



ENVIRONMENT

Are New Bitcoin Operations and NYS Climate Goals Compatible?



by **John Szalasny** May 8, 2021, 4:13 pm 14 Comments



It is safe to say that almost no one understands what Bitcoin is. Most think that it's the latest in a long line of get rich schemes. First used in 2009, Bitcoin is a decentralized digital currency that has grown in popularity to the tune of about 5.8 million unique users by 2018. As the cryptocurrency is not currently regulated by any national government, it is suspected as the 21st century answer to money laundering. But on the whole, it is used by most users as a risky, but profitable investment.

To this point, this sounds like it could be the next generation of money. Government issued currencies are having a hard time keeping up with counterfeiters (seriously, how do they recreate all of the 3-D watermarks, metallic seals and plastic windows, etc.?). Cryptocurrencies solve that by eliminating the physical coin or bill. But how does Bitcoin work?

The simple answer is that it takes a lot of energy to run the rooms of computer servers needed to make this work (the size of the servers is almost like walking into a computer center of the 1960s). The University of Cambridge in England has a Bitcoin Electricity Consumption Index that estimates that the worldwide energy use for Bitcoin mining went from 3.92 Terawatt hours (TWh) at the beginning of 2016 to 114.15 TWh at the beginning of 2021. Just as for comparison, the entire New York Power Authority (NYPA) network generates about 28.7 TWh of electricity per year.

Some of that NYPA generated electricity is currently going to a cryptocurrency mining operation near the St. Lawrence-FDR Power Project in Massena. More concerning from a climate perspective is a new center that combined Bitcoin mining with a **reopened power plant in Dresden**, on the western shore of Seneca Lake. Unlike the use of the clean hydropower in Massena, the Greenidge Generation LLC center be using a plant converted from coal to natural gas with all of the power now being used by the Bitcoin operation. According to a Grist investigative report, this center has already become one of the largest in the country, and is currently using enough electricity to power 9,000 homes – with plans to expand.

The conversion of the Dresden power plant was approved well before the Climate Leadership and Community Protection Act (CLCPA) was passed last year. The CLCPA put into legislative mandate the climate pledges previously made by the state. One of these was a target of 100% Zero Emission electricity by 2040 and an 85% reduction in Greenhouse Gas (GHG) Emissions by 2050. These targets, however, are calculated for energy sources that are added to the electric grid. As a “behind the meter” source of power, the Dresden plant is not legally required to reduce their GHG emissions. In fact, as their operations expanded, the NYS Department of Environmental Conservation (NYS DEC) noted that their GHG

emissions increased 10-fold from 2019 to 2020.

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This could be a nightmare for the New York State climate targets as Upstate currently has 30 mothballed coal and methane power plants which could be used for similar purposes. We've already had two local possibilities. In 2019, Beowulf Energy proposed to convert the Somerset power plant into a large-scale data center with about a quarter of the plant designated for Bitcoin mining. In April of this year, a methane fired power plant in North Tonawanda was purchased by cryptocurrency mining company Digihost.

Like any business, Bitcoin miners are looking for the least expensive way to do business. Most of their costs are the electricity that they use. If they purchase a power plant (likely at fire sale pricing), they have no incentive to meet CLCPA targets and purchase renewable energy since they will be able to use their fossil fuel plant for their low-cost energy needs. Most of the mothballed plants were underutilized when the baselines for the CLCPA targets were calculated. If even a handful of plants go back to methane fired operations, we can likely kiss New York's climate change targets goodbye.

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Earlier this year, the Chinese regional government in Inner Mongolia announced a ban on all Bitcoin mining. New York needs a pause to assess the effects of Bitcoin mining, and help may be on the way. On May 3, NY Senate bill 6486 was proposed by Sen. Kevin Parker which would stop Bitcoin mining **for three years** in order to assess the environmental impact of the industry. We haven't had an issue with such potential climate impact since the issue of hydrofracking over 10 years ago. As we are near the end of the legislative session, I would suggest to Governor Cuomo to use the same playbook as Governor Patterson did back in 2010. Have the NYS DEC issue an administrative pause to study what environmental impacts the Bitcoin mining will have and how it will impact the goals of the CLCPA.

Lead image: Photo by *Executium*

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Written by **John Szalasny**

John Szalasny is someone who cares about our planet. Born too late to join in on the first wave of organized environmental action in the 60's, I'm making up for lost time as I get nearer to retirement on various environmental concerns including the plastic waste crisis. Check out my Facebook group Bring NYC's Styrofoam Ban to My Hometown! <https://www.facebook.com/groups/2098476837129562/>.

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