

Brilliant Energy Institute

Office of the Vice President Research and Innovation

Ontario Tech University

BEI Energy News

Weekly newsletter

October 18, 2024

Top News

Nuclear

Canada allows 4 units at the Pickering nuclear plant to operate until late 2026 - Enerdata

<https://www.enerdata.net/publications/daily-energy-news/canada-allows-4-units-pickering-nuclear-plant-operate-until-late-2026.html>

The Canadian Nuclear Safety Commission has approved Ontario Power Generation (OPG) to continue operating four reactors—Units 5 to 8—at the Pickering nuclear plant until December 2026. These reactors will generate two gigawatts of electricity, enough to power two million homes. While some of Pickering's older reactors are being decommissioned, OPG plans to refurbish these units after 2026, underscoring the plant's ongoing role in Ontario's energy mix. With nuclear power contributing 14 per cent of Canada's electricity as of 2023, the extension highlights the importance of nuclear energy in meeting Ontario's energy needs.

New nuclear clean energy agreement with Kairos Power - Google

<https://www.utilitydive.com/news/google-kairos-power-advanced-nuclear-reactor-data-center-electricity-demand-ai/729876/#:~:text=The%20master%20development%20agreement%20has,additional%20power%20plants%20through%202035>

Google has partnered with Kairos Power to develop and operate 500 MW of advanced nuclear reactors, with the first slated to come online by 2030 and the rest by 2035, supporting the energy needs of Google's data centers. The molten salt-cooled reactors will provide round-the-clock, carbon-free power, helping Google achieve its goal of carbon neutrality by 2030 while meeting the rising electricity demand driven by AI technologies. This agreement highlights the growing role of nuclear power in decarbonizing grids and aligns with industry trends, as tech giants like Microsoft also secure nuclear energy to power their operations.

Energy Policy

Canada Announces \$500 Million for Clean Energy Projects - energynews

<https://energynews.pro/en/canada-announces-500-million-for-clean-energy-projects/>

Canada has announced a new \$500 million investment in the Smart Renewables and Electrification Pathways (SREPs) program, bringing the total funding to \$4.5 billion to accelerate the country's shift to clean energy. This boost aims to modernize infrastructure, improve grid reliability, and integrate new renewable sources, meeting rising electricity demand driven by data centers and economic growth. With 72 projects approved since 2021, the initiative

promises to power 700,000 homes annually and cut 3.1 megatons of CO2 emissions. The government is also launching new sustainable investment guidelines and mandating climate-related disclosures to attract private capital, underscoring the need for public-private collaboration to meet Canada's ambitious carbon-neutral goals.

Canada Raises \$2 Billion in Green Bond Reopening, First to Include Nuclear Energy Expenditures - ESG News

<https://esgnews.com/canada-raises-2-billion-in-green-bond-reopening-first-to-include-nuclear-energy-expenditures/>

Canada has raised an additional \$2 billion through the re-opening of its 10-year green bond, becoming the first country to include certain nuclear energy expenditures in a green bond framework. This bold move reflects Canada's push toward sustainable finance and underscores the role of nuclear energy in achieving net-zero emissions by 2050. With strong demand from environmentally responsible investors—who made up 53 per cent of buyers—the bond issuance signals confidence in Canada's economic strategy and commitment to climate goals. As part of broader efforts, the government is also developing voluntary sustainable investment guidelines to attract private capital and advance the clean energy transition.

Alberta government proposing additional restrictions on wind and solar energy - CBC

<https://www.cbc.ca/news/canada/calgary/danielle-smith-alberta-ruiping-luo-ucp-renewables-wind-1.7351877>

The Alberta government is proposing stricter regulations on wind and solar projects, citing environmental protection, but critics argue the move targets renewables unfairly. These new rules would prohibit renewable developments near scenic areas, parks, and prime agricultural land, with additional restrictions on grasslands and irrigated areas under consideration. Conservationists warn the plan could block nearly 40 per cent of the province from renewable projects, while oil and gas operations remain largely unaffected. As Alberta finalizes these policies by the end of 2024, questions arise about whether the focus is on environmental protection or limiting renewable energy growth.

The Double-Edged Sword of AI in the Energy Sector - OilPrice.com

<https://oilprice.com/Energy/General/The-Double-Edged-Sword-of-AI-in-the-Energy-Sector.html>

AI's explosive growth is driving a surge in energy consumption, threatening the stability of power grids and complicating global decarbonization efforts, with projections suggesting AI alone could consume 3.5 per cent of global energy by 2030. However, AI also offers game-changing solutions, from managing smart grids and renewable energy flows to advancing battery storage technology and improving electric vehicle energy systems. While the potential to revolutionize energy infrastructure is immense, the risks—such as runaway consumption, cybersecurity vulnerabilities, and failure under extreme conditions—underscore the need for thoughtful, strategic AI integration.

Edmonton makes clean energy retrofit program permanent - CTV News

<https://edmonton.ctvnews.ca/edmonton-makes-clean-energy-retrofit-program-permanent-1.7071702>

Edmonton is making its Clean Energy Improvement Program (CEIP) permanent, providing financing to help homeowners and businesses install solar panels, upgrade insulation, and improve their heating and cooling systems. Launching on October 17, the program, initially funded with \$20 million, allows property owners to repay costs through their taxes over 20 years, supporting the city's goal of carbon neutrality by 2050. Mayor Amarjeet Sohi highlighted the initiative's dual impact—reducing emissions while creating jobs and boosting prosperity. Following successful pilot runs, the city expects strong participation but will also incur annual operational costs, including a \$400,000 fee for administration.

Upcoming Events

Ontario Sustainable Energy Association New Green Energy Doors Open 2024

The Ontario Sustainable Energy Association (OSEA) advocates for sustainable energy growth in Ontario by supporting businesses, green technologies, and clean energy solutions tailored to the province's diverse needs. It focuses on reducing GHGs, advancing innovations like hydrogen fuel cells and biomass, and promoting energy exports to drive economic growth and a low-carbon future. OSEA is hosting an open-door event on Thursday, November 28 with keynote speakers Bob Willard – Sustainable Advantage, Giselle Di Grandis – Hydro One Network, and Ian London – Canadian Critical Minerals.

For more information, visit: <https://ontario-sea.org/events/#id=106&wid=1001&cid=1957>

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)