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SOUTHWEST POWER POOL GROWS ENERGY MARKETS EXPANDING RENEWABLE TRADING

On 1 February, Southwest Power Pool (SPP) launched a real-time balancing market initiative to include eight utilities and transmission authorities across the Midwest and Mountain-West regions of the United States. The new market, the Western Energy Imbalance Services (WEIS), is the latest in a growing trend to increase efficiency of wholesale energy markets. SPP's self-stated goal is to leverage the abundance of renewable generation facilities in the middle of the country by integrating the electricity generated by those facilities into a more expansive grid to meet increased electricity demand. SPP will serve as the WEIS Market Administrator.

WEIS is constructed on the foundation of a series of contracts among regional utilities to trade energy or transmission of that energy a day ahead, which in turn lowers wholesale electricity costs, increases price transparency, and mitigates congestion on the transmission system for market participants. Parties to WEIS may trade energy bilaterally within the market and hedge against costly transmission congestion. However, participation in WEIS does not imply membership in SPP's Regional Transmission Organization.

CARBON ENGINEERING AND 1POINTFIVE ARE DEVELOPING A DIRECT AIR CAPTURE FACILITY

Carbon Engineering (CE) and 1PointFive (1P5) are in the process of developing a Direct Air Capture (DAC) facility in West Texas that will capture and store an estimated one million metric tons of CO_2 per annum. The companies will design the plant this year and plan to begin construction in 2022 with a goal of opening the plant in 2024. The planned facility is the result of an arrangement entered into last year whereby CE granted a national license to 1P5 to use its DAC technology within the United States.

DAC technology involves many industrial fans that draw air into a large structure to be filtered through a plastic mesh coated in potassium hydroxide and to bind CO_2. Additional processes refine the CO_2 into pellets, and a pure gas is injected into older oil wells to sequester the CO_2, while simultaneously aiding oil extraction processes.

CE and 1P5 intend to develop several similar DAC facilities in West Texas and elsewhere with the goal of removing large volumes of carbon from the atmosphere. The name “1PointFive” is itself a reference to the Paris Climate Agreement's efforts to limit average global temperature increases to no more than 1.5 degrees Celsius.

NEW JERSEY TO INSTALL $166 MILLION ELECTRICAL VEHICLE CHARGING INFRASTRUCTURE

On 27 January 2021, the New Jersey Board of Public Utilities (NJBPU) approved a proposed settlement for its largest utility, Public Service Electric & Gas (PSE&G), to invest $166 million over the next six years in electric vehicle charging infrastructure in the state. The initiative will fund the deployment and installation of 40,000 residential chargers, 3,500 commercial chargers, and 1,000 direct current fast chargers. PSE&G will upgrade its own distribution system to support the installations and pay for some customer installation costs, but will not perform the installation itself or own any chargers.

This is the first utility-led electric vehicle charging program approved by the NJBPU. This plan is predicted to reduce carbon emissions by 14 million metric tons by 2035. This plan is also expected to help the state meet its commitment to facilitate the deployment of 330,000 electric vehicles on to state roads by 2025.

BOSTON SET TO LAUNCH ITS COMMUNITY CHOICE ELECTRICITY PROGRAM

Later this month, Boston will implement its new Community Choice Electricity Program. The program will be a municipal aggregation program, also referred to as a “community choice” aggregation program, whereby the City of Boston will purchase electricity on behalf of its residents. The program will allow Boston to leverage its residents' purchasing power to purchase a greater proportion of energy generated from renewable sources than would be available from a traditional electric utility.

The Boston Community Choice Electricity program will allow residents to choose from three different program rates: (1) the standard default rate; (2) the optional basic rate; and (3) the optional green 100 rate. The standard default rate will source 28 percent of the electricity provided from renewable sources; this rate will include the 18 percent renewable sources required by Massachusetts' renewable energy portfolio, plus an additional 10 percent of green energy. The optional basic rate will match the Commonwealth's renewable energy portfolio standards of 18 percent electricity from renewable sources. The optional green 100 rate will allow Boston residents to purchase 100 percent of their electricity from renewable sources. The program will be structured as an “opt-out” program.

Boston intends to use the Community Choice Electricity program to achieve its goal of carbon neutrality by 2050. The program will build off the work of the city's 2019 Climate Action Update, which includes a five-year plan focusing on reducing emissions in buildings and transportation.

WAVE ENERGY TECHNOLOGY RECEIVES SUBSTANTIAL FUNDING

On 26 January 2020, wave-energy developer CorPower Ocean (CorPower) and engineering firm OPS Composite Solutions (OPS) announced that they raised additional funding for COMPACT, a joint project that aims to combine CorPower Ocean's wave energy technology with low-cost composite design and manufacturing processes from the offshore industry. The companies have secured nearly €500,000 in EEA grants through Iceland, Liechtenstein, and Norway's Blue Growth Program.

COMPACT combines CorPower's Wave Energy Converter (WEC) design with OPS' experience in composite pressure vessels for offshore applications to combat the biggest issues facing wave technology: weight and price. By making the WEC significantly lighter and using cost-effective materials and production technology, the COMPACT solution aims to increase energy efficiency while decreasing the cost of energy.

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