.neimagazine.com/news/iaeas-grossi-opens-international-conference-on-nuclear-security-2024/?cf-view>

IAEA Director General Rafael Mariano Grossi opened the International Conference on Nuclear Security 2024 (ICONS-2024) with a tribute to the late President Ebrahim Raisi of Iran. Grossi highlighted the dual role of technological advancements like AI in enhancing and threatening nuclear security. The conference, focusing on "Shaping the Future," includes policy and technical sessions on nuclear security issues. Grossi emphasized the growing role of nuclear technology in combating climate change and the importance of a ~~strong~~ global nuclear security regime. ICONS-2024 aims to foster international collaboration and address evolving security threats.

New Rolls-Royce facility to produce SMR prototype modules

<https://www.neimagazine.com/news/advanced-reactors-fusion/new-rolls-royce-facility-to-produce-smr-prototype-modules/?cf-view>

Rolls-Royce SMR is establishing a facility in Sheffield, UK, to manufacture and test prototype modules for small modular reactors (SMRs). The £2.7m first phase is part of a £15m package, ~~located~~ at the University of Sheffield's Advanced Manufacturing Research Centre. This facility aims to refine production and testing methods, reducing risks and ensuring delivery certainty. Rolls-Royce SMR's design, currently under Generic Design Assessment in the UK, features a modular approach to streamline construction and integrate with industrial processes. A final investment decision is anticipated by 2029.

Fossil Fuels

Suncor moves on gas station plans, deciding which to renovate and which to sell

<https://www.theglobeandmail.com/business/article-suncor-moves-on-gas-station-plans-deciding-which-to-renovate-and-which/>

Suncor Energy Inc. is evaluating its 1,800 Petro-Canada gas stations to determine which to renovate and ~~which to~~ sell, aiming to transform 20% of its network by 2026. This strategy ~~aims to~~ will generate \$200 million in marginal growth by expanding restaurant offerings and rebranding over 200 Canadian Tire gas stations. Underperforming stations will be sold at a rate of about 10 per year. This move follows improvements under CEO Rich Kruger and aligns with activist hedge fund Elliott Investment Management LP's interests, which is satisfied with Suncor's fiscal progress and retains a significant investment in the company.

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
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(With a little help from ChatGPT)