

## Local Gov'ts Dig Deep To Tackle Regs For Bitcoin Mining

By **Emma Kennedy**

*Law360 (November 30, 2022, 7:10 PM EST)* -- When a public utility in a small Tennessee county rezoned its land to pave the way for a data center, the change breezed through the approval process.

A year later, however, neighbors complained about loud and disruptive operations on the site. The property had been leased by Red Dog Technologies LLC to operate a bitcoin mine.

Washington County attorneys sued Red Dog and BrightRidge, the utility, in late 2021, alleging the mine was an illegal operation under the zoning category of "Agriculture — Business District."

Washington County Attorney Allyson Wilkinson and an attorney for Red Dog, Hunter Smith & Davis LLP partner Christopher Owens, both declined to comment to Law360 on the litigation.

The case, *Washington County v. Johnson City Energy Authority* in the Chancery Court for Washington County, Tennessee, is ongoing, but it highlights a cycle of uncertainty that communities across the country face when bitcoin comes to town.

According to industry experts, a typical scenario plays out like this: a bitcoin mine operator comes in; neighbors complain about increased utility costs and noises similar to "jet engines that never take off"; the municipality tries to zone or regulate the industry; and most operators leave town in search of a more lenient jurisdiction.

Such locations invariably exist because there are no federal regulations governing cryptocurrency mines and the statewide approach is piecemeal, leaving many of the rules up to local governments' zoning and land use decisions.

Although most local government regulations use the more inclusive terms "cryptocurrency" or "data center" in a bid to cover future innovations in the space, the intent behind the current influx of regulations is to address the nuisance factors that come with bitcoin specifically.

Local leaders who have been through a crypto wave say that bitcoin mines lower property values, cause excessive noise and increase electricity costs without contributing to the tax base or providing employment opportunities gainful enough to meet the cost of homeownership in the towns they set up in.

Although the market is volatile and the perceived effects are overall negative for communities, many

local government officials also don't believe cryptocurrency mining is going away anytime soon. Instead, there has been a pivot to focus on isolating the operations in industrial areas and achieving renewable energy goals as governments take a closer look at the industry and the opportunities within.

## **The Energy Impact**

In Plattsburgh, New York, the city's affordable hydropower and lower temperatures were a big draw for bitcoin miners looking for a home base when Colin Read became mayor in 2017.

"We use cheap electricity as a tool to attract industry, and we do that hoping it will generate jobs and tax base and property taxes, all that kind of stuff," Read, an economics and finance professor at the State University of New York College at Plattsburgh, told Law360.

"Well, we really got none of that out of bitcoin even though they used twice as much power as our next-biggest industrial employer," said Read, who is no longer in office. "There's far more benefit when McDonald's comes to town than when crypto comes to town because at least McDonald's will own their building and pay property taxes. But crypto is always looking for the next bigger, better deal in electricity."

A six-month moratorium on new bitcoin mining business gave city leaders enough time to work through what regulations they needed in place to abate the nuisance issues and resulted in a noise limit that applied to everyone but was a nod to the mines' loud computers and fans.

City staff also petitioned for a New York Public Service Commission-approved surcharge for any high-density industrial user causing the city to surpass its power allotment.

That meant those users, primarily bitcoin miners, would pay the difference in increased power costs so that it wasn't averaged among property owners.

While Read said there is still some bitcoin mining activity in the city, the regulations have effectively stopped the influx of new operators.

Missoula County, Montana, also effectively regulated the industry out by putting in place aggressive clean energy requirements, including requiring bitcoin miners to use renewable energy for additional consumption, according to Jennie Dixon, zoning and land use expert for the county.

Legally, Dixon said the county knew it couldn't outright ban cryptocurrency mining, although it did explore that option before changing tactics.

"If you try to put a moratorium in place or to stop it, you'll just spin your wheels," she told Law360. "It's just as valid as any other industry, so we had a lightbulb moment while we were going that direction and realized we needed to instead turn and address the impacts and say, 'If they can come in and comply with all of that, then so be it.'"

Overall, bitcoin mines trend toward regions with low energy costs like hydropowered communities and areas that aren't facing threats like a nearby fault line or flood zone, according to American Planning Association research associate David Morley. The approach to regulation, however, varies greatly among jurisdictions.

Some balk at the venture entirely because it doesn't add to the tax base, while others welcome even a small slice of tax revenue in rural areas that would gain new construction on a site that didn't previously have any structure at all, Morley said.

In 2021, Kentucky added two laws to incentivize crypto mining in the form of clean energy incentives and tax breaks, whereas New York Gov. Kathy Hochul last week signed a bill that launches a task force to study the effects of cryptocurrency mining on the state's economy and bans some operations that run on carbon-based power.

At the local level, governments have opted for zoning overlay districts or new land use categories. Some have imposed renewable energy requirements and others, like Plattsburgh, have passed the additional electricity cost on to the miner rather than taxpayers.

Fort Worth, Texas, is an example of a community that has taken a strong pro-bitcoin stance by launching a pilot program in August to mine bitcoin out of city hall.

"I definitely think from a zoning perspective it's important to distinguish between crypto mining and data centers, and the case for drawing the distinction is based much less on the land use impacts but more on the perceived social license of the two things," Morley told Law360.

