

# Cryptocurrency Mining in Texas

Crypto mining will bring massive new demand and increased energy costs.

Senate Business & Commerce Committee  
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Adrian Shelley  
Texas Director, Public Citizen  
[ashelley@citizen.org](mailto:ashelley@citizen.org)  
512-477-1155

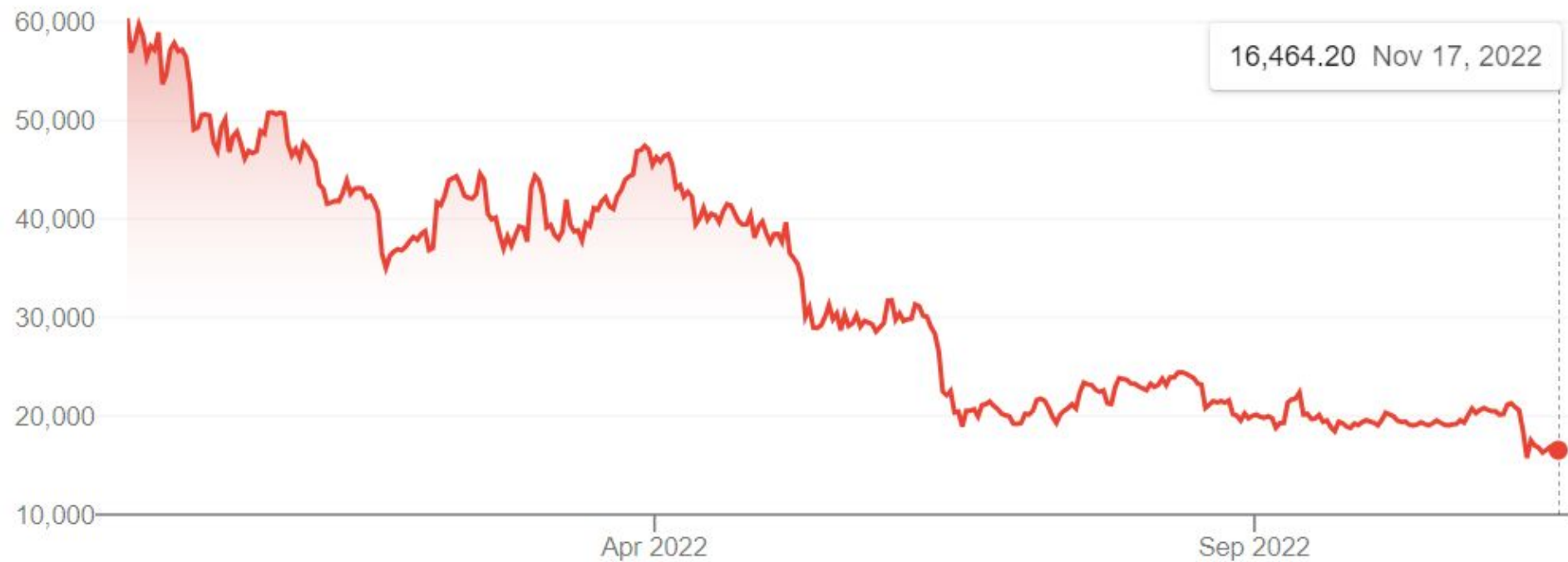
# Bitcoin's Value has Plummeted

16,464.20 USD

-43,930.70 (72.74%) ↓ past year

Nov 17, 2:30 PM UTC · [Disclaimer](#)

