Peercoin

Green Crypto for a Sustainable Future

What is Peercoin?

Peercoin is a decentralized p2p payment blockchain network based on a proof-of-stake consensus algorithm. The network also uses hashcash style proof-of-work for continual coin distribution. No one party controls the peer-to-peer Peercoin blockchain network, the consensus algorithm or the distribution.

Simply put, Peercoin is a trustless settlement layer and cryptocurrency based on continuous limited inflation and sustainable blockchain security. We will explore these concepts in greater detail over the next few slides.

Overview

- What is Peercoin?
- Launch & Initial Distribution
- Efficient & Sustainable Security
- Benefits of Proof of Stake
- Limited Inflation Economics
- Trustless Settlement Layer
- Protocol Timeline & Roadmap
- Resources

Launch & Initial Distribution

Launch

The Peercoin blockchain was originally launched on August 19th, 2012 by developers Sunny King and Scott Nadal, with **no** initial coin offering, premine, or developer tax. The project is completely open source and community driven.

Initial Distribution

Peercoin was the first of its kind, a blockchain secured by Proof-of-Stake (PoS) consensus, however Proof-of-Work (PoW) mining was originally used to fairly distribute the initial coin supply. Although it is decreasing in importance over time, PoW mining continues to provide a trickle of fresh coins. This has the effect of slowly decentralizing the blockchain over time by getting coins into the hands of new owners who can help secure the network via PoS minting.

Efficient & Sustainable Security

Time as a Scarce Resource

The key innovation of Peercoin is its invention of PoS. PoW blockchains are secured by proving the consumption of a costly resource: electricity. PoS replaces this expensive security protocol by using an alternative scarce resource: time. The older your coins are, the more time they've accumulated sitting in your wallet, which gives them more power to participate in securing the network.

Security with Low Power Devices

With PoS, you only need enough power to run your computer or laptop. This is possible because the network is secured through ownership of peercoins and the time they sit idle in your wallet, not by the wasteful and costly operation of mining equipment. This efficiency helps grow the number of security providers by making it more affordable to participate. Almost a decade after its launch, Peercoin continues to prove that energy efficient blockchain security is possible.

Benefits of Proof of Stake

Aligning Security & Ownership
In PoW networks, miners can easily jump between whichever network is more profitable to mine, without any loyalty. In Peercoin however, the responsibility for security falls to the coin owners themselves, guaranteeing stakeholders have a vested interest in maintaining the network's security.

Geographical Decentralization
PoW mining concentrates power where electricity is cheapest, which compromises security, making it easier for local governments to target miners. By contrast, PoS minting can be done anywhere.

Price Independent Security
Unlike PoW miners, who rely on a positive asset price to cover their costs of operation and remain profitable, Peercoin minters benefit from the efficiency and lower costs of PoS. As a result, PoS minters are independent of price and can always secure the network with little expense to them.

