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Energy Newsletter

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NEW LEGISLATION WOULD EXTEND INVESTMENT TAX CREDIT TO STANDALONE STORAGE

On 9 March 2021, a bipartisan group of federal lawmakers introduced the “[Energy Storage Tax Incentive and Deployment Act](#)” (H.R. 1684/S. 627), a measure that would extend the investment tax credit to residential, commercial, and grid-scale standalone energy storage systems.

Currently the tax credit is only available to storage systems charged by other resources that are available for the credit, most often solar, and the eligibility requirements can be complicated. For commercial and utility-scale installations, the legislation would extend the credit to standalone storage systems that are greater than 5 kW-hours and to a wide variety of technologies including batteries, compressed air, pumped hydropower, hydrogen storage (including electrolysis), thermal energy storage, regenerative fuel cells, flywheels, capacitors, and superconducting magnets. Residential systems would be limited to batteries and would have to be greater than 3 kW-hours. In either case, the credit would be available to systems placed in service after 31 December 2020, or in the case of residential systems, for expenditures paid or incurred in taxable years beginning after 31 December 2020.

The legislation is now the second introduced bill in 2021 that would extend the tax credit to standalone storage, following the more comprehensive “Growing Renewable Energy and Efficiency Now (GREEN) Act” (H.R. 848). Our summary of the GREEN Act is available [here](#).

FERC AND BOEM APPROVE NATION'S FIRST WAVE ENERGY TESTING FACILITY

On 1 March 2021, the Federal Energy Regulatory Commission (FERC) [granted](#) an application for a 25-year license under the Federal Power Act to [Oregon State University](#) to develop the PacWave South Hydrokinetic Project: a 20 MW hydrokinetic wave energy test facility constructed on the Outer Continental Shelf in the Pacific Ocean. In February 2021, the U.S. Bureau of Ocean Energy Management (BOEM) [issued](#) a lease for the Project.

PacWave South will be a commercial-scale wave energy testing facility supported by grants from the U.S. Department of Energy, the State of Oregon, and other public and private organizations. This will be the first commercial-scale utility grid-connected test site in the nation to receive such a license and lease, and will be the first marine renewable energy research facility in federal waters off the Pacific Coast.

The license will provide a platform for developers to test wave energy conversion devices and technologies for transporting energy to a local electrical grid. The test site will be located nearly seven miles offshore of Newport,

Oregon. The US\$80 million facility will be large enough to hold up to 20 wave energy testing devices simultaneously. Construction is anticipated to begin later this year, and the facility is expected to be operational by 2023.

DOE BEGINS PLANNING OF US\$75 MILLION GRID ENERGY STORAGE FACILITY

On 10 March 2021, the U.S. Department of Energy (DOE) [announced](#) that it is in the initial stages of designing and constructing a US\$75 million grid energy storage facility in Richland, Washington. [Pacific Northwest National Laboratory](#) will host the Grid Storage Launchpad (GSL), a facility that will serve as a hub for the accelerated development of long-duration and low-cost grid energy storage. The facility will include 30 research laboratories with testing chambers that assess new grid energy storage technologies under real-world grid operating conditions. The project will bring the DOE, researchers, and industry together in collaboration on the deployment of grid-scale energy storage. The GSL construction should begin later this year, and the building is expected to be operational by 2025.

In addition to federal funding, the Washington State Department of Commerce pledged US\$8.3 million for research equipment and specialized instrumentation. Washington's Department of Commerce also signed a memorandum of understanding with the DOE's Office of Electricity to collaborate on-grid energy storage technologies, support the energy storage innovation ecosystem, and share best practices with other states.

DOE ANNOUNCES GRANTS FOR CLEAN HYDROGEN PROJECTS

On 15 March 2021, the DOE [announced](#) the distribution of US\$2 million in research grants to four research and development projects designed to create clean hydrogen production technologies. The recipients are researchers who are exploring different methods of producing hydrogen, including the process of co-gasification. Co-gasification blends waste from biomass, plastic, and coal feed stocks with oxygen and steam under high pressure and temperatures to create hydrogen. Currently, natural gas is the main source for hydrogen production. By funding research into the development of "green hydrogen" sources, the DOE is working to advance the Biden Administration's climate change goals.

The funds were distributed to: [Auburn University](#) to study the gasification performance of select feedstock mixtures in a laboratory-scale fluidized-bed gasifier; [Electric Power Research Institute](#), Inc. to test a moving-bed gasifier using coal, biomass, and waste plastic blends to generate clean hydrogen; [University of Kentucky Research Foundation](#) to develop and study a coal, biomass, and plastic blend fuel; and the [University of Utah](#) to leverage a high-pressure, slurry-fed, oxygen-blown entrained-flow system to enable co-gasification of biomass and waste plastic by creating slurries of coal, biomass pyrolysis liquids, and liquefied plastic oil.

EV CONNECT ANNOUNCES LARGE-SCALE VEHICLE-TO-GRID CHARGING PROJECT

On 16 March 2021, [EV Connect](#), an electric vehicle (EV) charging station software company, [announced](#) the launch of a large-scale vehicle-to-grid (V2G) pilot program in Indiana. To bring this project together, EV Connect has partnered with the [Battery Innovation Center](#), [Energy Systems Network](#), and [Rhombus](#). The project will use Rhombus' 500 kW bi-directional bus-scale superchargers to support school bus fleets, heavy duty trucks, and other customer segment V2G applications.

The pilot program will generate data on overall battery life, the number of available cycles and discharge rates. EV-related companies will use this data to determine how V2G applications will impact their products and systems. V2G technology is one of many bi-directional systems under consideration today, with companies exploring vehicle-to-vehicle, vehicle-to-load, and vehicle-to-home systems that will one day serve as part of the distributed-energy-resource mix.

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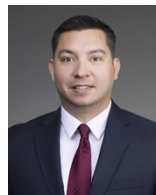
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