

Bitcoin Mining Update: May/June 2025

Miners push hashrate limits as profit margins tighten

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Quick Miner Overview

Miner Hardware	Capex per TH/s	Revenue per TH/s	Revenue per kWh	Opex per TH/s*	Payback (Days)
S23 Hyd (9.5 J/TH)	\$30	\$0.052	\$0.228	\$13.68	783
S21XP Imm. (13.5 J/TH)	\$24.56	\$0.052	\$0.16	\$19.44	754
S21+ Hydro (15 J/TH)	\$21.5	\$0.052	\$0.144	\$21.6	707
S21 Pro (15 J/TH)	\$16	\$0.052	\$0.144	\$21.6	526
S21 Imm. (16 J/TH)	\$15.5	\$0.052	\$0.135	\$23.04	535
S21+ (16.5 J/TH)	\$15	\$0.052	\$0.131	\$23.76	531
S19XP+ Hyd (19 J/TH)	\$10	\$0.052	\$0.114	\$27.36	406

*Based on an assumed energy rate of \$0.06 per kilowatt-hour

Executive Summary

- Bitcoin network difficulty and hashrate hit new records, signaling intensifying competition among miners
- Hashprice remains under pressure, while transaction fees have dropped to historically low levels
- Public miners are expanding capacity rapidly, with major players scaling up hashrate
- Production costs are rising, driven by both higher network hashrate and increased energy prices
- Mining stock performance is diverging, as investors focus on revenue diversification and adaptability beyond Bitcoin price movements

Network Review

Bitcoin's mining difficulty climbed to a record 126.98 trillion earlier this month, driven by a 14-day average hashrate of 913.54 EH/s—just 10% short of the zetahash milestone.

The surge underscores intensifying competition among miners, even as market conditions remain volatile and block rewards grow thinner. Following the difficulty adjustment, hashprice dropped to \$52 per PH/s, erasing most of the gains since early May. It has since rebounded slightly to \$55/PH/s as Bitcoin reclaimed the \$110,000 level.

Despite the soaring network hashrate, transaction fees have remained depressed, making up just 1.3% of block rewards in May. Fee pressure has worsened in June, with fees contributing less than 1% of total rewards so far—raising the possibility of a new record low.

Company Update

The recent rise in Bitcoin's network hashrate has been driven largely by public mining companies scaling and energizing new capacity. Leading firms such as MARA, CleanSpark, IREN, and Riot have all reported increases in realized hashrate, with MARA posting a 30% jump as its proprietary pool mined a record number of Bitcoin blocks.

HIVE also saw notable growth, boosting its realized hashrate by nearly 32% month-over-month after energizing its Paraguay facility and surpassing the 10 EH/s mark. The company is targeting 11.5 EH/s by the end of June and 18 EH/s by the third quarter's close. Meanwhile, Bitdeer and Canaan continued to ramp up their deployed hashrate, leveraging their own ASIC hardware.

Cipher Mining maintained steady Bitcoin production in May but noted that construction at its Black Pearl facility in Texas has picked up pace. The company has purchased additional miners to fully utilize the site's capacity and expects to increase its hashrate by 70% to 23 EH/s over the next two months.

