## **BEI Energy News**

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## Top news

## **Brilliant Energy Institute News**

### Meet the Team: Shana Fillatrau – BEI LinkedIn

The Brilliant Energy Institute (BEI) team is passionate about helping society, not just locally, but nationally and internationally, transition to net zero. Each week, we will introduce our team members and share their experience, skills, and interest. Shana Fillatrau, BEI's Project Coordinator brings experience in journalism, digital marketing, social media, communications, and first-hand entrepreneur experience to her role. Shana is a graduate of Durham College's Journalism program and Ontario Tech's Communication and Digital Media Studies program. While in university, she started her own freelance communications and marketing business and continued it after graduation. In early 2022, the Ontario Tech alum returned to the university as its Digital Engagement Co-ordinator. With her passion for helping her community and the planet, she is excited to be part of the BEI team to help Canada transition to a clean energy future.

## **Clean Energy Policy**

### EU negotiators reach deal to double renewables by 2030 – Euro News

The European Union (EU) has pledged to double its renewable energy capacity by 2030. The target is part of the EU's efforts to combat climate change and achieve its goal of net-zero emissions by 2050. The EU plans to increase its share of renewable energy in the overall energy mix to at least 42.5 per cent by 2030. In 2021, European countries generated almost 21 per cent of their energy from renewable energy sources. The EU member states reached a provisional agreement to reinforce the Renewable Energy Directive, which increases the binding renewable target for 2030 to a minimum of 42.5 per cent, up from 32 per cent and aims to reach 45 per cent of renewables by 2030 to support the European Green Deal and REPowerEU objectives.

### <u>U.K. releases its climate strategy – Government of U.K.</u>

The U.K. announced its own climate strategy on Thursday. The plan sets out a pathway for the nation to reach net zero. The strategy focuses on clean energy technologies and energy security in the wake of the invasion of Ukraine. It includes support for offshore wind energy, electric vehicles, green hydrogen, nuclear technology, home insulation and home heat pumps. The strategy also emphasizes carbon capture and storage, which traps and stores carbon pollution. While many scientists say this technology will be crucial for meeting climate goals, it has also been heavily criticized for allowing polluters to continue polluting, rather than cutting their emissions.

#### U.K. looks to nuclear to bolster energy independence – Government of U.K.

The U.K. has released a policy paper titled "Powering up Britain" with its ambitious plans to scale up affordable, clean, homegrown power and build thriving green industries in Britain to boost its energy security and independence while reducing household bills for the long-term and

maintaining a leading position in achieving net-zero. The paper lists 12 measures the government will take to achieve this. The government said it is committed to carbon capture usage and storage, and projects will soon be announced for the rollout of the first carbon capture clusters. The plan also includes a £160 million fund that will support the infrastructure for floating offshore wind projects, alongside a more than £380 million boost into the rollout of electric vehicle charging points and infrastructure. It also supports the first tranche of new green hydrogen production projects under the £240 million Net-Zero Hydrogen Fund as part of development of this new power source.

## **Technologies**

### **Nuclear**

#### Canadian budget underlines government support for nuclear – World Nuclear News

The 2023 Federal Budget extends support for nuclear in Canada's clean energy transition. The budget introduces a new 15 per cent refundable Clean Electricity Investment Tax Credit. Nuclear projects, both large-scale and small modular reactors (SMRs), are eligible for the credit. The 30 per cent Clean Technology Investment Tax Credit, announced in the government's 2022 Fall Economic Statement, has been included in this budget and supports SMRs. The budget announced a 30 per cent Investment Tax Credit for Clean Technology Manufacturing for investments in new machinery and equipment, under which the manufacture of nuclear energy equipment and the processing or recycling of nuclear fuels and heavy water are eligible. The budget also announced the extension of tax reductions for zero-emission technology manufacturers to include the nuclear power sector, along with additional funds for the Infrastructure Bank and Strategic Innovation Fund.

### Polish-U.S. nuclear cooperation expands to USNC microreactors – World Nuclear News

Polish chemicals producer Grupa Azoty Police, the U.S.'s Ultra Safe Nuclear Corporation (USNC) and the West Pomeranian University of Technology in Szczecin, Poland have signed an agreement to build a nuclear energy research facility based on USNC's Micro-Modular Reactor (MMR) technology. Over the next six months, the parties will prepare a comprehensive research programme and will jointly develop a plan for the construction, operation, and maintenance of the MMR. The first stage of the project will consist of the construction of a 30 MWt MMR to serve as a training, research and test facility. The aims to develop a plan for full-scale use of nuclear energy to power chemical processes and to generate steam and hydrogen at Grupa Azoty Police's plant.

### New isotope-producing research reactor for Missouri – World Nuclear News

The University of Missouri has launched an initiative to build a new, larger research reactor, NextGen MURR. The university's existing MU Research Reactor (MURR) is the highest-powered university research reactor in the U.S. and is currently the country's only producer of certain medical radioisotopes such as molybdenum-99. More than 1.6 million patients a year are diagnosed or treated using radioisotopes that MURR produces. The MURR NextGen aims to build on the internationally recognized excellence of MURR and expand the university's isotope production capabilities. The university plans to issue a Request for Proposals in April, to solicit interest from qualified parties to provide preliminary designs and industry partnerships.

