

BEI Energy News

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Top news

Brilliant Energy Institute News

[Meet the Team: Mohamed Mohamed Khaja – BEI LinkedIn](#)

The Brilliant Energy Institute (BEI) team contributes to Canada's leadership in the global transition to net zero by 2050. BEI energy co-op student, Mohamed Mohamed Khaja, is an international student from India, pursuing his final year in the Master of Engineering, Sustainable Energy and Climate Change program at Carleton University. His undergraduate degree is in Electrical and Electronics Engineering. Mohamed's work with BEI focuses on addressing climate change and strengthening socio-economic benefit through development of clean energy systems and related policy. Mohamed is an avid reader, development and political enthusiast, problem-solver, and a foodie. He enjoys networking with people and learning more about their work as he helps to create a just, sustainable, and climate-friendly future for all.

Clean Energy Policy

[Most Canadians got more from carbon-price rebates than they spent in 2021 – CTV](#)

The Greenhouse Gas Pollution Pricing Act's annual [report](#) for 2021 was released recently. The report finds that most of the Canadians who paid the national carbon price in 2021 got far more back than they paid. The average amount that people paid in the four provinces where the carbon price applied that year was \$555, and the average rebate was \$804. Only Alberta, Saskatchewan, Manitoba and Ontario used the federal system that year. Yukon and Nunavut also pay the federal carbon price, but those revenues are returned to the territorial governments directly, not as rebates to households. Northwest Territories and the other provinces opted for their own programs.

[Nearly half of all European hydrogen demand will be used in port areas by 2050 – Hydrogen Insight](#)

Clean Hydrogen Partnership's (CHP) study titled [Study on hydrogen in port and industrial coastal areas](#) has estimated that 46 per cent of hydrogen demand in Europe, around 15 million tonnes out of 32 million tonnes, will be in port areas by 2050. Much of this will initially be driven by demand in high temperature heat for industry and steel production, which the CHP expects to pick up in the late 2020s. The report says imports will account for 25 to 70 per cent of all hydrogen demand in Europe. Ports could choose to be a landlord and make land available for hydrogen-related infrastructure such as renewable energy installations, import terminals or pipelines, or they could become a community-builder functioning as a point of contact that coordinates a variety of related hydrogen-based activity, such as the Port of Antwerp-Bruges' plan to become an "incubator" for potential.

Energy Systems

[Tesla to build new battery factory in Shanghai – BBC News](#)

Elon Musk, Chief Executive Officer of Tesla, announced on Twitter on Sunday that his company would build a factory in Shanghai with the aim to assemble 10,000 giant batteries annually for electric producers and distributors. The batteries, which Tesla calls Megapacks, are designed to store large amounts of electricity. A single Megapack can power 3,600 homes for one hour, according to Tesla. The batteries can discharge the electricity to run factories or homes when demand from the local power grid is high, or during a blackout. Construction is expected begin later this year, with battery production expected to begin by the summer of 2024.

Technologies

Nuclear

[A new act to support nuclear technologies introduced to the U.S. Senate – World Nuclear News](#)

The Accelerating Deployment of Versatile, Advanced Nuclear for Clean Energy Act of 2023 was introduced to the U.S. Senate by a bipartisan group. The act aims to support efforts to develop and deploy new nuclear technologies at home and abroad by measures such as regulatory support for advanced nuclear technology deployment and facilitating the repurposing of conventional energy sites. The act would empower the U.S. Nuclear Regulatory Commission to lead in international forums to develop regulations for advanced nuclear reactors, as well as setting up a joint initiative of the US Departments of Commerce and Energy to facilitate outreach to nations that are seeking to develop advanced nuclear energy programmes.

[U.S. NRC proposes fining Urenco USA – Nuclear Engineering International](#)

The U.S. Nuclear Regulatory Commission proposes to impose a \$70,000 civil penalty for Urenco USA for violating two of the agency requirements related to implementing safety controls at its Eunice, New Mexico, enrichment plant. The violations occurred in March 2022 and June 2022. The company did not take enough precautions to prevent a potential accident sequence involving construction vehicles damaging the facility or the uranium hexafluoride inside which would increase the risk to plant workers and the public. This was the first new nuclear project in the U.S. in almost 30 years and one of the largest construction projects in the state of New Mexico, worth \$5 billion.

[Decommissioning permit issued for German reactor – World Nuclear News](#)

The Baden-Württemberg Ministry of the Environment has granted utility EnBW approval to decommission and dismantle unit 2 of its Neckarwestheim Nuclear Power Plant. The unit is due to be shut down later this month. This unit is a 1400 MWe pressurized water reactor that began operating in 1989. It generated more than 11 TWh of electricity in 2022. Unit 1 of the plant was shut down in 2011 and has been dismantled since 2017. Unit 2 of Neckarwestheim and Isar 2 were the only reactors approved to operate until April 15, 2023 when more than eight units were closed down due to nuclear power phase out in Germany through the 13th Amendment of the Nuclear Power Act.

