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BRITISH GOVERNMENT ANNOUNCES NEW INVESTMENTS IN SMALL NUCLEAR REACTOR PROJECTS

On 10 July, the United Kingdom's Department for Business, Energy, and Industry Strategy announced that it will invest £40 Million ($51 Million USD) in the development of advanced modular reactors (AMRs) and small modular reactors (SMRs). The funding will be distributed pursuant to the United Kingdom's Department for Business, Energy and Industrial Strategy's (Department) Energy Innovation Programme, which has been established to accelerate commercialization of innovative energy technology and processes through the provision of £505 million in funding.

Two-thirds of the funding will support SMR projects in Cheshire, Oxfordshire, and Lancashire as a result of successful participation in a 2018 AMR competition that sought to determine the feasibility of, and provide support for, the design and development of AMR designs employed in the United Kingdom. According to the Department, the remaining funds will target “unlocking smaller research, design, and manufacturing projects to create up to 200 jobs.” Moreover, £5 million will be invested in British companies and startups developing new methods of manufacturing advanced nuclear parts for modular reactor projects around the world.

The focus on AMRs is a result of research by the Department and the National Nuclear Lab indicating a strong possibility of diversifying the United Kingdom's low-carbon energy mix by stimulating private investment and increasing the United Kingdom's nuclear supply chain.

STATES PLEDGE TO REDUCE EMISSIONS FROM MEDIUM- AND HEAVY-DUTY VEHICLES

On 14 July, fifteen states and the District of Columbia signed a joint memorandum of understanding (MOU) pledging to lower transportation-sector emissions from medium- and heavy-duty vehicles. The signatories—California, Connecticut, Colorado, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and the District of Columbia—have committed to creating a multi-state task force to accelerate the market for zero-emission medium- and heavy-duty vehicles, including large pickup trucks and vans, delivery trucks, box trucks, school and transit buses, and long-haul delivery trucks. The task force has six months to develop an action plan, which will include incentive systems, encouraging public transit, coordinating outreach, and promoting charging infrastructure.

The MOU sets a target that all new medium- and heavy-duty vehicle sales are zero emission by 2050 with an interim target of 30 percent by 2030. The transportation sector is largest source of greenhouse gas emissions in the United States and contributes to high levels of ozone, smog, and particulate matters.

PORTLAND GENERAL ELECTRIC COMPANY LAUNCHES PILOT VIRTUAL POWER PLANT PROGRAM

On 1 July, the Oregon Public Utility Commission approved Portland General Electric Company's (PGE) pilot program that will connect 525 residential batteries to PGE's distribution system. The pilot program will test the benefit of using home batteries to increase the reliability of the grid as PGE increases its use of renewable energy sources. The project aims to allow PGE to integrate more intermittent renewable energy sources into its energy portfolio and to improve energy resilience.

PGE will test new smart-grid control devices that will allow PGE to actively control participating customers' residential batteries. The control devices will actively manage the distribution of electricity across PGE's system by incorporating energy that customers produce, such as through solar panels, and by drawing upon customers' batteries to meet power demands. PGE believes that this pilot "virtual power plant" will help capture and store energy from renewable power sources, such as wind and solar, by creating a single resource that can help the grid balance energy production with energy demand.

FEDERAL APPEALS COURT UPHOLDS FERC ORDER TO OPEN WHOLESALE MARKET TO STORAGE

On 10 July, the U.S. Court of Appeals for the D.C. Circuit held that the Federal Energy Regulatory Commission's (FERC) Order 841 does not encroach on states' authority over their distribution system and that states will violate Order 841 by prohibiting distributed energy resources located on their electrical distribution networks and retail systems from participating in wholesale markets.

In February 2018, FERC issued Order 841, which requires independent system operators and regional transmission organizations to develop rules that are "just and reasonable" for energy storage players to partake in the wholesale electricity market. Order 841 covered everything from storage at the transmission level to behind-the-meter storage and storage on the distribution system. Order 841 was challenged in federal court on grounds that FERC exceeded its authority.

According to the U.S. Court of Appeals for the D.C. Circuit, Order 841 "solely targets the manner in which an [energy storage resource] may participate in wholesale markets," an "action … intentionally designed to increase wholesale competition, thereby reducing wholesale rates." The Court's decision enables FERC Order 841 to help propel the utilization of energy storage across the country, and has been hailed—along with Order 841 itself—by industry participants as a critical component to sustainably integrate renewable energy sources into the grid system.

POWER LEDGER RELEASES RENEW NEXUS REPORT DISCUSSING ITS RESIDENTIAL ENERGY TRADING PILOT IN WESTERN AUSTRALIA

Power Ledger, a leading Australian-based blockchain-in-energy company, has released a joint report discussing the results of its blockchain-based solar energy trading trial in Western Australia. According to the report, peer-to-

peer trading of rooftop solar-generated electricity via distributed ledger technology is both feasible technologically and in-demand by prosumers.

From December 2018 to January 2020, Power Ledger tracked transactions of rooftop solar energy between 48 households in Fremantle, Western Australia, as part of the RENeW Nexus Project. Participants used Power Ledgers' blockchain platform to buy and sell excess electricity, in real time, generated by their rooftop solar panels. Because the platform enabled participants to view their electricity usage in 30 minute intervals, they could make buy/sell decisions based on real-time information. In households that had 10 and 15 kWh batteries, and where there was a virtual power plant in place, payback times for batteries would be less than 6 years. Participants said they were 3 times more likely to buy a battery if they could participate in a virtual power plant.

The trial and the report will help regulators and energy industry stakeholders better understand “the potential of localized energy markets” and how to much such markets as efficient as possible through strategic deployment of state-of-the-art technologies like distributed ledgers. It will also help regulators understand the effect of certain policy choices, such as electricity tariff structures or virtual power plant trading mechanisms, on demand and supply. For instance, the trial found that participants' revenues were more dependent on their daily energy consumption rather than trading volume because of such tariffs. The report dives into additional recommended policy changes.

Power Ledger will hold a webinar on 23 July to discuss the findings of its trial in more depth.

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