

Bitcoin Mining for Economic Revitalization

How states are using Bitcoin mining for economic development, with analysis of opportunities for Rhode Island

Rhode Island Bitcoin Policy Initiative | June 2026

This paper examines how states are using Bitcoin mining for economic development, with case studies from successful mining regions and analysis of opportunities for Rhode Island. Most U.S. mining activity concentrates in rural areas with cheap energy, including former industrial sites revitalized by mining operations.

\$4.1B U.S. mining gross product (2024, Perryman)	~31,000 Direct U.S. mining jobs (2024, Perryman)	9,500 MW Texas ERCOT projected flexible mining load (end-2025)	~138 TWh Estimated annual Bitcoin network electricity (Cambridge 2025)
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1. THE ECONOMIC FOOTPRINT OF BITCOIN MINING

Bitcoin mining in the United States generated approximately \$4.1 billion in gross product in 2024, per the Perryman Group's report commissioned by the Digital Chamber. The sector directly supports roughly 31,000 jobs across hardware manufacturing, data center operations, energy services, and technical operations. Average technician salaries in mining operations range from \$50,000 to \$55,000, with senior operations roles reaching \$87,000.

Unlike many technology sectors that concentrate in coastal hubs, Bitcoin mining distributes naturally to areas with cheap energy — often rural and economically distressed regions that benefit most from new infrastructure investment.

2. CASE STUDIES

2.1 Rockdale, Texas — former Alcoa smelter site

When Alcoa closed its aluminum smelting plant in Rockdale, Milam County lost its largest employer. Riot Platforms subsequently established a Bitcoin mining facility at the site with approximately 700 MW of capacity — among the largest mining operations in North America. The facility provides roughly 250 full-time positions and is among the largest taxpayers in Milam County. Riot's broader Rockdale operations and adjacent land have continued to attract substantial capital investment, including a \$1 billion data center lease announced with AMD in 2026.

2.2 Massena, New York — former Alcoa smelter site

Coinmint operates one of North America's largest Bitcoin mining facilities at the former Alcoa smelting site in Massena, New York. The facility uses approximately 435 MW of primarily hydroelectric power, has received roughly \$700 million in investment, and employs approximately 150 people. Massena illustrates how mining can preserve industrial-scale electrical infrastructure that would otherwise be stranded after legacy operations close.

2.3 Texas ERCOT — flexible load and grid stabilization

Texas's ERCOT grid operator has integrated Bitcoin miners as flexible load ("large flexible load," or LFL). Projected approved LFL capacity reached approximately 9,500 MW by end-2025, up from 5,479 MW the prior year. Miners reduce or shut down operations during peak demand events and absorb surplus generation during low-demand windows. ERCOT's experience suggests that mining-as-flexible-load is a viable mechanism for grid stabilization that may be transferable to other regions with renewable generation buildout.

3. STRANDED ENERGY MONETIZATION

A meaningful share of U.S. mining is co-located with stranded energy sources that would otherwise be wasted. Crusoe Energy's flare gas mitigation program reports combustion efficiency of approximately 99.9% at its co-located mining sites, substantially reducing the methane emissions intensity associated with otherwise vented or flared natural gas. Mining-co-located generation extends similarly to curtailed wind power and off-peak hydroelectric output.

Why this matters for Rhode Island

Rhode Island's offshore wind buildout creates the same curtailment dynamics that mining-co-located generation can monetize elsewhere. ISO-NE periodically experiences negative pricing during high-wind, low-demand windows. Mining is one of the few demand-response mechanisms operating at megawatt-to-gigawatt scale with the flexibility to absorb intermittent surplus generation.

4. THE ENERGY PROFILE IN CONTEXT

The Cambridge Centre for Alternative Finance estimates Bitcoin network electricity consumption at approximately 138 TWh annually as of 2025, representing roughly 0.5% of global electricity consumption. The sustainable energy share is approximately 52.4% (42.6% renewables plus 9.8% nuclear), up from 37.6% in 2022. Coal's share of mining electricity has declined from 36.6% to 8.9% over the same period.