Record Difficulty Wipes Out Much of Hashprice's One-Month Gains

Unit: U.S. dollar per petahash

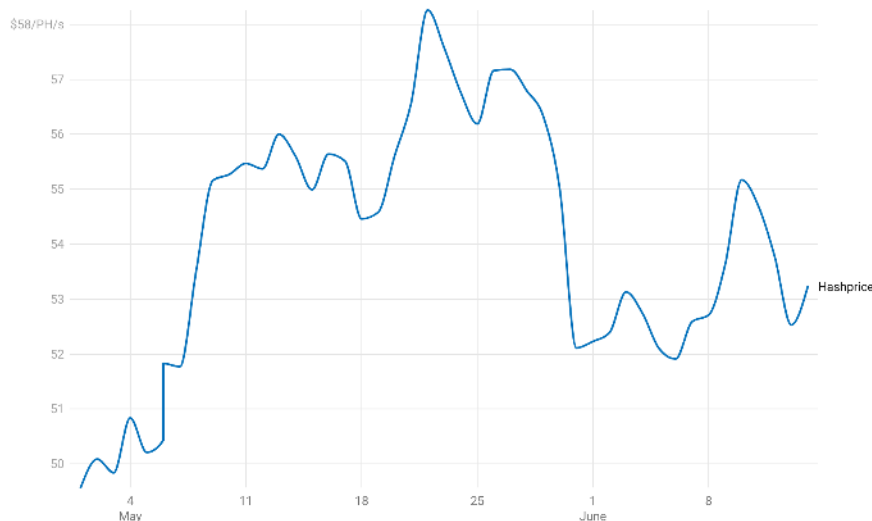


Chart: TheMinerMag • Source: Hashrate Index

May 2025 Bitcoin Mining Updates

Unit: Number of BTC, percentage, and exahash per second

	Proprietary Production	Holdings	Liquidation Ratio	Realized Hashrate	MoM Realized Hashrate Growth
MARA	950 BTC	49,179 BTC	0.84%	58.2 EH/s	30.48%
CLSK	694 BTC	12,502 BTC	42.22%	42.5 EH/s	6.16%
IREN	627 BTC	0 BTC	100%	38.4 EH/s	4.85%
RIOT	514 BTC	19,225 BTC	97.28%	32.8 EH/s	6.6%
CANG	485 BTC	3,429 BTC	0%	29.7 EH/s	-0.19%
FUFU	43 BTC	1,709 BTC	562.79%	23.7 EH/s	58.88%
CORZ	226 BTC			13.8 EH/s	-1.3%
BTDR	196 BTC	1,351 BTC	46.43%	12 EH/s	14.33%
CIFR	175 BTC	966 BTC	36.57%	11 EH/s	-0.39%
HIVE	139 BTC			8.5 EH/s	31.95%
IONIC	133 BTC	2,520 BTC	72.99%	8.1 EH/s	-4.81%
CAN	109 BTC	1,466 BTC	61.47%	6.7 EH/s	21.31%

Realized hashrate includes BTC equivalent from proprietary hashrate used beyond direct mining, such as power credits and cloud mining

Chart: TheMinerMag • Source: SEC Filings

Q1'25 Production Cost Update

First-quarter filings from major Bitcoin mining companies highlight a rising cost of production, driven by both the surging network hashrate and, in some cases, higher energy prices.

As the chart indicates, the median [direct cost](#) of Bitcoin production—excluding corporate overhead and interest expenses—rose from \$52,000 in Q4 2024 to \$64,000 in Q1 2025. With Bitcoin's average network hashrate in Q2 tracking about 10% higher than in Q1, direct production costs are expected to surpass \$70,000 in the current quarter.

Amid this backdrop, optimizing fleet hashcost has remained a key priority for miners. In Q1, the median [fleet hashcost](#) across companies tracked by TheMinerMag held steady at approximately \$34 per PH/s.

However, some firms, including Terawulf and Bitdeer, saw their fleet hashcost surge by over 25%. For instance, Terawulf reported that the increase was primarily driven by rising energy costs, which spiked to \$0.081 per kWh in Q1—nearly double the \$0.041 per kWh reported a year earlier.

Diverging Performance

Bitcoin mining stocks have seen sharply diverging performance over the past month, even as Bitcoin (BTC) itself posted modest gains of around 1.35%. As shown in the chart, the spread between the top- and bottom-performing mining equities has widened significantly, underscoring growing investor focus on revenue diversification beyond Bitcoin mining.

