Appendix 3. STX Coinbase Reward Market Impact Analysis

This appendix supports the liquidity statements in Section 3.2.3, which hold that, under current market conditions, the restored baseline and the temporary boost are not expected to introduce sell pressure the market would register. It models the incremental STX issuance against trading liquidity across a range of price and volume conditions. The 1,250 and 1,500 STX per block figures appear as sensitivity bounds rather than standing proposals: this SIP restores a 1,000 STX baseline and applies a temporary 500 STX boost for one six-month bonding period, which reaches 1,500 STX per block only for the duration of that window.

Key Takeaways

- **Increasing block rewards (within reason) likely has minimal impact to daily sell pressure** – even at 1,500 STX/block, incremental percentage added against daily volume is negligible. However, the recommendation is to keep total inflation to single-digits.
- **It stays inside normal daily noise.** Even if all miners sold on a single exchange, the % sold is a small amount of the normal daily volume range.
- **Higher prices make emissions easier to absorb, not harder.** Trading volume grows faster than price, so the miner's share of the tape shrinks even as the dollar figure rises.
- **Emissions fund the BTC-staking program.** Miner BTC bids are the revenue behind the BTC-yield obligation – at 1,250 STX/block, coverage increases past the high end of our target coverage threshold (2.0x).
- **Higher emissions expand system capacity.** The more STX emitted, the more BTC the staking program can sustainably back.
- **Cost-benefit trade-off favors raising emissions.** A modest, liquidity-absorbable increase in sell pressure buys materially stronger program coverage and capacity.

Setup / Assumptions

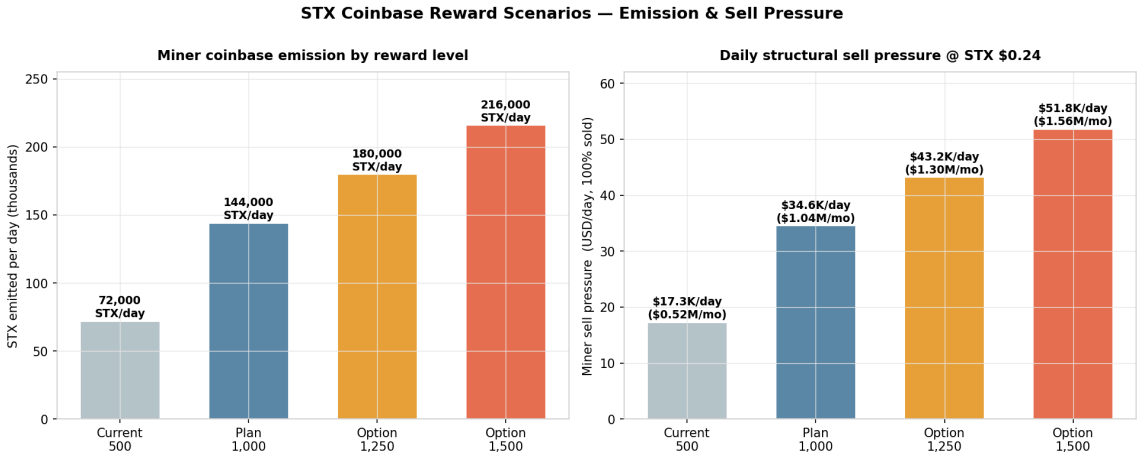
- Stacks pays a fixed STX coinbase per **Bitcoin block**; **144 blocks/day**, **52,560 blocks/yr**.
- The **April 15 halving** cut the rewards to 500/block. Small dollar size impact – running for ~1 month with little visible price effect.
- **This scenario assumes a "worst case" where miners sell ~100% of coinbase rewards.**
- Base price **$0.24** (Binance 5/18 close $0.2386); a price-sensitivity view is included below.
- Volume figures are an aggregate of 8 exchanges – UPBIT, Binance, OKX, Coinbase, Kucoin, Coinex, Gate and Whitebit; Binance numbers are used for single exchange comparisons.

Reward	Per block	STX / day	STX / year
Current	500	72,000	26.3M
Plan	1,000	144,000	52.6M
Option	1,250	180,000	65.7M
Option	1,500	216,000	78.8M

Absolute dollar sell pressure

At $0.24 / STX, each **250 STX/block** step adds 36,000 STX/day or $8.6K/day ($259K/month). The April halving removed ~$17K of sell pressure per day, but this had minimal impact on market structure or price.