1D | 5D | 1M | 6M | YTD | 1Y | 5Y | Max



# Collapse of FTX exchange

## FTX Token to USD Chart



Price Market Cap Candle Chart

1D 7D 1M 3M 1Y YTD ALL LOG



FTX estimated valuation of \$32 billion in September.<sup>1</sup>

Filed for bankruptcy last week.<sup>2</sup>

CoinMarketCap

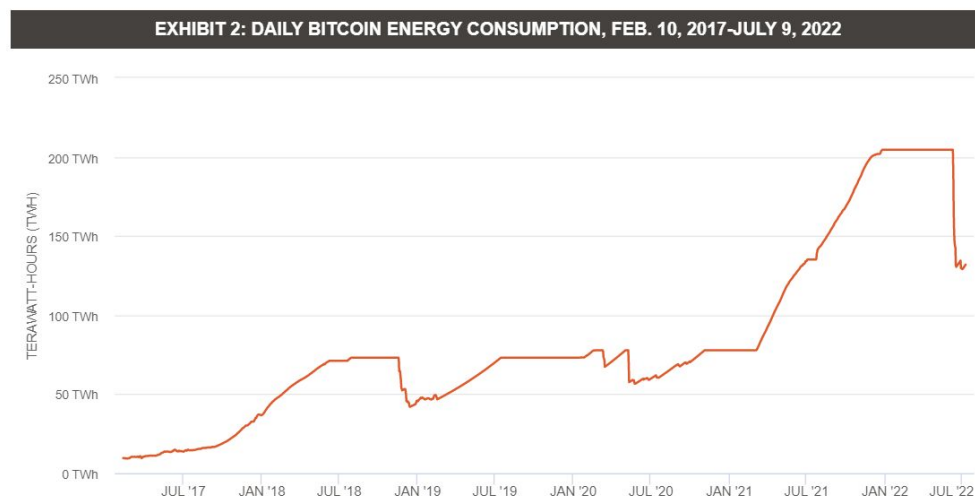
1. <https://www.barrons.com/articles/crypto-exchange-ftx-valuation-funding-51663854185>

2. <https://www.nytimes.com/2022/11/11/business/ftx-bankruptcy.html>

# Crypto Mining's Massive Demand for Energy

- 2-3 GW of energy demand in Texas today<sup>1</sup>
- 6 GW of demand by mid-2023<sup>2</sup>
- 33 GW of projected demand by 2026
  - Enough to power 6,600,000 homes in Texas
  - Equivalent to the entire State of New York

## Bitcoin global energy consumption



Source: Digiconomist

1. <https://comptroller.texas.gov/economy/fiscal-notes/2022/aug/crypto-tx.php>
2. <https://www.markey.senate.gov/news/press-releases/lawmakers-open-investigation-into-texas-energy-grid-operators-subsidies-to-cryptominers>

# Most Mines are Powered by Fossil Fuels

Most bitcoin mines operating in Texas are powered by fossil fuels or grid energy

- Compute North - 600 MW gas facility in Granbury, <sup>1</sup>
- Bootstrap Energy - 600 MW gas facility in Corpus Christi (AEP) <sup>2</sup>

A few operational sites are known to be powered by clean energy

- Aspen Creek Digital Corp - 30 MW mine behind-the-meter at 87 MW solar farm <sup>3</sup>
- Cipher Mining - five-year power purchase agreement for 40 MW of wind at \$0.0273/kWh. <sup>4</sup>



1. [Compute North breaks ground on 300MW data center in Granbury, Texas - DCD](#)
2. [Bitcoin mining facility coming to Corpus Christi](#)
3. <https://acdigitalcorp.com/?p=704>
4. [Cipher Mining Provides First Quarter 2022 Business Update](#)

# Bitcoin Mining is Propping up Coal

Marathon Bitcoin mine revived a 115 MW coal plant in Montana.<sup>1</sup>

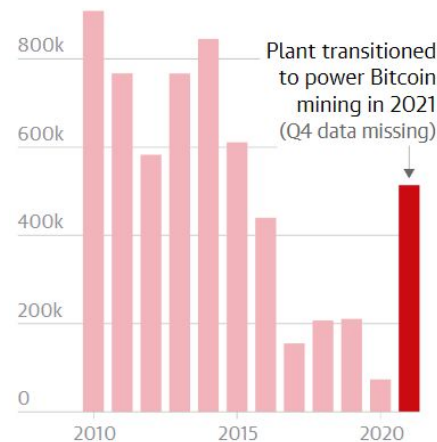
In New York, a mothballed coal plant reopened as a gas plant that uses 44 MW of energy to mine Bitcoin.<sup>2</sup>