User Governance
Protocol rules are governed collectively by Peercoin's users, making for a more democratic network.
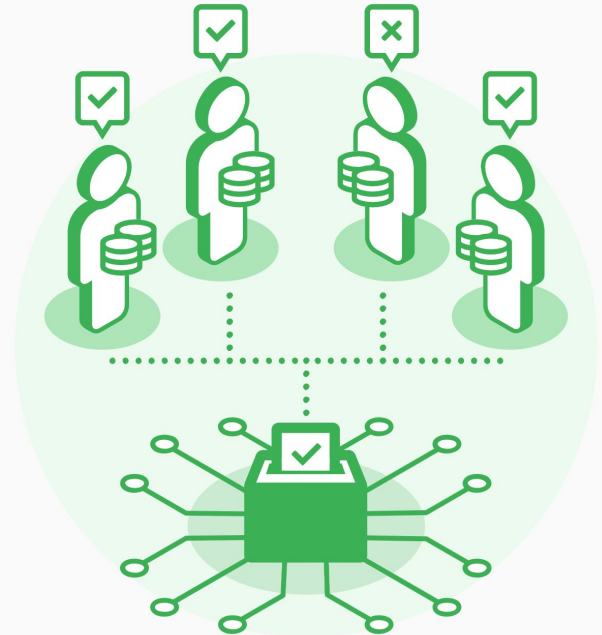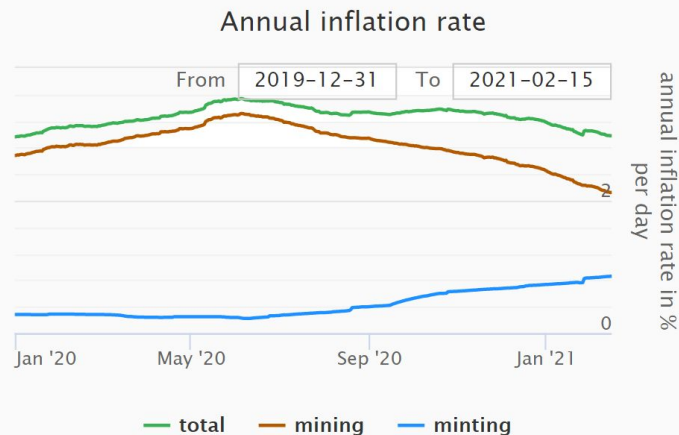
Limited Inflation Economics

Continuous Limited Inflation

Many in crypto have a negative view toward inflation, resulting in the popularization of "deflationary," fixed-supply economic models. At Peercoin however, inflation is viewed as a necessary element that contributes to the proper functioning of an economy. The problem is not inflation itself, but inflation that is excessive, centrally controlled, and open to manipulation.

The solution is not eliminating inflation entirely, but limiting and decentralizing it. This is the principle at the heart of Peercoins economic model, which targets an annual supply increase of around 2-3%. This mild inflation encourages circulation by providing a regulated and continuous stream of new coins into the hands of decentralized participants. As a counterbalance, transaction fees are burned, which acts as a downward force on the supply.

This annual inflation allows the Peercoin network to subsidize block producers with new coins, completely eliminating their reliance on transaction fees. The subsidy provides a permanent incentive for stakeholders to continuously produce new blocks. Personal minting rewards can range anywhere from 3% for periodic minters to 5% for continuous minters.

Annual inflation rate

From 2019-12-31 To 2021-02-15

annual inflation rate in % per day

Jan '20   May '20   Sep '20   Jan '21

— total   — mining   — minting

Trustless Settlement Layer

Built for Trustless Settlement

At its essence, a blockchain is a fully verifiable distributed public ledger which records data in a manner that prevents alterations. This tamper-proof system ensures stored data is immutable and requires less trust from users than third party intermediaries.

The blockchain's strength is primarily in permanent record keeping, rather than being used as a tool for daily payments. Transactions on the chain can be slow and expensive. This is solved with vertical and horizontal scaling technology, which offloads transactions onto separate off-chain networks built for high capacity processing. The blockchain plays the role of settlement layer by permanently recording the final result of these off-chain transactions.

Blockchains that draw their security from transaction fees however are directly competing with the node operators of these off-chain networks. Fighting with off-chain nodes over the same fees is an incompatibility that will only starve block producers of potential revenue, resulting in reduced security for the blockchain. Since Peercoin is secured without any reliance on transaction fees, it is in complete alignment with off-chain networks, making it a better alternative to serve the role of a trustless settlement layer.
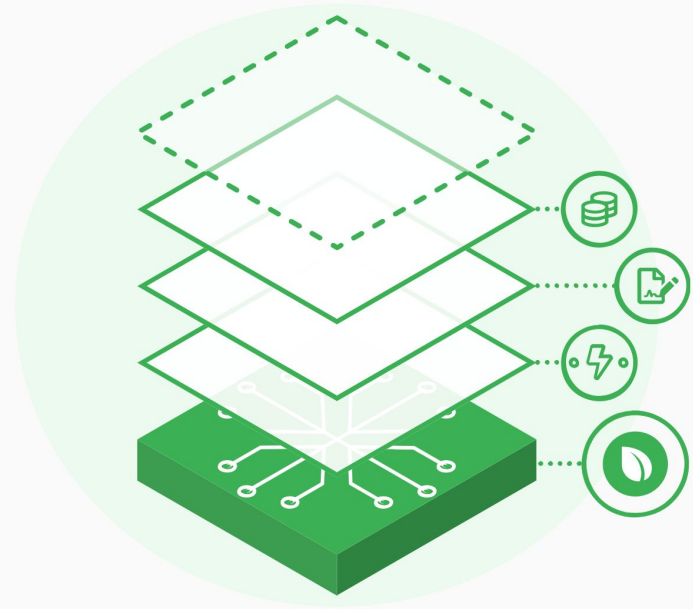
Protocol Timeline & Roadmap

