BLOCKCHAIN ENERGIZER – VOLUME 36

Date: 28 September 2018

Energy Alert

There is a lot of buzz around blockchain technology and its potential to revolutionize a wide range of industries from finance and health care to real estate and supply chain management. Many institutions and companies are forming partnerships to explore how blockchain ledgers and smart contracts can be deployed to manage and share data, create transactional efficiencies, and reduce costs.

While virtual currencies and blockchain technology in the financial services industry have been the subject of significant debate and discussion, blockchain applications that could transform the energy industry have received comparatively less attention. Every other week, the K&L Gates' Blockchain Energizer will highlight emerging issues or stories relating to the use of blockchain technology in the energy space. To subscribe to the Blockchain Energizer newsletter, please click here.

Come out and say hello to Blockchain Energizer co-author Buck Endemann as he presents on blockchain and renewable fuel standard, RINs, and biodiesel issues at the Oil Price Information Service (OPIS) conference in Chicago on October 1–3, 2018!

EDF ENERGY, UK POWER RESERVE, AND ELECTRON COMPLETE THE FIRST BLOCKCHAIN-BASED CAPACITY MARKET TRADE IN THE UNITED KINGDOM.

- Earlier this month, UK Power Reserve, a developer of small-scale, flexible power generation based in the Midlands, England, purchased a capacity market obligation contract from EDF Energy, which is Great Britain's largest electricity supplier by volume, using Electron's flexibility trading platform. By the terms of the agreement, UK Power Reserve will take responsibility from EDF Energy to provide two megawatts of electricity capacity. The UK capacity market aims to ensure sufficient firm capacity at times when there is a high risk of a system stress event.
- According to Electron, its blockchain-based platform is designed to facilitate a variety of energy flexibility trades and provides several advantages for parties trading in capacity contracts. First, the platform can reduce settlement time, which may require up to five days using current practices. Second, the platform automates compliance checks by incorporating the capacity market's rules into a smart contract, thereby improving the efficiency of such reviews. Third, the platform provides a transparent and immutable record of each capacity trade, which facilitates auditing and compliance while promoting data integrity.
- Electron believes the successful test demonstrates the viability of a blockchain-based trading platform. EDF Energy and UK Power Reserve believe blockchain can help unlock liquidity in secondary energy markets while reducing costs through "smart matching" (matching buyers and sellers and executing trades via smart contracts).

©2005-2026 K&L Gates LLP. All Rights Reserved.

- Blockchain-in-energy applications are progressing quickly in the United Kingdom — faster than innovation in the United States. As the U.K. market infrastructure scales and matures, the lessons learned will provide valuable insight for U.S. industry participants and regulators considering similar applications in the United States.

GRANT COUNTY PUD RAISES RATES ON CRYPTOCURRENCY MINERS; CHELAN COUNTY PUD CONSIDERS DOING THE SAME.

- The Grant County Public Utility District ("Grant County") raised electricity rates for cryptocurrency miners in August. Starting on April 1, 2019, small-scale miners will face an increase of 13.7 cents/kilowatt hour, and large-scale operations will pay an additional 7.9 cents/kilowatt hour. These rates may triple miners' electricity bills. One of the Grant County commissioners has argued that the new rate increases are necessary because cryptocurrency mining is risky and unregulated. Chelan County Public Utility District ("Chelan County") has proposed an 8.5 cent/kilowatt hour increase for cryptocurrency miners operating out of residential buildings and a 6 cent/kilowatt hour increase for miners in commercial or industrial settings. If approved, Chelan County's rates would also take effect on April 1, 2019, and would double the rates compared to non-mining residential and commercial customers.

- Chelan and Grant counties have wrestled with responding to the ever-growing presence of cryptocurrency miners in their jurisdictions, as we have previously discussed here, here, here, and here. Chelan County has issued multiple moratoriums on electricity demands from cryptocurrency miners and has shutdown unauthorized miners, citing public safety risks caused by overtaxing the grid. Other Washington counties, like Franklin County, have sought to curb cryptocurrency miners' energy demands for fear of significant rate increases to non-miners and grid security (see here).

- While the predominant cryptocurrencies have yet to shift from the consensus protocol "Proof-of-Work" to something less energy-intensive, the chorus to do so is growing. For example, momentum is growing within the Ethereum community to make at least temporary adjustments to the Ethereum consensus protocol to undermine the mining ability of "application-specific integrated circuits" ("ASICs") designed to mine Ether, Ethereum's native digital token. A byproduct of doing so would be a decrease in the amount of electricity used to mine Ether because the modified protocol would enable less energy-intensive equipment to be more effective mining tools than ASICs. For the time being, areas like Chelan and Grant counties, where electricity is cheap and the climate is cool, will have to continuing developing policy responses to mitigate the potential consequences of cryptocurrency mining.

ACCENTURE AND SAP COLLABORATE TO DESIGN A CLOUD-BASED BLOCKCHAIN SOLUTION FOR UPSTREAM OIL AND GAS OPERATIONS.

- Accenture and SAP are developing the "SAP S/4HANA Cloud" solution to streamline oil and gas companies' upstream operations by utilizing artificial intelligence and blockchain to automate various backroom tasks such as asset management and logistics. The companies are coordinating with various industry participants to ensure the solution meets the industry's needs.

- By using blockchain and artificial intelligence, Accenture and SAP aim to improve the oil and gas industry's visibility into day-to-day operations and to more efficiently and effectively conduct those

©2005-2026 K&L Gates LLP. All Rights Reserved.

operations with more accurate and secure data. Moreover, industry participants anticipate cost savings due to increased "flexibility" that a cloud-based system can provide. This application leverages several of blockchain's key benefits: improved efficiency in executing backroom operations, greater transparency into day-to-day operations, and improved capacity to make strategic decisions due to quality data collection.

This publication/newsletter is for informational purposes and does not contain or convey legal advice. The information herein should not be used or relied upon in regard to any particular facts or circumstances without first consulting a lawyer. Any views expressed herein are those of the author(s) and not necessarily those of the law firm's clients.

©2005-2026 K&L Gates LLP. All Rights Reserved.