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K&L Gates' The Energizer – Volume 58

A biweekly update on blockchain technology applications, distributed energy resources, and other innovative technologies in the energy sector.

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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](#).

For a quick read on the technical basics of blockchain that every energy lawyer should know, see Daniel S. Cohen's article in Business Law Today, please click [here](#).

New Jersey Poised to Increase Incentives for Electric Vehicles

- As of January 6, 2020, the New Jersey Senate Environment and Energy Committee and the Assembly Environment and Solid Waste and Appropriations Committee have approved [S2252](#) and [A4819](#), respectively, companion bills that incentivize greater adoption of electric vehicles (“EVs”). The bills would permit the state's [Board of Public Utilities](#) (“BPU”) to create an incentive program of up to \$500 for individuals who install in-home EV equipment, such as chargers. The legislation also directs the BPU to establish a special nonlapsing fund to provide incentives of up to \$5,000 for the purchase or lease of an eligible EV. This program would last for 10 years, or until \$300 million of rebates are dispersed.
- The bills also set goals for EV adoption and charging infrastructure, including at least 1,000 level-two chargers made available for public use by 2025 and targets for overnight charging infrastructure at multifamily buildings and hotels. The Senate Budget and Appropriations Committee is expected to take up S2252 before floor votes in the Senate and Assembly on January 13.
- These bills are part of New Jersey's goal of reaching 100 percent clean energy usage, and 80 percent reduced emissions by 2050. Moreover, if passed into law, New Jersey will join the trend in state policy to promote EVs as a means to reduce transportation-generated emissions, which outpace electricity-generated emissions.
- Legislatures in Colorado, Washington, California, and New Mexico passed laws in 2019 calling on state utility regulators to encourage EV adoption. Most recently, Massachusetts extended its EV rebates — capped in aggregate at \$27 million — through at least December 31, 2021.

OOO Oil & Gas Blockchain Consortium Tests Authorization for Expenditure Balloting System

- On December 18, 2019, the [OOO Oil & Gas Blockchain Consortium](#) [announced](#) that it successfully tested a blockchain-based program for Authorization for Expenditure (“AFE”) balloting with [GuildOne](#), a technology company that provides enterprise blockchain solutions. AFEs are used to approve capital and expense allocations and to determine the working interests of the parties operating under a joint-operating agreement for capital projects. The test included multiple scenarios of AFE ballots submitted to several nonoperating partners via GuildOne’s blockchain platform and smart contracts. The platform calculated the working interest of each partner based on their individual elections. Several rounds of AFE elections were held until an ultimate working interest of the participating parties was determined.
- This proof of concept is a first step towards modernizing joint venture management within the oil and gas industry. Currently, AFE balloting is largely a paper-based, manually-intensive process. Using blockchain and smart contracts could help digitize the process and make it more efficient through automation. In 2020, the balloting process testing will include increasingly complicated scenarios. Initial testing will occur through a joint interest billing (“JIB”) exchange, which will encompass charging and settling ventures between partners. The JIB will incorporate the AFE to manage the full process of the joint ventures. The consortium believes that incorporating blockchain technology into the AFE will update the manually-intensive and paper-based process by enabling greater automation.

Monash University Reports Breakthrough in the Production of Lithium-Sulfur Batteries

- [Monash University researchers](#) published new [research](#) suggesting that efficient lithium-sulfur batteries may soon be commercially viable. Lithium-sulfur batteries typically degrade faster than lithium-ion batteries because sulfur cathodes expand roughly eight times as much as lithium-ion cathodes when charged. Yet ultra-high capacity lithium-sulfur batteries perform better than the current lithium-ion products by delivering higher specific energy.
- The new research details an innovative method for fabricating sulfur cathodes that produces a cathode architecture that offers minimum interference with electrochemical reactions and ion movement and accommodates natural volume expansion during discharging, thereby resulting in markedly higher performance metrics.
- The researchers claim that lithium-sulfur batteries can be produced at a lower manufacturing cost using water-based processes, potentially leading to reduced environmental impacts. Some of the world’s largest manufacturers of lithium batteries have expressed interest in upscaling production of the new batteries, with further testing to take place in Australia in 2020. The new technology could be used to create more efficient battery technology in cars and to improve energy storage for solar power.

California Public Utility Commission Issues Proposal to Incentivize Energy Storage

- In late December, the [California Public Utility Commission](#) (“CPUC”) issued a [proposed decision](#) to implement rulemaking procedures for the state’s Self Generation Incentives Plan (“SGIP”), amending the plan to further incentivize energy storage technologies. The new order allocates \$830 million from 2020 to 2024 for SGIP, funded by ratepayer collections.

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- In early August, CPUC earmarked \$100 million to establish equitable resilience incentives to address consumers affected by the Public Safety Power Shutoff events or those located in areas of elevated wildfire risk. In its most recent order, CPUC allocates 85 percent of the \$830 million SGIP budget to energy storage technologies.
- Part of the increased allocation by CPUC includes a \$613 million increased budget for the state's Equity Resilience Budget, which "provides a \$1,000 per kilowatt-hour incentive for low income, environmentally overburdened, and medically vulnerable households and critical service providers in high wildfire threat zones to install battery storage systems designed to power critical loads during an outage."
- The state's focus on battery storage as a major component of resiliency efforts is a significant shift from its previous policy stances.
- For more information on California's SGIP, check out the [K&L Gates Energy Storage Handbook](#).

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