

BEI Energy News

This update is produced three times weekly by the Brilliant Energy Institute

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Top news

Brilliant Energy Institute News

[Brilliant Energy Institute visits Ontario Power Generation – BEI LinkedIn](#)

Brilliant Energy Institute's Project Co-ordinator, Shana Fillatrau, joined a group of Ontario Tech University graduate students, professors, Dr. Glenn Harvel and Dr. Jennifer McKellar, and partnerships director Lindsay Coolidge for a tour of Ontario Power Generation's nuclear simulator rooms and visited the Centre for Canadian Nuclear Sustainability to virtually tour the Pickering Nuclear Generating Station. The simulator rooms are used for training and testing nuclear operators, and a certified operator must do hundreds of hours of training each year there to maintain their license. The group witnessed first-hand the vast knowledge nuclear operators must have to ensure the sites are operating safely and efficiently.

Energy Policy

[Ontario Launches New Ultra-Low Overnight Electricity Price Plan – Government of Ontario](#)

The provincial government is launching the Ultra-Low Overnight price plan, Ontario's Minister for Energy announced in a press release on Tuesday. It is intended to provide consumers with more ways to keep costs down, save money and take control of their energy bills. The new rate, set by the Ontario Energy Board, will be 2.4 cents per kWh, which is 67 per cent lower than the current off-peak rate, in exchange for a higher on-peak rate. From May 1 onwards, Toronto Hydro, London Hydro, Centre Wellington Hydro, Hearst Power, Renfrew Hydro, Wasaga Distribution, and Sioux Lookout Hydro will offer the new pricing, and all utilities will be required to offer it within six months.

[G-7 nations tussle over bid to phase out coal power by 2030 – Energy Now](#)

The G7 group of the world's most industrialized nations is struggling to find common ground on committing to phasing out coal power generation by 2030 ahead of a summit in Japan later this week, according to a draft communique for the meeting. In those documents, the U.S., Japan, and the European Union have said they have reservations about a proposal by the U.K. to set a firm 2030 deadline to end unabated coal-fired power generation when the G7 energy and climate change ministers meet at a summit on April 15 and 16. Germany has reportedly offered alternative wording to the firm timeline proposed by the U.K., with drafts being circulated mentioning coal phase-out "ideally by 2030" or "in the 2030s."

Energy Systems

Electric Vehicles

[Ford says Oakville plant to produce EV passenger cars by 2025 – The Globe and Mail](#)

Ford Motor Co. says its factory in Oakville, Ontario, will be the first high-volume facility to produce electric passenger cars in Canada for the North American market by 2025. The factory will be transformed to assemble Ford and Lincoln electric vehicles and battery packs through a \$1.8 billion investment, of which \$580 million is taxpayer funded. The factory currently makes the Ford Edge and Lincoln Nautilus and employs about 3,000 people. The factory includes an assembly building, three body shops and a paint facility. Ford will add a 407,000 sq.ft. plant where the car battery packs will be assembled from cells and components trucked in from Ford's Blue Oval factory in Tennessee.

[U.S. EPA announces significant limits on tailpipe emissions to boost electric vehicle adoption - NPR](#)

The U.S. Environmental Protection Agency (EPA) proposed new emissions limits that would force carmakers to make 67 per cent of their American models electric by 2032. It would significantly increase EVs' share of the new vehicle market. The proposed rule would limit tailpipe emissions across all the vehicles in a carmaker's fleet, forcing companies to make more battery-powered vehicles to meet the new standard. It would affect models built starting in 2027 through to 2032. The proposal would also curb air pollution, boosting the U.S.'s chance of achieving its Paris Agreement pledge to lower emissions by 50 to 52 per cent below 2005 levels by 2030. The rules would also force carmakers to speed up their timetables for electrification, and in doing so, tilt the U.S. car market towards EVs, even as they remain more expensive than vehicles with traditional engines.

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Technologies

Nuclear

[China and France expand nuclear cooperation – World Nuclear News](#)

France and China agreed to renew their partnership in nuclear energy during the recent state visit of French President Emmanuel Macron to China. This was one of many economic agreements reached during his three-day trip. The latest agreements between China General Nuclear (CGN), China National Nuclear Corporation (CNNC) and Électricité de France (EDF) build on 40 years of previous cooperation between the two countries. CNNC and EDF signed a Memorandum of Understanding on low-carbon energy development. CGN and EDF signed an agreement to deepen cooperation in research and development, design, procurement, and operation and maintenance of nuclear energy facilities.

