

Anticipated Impact of the Shanghai Upgrade on 21Shares ETPs

17 February 2023

This document is intended to help investors understand the upcoming Shanghai Upgrade to the Ethereum blockchain and its potential impact on 21Shares ETPs. For those who are new to staking, context can be found [here](#) and in the 21Shares [Staking Primer](#). For more information, please contact etp@21.co.

Overview

What is the Shanghai Upgrade and how does it impact Ethereum?

The Shanghai Upgrade refers to a network upgrade to Ethereum, expected to occur in mid-to-late March 2023. The Ethereum development team has been working on several improvements that will be incorporated into the network. The final list of features will be announced closer to the upgrade.

Expected enhancements include:

- Unstaking ETH: Investors will be able to unstake and withdraw staked Ether (ETH) that had previously been locked up on the Ethereum blockchain during the transition from Proof-of-Work (PoW) to Proof-of-Stake (PoS).
- Gas fees: Investors may notice improved network performance and reduced gas fees, making it easier and more affordable to use the Ethereum network. This change may increase usage of the Ethereum network.

What do these upgrades mean for ETH investors?

Most importantly, ETH investors will be able to stake *and withdraw* ETH to help secure the network and earn staking rewards. Investors have been able to stake ETH since 2020, but haven't been able to withdraw staked ETH or earned staking rewards.

- Now that investors will be able to withdraw staked assets and staking rewards, staking is expected to become a much more attractive investment strategy for ETH investors.
- Staking will become an eligible strategy for ETPs for the first time.



What is the expected return on staking ETH?

There are numerous estimates regarding the expected rewards that can be earned as a result of ETH staking, including approximately 4%¹ as of 17 February 2023. Though, it should be noted that rewards earned from staking ETH do not necessarily reflect the entire return on investment, given the potential incorporation of fees and other costs.

What does the Shanghai Upgrade mean for 21Shares ETPs that hold ETH?

- **21Shares Ethereum ETP (AETH):** ETH staking is expected to be introduced as soon as practicable after the Shanghai Upgrade. Staking proceeds will be reinvested into the ETP's NAV, allowing investors to receive additional rewards (coin entitlement) that are independent from market performance.
- **21Shares Staking Basket Index ETP (STAKE):** Once ETH becomes eligible under index guidelines, it will be considered for inclusion at the next rebalancing date. Eligibility is contingent on having institutional support for staking in place. Rebalancings occur twice annually in March and September. The first opportunity for ETH to be considered for inclusion will be in September 2023.
- **Other 21Shares ETPs:** 21Shares will evaluate the introduction of ETH staking into other products that hold ETH.

¹ <https://www.stakingrewards.com/earn/ethereum-2-0/>, accessed 17 February 2023



Timeline and Background

Timeline: ETH and 21Shares ETPs

- 15 September 2022: “The Merge” - Ethereum moved from a Proof-of-Work (PoW) consensus mechanism to a Proof-of-Stake (PoS) consensus mechanism
- Expected - March 2023: Shanghai Upgrade, allowing staked ETH withdrawals
- Expected as soon as feasible after Shanghai Upgrade: Introduction of ETH staking for 21Shares Ethereum ETP
- Expected - September 2023: Introduction of ETH staking for 21Shares Staking Basket Index ETP

What is the difference between Proof-of-Work and Proof-of-Stake?

- Proof-of-Work and Proof-of-Stake are two blockchain consensus mechanisms that ensure the validity of transactions and the security of a blockchain.
- Proof-of-Work involves solving complex equations using computing power.
- Proof-of-Stake doesn't involve high computing power (e.g. supercomputers), but rather requires skin in the game or a stake in the native token for the right to verify and validate a new block of transactions.

What is Staking?

- Staking is used to secure the network and validate transactions in a proof-of-stake (PoS) consensus algorithm.
- Users can earn rewards in the form of new coins, transaction fees, and other network-provided incentives by doing so.
- For more details, see our [Staking Primer](#).



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