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FORM ENERGY ANNOUNCES DEVELOPMENT OF IRON-AIR LONG-DURATION COMMERCIAL BATTERY PRODUCT

On 22 July 2021, Form Energy, Inc. (Form Energy) announced its first commercialized battery product will use iron-air technology and will be capable of delivering 100 hours of continuous electricity. The company represents that its iron-air batteries will be available at substantially lower commercial costs than existing storage technologies, with cost only 10 percent of the cost of lithium-ion batteries. The first project using this iron-air technology is scheduled to be deployed in Minnesota sometime in 2023. Pending a successful launch, Form Energy intends to scale mass production of the iron-air batteries by 2025.

Form Energy intends to build the batteries near the location where projects will be sited, and the iron would be produced domestically. The iron materials will be jointly developed by Form Energy and one of its investors, ArcelorMittal S.A., who will also supply the iron on a nonexclusive basis.

HAWAIIAN ELECTRIC OFFERS CUSTOMERS INCENTIVES TO ADD BATTERY STORAGE TO THEIR ROOFTOPS

On 19 July 2021, Hawaiian Electric launched the “Battery Bonus” program to compensate residential and commercial customers on the island of Oahu for adding battery storage to a new or existing rooftop solar system. The Hawaii Public Utilities Commission (PUC) capped the total energy supplied from storage at 50 megawatts (MW) among all participants of the program. Applications will be accepted until 20 June 2023 or until the 50 MW cap is reached.

The program term is 10 years and will run in two phases. During the first phase of the program, participating customers must use or export stored electricity on a two-hour schedule between 6 p.m.–8 p.m. every day until 21 December 2023. The program's next phase will be defined by the PUC at a later date.

The program is intended to help promote 100 percent clean energy in the state by 2045.

AMERICAN CLEAN POWER ASSOCIATION RELEASES 2020 ANNUAL REPORT

On 29 July 2021, theAmerican Clean Power Association released its first Clean Power Annual 2020 Report, which showed wind, utility, solar, and battery storage capacity in the United States exceeded 170 gigawatts (GW), following a record 26 GW of clean energy projects coming online in 2020. New clean power installations included 16,838 MW of land-based wind, representing 50 percent of new additions; 8,894 MW of utility-scale solar projects, capturing 26 percent of the market; and 760 MW of battery storage capacity. Wind, solar, and battery storage

power combined represent 78 percent of new power installations in 2020. Cumulatively, clean power technologies now deliver 10.7 percent of the nation's electricity.

The report demonstrates that current utility wind and solar capacity is capable of powering the equivalent of over 50 million homes, with growth continuing across the industry. Nearly 90,000 MW of clean energy projects are currently underway, representing over US$120 billion in new investment. Analysis in the report shows that the unsubsidized cost of energy for wind power has fallen 71 percent since 2009 and that the cost for solar has fallen 90 percent since 2009. As a result, wind and solar offer the lowest cost of any generation type in most parts of the country.

Texas currently leads all states with 37,443 MW of installed clean power capacity, followed by California (20,354 MW), Iowa (11,394 MW), Oklahoma (9,395 MW), and Kansas (7,058 MW). Texas also led all states by generating over 100 million MW hours of renewable electricity in 2020.

ORBITAL MARINE POWER CONNECTS TIDAL TURBINE TO ELECTRIC GRID IN THE UNITED KINGDOM

On 28 July 2021, Orbital Marine Power announced that its 680 metric ton tidal turbine has been officially connected to the grid in the United Kingdom, making it the world's most powerful tidal turbine to export power to the grid.

The 2 MW turbine, which is 74 meters long, is anchored in a high-tidal energy environment off the coast of Orkney and is connected to the local onshore electricity network via a subsea cable. The turbine is designed to send power to a land-based electrolizer that will produce green hydrogen that is then deployed onto the grid. Orbital Marine Power is planning to have the turbine operate offshore for the next 15 years.

The turbine is anticipated to hold the capacity to meet the annual electricity demand of approximately 2,000 UK households, offsetting about 2,200 tons of carbon dioxide production annually. This announcement indicates a large milestone for the marine energy industry, not just within the United Kingdom, but globally, and a sign of what is to come.

XCEL ENERGY ACCELERATES DECARBONIZATION PLANS

In its 29 July 2021 earnings report, Xcel Energy announced plans to accelerate its efforts to decarbonize its electric supply load in Minnesota by 85 percent by 2030, advancing from its previous goal of 80 percent by 2030. The utility recently submitted a plan to regulators that would add 10,000 MW of renewable energy generation in both Minnesota and Colorado.

The new plans from Xcel Energy see the company adding 3,150 MW of solar energy, 2,650 MW of wind-powered energy, 250 MW of storage, 800 MW of hydrogen-ready combustion turbines, 1,900 MW of other firm dispatchable generation, and repowering 300 MW of blackstart combustion turbines in Minnesota alone.

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