

Inside two mining operations turning Texas power into crypto profits

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Amid the loud fans and a towering wall of supercomputers, a digital gold rush is taking place in Texas.

The Lone Star State has emerged as the bitcoin mining capital of the United States because of access to cheap energy, open land and support from state leaders such as Gov. Greg Abbott. But it's also faced criticism from Texans about [energy consumption](#), the industry's deals with ERCOT, environmental effects and more.

Without the knowledge of how bitcoin mining works, the anger and confusion from citizens is understandable, Lee Bratcher, president and founder of the Texas Blockchain Council, said.

"If I didn't work in this industry and hadn't been knee-deep in this ERCOT stuff for the last four years, I would also hear the headlines and think, 'Man, is bitcoin mining a good thing to have in Texas?'" he said. "But having this background knowledge, I'm like, 'Absolutely, it's a good thing.' In fact, we want more of it because it can help stabilize the grid, it can increase renewable generation, it's got incredible economic development potential and [it's] creating a lot of jobs."

Getting people's attention for long enough to show them how bitcoin mining works is the biggest challenge [bitcoin miners](#) are currently facing in Texas, Bratcher said.

Fort Worth-based 360 Mining, an oil and gas company that also mines bitcoin, and Austin-based cryptocurrency tech giant CoreScientific gave The Dallas Morning News tours of their North Texas facilities on Nov. 15 as part of the 2023 Texas Blockchain Council Summit.

How do its deals with ERCOT work?

Riot Platforms, another bitcoin mining company, faced criticism from Texans in October over its deals with ERCOT, which helped the company snag \$13 million over the summer. But the Castle Rock, Colo.-based company isn't the only one benefiting from those deals.

CoreScientific also works with ERCOT in a similar capacity using ancillary services, said Steve Gitlin, senior vice president of investor relations at CoreScientific.

Big power generators, like bitcoin miners, are able to provide ERCOT with ancillary services to increase or decrease the [electricity supply](#).

"We have deals with ERCOT that allow us to purchase power and use that power to drive our operations," Gitlin said. "The interesting thing about these kinds of facilities is because they're so large when the grid needs electricity back, they [ERCOT] can come to us and ask us to power down and return some of that power to the grid. Think of our site as a really big battery that can provide energy to the grid."

ERCOT did not respond to an interview request from The News.

However, 360 Mining's Fort Worth facility is off the grid, meaning it has to work with ERCOT in a different way, CEO Chris Alfano said.

"Instead of pushing megawatts of electricity back through transmission lines, we'll shut down the generators and push natural gas back into the pipeline," he said. "So our way of curtailing would be shutting down our bitcoin mine and freeing up all of that natural gas to go to power plants, so they can generate more electricity."

If the state is working with bitcoin miners to help with power capacity, it's because it was the state's cheapest option, Bratcher said.

"ERCOT paid about a billion dollars for ancillary services," he said. "It would have been higher had there been no bitcoin miners here because those traditional loads would have been able to bid more and still extract that value from the ratepayers if that makes sense."

What is bitcoin mining and how does it work?

360 Mining and CoreScientific aren't physically digging for gold or coal underground to get bitcoin.

Bratcher said miners are instead using advanced computers to solve complex mathematical problems in order to get bitcoin: "The mining aspect is the process of securing the bitcoin network through computing power."

The computers' equations are trying to find a number, called a hash, that will help validate and send the bitcoin off to the blockchain, a decentralized and public ledger that tracks every bitcoin transaction. However, getting the answer to the problem can be difficult mathematically speaking, Bratcher said.

"Imagine you had one dice with a thousand sides to it instead of six, and you're trying to roll a number under three," he said. "You're going to be rolling that dice for a while, and that's really what these miners are doing."

CoreScientific's 30-acre complex in Denton is among the biggest in North Texas, meaning it has to scale its "dice" up, Bratcher said.

Once the computer solves the problem, miners in the network are able to add the bitcoin to a transaction.

However, these computers require a lot of power, Gitlin said.

"They do generate a lot of audio energy, and that's mostly because of the fans operating," he said. "They're transforming energy into high-value commodities, and by doing so, they're generating heat, and the fans help those machines stay cool in the process."

Unlike CoreScientific, 360 Mining uses a much smaller facility to mine bitcoin in Fort Worth.

The company credits House Bill 591, which aims to provide support and incentives for miners and allows former gas sites to be turned into data centers, for its ability to integrate its oil business with its bitcoin business, Alfano said. The company's mining facility sits on an old oil and gas mining site.

"The opportunity here is massive to take these older, distressed, marginally economic, or stranded gas wells and turn them into bitcoin mining sites," Alfano said. "We're taking one commodity, natural gas, and we're turning it into another commodity, bitcoin, that's a lot more valuable on the open market than [natural gas](#)."

What's the future outlook for bitcoin mining in the state?

Whether it's giant facilities like CoreScientific's or off-the-grid miners like 360 Mining, bitcoin mining isn't leaving the state any time soon.

Even traditional oil and gas miners may turn to bitcoin mining for an additional profit, Alfano said. The company is making 10 times as much as it would by selling gas, he said.

"We think bitcoin [mining](#) is going to become ingrained in the traditional toolkit that oil and gas operators have," he said. "If you're an oil and gas operator that's distressed, not making a lot of money on your gas, or if it's stranded, this [[bitcoin](#)] is something you can deploy. So it's very sustainable, very economic and it creates a lot of tax revenue for the state of Texas."

Texas is crucial to CoreScientific's growth plans as it aims to bring 370 megawatts of capacity online within four years, Gitlin said.

"The state of Texas has been very welcoming to businesses like ours because they see the value we can provide not only from an economic perspective but also from helping the grid," he said. "The fact that it's a deregulated energy market is helpful, because there's a lot more flexibility in terms of accessing power here. Most of the growth we're projecting for the next few years is coming here in our Texas facilities."

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