Brilliant Energy Institute

Office of the Vice President Research and Innovation
Ontario Tech University

BEI Energy News

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Brilliant Energy Institute News

A new clean energy workforce toolkit hit our desk, this week

https://www.linkedin.com/feed/update/urn:li:activity:7112049995729571840

At BEI and Ontario Tech University, we are working with partners to develop a future workforce that is highly skilled and reflects equity, diversity and inclusion principles. So, we were excited to discover the *Clean Energy Economy and Workforce Preparation Toolkit* produced through the Clean Energy Ministerial's Empowering People Initiative (EPI). Natural Resources Canada with colleagues internationally developed the toolkit, filled with resources for governments and other stakeholders. You can find it here: Clean Energy Economy & Workforce Preparation Toolkit.pdf - Google Drive. Want to be part of the workforce energizing the future? Drop us a line at brilliantenergy@ontariotechu.ca to learn more about energy-related degrees and programs at Ontario Tech.

Energy Policy

How to blend oil and climate - The Globe and Mail, Editorial (Pay Wall)

https://www.theglobeandmail.com/opinion/editorials/article-how-to-blend-oil-and-climate/

The tension between Canada's oil industry and climate action remains profound. While global discussions, such as the *World Petroleum Congress* and the *UN's Climate Ambition Summit,* address the need for a shift to clean energy, the reliance on fossil fuels persists. The Canadian government and the oil companies have stated their

commitments to decarbonization to address climate change. However, the Globe and Mail editorial board says, bridging the gap requires more robust measures, stricter regulations, and societal collaboration. Initiatives for change are urgently needed to align the oil sector with effective climate action, it says.

Indigenous and Community Engagement

Why Indigenous-led projects could be key to combating Canada's energy dilemma – Global News

https://globalnews.ca/news/9142106/indigenous-projects-canada-energy-landlocked/

Indigenous leaders in Canada are advocating for greater participation in clean energy projects to address the country's energy challenges and reduce reliance on government funding. They suggest that Indigenous communities should have ownership stakes in significant energy projects, allowing them to generate income and decrease their reliance on government assistance. These leaders emphasize that Indigenous knowledge and involvement can play a significant role in helping Canada transition away from fossil fuels. They call for meaningful dialogue between industry, government, and Indigenous communities to create equitable partnerships that benefit all parties and contribute to Canada's sustainability goals.

Technologies

'Home energy bills to halve' in US and Canada after $12 trillion green spree - Recharge News

https://www.rechargenews.com/energy-transition/home-energy-bills-to-halve-in-us-and-canada-after-12-trillion-green-spree/2-1-1523314

DNV, a certification and research body based in Oslo, has forecasted a significant decline in household energy spending in North America due to electrification driven by renewables. The report predicts that by 2050, household energy bills will halve as cheaper electricity generated by renewables becomes more prevalent. DNV anticipates that more than $12 trillion will be spent on grid and renewables in the United States and Canada between now and 2050. The DNV says intrinsic efficiency of renewables and electrification is expected to reduce overall energy expenditure from 4 per cent of GDP to 2.5 per cent by 2050. Despite these improvements, DNV believes that North America may still fall short of its net-zero targets by 2050 due to the continued use of fossil fuels and emissions from hard-to-electrify industrial processes. To meet global emissions targets, more determined decarbonization efforts will be needed in the coming decades.

Innovation is crucial for tough-to-decarbonize industries – World Economic Forum

https://www.weforum.org/agenda/2023/09/how-innovation-can-slash-emissions-in-tough-to-decarbonize-industries/

Decarbonizing challenging industries, such as mining, aviation, shipping, and chemicals, requires innovation, according to leaders at the World Economic Forum's Sustainable Development Impact Meetings in New York. These sectors rely heavily on fossil fuels in their processes, making usual decarbonization methods ineffective. According to reports, innovation in areas like energy storage and carbon capture is crucial. Challenges include raising awareness among innovators about the potential for their technologies in these sectors and fostering a cultural shift towards risk-taking in traditionally conservative industries. Business incentives for reducing emissions must also be introduced to drive innovation in these areas.

Nuclear

A Framework for International Regulatory Efficiency to Accelerate Nuclear Deployment - CNA

https://cna.ca/2023/09/22/a-framework-for-international-regulatory-efficiency-to-accelerate-nuclear-deployment/

A new report is calling for streamlined processes to improve the efficient deployment of small modular reactors (SMRs) to support clean energy systems. *A Framework for International Regulatory Efficiency to Accelerate Nuclear Deployment* was authored by the Cooperation in Reactor Design Evaluation and Licensing Working Group of the World Nuclear Association in conjunction with the Canadian Nuclear Association and the Nuclear Energy Institute. It examines global efforts to expand the use of clean nuclear energy. The report says to effectively leverage nuclear energy on a global scale requires deployment of standardized designs. This includes streamlined project assessments, approvals, and licensing, which could lead to improved supply chain efficiency, operational effectiveness, and safety. The report introduced a new phased approach for international regulatory design reviews, emphasizing the importance of collaboration among regulators. Success in this endeavor would require increased government support, stakeholder engagement, and coordination. Keeping an eye on the estimated project start and funding details would be crucial factors, as well.

Batteries and storage

Energy Department announces $325M for batteries that can store clean electricity longer - The Toronto Star

https://www.thestar.com/news/world/energy-department-announces-325m-for-batteries-that-can-store-clean-electricity-longer/article_8b99a3ec-d1bf-515b-b9ae-1e4f3b07818c.html

The Energy Department in the United States is introducing US$325 million into 15 projects across 17 states and the Red Lake Nation, focusing on long-term battery storage to ensure consistent power from solar and wind energy. This funding addresses the intermittent nature of renewables, offering a solution for nighttime or overcast periods. Notably, a collaboration between Xcel Energy and Form Energy will deploy 10megawatt batteries with a 100-hour duration in Minnesota and Colorado. Additionally, California's Valley Children's Hospital will receive a battery system to bolster its resilience. The initiative also repurposes retired electric vehicle batteries for backup power in various locations. This investment aims to demonstrate scalability, cut costs, and expedite the shift to renewable energy sources.

Fossil Fuels

DHL’s new fleet of trucks reduced Formula 1’s carbon emissions by an average of 83 per cent across the European leg of the 2023 FIA Formula One World Championship – Energy Digital

https://energydigital.com/articles/dhls-biofuel-trucks-reduce-formula-1s-carbon-emissions

In a major sustainability push, the 2023 FIA Formula One World Championship saw the deployment of 18 biofuel-powered trucks during its European rounds, covering more than 10,600 km each and transporting 300 tons of freight per race. These trucks used HVO100 drop-in fuel, meeting EN15940 standards, and maintained performance parity with diesel counterparts. Formula 2 also embraced sustainability, and Formula 1 aims to build upon these reductions in its carbon footprint, with plans to reach Net Zero by 2030.

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)