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[South Korea and the U.K. enhance cooperation in nuclear energy – World Nuclear News](#)

The U.K. and South Korea have signed a joint declaration stating their agreement on the need for energy transition from fossil fuels to low-carbon power sources, prospects for South Korea's participation in new U.K. nuclear power plant projects and the two countries' exchanges and cooperation in offshore wind power, hydrogen, and other clean energy areas. Both countries agree to collaborate on promoting the highest standards of nuclear safety, regulation, security, safeguards and non-proliferation to set a global standard, confirmation of plans to build robust and resilient nuclear supply chains, and to share experiences in developing the latest advanced civil nuclear technologies, including small modular reactors.

[India plans 9 per cent nuclear share by 2047 – Nuclear Engineering International](#)

India plans to get 9 per cent of its electricity from nuclear sources by 2047. As of Feb. 28, the installed nuclear power capacity was 6.78 GWe, which is 1.6 per cent of the total installed power capacity. The Department of Atomic Energy had been given the target of achieving 20 GWe of nuclear power generation by 2030, making India the world's third-largest producer of nuclear energy after the U.S. and France. India has the sixth-highest number of operating nuclear reactors in the world and the second-highest number of reactors, including those under construction. Nuclear energy is also being used for other applications like increasing the shelf life of fruits and other agricultural products, and in the medical field for the first time in India.

Energy Storage

[The U.K. announces £30 million fund for energy storage projects – Energy Live](#)

The U.K. government has awarded £30 million to innovative projects aimed at capturing and storing renewable energy for later use as a part of its "Powering Up Britain" plan. This funding will help businesses in Scotland and Nottingham design and test new technology that will modernize the U.K.'s energy system and store renewable energy. The funding will support three projects. The Synchrostor project in Cumbernauld, Scotland, will receive £9.4 million to build a Pumped Thermal Energy Storage grid-connected demonstration plant. Invinity in Scotland will receive £11 million to develop and manufacture the largest vanadium flow battery in the U.K. The Cheesecake Energy Ltd. in Nottingham will receive £9.4 million to test their FlexiTanker technology that stores electricity using a combination of thermal and compressed air energy storage.

Hydrogen

[World's largest solid-oxide electrolyzer successfully installed at Rotterdam biofuels refinery – Hydrogen Insight](#)

Sunfire, a German company, has successfully installed the world's largest solid oxide electrolyser at the Neste biofuels refinery in the Dutch port of Rotterdam. The MultiPLHY project includes a 2.6 MW machine, which consists of 12 electrolysis modules, and will use waste heat from the refinery and convert steam into hydrogen. This utilization of waste heat means less electricity will be required to produce each kilogram of hydrogen than alkaline or PEM electrolyzers, potentially reducing the cost of hydrogen production via electrolysis. The project is valued at €9.75 million and has received €7 million of funding from the EU's Clean Hydrogen Partnership.

['A 1.5 GW energy island' | France's EDF to co-develop offshore green hydrogen storage project in China – Hydrogen Insight](#)

Électricité de France (EDF), a state-owned French energy giant, plans to help build an offshore green hydrogen facility for energy storage off the Dongtai region in Jiangsu, China. The project is part of an agreement on a 1.5 GW "energy island" with local giant, China Energy Investment Corporation (CEIC). The agreement was reached during the recent state visit of French President Emmanuel Macron to China. EDF is already a pioneer of foreign investment in offshore wind in China through the 500 MW of capacity it operates off Dongtai as a minority 37.5 per cent partner with CEIC.

Carbon Capture

Commented [SF3]: You'll have to write out the acronym here, Électricité de France.

Commented [SF4]: Should this be "in" China?

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[Britain's Harbour Energy, BP to develop Viking CCS project - Reuters](#)

BP has acquired a 40 per cent stake in the U.K.'s Viking CCS project from Harbour Energy as the government looks to accelerate plans to develop carbon capture and storage. The Viking project aims to meet up to a third of the U.K.'s annual target of capturing 30 million tonnes of carbon dioxide by 2030, by repurposing old, depleted gas fields off the Humber region coast. There are also plans to ship in additional carbon dioxide emissions from other parts of the U.K. and abroad.

Grid Management

[Wind and solar hit record 12 per cent of global power generation last year – Energy Now](#)

A report released by Ember, an independent climate and energy think tank, found that wind and solar energy represented a record 12 per cent of global electricity generation last year. This is an increase from 10 per cent in 2021. Ember studied power sector data from 78 countries in its annual global electricity review, representing 93 per cent of the global power demand. The report concluded that all renewable energy sources and nuclear power combined represented a 39 per cent share of global generation last year, with solar's share rising by 24 per cent and wind's share rising by 17 per cent from the previous year. Their growth in 2022 met 80 per cent of the rise in global electricity demand.

Thank you.

Regards,
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