21mScot Miner Economics Engine

Validation Summary for Clients

1. Purpose of this document

This summary explains how the 21mScot miner economics engine has been validated against independent industry calculators. The aim is to give confidence that our BTC/day and revenue/day estimates for ASIC miners are technically sound and aligned with real-world expectations.

2. Overview of the economics engine

The engine estimates how much Bitcoin a miner is expected to earn per day based on:

- Miner hashrate (TH/s)
- Network difficulty
- Block reward (currently the 3.125 BTC block subsidy only)
- Bitcoin price (USD)

The expected BTC/day is proportional to the miner's share of the total network hashrate. Revenue/day (USD) is then BTC/day multiplied by the Bitcoin price.

3. External validation sources

We validated the engine against three independent industry tools:

a) WhatToMine (primary benchmark)

 - Highly configurable calculator allowing us to match network difficulty, block reward, BTC price, hashrate and 0% pool fees exactly.
 - Using a difficulty of 150T, block subsidy of 3.125 BTC and BTC price of $90,000, our BTC/day and USD/day estimates for three reference miners (S21, M60, S19k Pro) matched WhatToMine's outputs to within rounding.

b) HashrateIndex (market benchmark)

 - Publishes revenue/day for specific ASIC models using live market data.
 - Not directly configurable, but our results fall within a reasonable range once differences in transaction fees and exact timing of network data are taken into account.

c) Braiins (sanity check)

 - Provides an independent profitability estimate but does not expose the underlying inputs (difficulty, price, exact reward).

- Used for directional checks only. Our relative rankings and magnitudes

   are consistent with Braiins' profit figures.

4. Key conclusions for clients

- The core 21mScot miner economics engine has been validated against WhatToMine,

   with effectively identical BTC/day results under matched assumptions.

- Comparisons with HashrateIndex and Braiins confirm that our revenue/day

   estimates are in line with widely used industry tools.

- Where small differences exist, they can be explained by factors such as pool

   fees, inclusion of transaction fees in the block reward, and timing of network

   data snapshots.

5. Current scope and limitations

For transparency, the current version of the engine:

- Uses the protocol block subsidy (3.125 BTC) and does not yet add transaction

   fees into the block reward. This is a conservative simplification.

- Treats network difficulty as constant within a scenario or static snapshot.

- Assumes 100% uptime and 0% pool fees in the core engine; client scenarios

   can apply more conservative adjustments at the site or project level.

6. Planned enhancements

Future improvements to the model may include:

- Explicit modelling of transaction fees in the block reward;

- Difficulty projection curves over the project horizon;

- Halving-aware forecasts for multi-year site economics;

- More detailed treatment of pool fees and uptime assumptions.

7. Summary

Based on the validation work completed to date, we are confident that the miner
economics engine provides a robust and defensible basis for feasibility analysis
and client discussions about ASIC selection and site-level revenue scenarios.