Scenario	Sell $/day	$/month	$/year	Δ vs current 500	Δ vs 1,000 plan
Current 500	$17.3K	$0.52M	$6.3M	—	—
Plan 1,000	$34.6K	$1.04M	$12.6M	+$17.3K/day	—
Option 1,250	$43.2K	$1.30M	$15.8M	+$25.9K/day	+$8.6K/day
Option 1,500	$51.8K	$1.56M	$18.9M	+$34.6K/day	+$17.3K/day



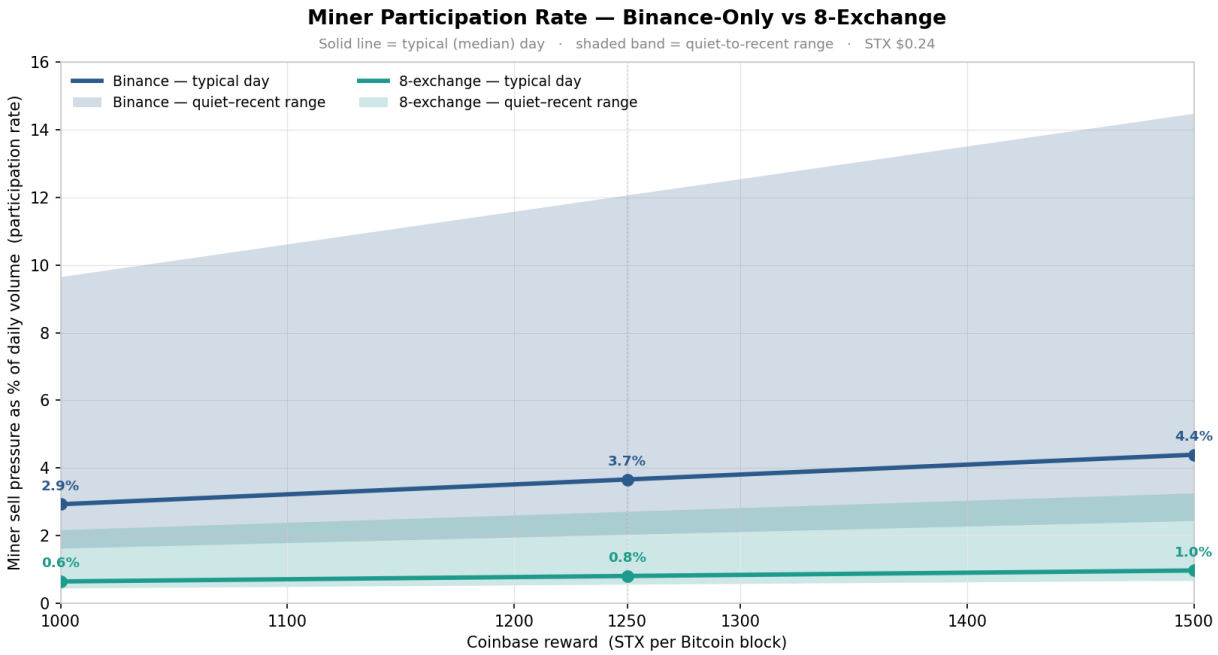
Relative to liquidity – size of additional emissions against trading volume

Volume days categorized by low volume (“quiet”), average 2026 volume, and recent 10-day volume.

Volume basis	1,000	1,250	1,500
Quiet day — Binance only (~$0.36M)	9.7%	12.1%	14.5%
Quiet day — 8-exchange (~$1.6M)	2.2%	2.7%	3.3%
Average day — Binance only (~$1.2M)	2.9%	3.7%	4.4%
Average day — 8-exchange (~$5.3M)	0.6%	0.8%	1.0%
Recent day — Binance only (~$2.1M)	1.6%	2.0%	2.4%
Recent day — 8-exchange (~$7.6M)	0.5%	0.6%	0.7%

With the "worst case" scenario assumption where miners sell every STX token, miners won't distribute evenly to all markets and most likely will route to the most liquid venues. Therefore, STX miner rewards participation rate (daily sell % against volume) should be somewhere between Binance rates (if all sold on a single venue) and total market rates (8 major exchanges).

The chart below depicts participation rates against the total market (green line) and against Binance (blue line) for different emissions levels (i.e. 1,250/block STX emissions will result on average in 0.8% – 3.7% of daily trade volumes).