Energy Storage

[Innovative low-income battery pilot finally wins approval in Massachusetts – Renewable Energy World](#)

The Massachusetts' Cape Light Compact and Dept. of Public Utilities have approved the first-in-the-nation energy storage pilot program for low-income customers. The Cape & Vineyard Electrification Offering offers free batteries, solar PV, and heat pumps to income-eligible customers. The program will be implemented over the coming year, targeting 100 households in Cape Cod, Martha's Vineyard, and Duke County. Eighty of these households will be below the 60 per cent Area Median Income (AMI) threshold, and twenty will be between 60-80 per cent AMI. The low-income households will receive rooftop solar and heat pumps completely free of charge while the median-income households will be required to pay 20 per cent of the costs. They will also have access to HEAT loans that provide interest-free financing.

Wind Energy

[Scottish wind farm launches £300k fund for vulnerable residents – Energy live](#)

Community Windpower and Dalry Parish Boundary Trust have launched a new £300,000 energy fund in partnership. The initiative aims to provide heating assistance to the vulnerable residents in the town of Dalry, North Ayrshire. This initiative will be managed by Advice Direct Scotland and is supported by Community Windpower's onshore wind farm in the region. The initiative will prioritize those with children living in poverty, people with cancer, pensioners and households that use a large amount of energy to power medical equipment.

Solar Energy

[Masdar to construct three solar projects in Uzbekistan – Energy Digital](#)

Masdar has announced it has acquired three solar photovoltaic projects in Uzbekistan. The plants will represent the largest solar development programme in Central Asia and will have a combined capacity of approximately 900 MW. Masdar agreed to join IRENA's [Energy Transition Accelerator Financing](#) (ETAF) platform at COP27, with the potential to invest up to US\$200 million in renewable energy projects in equity. Masdar and the Asian Infrastructure Investment Bank are funding the Uzbekistan projects under the ETAF platform. ETAF is a platform for climate finance with multiple stakeholders that aims to deploy 5 GW of new renewable power in developing nations by 2030.

Hydrogen

[Italy allocates €300 million to new hydrogen trains and associated green H2 projects – Hydrogen Insight](#)

Italy's Ministry of Infrastructure and Transport will provide €300 million from the post-pandemic National Recovery and Resilience Plan for a new programme to replace diesel trains with hydrogen ones in six regions across the country. Among the €300 million, €276 million will be used for green hydrogen production, storage and refuelling equipment for the trains while €24 million will be used for buying trains. This new funding is in addition to the [€450 million](#) that Italy recently announced it will spend on green hydrogen production in abandoned industrial areas, and the [more than €100 million](#) for 36 new hydrogen fuelling stations.

Fossil Fuels

[\\$10 Million Canadian Cleantech Challenge fuels innovation in natural gas – Energy Now](#)

NGIF Capital, a subsidiary of the Canadian Gas Association, and the International Gas Union have kicked-off a \$10 million Global Cleantech Challenge. The challenge is a call for start-ups that have technologies to improve the industry's environmental performance to access grants, industry validation, development, and potential customers. Each demonstration project undertaken in Canada is eligible to receive up to \$1 million. NGIF expects 70 per cent of participants will be Canadian. Ekona Power, a Vancouver-based company, plans to enter the challenge with a special method of producing hydrogen from natural gas with 90 per cent lower emissions than conventional technology.

Renewables

[CanREA launches workforce strategy to support renewables workforce – Environment Journal](#)

The Canadian Renewable Energy Association (CanREA) has launched a [National Workforce Strategy](#) to support Canada's growing renewable energy and energy storage workforce. The report was launched at the 2023 CanREA Operations Summit and is considered a first in looking at Canada's workforce development needs in the context of CanREA's 2050 vision. The report examines the aspects of attracting new, skilled talent to the renewable-energy industry, retaining the current workforce, and retaining industry knowledge within organizations. They've developed an Employment-Process Model with five stages demonstrating the variety of pathways that could lead individuals to a renewable-energy or energy-storage career and identified the key stakeholders involved at each stage.

Grid Management

[U.S. grid interconnection requests surged in 2022 adding to deep backlog – Renewable Energy World](#)

A report from the Lawrence Berkley National Laboratory finds that requests to connect to the U.S. transmission grid grew by 40 per cent in 2022. This includes nearly 2,000 GW in solar and energy storage resources. This surge adds on to the pending requests despite the slowdowns in the California Independent System Operator (CAISO) and PJM grids. CAISO did not accept any new requests last year while PJM won't accept any until 2025. Solar, battery storage, and wind accounted for 95 per cent of the proposed capacity in 2022. In total, 947 GW of solar, 300 GW of wind, and 670 GW of storage capacity are currently seeking grid connection.

Thank you.

Regards,
Mohamed Mohamed Khaja
Energy Co-Op Student
Brilliant Energy Institute
brilliantenergyinstitute.ca