Blockchain and Renewable Energy Are Utterly Disrupting Society as We Know It

A new microgrid is set to power Brooklyn later this year, thanks to startup LO3 Energy. This microgrid relies on renewable energy and blockchain, two technologies that are inspiring the cities of the future.

THE GRID OF THE FUTURE

Renewable energy and blockchain are two technologies that are worth betting on. The former is considered to be the most effective way to combat the world’s climate problem. The latter is a promising new technology whose potential for disruption of current financial and societal structures is yet to be fully realized. Here’s a thought: why not put the two together? That’s what Brooklyn-based startup LO3 Energy (http://lo3energy.com) had in mind when it started a project that does just that, creating an innovative retail model for electricity.

“Oh, this is shared economy. This is Airbnb, this is Uber, this is 21st century,” Brooklyn resident Michael Guerra told Politico (http://www.politico.com/magazine/story/2017/06/15/how-a-street-in-brooklyn-is-changing-the-energy-grid-215268), recounting the time when LO3’s Sasha Santiago first introduced him to the idea. Back in 2013, Guerra installed 24 solar panels on the rooftop of his Park Slope home. Now, aside from providing him with a cheaper and greener way to power his air conditioning in summer, he’s also providing solar power to others in the neighborhood — and earning money in the process.

Essentially, the Brooklyn Microgrid (http://brooklynmicrogrid.com) runs an electricity-sharing ecosystem that’s maintained directly by consumers. Those with solar panels sell environmental credits, through a phone app, to residents without direct access. The entire setup is made possible by blockchain, the same technology behind the increasingly popular cryptocurrencies — such as Bitcoin and Ethereum, among others.

THE POWER OF DECENTRALIZATION

Thanks to the decentralized nature of blockchain as a digital information ledger, the transactions are very secure. Blockchain allows for meters to communicate with one another reliably, with the phone app acting as the bidder that gives microgrid consumers the power to control transactions.
“The idea is that it isn’t just rich people with solar panels selling energy to each other, but really, it’s the entire community,” LO3’s director of business development Scott Kessler explained to Politico. “So if you’re low-income and you need the cheapest power you can get, we’ll still provide that to you. We don’t want to be dictating.”

Greetings from Brooklyn Microgrid

After a successful trial run, LO3 plans to formally launch the microgrid later this year, with interest from 300 households and small businesses. Already, there are 50 generation sites throughout Brooklyn, mostly solar and one small wind turbine. “After I learned about it,” Guerra said, “I thought, ‘This is definitely happening. This can’t not happen.’”

This is one rather effective example of how blockchain can be a practical and useful technology. Its applications go far beyond just cryptocurrencies. Already, there are efforts to try and implement blockchain-based file systems for medical records, as well as international money transfers — including a basic income model and even UN financial aid programs. Some even consider blockchain to be the foundation for a new kind of internet, one that’s truly decentralized and free.

The Brooklyn Microgrid is “a glimpse of the future,” Duke University economist Campbell Harvey told Politico. “The idea with blockchain is that everything is done peer to peer. With a microgrid, people that have solar panels can actually trade amongst themselves. They don’t have to have a centralized person in the middle that is taking a piece of the action.”


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Robots Are Preparing to Fill 200,000 Vacant Construction Jobs

IN BRIEF

Though many fear the unemployment that could follow the widespread adoption of automated systems, they could be a welcome addition to the construction industry, which currently suffers from a lack of workers and stagnant productivity levels.

READY FOR DISRUPTION

Automation has long been considered the harbinger of future unemployment, and experts have predicted that the widespread adoption of artificially intelligent (AI) software and smart machines could lead to thousands or even millions of people losing their jobs (https://futurism.com/experts-because-of-ai-millions-of-people-are-at-risk-of-unemployment/).

![Will Automation Steal My Job?](https://futurism.com/images/will-automation-steal-my-job/)

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However, that may not be the case in the construction industry. In fact, with a growing shortage in labor, it’s one sector that’s particularly well-suited for an automation takeover.

According to a report released by McKinsey & Company (http://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/reinventing-construction-through-a-productivity-revolution) earlier this year, the world of construction suffers from productivity levels that haven’t really gone up much since 1945. The report also showed that 98 percent of huge construction projects end up going over budget and that the industry has proven resistant to technological upgrades. Furthermore, data from the Bureau of Labor Statistics (https://www.bls.gov/lt/4data) shows that almost 200,000 construction jobs were unfilled in the United States alone as of February 2017.

To sum, a lingering inefficiency seems to plague the industry, and it could be remedied through the use of automated systems and machines.

NEW JOBS, BETTER LIVES

A number of AI-powered systems that could help alleviate the construction industry’s woes are currently in development. These include a mobile construction worker (https://futurism.com/mobile-construction-robot-can-adapt-to-changes-on-site/), as well as a mobile 3D-printer (https://futurism.com/videos/mit-can-3d-print-a-building-in-hours/), both of which are capable of adjusting to their immediate environment. Almost always, these AI construction systems are able to finish their tasks more efficiently (https://futurism.com/this-robot-works-500-faster-than-humans-and-it-puts-thousands-of-jobs-at-risk/) and quickly than their human counterparts (https://futurism.com/new-construction-robot-hadrian-can-build-a-house-in-two-days/), so construction seems to be a nice fit for automation.

MIT Can 3D Print a Building in Hours
https://futurism.com/blockchain-and-renewable-energy-are-utterly-disrupting-society-as-we-know-it/
Some critics are wary of this kind of intelligent automation because they view it as an attempt to replace human workers. While it’s true that automated systems might cause some unemployment, they could also lead to the creation of new jobs that we haven’t really needed before, such as providing maintenance for these automated systems.

Still others argue that automation, coupled with universal basic income (UBI), would free people to pursue other meaningful endeavors, such as content creation. This pairing could also give people time to learn more and to tackle larger issues, so before we dismiss automation as a negative, we must consider all possibilities.


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