Brilliant Energy Institute

Office of the Vice President Research and Innovation Ontario Tech University

BEI Energy News

Produced twice weekly

Oct. 27, 2023

Energy Policy

UN warns world on brink of environmental 'tipping points' that could cause irreversible damage - Globe and Mail (Paywall)

https://www.theglobeandmail.com/world/article-un-warns-world-on-brink-of-environmental-tipping-points-that-could/

The Institute for Environment and Human Security at the United Nations has issued a report sounding the alarm. It emphasizes that the world is approaching critical environmental "tipping points" with potential to disrupt vital systems. This is primarily attributed to the impacts of climate change and unsustainable resource consumption. The report outlines six significant concerns, including accelerated species extinctions, declining groundwater levels, and glacial melt. Additionally, it highlights the issue of space debris jeopardizing our orbital environment and escalating insurance costs due to worsening weather events. The report underscores the imperative for swift action in addressing these pressing environmental challenges.

Canada needs to move faster than the rest of the world on renewable energy: Wilkinson - Toronto Star

https://www.thestar.com/news/canada/canada-needs-to-move-faster-than-the-rest-of-the-world-on-renewable-energy-wilkinson/article_e9faa068-0074-5660-94e4-14ae71854562.html

The Government of Canada is paying attention to a recent report from the International Energy Agency. This report predicts that demand for fossil fuels will decrease within seven years, even without new climate policies. It also says that renewable energy, like solar power, will provide nearly half of the world's electricity by 2030. To secure Canada's economic future, the government stresses the importance of investing in clean technology. China is already a major player in clean technology, and Canada's oil and gas industry must speed up efforts to reduce emissions to stay competitive.

Environment Minister Steven Guilbeault plans to set limits on emissions from oil and gas production to meet 2030 greenhouse gas targets, in line with the Canada Energy Regulator's recommendations.

Nuclear

Low-level waste recycling facility opens in Ontario - World Nuclear News

https://www.world-nuclear-news.org/Articles/Low-level-waste-recycling-facility-opens-in-Ontari

Laurentis Energy Partners, a subsidiary of Ontario Power Generation, has opened the Western Clean Energy Sorting & Recycling Facility (WCSR) in Kincardine, Ontario. The WCSR facility, covering 42,000 square feet, is dedicated to sorting and recycling low-level radioactive waste from OPG's nuclear power plants. The facility, located near OPG's NSS Western Waste Management Facility, employs about 25 people and was built through a partnership with Dancor Construction Ltd and licensing support from EnergySolutions Canada. This effort aims to reduce waste, cut decommissioning costs, and support OPG's environmental sustainability goals outlined in their Climate Change Plan.

Commission renews Cameco Corporation's licences for the Key Lake Operation, McArthur River Operation and Rabbit Lake Operation - CNSC

https://www.canada.ca/en/nuclear-safety-commission/news/2023/10/commission-renews-cameco-corporations-licences-for-the-key-lake-operation-mcarthur-river-operation-and-rabbit-lake-operation.html

The Canadian Nuclear Safety Commission (CNSC) has extended Cameco Corporation's licenses for three operations. Key Lake's uranium mill license was renewed for 20 years, as was McArthur River's uranium mine license, while Rabbit Lake's uranium mine and mill license was extended for 15 years. These renewals permit Cameco to continue operating in northern Saskatchewan, within Indigenous territories. The decision followed a public hearing in June 2023. Participant funding was allocated to support Indigenous Nations and other stakeholders participating in the process. The Commission reaffirmed Cameco's qualifications and commitment to environmental and safety standards, and no changes were made to the existing license terms and conditions.

Indigenous and Community Engagement

McLeod Lake Indian Band signs with province, regulatory agency to lead \$7B clean energy project - CBC

https://www.cbc.ca/news/canada/british-columbia/low-carbon-energy-projects-planned-by-northern-b-c-first-nation-1.7008062

The McLeod Lake Indian Band, in collaboration with British Columbia and the B.C. Energy Regulator, has inked a significant agreement for a substantial \$7 billion clean energy venture. The initiative begins with the development of a hydrogen production facility and the extraction of valuable substances from natural gas pipelines. This project is anticipated to create up to 2,000 construction jobs and 500 permanent positions, accessible to all British Columbia residents. Construction may commence within 16 to 24 months, and it stands out as a departure from traditional Impact Benefit Agreements. Its primary aim is to optimize natural gas utilization while curbing emissions, benefiting both the McLeod Lake Indian Band and the local community.

Geothermal Energy

Canada Growth Fund invests \$90M in Calgary geothermal company – Toronto Star (Paywall)

https://www.thestar.com/business/canada-growth-fund-invests-90m-in-calgary-geothermal-company/article 4b88bed7-bfb2-5798-9034-0ba4dee77b35.html

Eavor Technologies Inc., a Calgary-based geothermal energy company, has secured \$90 million in Series B preferred equity from the Canada Growth Fund, a federal public investment vehicle with a \$15-billion budget. This funding will support Eavor in expanding its proprietary closed-loop geothermal system for clean baseload heat and power. The Canada Growth Fund, established by the Government of Canada in the 2023 federal budget, focuses on advancing Canadian clean technology businesses at the commercialization stage, addressing the liquidity gap in this market.

Fossil Fuels

With growth in clean energy 'unstoppable,' fossil fuels will peak by 2030, energy agency says - CBC

https://www.cbc.ca/news/climate/iea-report-world-energy-outlook-2023-1.7005194

The recently published report by the International Energy Agency (IEA), *World Energy Outlook 2023* provides a comprehensive overview of anticipated changes in the global energy sector over the next decade. According to the report's findings, renewable energy sources are projected to play a prominent role, contributing to nearly 50 per cent of the world's electricity supply. This transition also includes a substantial increase in the adoption of electric vehicles, expected to grow tenfold, and the ascendancy of electric heating systems over fossil fuel boilers. Furthermore, the report highlights a significant shift in investment patterns, with three times more funding directed towards offshore wind projects compared to coal and gas power plants, and solar energy emerging as a leading source that could surpass the entire U.S. power system in generation capacity. The report also suggests that fossil fuel demand may reach its peak during this decade.

Solar

182 MW Canadian solar portfolio under construction - Renewable Energy World

https://www.renewableenergyworld.com/solar/ci/182-mw-canadian-solar-portfolio-under-construction/

FLEXRACK by Qcells and Alltrade Industrial Contractors have joined forces for a substantial 182 MW solar project in Canada. This project features two solar installations in Alberta, one in Scotford and the other in Aldersyde. Scotford is slated to become Canada's largest behind-the-meter solar project at 81 MW. Meanwhile, the Saddlebrook project, with a capacity of 101 MW, introduces a unique flow battery energy storage system, the first of its kind in North America. These endeavors are expected to have a notable impact in reducing greenhouse gas emissions and are on track for completion by late 2023.

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)