Energy Source	2022 Share	2025 Share
Renewables (hydro, wind, solar)	Lower mix	42.6%
Nuclear	Smaller share	9.8%
Sustainable subtotal	37.6%	52.4%
Coal	36.6%	8.9%
Natural gas	Substantial	Substantial

5. OPPORTUNITIES FOR RHODE ISLAND

5.1 Offshore wind co-location pilots

Rhode Island's offshore wind capacity (Block Island Wind Farm operational since 2016, Revolution Wind under construction, additional projects in pipeline) creates curtailment opportunities that mining co-location could monetize. A pilot study with the Office of Energy Resources and the Public Utilities Commission could quantify the size of the opportunity.

5.2 Former industrial sites

Several former industrial sites in Rhode Island retain substantial electrical infrastructure that could support mining-scale loads at lower ramp-up cost than greenfield development. A Department of Business Regulation–led inventory of eligible sites would clarify the practical opportunity scale.

5.3 Workforce development

Mining operations require electrical, HVAC, and IT skills broadly aligned with existing Rhode Island workforce development pathways at Community College of Rhode Island and apprenticeship programs through the Department of Labor and Training. No specialized mining-specific credentialing is required.

5.4 Tax base impact

Mining operations are typically large property tax payers at their host municipalities. A Rockdale-scale operation generates millions in annual local property tax revenue. Rhode Island's smaller municipalities with stranded industrial infrastructure could capture meaningful local tax benefit if pilot sites are sited there.

6. RISKS AND CONSIDERATIONS

6.1 Electricity rates for non-mining ratepayers

A frequent concern with mining co-location is upward rate pressure on non-mining ratepayers. The Texas experience suggests that flexible load can reduce rates for all ratepayers by participating in demand response, but specific rate impacts depend on the contract structure. PUC involvement in pilot design is essential.

6.2 Community engagement

Mining operations generate noise and require substantial physical footprint. Successful sites in Rockdale and Massena were located on established industrial sites with existing zoning and community infrastructure for industrial use. Greenfield siting in residential areas is not appropriate.

6.3 Bitcoin price cycles

Mining operations are exposed to Bitcoin price cycles. Operations sized to break even at low-price scenarios are more resilient than operations sized for bull-market conditions only. Pilot sizing should be modest.

7. RECOMMENDATIONS

1. Commission a joint study by the Office of Energy Resources and the Public Utilities Commission on the curtailment-monetization opportunity associated with Rhode Island's offshore wind buildout.
2. Inventory former industrial sites with existing megawatt-scale electrical infrastructure for potential mining co-location pilot.
3. Engage CCRI and DLT on workforce development pathways for mining operations roles (electrical, HVAC, IT).
4. Coordinate with the Blockchain Study Commission (S.2198 Sub A) to integrate mining-as-economic-development analysis into the Commission's mandate.

APPENDIX: SOURCES AND REFERENCES

Mining Economic Impact

- Perryman Group, "Bitcoin Mining Powers U.S. Economy" report (released February 2025; 2024 data)
- The Digital Chamber, mining industry economic studies
- Riot Platforms, Inc., public 10-K filings (Rockdale site disclosures)

- Coinmint, public statements on Massena facility

Energy and Grid Data

- Cambridge Centre for Alternative Finance, Digital Mining Industry Report (April 2025); CBECI energy consumption series
- ERCOT, Large Flexible Load reports (2024–2025)
- U.S. Energy Information Administration, Bitcoin mining electricity briefs
- Crusoe Energy, methane combustion efficiency disclosures

Rhode Island Context

- Rhode Island Office of Energy Resources, Renewable Energy Standard reports
- ISO New England, system load and curtailment data
- Rhode Island Public Utilities Commission, distributed energy and demand response dockets

Federal Regulatory Context

- GENIUS Act, P.L. 119-27, signed July 18, 2025
- Department of Energy, AI/mining electricity demand assessments

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End of Report