V0.7 - January 2019
- Fee Changes
- Op_return Increase
- Disable Minting While Synchronising

v0.9 (Strider) - May 2020
- (RFC-0018) PoS Rewards Adjustment
- (RFC-0019) PoW Block Spacing
- (RFC-0017) One Year Coinage Limit
- (RFC-0015) Time Drift Reduction

v0.11 (Tardigrade) - Late 2021
- (RFC-0012) Cold Minting
- (RFC-0014) Transaction Timestamp Removal
- (RFC-0020) PoW Difficulty on PoS Blocks

v0.7   v0.8   v0.9   v0.10   v0.11
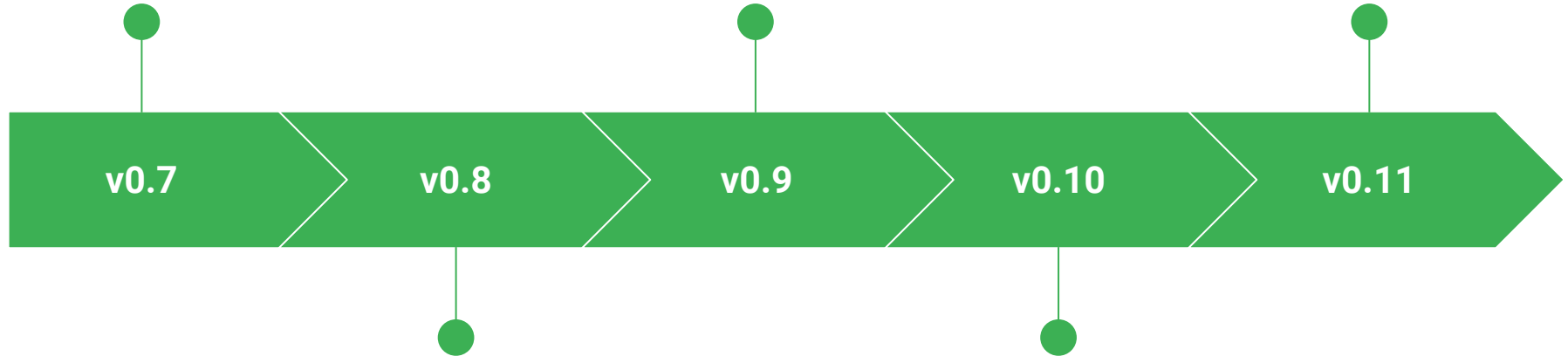
V0.8 (Mantis) - July 2019
- Rebase to Bitcoin-core 0.16.3
- SegWit Protocol Extension
- Compact Blocks (BIP152)
- HD Wallet Support (BIP32)
- (RFC-0006) PoW Block Signature Removal

v0.10 (Scarab) - Spring 2021
- Rebase to Bitcoin-core 0.20

Peercoin Primer

The Peercoin Primer is a five part introductory video series covering the basic fundamentals of Peercoin.

Resources

- Peercoin.net
- Peercoin Primer
- Peercoin University
- Technical Documentation
- Peercoin Foundation
- GitHub Repository
- 2021 Roadmap

Social Media

- Twitter
- Telegram
- Discord