# BLOCKCHAIN ENERGIZER – VOLUME 22

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**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. Reports estimate that over $4.5 billion was invested in blockchain startups in 2017 alone, and 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.

## EUROPEAN UTILITY DENIES RENEWABLE ENERGY SALE TO SWISS CRYPTOCURRENCY MINING UNIT MANUFACTURER.

- Utilities are paying more attention to the energy impacts associated with blockchain applications that support cryptocurrencies. Enel SpA, which is Europe's largest utility, has decided not to sell power from wind, solar, and other renewable energy plants to Envion AG, a Swiss cryptocurrency mining unit manufacturer. Envion has raised $100 million to fund its proposed network of portable cryptocurrency mining products that are designed to connect directly to wind, solar, and other clean energy generators. According to Envion, the benefits of its technology is that it enables cryptocurrency miners to easily and cheaply relocate their operations to locations with low energy costs, thus allowing them to incur significant savings. By purchasing power from Enel, Envion sought to provide low-energy cost products to cryptocurrency miners. On February 1, however, Enel announced that it had "no interest whatsoever in selling power" to cryptocurrency miners. The company stated it had "undertaken a clear path toward decarbonisation," and that "the intensive use of energy dedicated to cryptocurrency mining [was] an unsustainable practice[.]"
- Enel's declaration is significant in light of the crypto-community's appetite for cheap and reliable power. According to Bloomberg New Energy Finance, the power demand for mining bitcoin was approximately 20.5 Terawatt-hour (TWh) by the end of 2017. Power demand for all cryptocurrency mining could increase to 125 or even 140 TWh in 2018. For perspective, that amount of energy would constitute 0.6% of global energy consumption. Enel's announcement comes at an important time for cryptocurrency miners because many of them are relocating from China due to the Chinese government's increasing restrictions on cryptocurrency-related operators. Enel's position suggests that Europe may be a less inviting environment for cryptocurrency miners than previously thought.

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- Enel also owns a majority stake of Endesa, which is Spain's largest electric utility company, and is the founding member of the Enerchain Project, which is a consortium of utilities and energy companies that utilize the Enerchain blockchain to execute energy trades. If Endesa and members of Enerchain, such as Wien Energie, also refuse to sell power to cryptocurrency miners, miners may choose other energy affordable locations, such as Canada. For example, Bitman Technologies, which is one of the largest bitcoin mining pools in the world, is considering relocating to Quebec, in part, due to potential power savings.

## WIEN ENERGIE IS TESTING BLOCKCHAIN-BASED END-CUSTOMER ENERGY PRODUCTS.

- Austrian utility Wien Energie told the press at the E-World of Energy Fair that it is testing blockchain-based consumer-end products in Vienna's office and residential district of Viertel Zwei. Such products may include electric car charging power and the purchase and sale of green electricity. While Wien did not guarantee a date when such products will be provided to a broader market, it said that such services "may become available" sometime in 2018. Wien already has a track record of implementing blockchain technology, as 2017 saw the company test BTL's "Interbit" blockchain platform for gas trade confirmations.

## ENERGY TRADING COMPANY VATTENFALL AB IS CONSIDERING DEPLOYING A BLOCKCHAIN-BASED TRADING PLATFORM.

- Vattenfall is one of the largest energy traders in Europe and processes approximately 8,000 trades per day. However, the company still wants to expand its trading capacity, particularly the sizes of the transactions it can accommodate. According to Vattenfall, a blockchain-based trading platform would enable it to target trading volumes that the company would have previously neglected. Such trades could possibly include solar power and battery power from smaller resources, such as homes and department stores. Vattenfall is also participating in the Enerchain Project.

- Rising production and demand for renewable energy has seen renewable energy trading volume increase, particularly in the real-time and spot trading markets.

## GAS NATURAL FENOSA AND ENDESA BECOME FIRST COMPANIES TO USE BLOCKCHAIN FOR AN ENERGY TRADE IN SPAIN.

- Gas Natural Fenosa and Endesa recently executed a trade for 5.95 Gigawatt hours (of natural gas through the Enerchain project's blockchain platform. While several experimental blockchain-based energy transactions have been executed, this was the first actual trade in Spain. Endesa's sales director, Javier Alonso, remarked that using blockchain reduces energy supply costs and creates value for consumers. Both companies are members of Spain's nationwide blockchain network, Alastria, which joins banks, telecommunication companies, universities, and leaders from other sectors to promote blockchain development.

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