SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF YATES

In the Matter of the Application of
GREENIDGE GENERATION LLC,

Petitioner-Plaintiff,

Index No. 2024-5221
Hon. Vincent M. Dinolfo

For a Judgment Pursuant to Article 78 of the
Civil Practice Law and Rules

- against -

NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION, and ACTING
COMMISSIONER SEAN MAHAR, In his Official
Capacity as Acting Commissioner,

Respondents-Defendants,

SENECA LAKE GUARDIAN, THE COMMITTEE
TO PRESERVE THE FINGER LAKES,
and SIERRA CLUB,

Intervenors-Respondents.

Amicus Brief by Colin Read
Professor of Money, Banking, and Sustainability at SUNY Plattsburgh
Former Mayor of the City of Plattsburgh
Author, The Bitcoin Dilemma: Weighing the Economic and Environmental Costs and Benefits

I submit this amicus brief to provide information that I hope will be helpful to the Court on the negative impacts of cryptocurrency mining on small upstate New York communities.

I have taught Money and Banking for 37 years, and environmental and energy economics for about 35 years, and have maintained an academic interest in the viability of digital currencies such as bitcoin.

I wrote a scholarly book, called "The Bitcoin Dilemma: Weighing the Economic and Environmental Costs and Benefits," published by MacMillan-Palgrave,[1] to document the promise of Satoshi Nakamoto and the cryptocurrency industry but also the substantial risks and

[1] https://link.springer.com/book/10.1007/978-3-031-09138-4.

costs all citizens incur. Chapters 10 and 20 provide details on the lack of economic development and jobs, and the externalities that host communities must pay, with little benefit.

I found interesting and eventually troubling the efforts of bitcoin mining to take a foothold in the United States in 2016. At that time I ran for and was elected mayor of the City of Plattsburgh, New York, and found it necessary to deal with a couple of large bitcoin mines that were permitted to start up in my city by my predecessor.

While for various technical reasons bitcoin will never be the digital currency that its developer, Satoshi Nakamoto, had hoped, other digital currencies have since emerged. These include Ethereum, a technically far superior coin, and the various digital coins being developed worldwide by central banks motivated to make banking and transactions accessible and affordable.

Bitcoin mines should be differentiated from the coin they enable. Every cryptocurrency must establish a mechanism to record transactions and ensure this record does not become corrupted. Most every cryptocurrency now uses a method called Proof-of-Stake, including every new digital currency. However, bitcoin, as the first successful digital currency, instead pioneered a method for corruption-proofing the digital coin called Proof-of-Work. Satoshi developed this method because it was efficient in 2008. The method has the unfortunate characteristic, though, that the energy devoted into memorializing transactions is proportional to the price of the coin. This is because new coins are offered to those who perform this Proof-of-Work purpose. In essence, copious amounts of electricity is the pay-to-play in the proof-of-work process.

The price of bitcoin began to increase rapidly in the 2010s. By 2016, bitcoin proof-of-work entrepreneurs, called miners, began to search for large pools of cheap electricity necessary to capitalize on the increasing bitcoin price by “mining” new coin as part of the transaction memorialization process. In 2016 a number of such proof-of-work coins existed, but almost every coin has since moved away from this energy intensive protocol and have adopted energy benign methods.

This left bitcoin, a digital currency that represents almost half of all cryptocurrency capitalization, as almost the sole coin that uses proof-of-work. In fact, more than 99% of this energy-wasteful method is concentrated on bitcoin. Miners wishing to capitalize in the lucrative cashflows this method can generate flocked to my city for profits of more than $10 million per month for an allocation of 10 megawatts of electricity.

In 2016, a large mining operation called Coinmint came to town. It required our city to devote almost 10% of all the electricity allotted to our municipal electric distribution corporation. It also

required our Municipal Lighting Department to invest in the various transformers and distribution networks necessary to provide such a large slice of our city's power.

A city such as ours uses our very inexpensive energy as an important strategic tool to attract industry that creates jobs. For that reason, the city welcomes new industry for the jobs they create and is willing to make the substantial investments for the creation of long term jobs.

Other industries use far less energy and employ many more New Yorkers. For instance, one of Plattsburgh's largest energy users is a plastics plant. Their power allocation is less than 5 MW, but not 24/7 since the plant does not run to full capacity at all times. Nonetheless, despite the use of only half the power allotted to Coinmint, the plastics plant employs almost 500 people.

Coinmint's operations in Plattsburgh is like all bitcoin mining operations. While the industry refuses to publish the number of people they employ, there is rarely more than one or two cars in the lots adjoining the mining facility. As mayor, I estimated their permanent employment as around ten people. That is 1/50th the job creation of a manufacturer such as a plastics plant, but uses twice as much power, and 24/7 rather than for a set number of shifts. In other words, bitcoin mining creates jobs at 1/100th the rate of the types of enterprises our city hopes to support, but requires substantial investments in city-owned electrical equipment and our electricity allotment.