## **Energy Storage**

# <u>Wärtsilä's 200 MW stand-alone battery storage facility in Texas is has begun operation – Clean</u> Technica

Wärtsilä has completed a 200 MW, 429 MWh stand-alone battery storage project in Texas that will help stabilize that state's grid. The construction began in January 2021. The primary purpose of the facility was to help maintain grid stability as more renewable energy from wind and solar installations is added to the utility grid. It will also be a source for emergency power when needed. The project consists of two interconnected energy storage systems. This is the first installation to benefit from the latest Investment Tax Credit legislation, which earlier did not consider standalone utility scale energy storage projects.

### Wind Energy

### Enbridge's joint venture to build Normandy Wind Farm – Yahoo

Maple Power, a joint venture between Enbridge, the Canada Pension Plan Investment Board, and EDF Renewables, a subsidiary of the French utility EDF Group, have been chosen by the French government to build the Centre Manche 1 Normandy offshore wind farm with an expected installed capacity of 1 GW. The proposed wind farm would supply electricity to meet more than half of Normandy's electricity needs or 1.5 million people's annual power demand. The project will be located more than 32 km off the north coast and is likely to be completed around 2030.

### Hydrogen

# <u>U.K.</u> allocates grants to 15 low-carbon hydrogen projects and unveils shortlists for further funding – Hydrogen Insight

The U.K. government has allocated a total of £37.9 million of grants to 15 low-carbon hydrogen projects from its £240 million Net Zero Hydrogen Fund (NZHF). The funding contributes towards front end engineering design and capital expenditure. The NZHF funds 13 green hydrogen and two blue hydrogen projects. The Department for Energy Security and Net Zero has unveiled 480 MW of green hydrogen projects and four blue hydrogen projects are now eligible for separate grant financing for carbon capture and storage.

# <u>Natural hydrogen found? | State-owned oil company analyzing five sites across South Korea – Hydrogen Insight</u>

State-owned Korea National Oil Corporation (KNOC) says it may have found naturally occurring hydrogen underground at five locations across South Korea. They have been searching for natural hydrogen in the country since last year, measuring gases emerging from different soils, and applied for a patent for its new hydrogen-detecting probe earlier this week. KNOC's team is conducting studies to analyze their findings. Many companies have been searching for commercially exploitable natural hydrogen in the U.S., Australia, and parts of Africa, but have not found any so far. The hydrogen seeping from soils is sometimes visible in the form of "fairy circles" but are often mixed with other gases, whose presence makes the hydrogen difficult to commercially exploit.

### **Critical Minerals**

Canada takes small step forward in critical mineral ambitions with restart of Quebec lithium mine

— The Globe and Mail (Paywall)

Sayona Mining Ltd. and Piedmont Lithium Inc. have restarted the hard rock project, also known as North American Lithium, to produce lithium for commercial use. The project is located 60 km north of the Val d'Or mining region in Western Quebec. The project was stopped earlier due to operational problems and crashing commodity price, three years ago. Sayona Mining and Piedmont Lithium acquired the mine out of the Companies Creditors Agreement Act in 2021 and have invested \$100 million into it. They expect to increase production within the next six months and ship lithium to battery and car makers by the third quarter of 2023.

### **Fossil Fuels**

### Oil heads for weekly surge as Iraqi supply disruption continues – Energy Now

Oil prices headed for a weekly surge of about 7 per cent due to the ongoing disruption of Iraqi exports. Gulf Keystone Petroleum Ltd. is the latest producer to cut production. Talks between officials from Kurdistan and the Iraqi federal government are set to take place next week, which may see the resumption of over 400,000 barrels a day of Iraqi oil exports. West Texas Intermediate futures fell to around \$74 a barrel on Friday after closing almost 2 per cent higher in the previous session. Crude dropped following the European market open, which has so far presented a mixed picture in equities and a rise in the dollar.

### Alberta to contribute to CCUS after Ottawa commitments – Energy Now

Canada's federal budget expanded eligibility for Carbon Capture Utilization and Storage (CCUS) investment tax credits over the next five years, by adding \$520 million to the \$2.6 billion program laid out in last year's budget. Natural Resources Minister Jonathan Wilkinson has said he has been in talks with the Alberta government regarding CCUS and expects to see some of the major CCUS projects to be launched this year. Alberta's Premier Danielle Smith has said she is open to bolstering CCUS financial support. The Pathways Alliance is planning to develop a CCUS hub in northern Alberta, expected to cost \$16.5 billion by 2030.

## **Grid Management**

### Sun, sand and subsea cables: U.K.'s grid could get power boost from Morocco - Energy Live

The U.K. government has expressed interest in the Xlinks project, a plan for an onshore wind, solar and battery electricity generation facility located in Morocco. The proposed project aims to exclusively supply the U.K. grid with power via 3,800 km high voltage direct current subsea cables. The project was announced in the recent policy paper titled *Powering up Britain*, released by the government. The £18 billion Morocco-U.K. link could power up to 8 per cent of the U.K.'s energy needs.

### <u>Siemens Energy to supply transmission technology in Italy – Energy Digital</u>

Siemens Energy and Italy's FATA are providing High-Voltage Direct Current (HVDC) transmission technology to a 970 km long power link connecting Italy's largest islands, Sicily and Sardinia to the mainland. Italy's transmission system operator, Terna, has awarded the organizations the contract to supply four converter stations for the Tyrrhenian Link project. This is Siemens Energy's first HVDC project in Italy and is expected to cost around €1 billion. The HVDC link will enable more efficient use of renewable energy, increase stability of the power grids, and enable the close of coal-fired power plants on the two islands to reduce CO2 emissions.

Thank you.

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