## As Hardin plant powered Bitcoin mining, emissions spiked

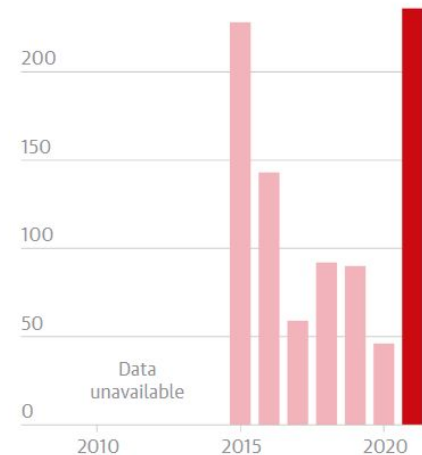
CO2 emissions

1m tons of annual CO2 emissions



Boiler operating days

250 operating days

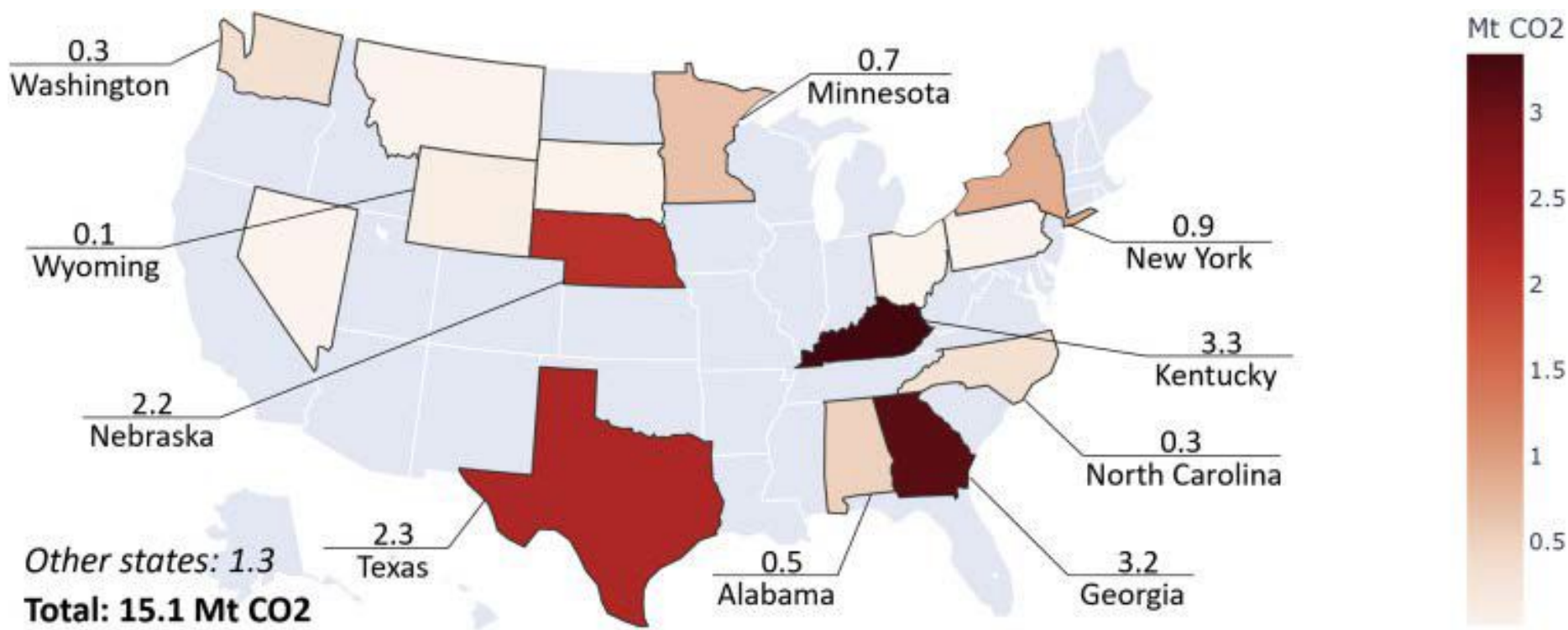


Guardian graphic. Sources: Emissions from EPA, boiler activity compiled by the Montana Environmental Information Center from reports submitted to the Montana Department of Environmental Quality.