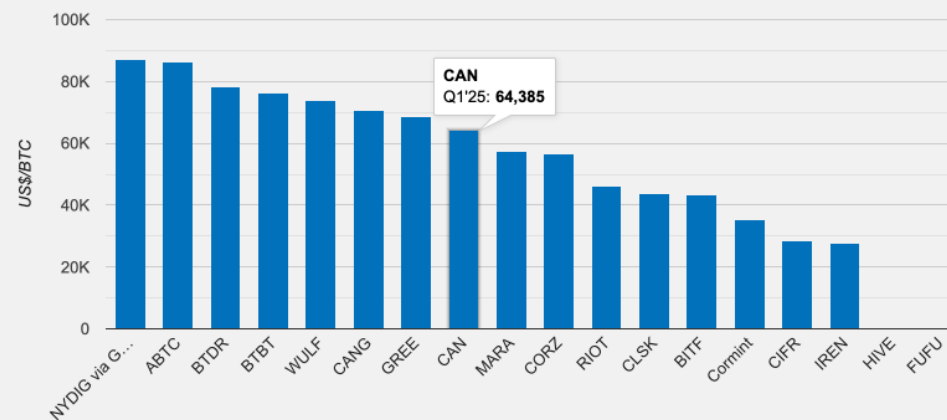
Leading the pack is IREN, followed by Core Scientific (CORZ) and Bit Digital (BTBT). On the other end, Canaan (CAN) and Bitfarms (BITF) have lagged, each posting losses of more than 21%.

The growing divergence comes despite Bitcoin's relatively stable price, highlighting a decoupling between BTC and mining stocks. This trend suggests that equity investors are increasingly evaluating miners based on their adaptability in the post-halving environment—particularly their ability to pursue new narratives—rather than simply mirroring Bitcoin's price movements.

Implied cost of bitcoin production from proprietary hashrate

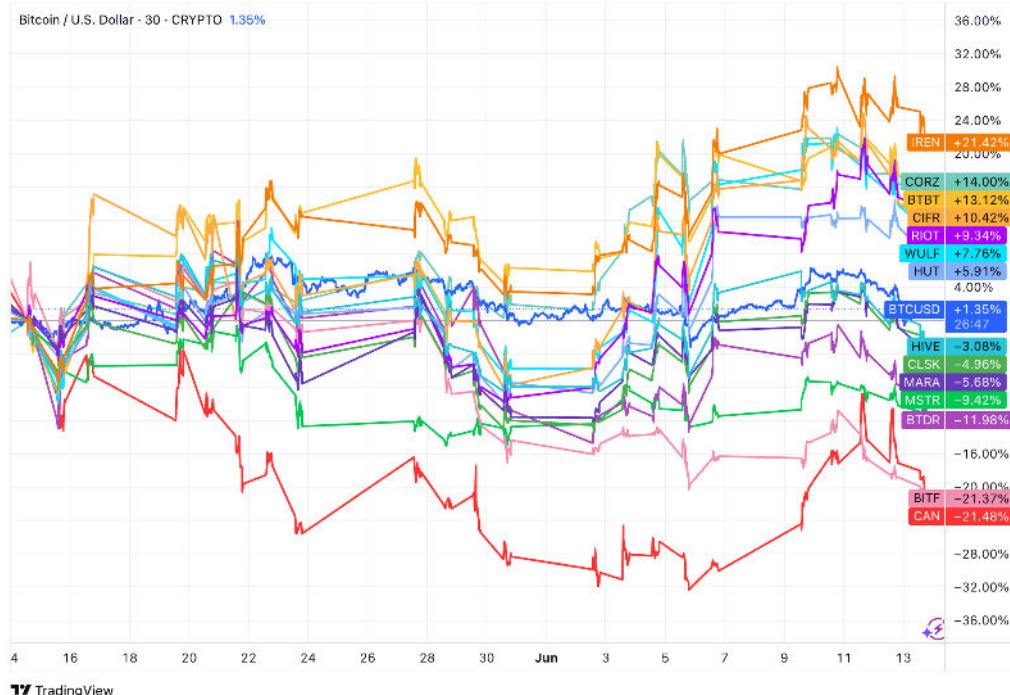
Unit: U.S. dollars per BTC mined

Q1'25 Q4'24 Q3'24 Q2'24 Q1'24



Excludes depreciation; includes BTC equivalent generated from proprietary hashrate activities besides self-mining.

Chart: TheMinerMag • Source: SEC Filings; TheMinerMag



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