Sell-pressure participation rate vs coinbase reward. Solid line = a typical (median) day; shaded band = the quiet-to-recent volume range; Binance-only (upper) vs 8-exchange (lower).

At higher prices the dollar figure seems to indicate caution. In dollar terms sell pressure scales linearly with price - at $0.45 the 1,500 case is ~$97K/day.

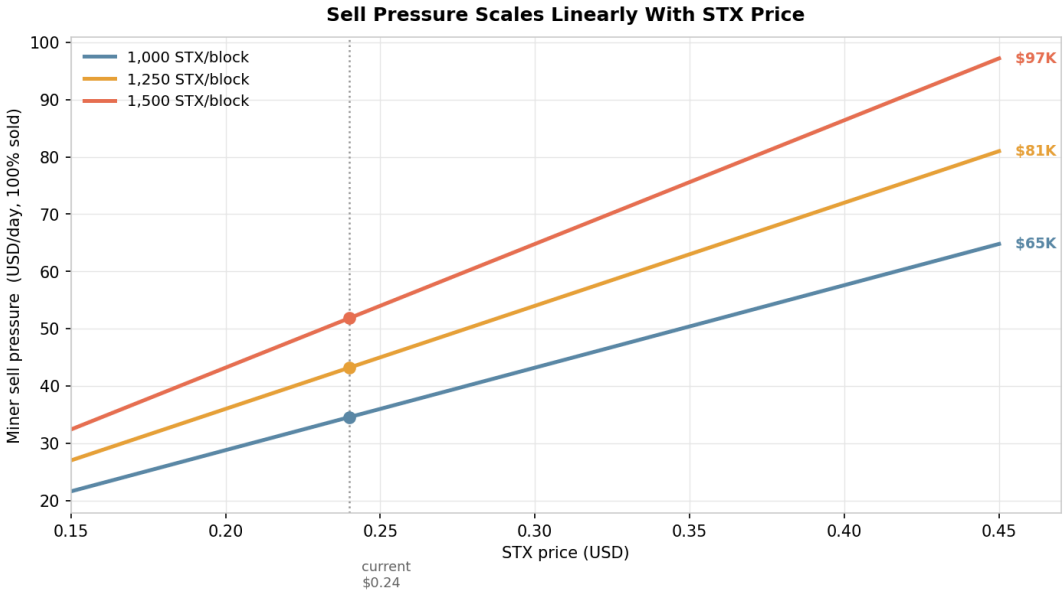
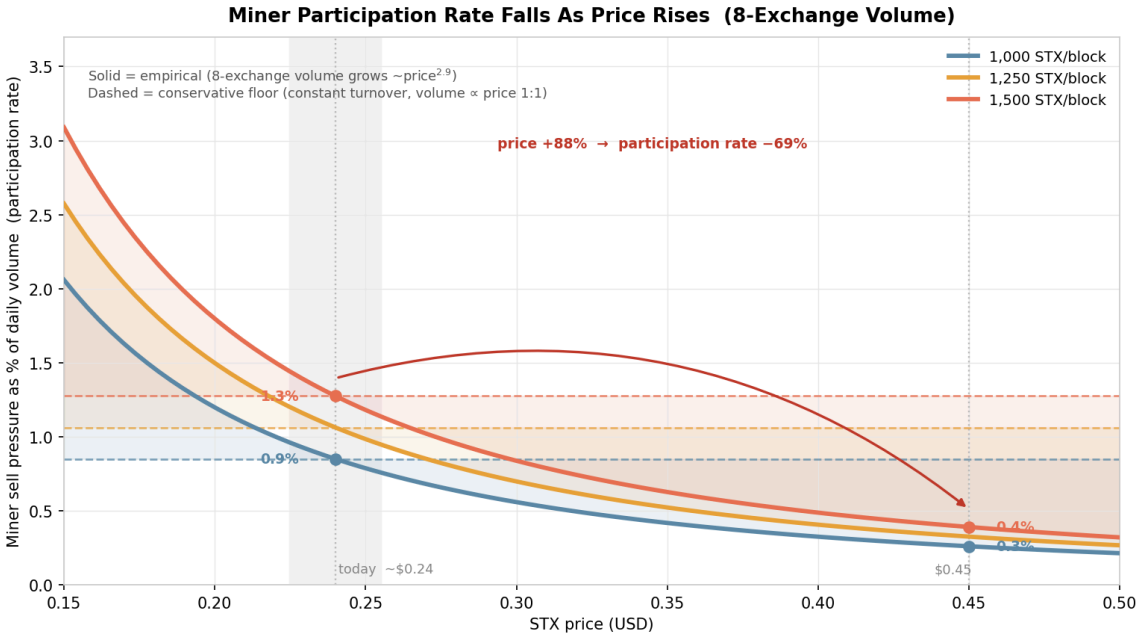


Figure 3. In dollar terms, sell pressure rises linearly with STX price.