- <https://www.theguardian.com/technology/2022/feb/18/bitcoin-miners-revive-fossil-fuel-plant-co2-emissions-soared>
- <https://apnews.com/article/bitcoin-mining-new-york-power-plant-climate-change-516dbd319394a6a30f83d94947abad20>

# Greenhouse Gas Emissions from Crypto Mining

- 2,300,000 tons/year of CO<sub>2</sub> emissions in Texas
- 60,000,000 tons/year globally





# Crypto Mining's Participation in Demand Response could Cost Texans Billions

- 8 data mines total ~750 MW of controllable load in Texas right now.<sup>1</sup>
  - Proposed additional 2,600 MW.
- \$170 million/year in estimated cost of enrollment in demand response programs by Crypto
  - These payments are before any participation in DR.<sup>2</sup>
  - Could exceed **half a billion dollars per year** as participation expands.
- Lancium collected \$17 million just for enrolling in demand response in 2020.<sup>3</sup>
  - Reduced energy cost to <\$0.01/kWh
- Riot Blockchain earned \$9.5 million for participation in DR in July 2022.<sup>4</sup>
- Demand response could be up to 10% of a crypto mine's total value.<sup>5</sup>

1. [https://www.ercot.com/files/docs/2022/04/25/Load\\_Resource\\_Participation\\_for\\_LFLs.pptx](https://www.ercot.com/files/docs/2022/04/25/Load_Resource_Participation_for_LFLs.pptx)

2. <https://www.techtransparencyproject.org/sites/default/files/Crypto%20Texas%20Report.pdf>

3. <https://www.cnn.com/2022/02/03/winter-storm-descends-on-texas-bitcoin-miners-shut-off-to-protect-ercot.html>

4. <https://www.forbes.com/sites/christopherhelman/2020/05/21/how-this-billionaire-backed-crypto-startup-gets-paid-to-not-mine-bitcoin/?sh=5e4e68ae7596>

5. <https://www.utilitydive.com/news/bitcoin-mining-as-a-grid-resource-its-complicated/617896/>



# “Enron Style” Energy Arbitrage Costs Ratepayers Money

- Riot Blockchain made \$125 million dollars selling energy back to the grid during Uri.
- ERCOT stills owes Riot over \$80 million, a bill likely to be paid by ordinary utility users. <sup>1</sup>
- Crypto mines have sold energy back to the grid for profits of over 700%. <sup>2</sup>
- During times when prices are high crypto mining becomes too expensive; miners sell energy that they wouldn't use otherwise
- One bitcoin miner stated that it would “opportunistically sell electricity back to ERCOT in exchange for cash payments”<sup>3</sup>

1. <https://www.riotblockchain.com/investors/sec-filings/all-sec-filings/content/0001079973-21-000828/0001079973-21-000828.pdf>; 1.

<https://www.sec.gov/Archives/edgar/data/1167419/000107997321000745/ex99x1.htm>

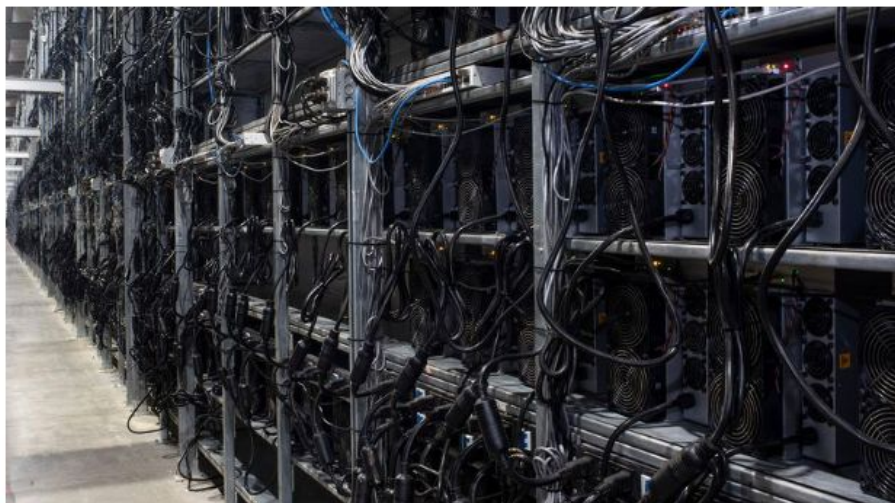
2. <https://www.bloomberg.com/news/articles/2020-09-01/bitcoin-miner-is-scoring-700-profits-selling-energy-to-grid?sref=VDXBDESf&leadSource=uverify%20wall>

