



POWER UP BLOCKCHAIN

a weekly briefing on blockchain & energy innovation & regulation
US & global coverage



Why the Potential for “Tokenization” to Streamline Project Finance in Renewable Energy Projects on the Blockchain May be Bad for Investors

Traditional project finance is subject to geographic, government, and regulatory uncertainty based on different rules and regulations depending on where renewable energy systems are being developed. Most renewable energy projects require power offtake agreements (such as a Power Purchase Agreements) to be in place before financing is approved, creating a major bottleneck and many risks for developers. As a result, many projects are not approved due to financing methodologies requiring entire project output be accounted for over the life of the project.

Tokenization enables renewable energy producers to raise capital by issuing their own energy tokens that represent energy they commit to produce and deliver. Producers can trade directly with green energy buyers (consumers and investors) and raise capital by selling energy upfront, at below market rates. Tokenization adds asset liquidity and democratizes financing by increasing investor access. It allows developers to tap into a previously unavailable pool of capital with less rigorous oversight and lower transaction costs. With this alternative source of financing, smaller renewable projects with lower rates of return may have a better opportunity to get off the ground, as projects may be financed by a large number of small investments.

While blockchain and tokenization are conceptually sound and have many potential benefits, nothing has come to market showing added liquidity and increased investor access being practically accomplished. Further, there are risks involved with democratizing investments. Traditional investors have greater protections in their ability to watch their investments closely and intervene when red flags or financial misconduct arises. However,

because distributed individual investors are disconnected from each other and the company, they do not have the same ease in oversight and lack a leading voice in determining if their investment is at risk. Thus, from an investor perspective, there is a greater chance and willingness for individual token buyers to eat the loss of a bad investment. [GreenTechMedia](#), [Medium](#)

Are Initial Coin Offerings the Problem and is Regulation the Solution?

Initial Coin Offerings ([ICOs](#)) enable companies to generate revenue by offering crypto-tokens or cryptocurrency to the public and [many blockchain-based energy startups](#) have used ICOs to fund their initial work. However, the 2017 hype surrounding blockchain and the lack of intensive evaluation into startup ventures led to the financing of potentially undeserving entities. As the cost and complexity of implementing blockchain solutions increases, the hype surrounding blockchain technology will fade in the remainder of 2018, according to the research conducted by [GlobalData](#). At this time, many U.S. utilities are just now beginning to develop proof of concepts, many of which are still many in the exploration phase. Unfortunately, as the hype surrounding ICOs fades, many blockchain-based projects will be “quietly shelved,” making it important for energy startups to begin developing the products that can be used in mass markets.

The ability of energy companies to avail themselves of ICOs to raise capital is also diminished because ICOs carry with a high potential for fraud since they operate as a regulatory workaround to traditional securities law. For this reason, both China and South Korea have taken steps to ban the creation or selling of ICOs. On the other hand, Switzerland and Lithuania are beginning to issue guidelines and regulations for ICOs to increase transparency and foster security and credibility to develop the right environment for blockchain-based projects. [Switzerland](#) will assess ICO structures based on the underlying economic purpose of the coin or token: payment, utility, or asset. The [Lithuanian Finance Ministry](#) recommends a framework based on whether a coin or token “grants profits or governance rights” to investors who obtain the token through an ICO. In a recent [interview](#) with CNBC, SEC Chairman Jay Clayton expressed that while [Bitcoin](#) is not a security since it acts as a replacement for sovereign currencies, tokens that act as digital assets will be regulated as securities. However, Clayton further explained that the SEC will not change the traditional definition of a security to support the ICO community. [Medium](#), [GreenTechMedia](#)

WPO’s Certification Blockchain Encouraging Renewable Energy

[WPO](#) (formerly Wind Prospect Operations), a [services platform](#), is set to begin issuing renewable energy production certificates to projects the company supervises. Their model is based on blockchain with ambitions to “[renew the renewables business](#),” according to WPO CEO, Barthélémy Rouer. These certificates, aimed to encourage clean power generation and investment in renewable energy, will ensure the security and traceability of energy produced from renewable sources. Through an initial coin offering (or ICO, a way to raise money by selling units of cryptocurrency or crypto-tokens), WPO will use “utility tokens” as the way to access their certified products and services. [reNEWS](#)

Testing Boundaries: Catalonia Distributing Crypto-tokens to Incentivize Solar Power Generation

Catalonia, an emerging [technology hub](#), is pioneering new tech. While Madrid's rules have made solar power less attractive by restricting peer-to-peer trading and requiring solar-producing consumers to pay a grid access fee before selling excess power onto the grid, Catalonia is pushing to use decentralized blockchain technology to incentivize solar power generation. As a way to make renewable energy investments seem more attractive, the autonomous region plans to circumvent Madrid's rules by distributing crypto-tokens which will be used to manage micro-grids, groups of distributed energy resources that will not be connected to the national grid. This is not an attempt to go against Madrid's rules, stressed by [Lluïsa Marsal](#), the tech innovation lead at the [Catalan Institute of Energy](#). Instead, these tokens, which will be called ION tokens, will be given away or 'airdropped' when users sign up, with hopes to distribute over eight million tokens. The plan is to establish the value of 1 ION to 1 kWh aiming for many more micro-grids and solar communities to create a solar production equaling one solar power plant. [Coindesk](#)

Local Perspective: How a Small Town with Cheap Electricity is Coping with Influx of Bitcoin Miners

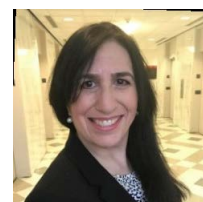
The small town of [Plattsburgh](#), NY might not be a top guess as being on the forefront of emerging technological challenges, but since an increase in bitcoin mining activity, residents now facing tough choices on how to cope. Plattsburgh attracted bitcoin miners because of its low electricity costs, tied to the region's hydroelectric generators, but the city only receives those low rates up to a limit, after which it has to pay higher rates on the open market. Bitcoin mining, which is earning a reputation as an [energy hog](#), now uses 10% of the city's electricity. Residents note that since bitcoin miners began flocking to the area, the city has regularly surpassed its electricity quota, a previously rare occurrence, resulting in 30-40% higher rates. The city put an 18-month ban on new mining, but local miners and the mayor hope to leverage the situation to turn the city into a leader in sustainable bitcoin mining, for example by harnessing the incredible heat generated by mining to support other activities, like hothouse agriculture. [PBS](#)

Blockchain and IoT and AI, Oh My!

Blockchain. Internet of Things. Artificial Intelligence. These are the buzzwords of the future. But at times, it can be difficult to conceptualize how all of these different technologies work together and apply to the energy industry. That's why this piece, [Blockchain Is Powering the Landscape, Centered Around People](#) by Peter Davies is so useful. Davies predicts that blockchain, IoT and AI together will herald the age of People Power - from peer-to-peer energy networks, socially-inclusive microgrids and creation of a steady stream of data on consumer energy use that will help consumers make smart energy choices. Davies' piece is focused on the UK, but it's equally applicable to the U.S. as well. [Cryptoslate](#)

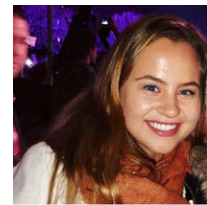
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