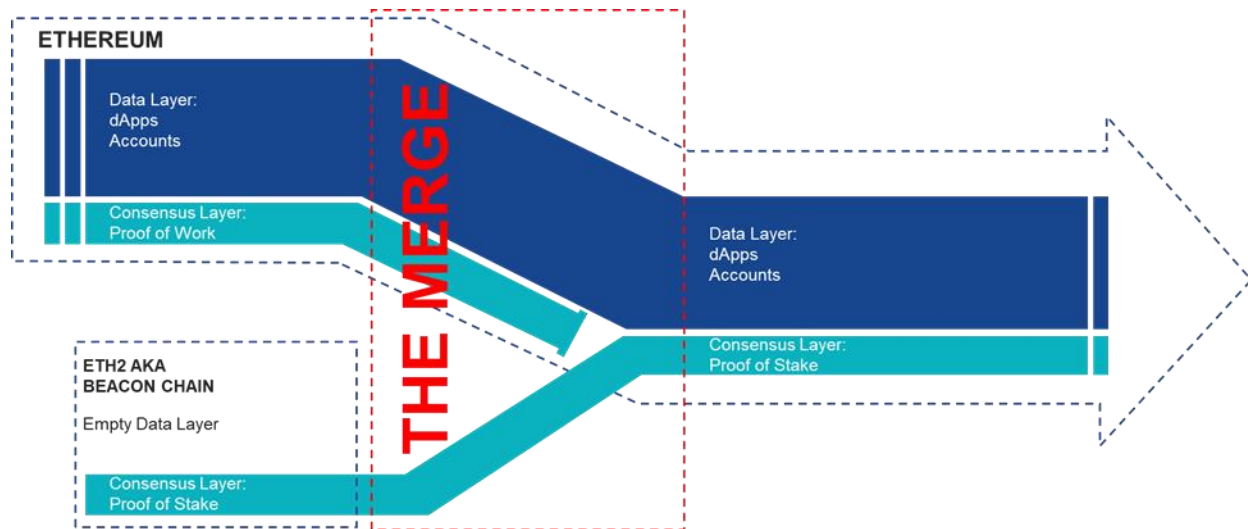







For immediate release

## VanEck Digital Assets ETNs The Merge: Transition from Proof-of-Work to Proof-of-Stake

September 13, 2022 – The Merge represents probably one of the most exciting events in the digital assets industry. Even though it was expected to happen since the inception of the Ethereum network in 2015, only recently it became evident what the implication may be for the Ethereum ecosystem. Let’s take a step back first to understand what the Merge is and why it is happening. Ethereum, the first blockchain-based smart contract platform, needs a consensus mechanism to validate transactions just like Bitcoin does. Previously (and until the Merge), Ethereum used Proof-of-Work (PoW) as a consensus mechanism, however, the original vision of Ethereum was to use Proof-of-Stake (PoS). The difference between PoW and PoS could best be described as the different resource used to provide security. While PoW relies on performing energy intensive calculations (i.e. the resource is electricity) to secure the blockchain, PoS does not require energy intensive calculations because it uses tokens at stake to provide security.



The Merge is the event where Ethereum transitions from PoW to PoS. The most significant implication is the large reduction in energy usage (It is estimated that Ethereum will use 99.95% less energy post-merge). While the reduced energy is great, it will not reduce transaction fees or decrease time to finality. The market excitement mainly comes from the expectation that there will be significant supply sink post-merge due to the depreciation of PoW block rewards and the indefinitely locked validator rewards and staked tokens. In other words, ETH will become a net deflationary asset and liquid rewards earned by the network’s validators will be reduced from 15,135 ETH to 1,777 ETH per day. Since there will not be any miners left in ETH PoS, it is expected that there will be a lower sell-off due to lower operating costs of the network validators (such as electricity cost or rent).

	Effect of the merge on energy usage: Energy reduction of 99.95%
	Effect of the merge of transactions fees: No or insignificant effect on fees
	Effect of the merge on transaction speed: Slight reduction in block time from 13-14 seconds to 12 seconds
	Effect of the merge on total supply of Ethereum: Pre-merge Ethereum was inflationary, post-merge Ethereum might become net deflationary
	Effect of the merge on the price of Ethereum: It's hard to say, the market will eventually decide the price of the Ethereum Proof-of-Stake version.

## **ETH PoW: The Fork**

There is one question that may be on everyone's mind at this moment: what are all the current network validators going to do if they cannot perform ETH mining anymore? Ethereum mining is a multi-billion dollar industry; while some miners will simply quit or move to a different PoW-based blockchain, others may have too much skin in the game to simply quit mining Ethereum. This is why some speculators believe that miners will resist the proof-of-stake update at the time of the merge, this essentially means they will continue with the proof-of-work version of the Ethereum blockchain just before the merge takes place and continue operating on their own network which will most likely be called ETHPoW. If this does happen, the follow-up question is: how would the market value this new fork? In the end, as with all other cryptocurrencies, the market decides how much this ETHPoW will be worth. This decision depends on a number of factors such as exchange listings, developer support, mining pool support and application support. Besides the native asset ETH, other tokens such as ERC20 tokens, will also have a clone version on the ETHPoW network. We don't expect these tokens will be supported by any exchanges unless the developers behind the token decide to support both networks or only support ETHPoW version of the token.

## **What will VanEck do?**

For our crypto ETNs, we follow the return profile of respective index. For a detailed explanation about the approach taken by our index provider, MarketVector Indexes, we would like to refer to their website, client communication about the Merge and the publicly available index guidelines which contain a detailed description of changes that may occur due to forks. Everything that VanEck will do will be based on best effort, with the interest of the investors as our priority. VanEck's global crypto team closely watches the developments surrounding Merge and will act in the best interest of the investor.

If an ETHPoW hard fork occurs, it might mean that every ETH holder will receive ETHPoW tokens at 1:1 ratio for every ETH held in custody at the time of the Merge. This means that the ETH held at our custodian will also be eligible to receive ETHPoW tokens. In case there is support from wallet providers and in case there will be an active market in ETHPoW, meaning top-tier crypto exchanges supporting trading in ETHPoW post The Merge, the intention will be to sell the ETHPoW tokens and reinvest the proceeds into the other component digital asset(s) of each ETN. It is currently not clear what the timelines will look like.

VanEck will continue to provide updates as necessary.

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