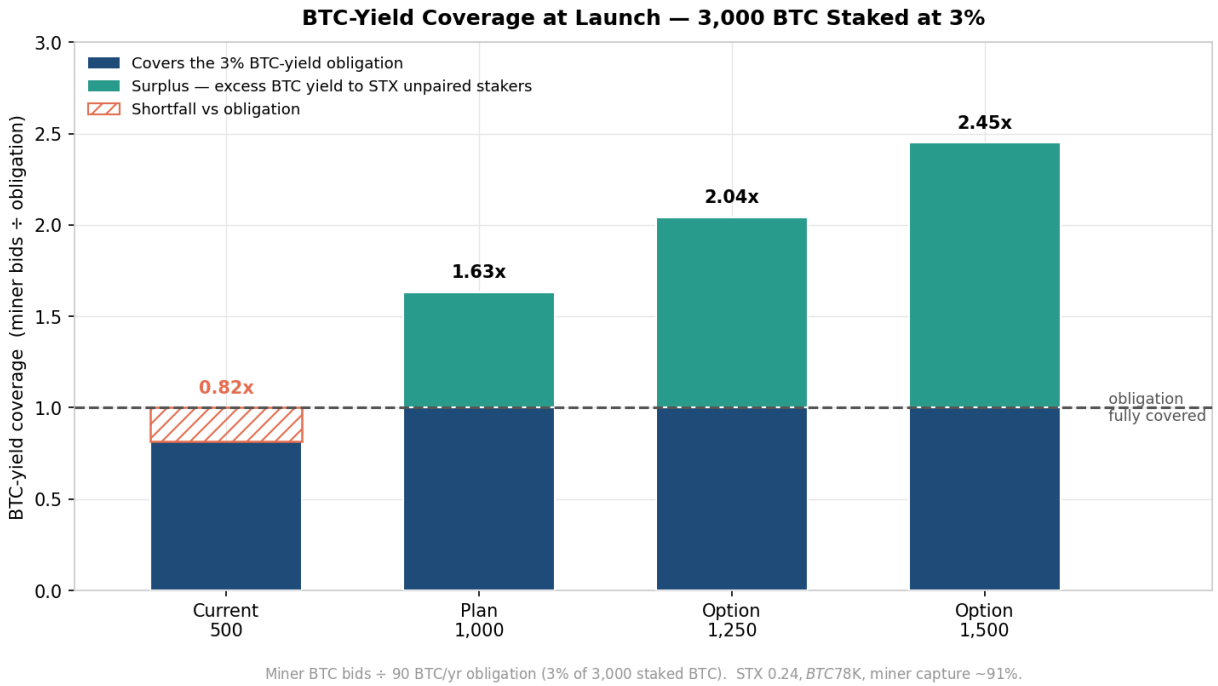
However, as price increases, miner **participation rate** (sell pressure as a share of daily volume) tends to fall on a historical basis. Empirically 8-exchange daily volume scales with roughly price^2.9, faster than price itself, so the miner's share of the tape shrinks. As price runs from $0.24 to $0.45 the dollar figure roughly doubles, but the participation rate drops ~70% (1.3% to 0.4% for the 1,500 case). Even under a conservative constant-turnover floor (volume proportional to price – 1:1) the rate is flat - it never rises under any assumption.



log-log regression of daily volume vs price, 131 days (Jan–May 2026); slope ≈ 2.9; The participation rate falls as price rises

Miner BTC bids mitigate increased emissions impact

Miner bids increase with either price or STX emissions. This increases sustainability for the BTC staking program, by virtue of increased coverage. It also incentivizes STX unpaired staking because there will be more excess yield available as BTC yield obligations are flat (~3%).



BTC-yield coverage at the 3,000-BTC launch — miner BTC bids vs the flat 3% obligation, by emission level (STX $0.24, BTC $78K).