

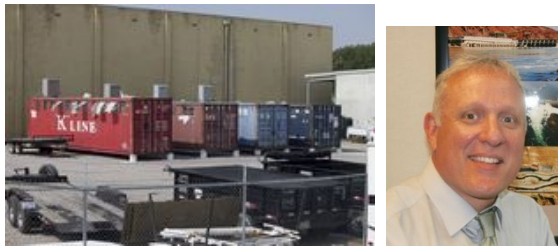
PUD seeks more rules, higher rates for elusive data miners

by Christine Pratt July 19, 2015, 2:52 p.m.



World photo/Christine Pratt

A data-mining operation had set up in the back of this multi-tenant building which formerly housed Nancekivell's Cleaners. The operation overloaded the power line that supplied the building with electricity, and burned off part of its insulation, according to Chelan County PUD officials. A similar incident in Ellensburg caused a fire that spread to a neighboring fence.



WENATCHEE — A small “data-mining” operation in the building that once housed the old Nancekivell’s Cleaners on North Chelan Avenue was drawing so much electricity last March that it melted the insulation on part of the wire that supplied the building with power.

Chelan County PUD crews who monitor the power grid noticed a spike in the power usage at that building and fixed the problem before it caused a fire, but Andrew Wendell, the PUD’s customer service director, describes the incident as “a near miss.”

The ability of these energy-intense data-mining operations to spring up almost anywhere in the city doesn’t only pose fire danger, but also threatens the reliability of the power supply and the sustainability of county’s low electric rates, say PUD officials. They’ve been studying rule changes and new rates for these customers since December.

Industry insiders say data centers designed to “mine” for the digital currency Bitcoin are driving a boom in inquiries for Chelan PUD power. These miners have discovered the region’s cheap electricity and are going after it.

The utility received 34 inquiries last year for a total 220 average megawatts. Annual system growth for the PUD is typically 1 to 3 average megawatts. The utility currently powers the entire county with just over 180 average megawatts.

PUD commissioners imposed a moratorium in December on requests for 1 megawatt of power or greater. They’ve since imposed new restrictions this month after nine moratorium-beating inquiries kept coming in — but this time for only about 0.95 megawatts each.

Wendell recently spoke with one man from Florida who arrived with 600 Bitcoin mining machines that he’d hoped to operate out of a storage unit in Cashmere. He was denied power because of the moratorium.

“The problem is that the mining operations are using as much energy as they can get,” says Wendell. “They’re going into facilities that were not originally designed for that load... Anywhere there’s a vacant building. They’ll go anyplace.”

Other utilities have had similar experiences, including Ellensburg City Light. About a year ago, an overloaded line feeding one of these data centers started a fire that spread to a neighbor’s fence. Officials there say the data center was in a building not designed for such heavy electrical use.

Bitcoin boom

Bitcoin miners set up rooms of high-capacity computers that perform complex calculations around the clock. They compete with mining operations all over the world.

The system that cracks a complex math problem wins the right to process a batch of sales transactions in this global digital currency. They’re paid in Bitcoin.

The currency, itself, is unregulated, intangible, knows no international borders and has the perception of anonymity. Anyone with an Internet connection can buy, sell and purchase Bitcoin and other “cryptocurrencies.” This could make it convenient tender for those who live in countries with unstable currencies or who lack access to bank accounts. But it has also been a financial tool for drug trafficking and a medium for money laundering, according to national news reports.

The energy used for data mining can be 10 to 100 times greater per square foot than a large supermarket or general hospital, Wendell’s data shows.

Unlike the traditional data-processing centers that buy land and build sprawling campuses that meet electrical and safety codes, Bitcoin miners often lease space or set up operations in air-conditioned freight containers, which can be easily moved if they can find a lower lease or better power costs elsewhere. If they do move out, they leave costly power infrastructure behind that the PUD must maintain without a customer to bill to help offset the cost.

Also, unlike other industries including fruit-packing, the currency miners don't have an incentive to conserve electricity, Wendell said, and the transitory tendency of some of them increases the credit risk for the PUD.

The Bitcoin operation at Nancekivell's Cleaners, for example, closed for inability to pay its power bill, he said.

Bitcoin operations are often unattended, since owners/operators can monitor their equipment remotely, over the Internet, and only need be present when something breaks down.

About seven miners are believed to be operating in Chelan County, another seven Douglas County and eight in Grant County, according to PUD officials. Neither the Douglas nor Grant PUDS have noticed a spike in applicants since Chelan PUD created its moratorium.

Their voracious use of electricity could threaten Chelan PUD's business model by reducing the amount of surplus power the PUD sells at higher prices to buyers outside the region. The revenue from this sale of power subsidizes local rates to keep them low.

Even so, owners of leasable space around Chelan County and city officials, have urged the PUD to come up with rules that could accommodate mining operations. The ones that do it right, they say, are not safety or credit risks.

Port of Chelan County officials also support the PUD's rulemaking effort but have encouraged the utility to be quick about it. The moratorium on applications large power hookups, they say, could discourage manufacturing companies or other big employers from investing here. The moratorium was recently extended into December.

Unseen danger

Overloaded wires outside Bitcoin buildings are visible harbingers of insufficient wiring inside the building, inspectors say.

Matthew Erlich, a spokesman for the state Department of Labor and Industries, said that the department's electrical supervisor couldn't immediately identify specific locations of data centers with faulty wiring, but that his inspectors had seen several.

"There have been apparently several businesses that meet the description of 'jerry-rigged' server operations," Erlich said. "Whether they are Bitcoin we are unsure, but clearly they have set up an unsafe operation."

The state's inspectors will typically examine an electrical installation only when the owner or an agency, like the PUD, calls for an inspection or after a crisis, like a fire, occurs, Erlich said.

If PUD crews notice a customer with an electrical installation in imminent failure, utility officials will work with the customer to correct the problems, Wendell said. They rarely call for a Labor and Industries inspection, he said.

Nor, Wendell said, will the PUD grid-monitoring system automatically signal when a customer's power usage dramatically spikes — that's something meter readers would notice only after a couple months of readings.

With software adjustments, the PUD could get better at detecting these usage spikes quickly, he said.

Correction: The Part of Chelan County's position on crypto currency mining was misstated in the original version of this story. The error has been corrected in this version.

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