

Tokenomics Change

Version 1.04 of the White Paper was available during Mainnet launch on December 10, 2023. The original tokenomics had halvings occurring every 1 million blocks (approximately every 1.9 years) and the total supply would've reached approximately 1 billion AIPG. On December 30, 2023, there was a community poll on Discord on whether accelerated halvings should occur for the first four halvings and to reduce the total supply from 1 billion AIPG to 200 million AIPG. This would mean more frequent halving events in the short term for robust initial distribution.

The first four Accelerated Halvings would introduce approximately 50% of AIPG's total supply (almost 100 million coins) into circulation within the first year, and then slowing the distribution rate over time thereafter. The goal of the new tokenomics is to ensure a well-balanced and sustainable growth, keeping the network secure while rewarding those contributing with AI workloads.

10:1 voted Yes for making the change in AIPG's Discord server. The table below shows the summary of the old tokenomics and the updated tokenomics.

Description	Old	Updated
Block Reward:	500 AIPG	500 AIPG
1st Halvening:	Block 1,000,000	Block 100,000
Block Time:	Approx. 1 minute	Approx. 1 minute
Maximum Supply:	1 billion AIPG	200 million AIPG

Tokenomics Phases and Halvenings

The tokenomics were changed to have 3 phases:

- Initial phase
- Second Phase
- Third Phase.

Each phase follows a halvening event:

- Accelerated Halvening
- Intermediate Halvening
- Mature Halvening

The Initial Phase kicked off with the Mainnet launch. The Second and Third Phases are meant to take a break from any halvenings and last approximately 5 years and 7 years respectively. During this time, AIPG would transition to a mature phase with a broader ecosystem where AI workloads will be actively transacted with AIPG.

95% of the total supply will be reached by the end of the Intermediate Halvening. During the Mature Halvening, emissions will slow down considerably until the total max supply of 200 million AIPG is almost reached.

A summary of each phase is shown in the next few sections. A table showing the full information on the phases and first 25 halvenings is shown at the bottom of the tokenomics webpage.

Initial Phase and Accelerated Halvening

The Initial Phase started with the Mainnet launch and lasts 100k blocks or 69 days. Following the Initial Phase, there are four Accelerated Halvening events lasting 100K blocks each. Below is a summary of the Initial Phase and the Accelerated Halvenings.

Initial Phase

Start Date: Mainnet launch DEC 10, 2023

Block Height: 0 to 100,000

Block Reward: 500 AIPG

Total Supply by end of Initial Phase: 50 million AIPG

% of Max Supply: 25%

First Accelerated Halvening

Approx. Start Date: FEB 17, 2024

Block Height: 100,000

New Block Reward: 250 AIPG

Total Supply by end of First Halvening: 75 million AIPG

% of Max Supply: 37.5%

Second Accelerated Halvening

Approx. Start Date: APR 26, 2024

Block Height: 200,000

New Block Reward: 125 AIPG

Total Supply by Second Halvening: 87.5 million AIPG

% of Max Supply: 43.75%

Third Accelerated Halvening

Approx. Start Date: JUL 5, 2024

Block Height: 300,000

New Block Reward: 62.5 AIPG

Total Supply by Third Halvening: 93.75 million AIPG

% of Max Supply: 46.9%

Fourth Accelerated Halvening

Approx. Start Date: SEP 12, 2024

Block Height: 400,000

New Block Reward: 31.25 AIPG

Total Supply by Fourth Halvening: 96.875 million AIPG

% of Max Supply: 48.4%

Second Phase and Intermediate Halvening

The Second Phase maintains the block reward of the last Accelerated Halvening event and lasts 2,500,000 blocks or almost 5 years. There are four Intermediate Halvening events, halvening #5 to #8, lasting 525K blocks each or approximately 1 year each. The total supply at the end of the Intermediate Halvenings will equal 95% of the maximum supply. Below is a summary of the Second Phase and the Intermediate Halvenings.

Second Phase

Approx. Dates: NOV 21, 2024 to AUG 23, 2029

Block Height: 500,000 to 3,000,000

Block Reward: 31.25 AIPG

Total Supply by end of Second Phase: 175 million AIPG

% of Max Supply: 87.5%

Four Intermediate Halvenings

Approx. Dates: AUG 23, 2029 to AUG 20, 2033

Block Height: 3,000,000 to 5,100,000

New Block Reward: 1st – 15.63, 2nd – 7.81, 3rd – 3.91, and 4th – 1.95

Total Supply by end of last Intermediate Halvening: 190.4 million AIPG

% of Max Supply: 95%

Third Phase and Mature Halvening

The Third Phase maintains the block reward of the last Intermediate Halvening event and lasts 3,750,000 blocks or approximately 7 years. The period of halvening after the Third Phase is referred to as the Mature Halvening and lasts 1,050,000 blocks each or approximately 2 years each. Mature Halvening starts the 9th halvening event; however, there is no end halvening due to how halvening works. Please read the 'Maximum Supply' section below to understand more about how halvings work.

Third Phase

Approx. Dates: AUG 20, 2033 to OCT 6, 2040

Block Height: 5,100,000 to 8,850,000

Block Reward: 1.95 AIPG

Total Supply by end of Third Phase: 197.7 million AIPG

% of Max Supply: 98.9%

Mature Halvenings

Approx. Starting Date: OCT 6, 2040

Starting Block Height: 8,850,000

Starting Block Reward: 0.975 AIPG

Total Supply by end of the Mature Halvening: ~200 million AIPG

% of Max Supply: ~100%

Maximum Supply

The maximum supply is 200 million AIPG; however, it will never fully reach 200 million. In cryptocurrency systems that implement a halving mechanism, the block reward that miners or validators receive for adding new transactions to the blockchain is reduced by half at regular intervals. This reduction continues at each halving event, exponentially decreasing the number of new coins created.

With each halving, the number of new coins minted will decrease geometrically. As this process continues, the rewards become so small that they effectively approach zero, but never actually reach it. This is like the concept of Zeno's paradox, where you can always go half the distance to a target but never quite reach it.

For example, if we start with a block reward of 50 coins:

- After the 1st halving, the new reward is 25 coins.
- After the 2nd halving, it's 12.5 coins.
- This pattern continues indefinitely.

With each halving, you make progress toward the total supply but with diminishing returns. As a result, you add fewer and fewer coins with each passing event, and thus, in practice, it would take an infinite amount of time to actually reach the total supply cap.

The exact point at which you get asymptotically close to the total supply depends on the specifics of the emission schedule and the intervals between halvings. In an implementation like this, the theoretical cap of 200 million serves more as a ceiling that the supply can approach but never quite touch, ensuring scarcity and potentially increasing the coin's value over time due to this diminishing emission.