Bitcoin miners seek out cheap energy, no matter what its source. Greenidge bought a gas power plant to directly mine on site directly combusting fossil fuels for its operations. In my community, they sought municipal power allocations to our local grid. To promote jobs, we offer a rate of 1.9 cents per kwh to industrial users. This rate is one of the lowest in the country and the world and made Plattsburgh very attractive to mining entrepreneurs who predominantly use energy over all other factors of production to generate bitcoin and almost unimaginable profits.

When I became mayor, I recognized the problem very quickly. So did our ratepayers. The inflow of miners forced our city to exceed its power allocation on the coldest winter days where everybody heats with electricity given the usually very inexpensive rates. When our quota is exceeded, we are forced to purchase additional power in spot markets or on contingent contracts, at vastly higher prices. This forces our city to raise the rates on our commercial and residential customers to compensate for our higher costs. In essence, our ratepayers were paying much higher electricity bills so bitcoin miners can maintain their immense profits. Our city was in a better position than most utilities though. We had ratepayers to protect and I lobbied the state's Public Service Commission to create a rate provision for municipally-owned utilities. This resulted in Rider A that allowed any overages in our wholesale electricity costs to be passed directly onto so-called "high energy density" customers that dissipate a very large amount of electricity and heat in a very small space. While this is not the Greenidge model of electricity consumption, there are still real impacts on local communities.

To deal with the local impacts in Plattsburgh,we passed a moratorium on new bitcoin applications for our power. This afforded us time to revise our code in ways a municipality could not have otherwise anticipated in order to protect our residents and the environment.

These changes included a revision of our safety codes to protect firefighters who must respond to a large scale electrical fire that is of heightened risk given the immense amounts of heat produced by miners in a small and concentrated floorspace. We also limited the indoor temperature our workers must endure. The very unusual need for this industry to dissipate immense amounts of heat in such a small area also creates other unique problems. The most notorious facility in Plattsburgh leased an abandoned dollar store in a building that had a couple of adjoining shops. The noise of the fans that must whir at all times, day, night, and weekends, disturbed the peace of adjoining shopkeepers and residents. We received numerous such complaints from our citizens. To combat at least a portion of these problems, we adjusted our noise codes.

We also adjusted our code to mitigate other externalities placed on our community from mining operations. The powerful fans necessary to dissipate the equivalent of 10,000 space heaters all housed in one dollar store sucked the air from cracks in walls and doors of adjoining shops. To replace that airflow, air was drawn in from under the doors and through windows and prevented these shops to maintain heat on cold winter days.

On days when the outside temperature dropped below 40 degrees, we required bitcoin mines to recycle a share of heat rather than squander it into the atmosphere. We envisioned that they could provide heat to adjoining shops or nearby field houses, gyms, or factories.

After some of our protective measures were put in place, Coinmint sought to establish additional facilities elsewhere. This industry can move from one leased facility to another over a weekend. There is no long term dedication to community, almost no jobs created at all, no sales taxes that accrue, no property taxes in proportion the immense profits generated because they typically lease rather than own buildings housing their mining machines, and perhaps some corporate income taxes that are paid, if not evaded given the anonymity of bitcoin revenue as a feature of the coin’s privacy opacity. Of course, towns, counties and cities do not share in any corporate income taxes paid, which in sum means that there is almost nothing gained by a bitcoin mining operation, but much lost in higher energy costs, greater investments required in firefighting resources and electricity infrastructure, noise to endure, and environmental consequences we all suffer as more and more of our precious power, locally and nationally, is devoted to such a wasteful activity in times of climate change.

As an economics professor who appreciates the value of digital currencies but also who teaches and has published a book on sustainability, I remain very troubled not by digital currencies, but by one particular cryptocurrency that refuses to abandon the wasteful Proof-of-Work mining technology. There are better ways to both create and memorialize digital currencies that use but 1% or less of the energy bitcoin commands. Instead of enabling this industry that now uses an amount of electricity approaching 3% of our nation's electricity consumption, we should be recognizing we can have crypto without squandering our children's future through a ratcheting up of fossil fuel plants that defy our state's and nation's ability to meet its climate goals.

Miners like Greenidge that have bought power plants to create the power for their operations maintain the profits in ways that leave the rest of us paying the cost, both environmentally and in our ability to invest in and transition to sustainable power sources.

Our city was fortunate in that we had the tools to nip this problem in the bud and protect our citizens. I lament that other local jurisdictions do not have these tools and are often enamored by the glossy presentations and small donations peppered into communities willing to approve their permits. They do not discover until too late that noise detracts from neighbors' quality of life, little or nothing is returned to local coffers, and a McDonald's restaurant generates far more and perhaps better and higher paying jobs than do bitcoin mines. In the case of Greenidge, a gas plant that operates full time to mine bitcoin, there are the externalities such as local air and water pollution and climate pollution from the burning of fossil fuels.

Respectfully submitted,

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