# Tokenomics Change

Version 1.0.4 of the White Paper was available during Mainnet launch on December 10, 2023. The original tokenomics had halvenings 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 halvenings should occur for the first four halvenings 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. After these four accelerated halvening events, AIPG would transition to a mature phase with a broader ecosystem. At this point, AI workloads will be actively transacted with AIPG, and in 2025 emissions will slow down considerably until the total max supply of 200 million AIPG is almost reached.

The first four halvenings will introduce 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

The tokenomics were changed to have 3 phases: Initial phase, Second Phase, and Third Phase. Each phase follows a halvening event: Accelerated Halvening, Intermediate Halvening, and Mature Halvening. A summary of each phase is shown below. A table showing the full information on the phases and first 25 halvenings is shown further below.

## 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 December 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
**Start Date:** Approx. February 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
**Start Date:** Approx. April 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
**Start Date:** Approx. July 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
**Start Date:** Approx. September 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 2,500,500 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
**Dates:** Approx. November 21, 2024 to August 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
**Dates:** Approx. August 23, 2029 to August 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 halvenings work.

Third Phase
**Dates:** August 20, 2033 to October 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
**Starting Date:** Approx. October 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 halvenings. 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.