3. <https://www.techtransparencyproject.org/sites/default/files/Crypto%20Texas%20Report.pdf>

# Crypto Mines Avoid Transmission and Interconnection Costs

The Rayburn County Electric Cooperative found that each of two planned mines NE of Dallas would cost **\$20 million in transmission upgrades**.<sup>1</sup>

Because crypto mines typically do not operate during peak, 4CP avoidance means that mines will not pay their fair share of transmission costs.

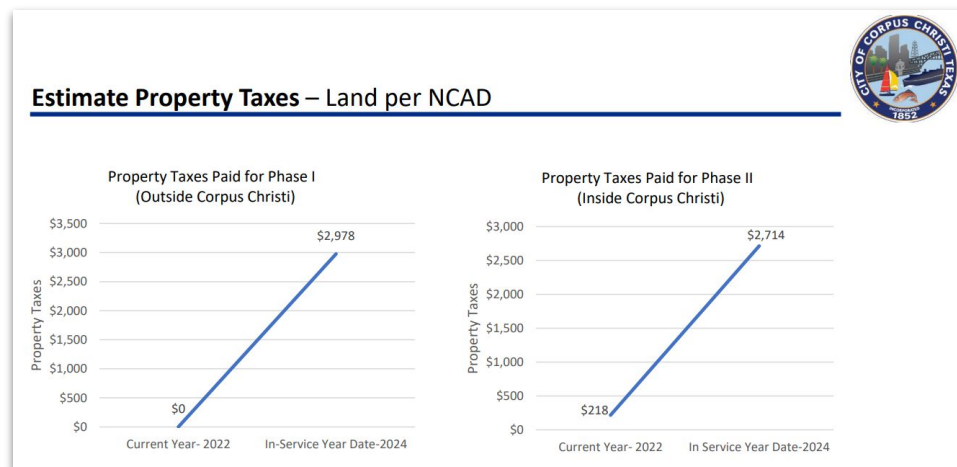


A crypto mining facility in Rockdale, Texas. *Photographer: Mark Felix/AFP/Getty Images*

1. Naureen S. Malik & Michael Smith, Crypto Mania in Texas Risks New Costs and Strains on Shaky Grid, Bloomberg (Mar. 15, 2022), <https://www.bloomberg.com/news/articles/2022-03-15/crypto-mania-in-texas-risks-new-costs-and-strains-on-shaky-grid>

# Crypto Mines Receive Chapter 313 Tax Breaks

Bootstrap Energy mine in Corpus Christi will receive **\$70 million** in Ch. 313 tax breaks over ten years.



1. Bootstrap Energy, Project Corpus Christi Energy Park, at slides 22–24 (Mar. 25, 2022), <https://corpuschristi.legistar.com/View.ashx?M=F&ID=10675758&GUID=10B47135-9684-416F-A8C0-D46E8AA2B5AE> ; see also City of Corpus Christi, Agenda Memorandum from Ian Vasey and Andrea Gardner to Peter Zaroni re Disannexation and Amendment Industrial District #2 Boundaries, at 2 (Mar. 3, 2022) (“However, staff’s financial analysis concludes the City will forego \$70,501,509 over a ten-year period if the same development were constructed and operated outside of an Industrial District Agreement in the city limits.”).