THE ENERGIZER – VOLUME 45

Date: 23 May 2019

Energy Alert

There is a lot of buzz around blockchain technology, distributed energy resources ("DERs"), microgrids, and other technological innovations in the energy industry. As these innovations develop, energy markets will undergo substantial changes to which consumer and industry participants alike will need to adapt and leverage. Every other week, K&L Gates' The Energizer will highlight emerging issues or stories relating to the use of blockchain technology, DERs, and other innovations driving the energy industry forward. To subscribe to The Energizer newsletter, please click here.

CAISO ADDS FLOW BATTERY TECHNOLOGY TO GRID.

- On April 30, the California Independent System Operator ("CAISO") announced that it connected a new flow battery technology to its grid, becoming one of the first wholesale power markets to do so. The flow battery is capable of providing 2 megawatts ("MW") and 8MW hours of energy storage. The New Energy and Industrial Technology Development Organization and San Diego Gas & Electric ("SDGE"), in partnership with Sumitomo Electric, started testing a vanadium redox battery-storage pilot project in 2015. In December 2019, that battery began participating in CAISO's wholesale electricity markets.
- Flow batteries combine conventional battery technology with fuel cells, using liquid electrolytes of metallic salts pumped through a core with positive and negative electrodes, separated by a membrane. As the liquid flows through the membrane, the ion exchange creates charge and discharge capability.
- Flow batteries are a promising energy storage technology because they can be scaled easily by simply increasing the size of the electrolyte tanks. Moreover, the electrolyte solutions are highly durable as they generally materially degrade, and the cycle life of flow batteries can be higher than other battery technologies, reducing installation and operating costs.

ENGIE NORTH AMERICA ACQUIRES DER STARTUP GENBRIGHT, LLC.

- Last week, trade press reported that Engie North America ("Engie") acquired Genbright LLC ("Genbright"), a company that integrates DERs into wholesale markets. Genbright currently manages a portfolio of more than 50MW of DERs that include solar, demand response, and energy storage. With this acquisition, Engie plans to expand its DER portfolio in the United States, which includes more than 75MW of behind-the-meter battery from Engie Storage and numerous solar projects stemming from its acquisition of SoCore Energy last year.
- Christopher Tilley, Engie Storage's CEO, believes the acquisition will "allow Engie Storage to deliver co-optimised energy storage services seamlessly that span from behind-the-meter peak demand shaving and energy arbitrage to in-front-of-the-meter wholesale electricity market capacity, energy, and ancillary

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services, all from a single energy storage asset." Genbright participates in the PJM Interconnection LLC and ISO New England, Inc. markets and is also an energy broker in various states across the country. Engie's acquisition is timely in light of the Federal Energy Regulatory Commission's ("FERC") recent decision to affirm Order 841, which supports the full participation of energy storage resources in the regional wholesale markets.

FERC DENIES REQUESTS TO REHEAR ORDER 841.

- The FERC voted on May 16 to deny requests to rehear Order 841, which largely removed barriers for energy storage resources to participate in the Regional Transmission Organization and Independent System Operator markets. As part of its decision, FERC declined to adopt a state-by-state opt-out of storage participation in the wholesale market. K&L Gates will publish a more in-depth post about the Order in the near term. For more on energy storage, see K&L Gates' Energy Storage Handbook Vol. 4.

NY PUBLIC SERVICE COMMISSION CONTINUES ENHANCING DISTRIBUTED ENERGY RESOURCES MECHANISMS.

- On May 16, the New York Public Service Commission ("NYPSC") issued an order updating market price signals with methodologies to more accurately capture the actual cost and benefit of DERs to the grid. The order implements changes to standby and buyback service rates allowing utilities to recover a greater proportion of their DER costs. By allowing more optional rates and precise price signals, the NYPSC aims to allow customers "interested in managing their load to take advantage of these rates . . . [by being] able to lower their own bills by reducing the costs they impose on the utility system, avoiding unfair cost shifts."
- NYPSC also increased the availability of demand rates through mandatory opt-in eligibility for customers to a demand-based rate option, and improved cost allocations for standby service rates by directing its jurisdictional public utilities to implement an Allocated Embedded Cost of Service ("ACOS") methodology. Through the order, the NYPSC has introduced the ACOS as a methodology to improve the Embedded Cost of Service methodology by assigning costs on a local or shared basis.
- The order promotes DERs, which may allow for more efficient and cleaner energy reliance. By promoting DERs, the NYPSC intends to advance New York State's Reforming the Energy Vision, which includes a commitment to reach 50% renewable energy reliance by 2030 and to reduce greenhouse gas emissions 80% by 2050. By furthering the proliferation of DERs, the NYPSC believes it is increasing grid resiliency, energy security, and greater price stability.

ABB AND EVOLVERE INITIATE BLOCKCHAIN PILOT PROGRAM FOR ENERGY SECTOR.

- On May 16, trade press reported that ABB, a Swiss-Swedish digital technology corporation, and Evolvere, an Italian utility company, have developed a blockchain pilot program with PROSUME, a blockchain-based platform for energy services. The platform allows smart contracts to work directly with inverters manufactured by ABB. The pilot program tests how well the platform facilitates peer-to-peer solar energy exchanges.

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- Blockchain technology benefits energy markets not only because of the reduced costs associated with removing third-party mediations, but also the increased transparency through the shared network participation and heightened security due to the traceability of transactions. This pilot program joins a long list of such programs, demonstrating the industry's continued interest in peer-to-peer energy trading infrastructure.

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