"Data centers make the internet work, so they have a high social value right now, and we're willing to have these energy-intensive settings to make it happen, whereas cryptocurrency mining is much less understood and they don't behave like conventional currencies," he said. "Because they're poorly understood, I think there is this urge to treat them quite distinctly, but the zoning is based more around this social license."

The zoning debate is also one playing out in a primarily reactionary fashion, Morley added.

It's usually not until a proposed bitcoin mine comes across a planner's desk that the city or county talks about the land use implications of the industry.

David Shargel, a partner in Bracewell LLP's cryptocurrency practice, said that although cryptocurrency mining has been prominent for more than a decade, it's only in the last few years that it has become a local government and land use issue.

"It makes sense there would be regulations that have the effect of pushing crypto mining operations to more industrial areas and limiting the ways in which the operations have access to the electrical grid," he told Law360.

"I think primarily it's a power issue and these crypto mining operations, if they're big enough, can use many multiples the amount [of electricity] that a typical home uses, which places an enormous amount of stress on the traditional power infrastructure," he said.

### **Trying to See the Future of Crypto**

The cryptocurrency market's popularity and volatility have come into focus in the last few years as bitcoin's value plummeted and, most recently, major exchange site FTX filed for bankruptcy.

Real estate-wise, those factors and the tendency for miners to lease rather than own property have kept

crypto mines from slicing out a significant portion of real estate development, Shargel said.

It's unclear how much infrastructure and property should be built specifically for the industry, so it's more likely miners would scoop up former industrial facilities like old factories where there's already access to a large amount of electricity, he said.

Bitcoin mines can be set up almost anywhere as long as they meet the primary requirement of a large amount of cheap electricity. They are sometimes in storage units, old office buildings, or commercial sites like defunct retail space.

The operations require hubs of computers and the fans needed to cool them, but they are easy to relocate quickly if needed. Read recalled a bitcoin miner in Plattsburgh who packed up its site and left in a single weekend to relocate about 60 miles away to a less regulated community.

In Missoula County, land use expert Dixon recalled a bitcoin miner filing for bankruptcy in 2020 and leaving with a multimillion-dollar outstanding energy bill.

Bitcoin, however, is one of the last cryptocurrencies using the electricity-heavy model known as proof-of-work, which raises the question on whether the need to regulate its land use will soon be outdated or moot.

Proof-of-work authentication methods use specialized computers to generate codes, racing against other miners to find the successful string of characters to authenticate the cryptocurrency transaction.

Most cryptocurrencies now use the proof-of-stake model in which, according to Read, most of the same authentication work can happen with much less energy consumption and in most cases on only one machine. The next-biggest cryptocurrency, Ethereum, recently converted to a proof-of-stake model, leaving bitcoin as the primary remaining proof-of-work cryptocurrency.

Read believes bitcoin will cling to the proof-of-work model because a conversion would likely lower its value and make bitcoin mining less profitable, which means there is still a need to assess potential effects of the industry in local communities — if not for bitcoin itself then for blockchain technology in general.

Morley of the American Planning Association agreed, saying that cryptocurrency mining or whatever similar technology follows will continue to be a land use issue for communities.

"I think the underlying technology is likely to be durable, so even if every existing cryptocurrency died off, I don't think they would all go away or other blockchain-based applications would go away," he told Law360. "I think there will continue to be a lot of experimentation and innovation in the space."

### **The Flip Side of Bitcoin: Renewable Energy**

An unexplored benefit of bitcoin mining operations is the potential to drive the renewable energy effort, according to Bracewell's Shargel.

There has been talk of converting methane gas into electricity for cryptocurrency operations — the idea being to capture methane gas emitted and wasted from oil and gas operations — and some utilities have deals with miners to buy unused power in their communities at a discounted rate.

Shargel also pointed to firms operating out of places like Africa, where some energy generators are offering incentives for crypto miners to come and use electricity that in turn helps power communities.

In these instances, the utilities have built generation facilities that are ready to produce, but there is no transmission infrastructure to the communities, so it's a win-win for crypto miners to come in and use the electricity in the meantime and make deals with the generator or government to eventually help fund the transmission lines to bring power to the communities as originally intended, Shargel said.

Far more common than those types of deals is a requirement that cryptocurrency mines operate on renewable energy, as is the case in last week's New York state bill.

That law requires proof-of-work mines to use 100% renewable energy and bans new mines from coming online for the next two years.

A move like that could help bolster renewable energy innovation — facilities like hydropower, wind power and solar energy — in a market where renewables have already become more affordable and less a cost barrier for operations like bitcoin mines, according to Morley.

"The most rapid build-out of large-scale cryptocurrency mining was initially in areas that have hydropower since that's historically been the cheapest, but that's changing with the other renewables becoming cost-competitive in other markets now," Morley said.

Missoula County, which was one of the first jurisdictions to require clean energy in bitcoin mining in 2021, requires cryptocurrency miners to incorporate elements like roof solar panels, power purchase agreements or green tariffs on any power usage beyond the typical allotment for the site.

"Powering with renewable energy was a big piece in what we did, and people thought it would make it so much more expensive, but it's really not a massive financial barrier," Missoula County climate action program manager Caroline Bean told Law360.

"I think when we were one of the first to require it that it was much easier for them to not figure it out and go somewhere else, but that dynamic is changing now."

--Editing by Orlando Lorenzo and Jill Coffey.