



# Proof-of-Burn

# Understanding Proof-of-Burn (PoB)

- Initially, Proof-of-Burn may appear like a Proof-of-Work system but with reduced energy consumption rates.
- The block validation procedure in PoB-based networks does not necessitate the utilization of high-performance computing resources or mining gear like Application specific Integrated circuits or ASIC's.
- In POB, cryptocurrencies are burned to "invest" resources in the Blockchain network, removing the need for potential miners to commit physical resources.
- POB gives the right to add a new block and validate transactions to nodes with the highest amount of token burned.
- Miners invest in virtual mining machines, or we can say virtual mining power in PoB consensus.

# How does PoB work?

- Proof-of-Burn is similar to Proof-of-work, but instead of investing in electricity or processing capacity, PoB Blockchains are designed to use the amount of token burned by a node as a metric to provide the node with the right to mine a block.
- PoB systems will pay block rewards to miners, similar to PoW Blockchains, and the rewards are supposed to cover the initial investment of the burned coins within a specified amount of time.
- It is important to note that the Proof-of-Burn consensus algorithm can be implemented in a variety of ways. Burns can be done using networks native currency and also by using other cryptocurrencies.

# Advantages and Disadvantages of PoB

## Advantages

- Low energy consumption
- No need for specialized hardware.
- Burning tokens allow user to maintain market liquidity of the tokens.
- Proof-of-burn promotes the nodes to participate in mining and commit to the network for the long term.

## Disadvantages

- The verification of the burns done by miners tends to be delayed, making the system slower.
- The other drawback is that burning coins is not always transparent or verifiable by the average user.

# Example of PoB: Slimcoin

**Slimcoin, a virtual currency network that uses POB, allows miners to burn coins to get the right to mine blocks.**

- Slimcoin's POB implementation is essentially a combination of three algorithms: POW, POS, and the basic POB concept.
- Although the POB consensus exhibits similarities with both PoW and PoS, it follows its own way of reaching consensus and validating blocks.



# Proof-of-Weight (PoWeight)

# Understanding Proof-of-Weight

Proof-of-Weight (PoWeight) is a consensus algorithm based around the Algorand consensus model.

- Proof of weight aims to solve the shortcomings of proof of stake systems of being biased towards the wealthy holder of the network
- In a PoWeight system, instead of using your portion of tokens owned in the network to reflect your chance of “**discovering**” the next block, some other weighted value is employed.

For **example** The Proof-of-Spacetime algorithm in Filecoin is weighted based on how much IPFS data you’re storing.

# The Proof-of-Weight Concept

- In the case of algorand, every user on a PoWeight network has a “weight” assigned to them. This weight is determined by the amount of tokens in the user’s account.
- The network will stay secure as long as the total weighted proportion of users is honest – usually two-thirds or more. This approach safeguards against double-spend attacks on the network.
- When a block is proposed, a committee made up of pseudorandom network users is appointed to perform validation. The committee is selected each round randomly using the Verifiable Random Function.
- The voting power of the committee members is decided by the amount of token they hold.



# Advantages and Disadvantages of PoWeight

## **Advantage:**

PoWeight is known for its super scalability and high customization. The developers can adopt the fundamental algorithm to allow for the formation of committees.

Active Voice!

## **Disadvantage:**

Despite its advantages, it has proven challenging to get consumers enthused about the concept due to the complex structure, which makes incentivization challenging.

# THANK YOU!

## Any Questions?

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