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## How to Make Bitcoin Mining Less Power Hungry ?

The recent events in the world of cryptocurrencies and current trends have clearly shown, that a reasonable alternative to the Proof-of-Work (PoW) and Proof-of-Stake (PoS) consensus algorithms is needed. What does it mean a “reasonable”, and why PoS is not the best solution, even it reduces the crypto mining power consumption almost to zero ? Before the answer will be given, let's focus on the last challenges.

**29 March 2022.** Several climate activist groups including Greenpeace and crypto billionaire Chris Larsen are launching a “Change the Code, Not the Climate” campaign, designed to pressure the Bitcoin community to alter the way it orders transactions that already consumes as much power as Sweden [1, 2].

“Bitcoin’s environmental concerns came to the fore last year, when Elon Musk said Tesla Inc. would resume accepting Bitcoin as payment only after at least 50% of the mining relies on renewable energy” – has written *Bloomberg*. “Larsen said: *“Bitcoin’s power consumption issue could be fixed via a soft or a hard fork - both changing the network’s code to make Bitcoin less power hungry. A soft fork would preserve Bitcoin as a single blockchain. A hard fork would split Bitcoin into two separate networks, one supporting miners and the other running different code - perhaps Proof of Stake”*.

**20 April 2022.** A group of US Congressmen have asked the Environmental Protection Agency to review the mining industry for environmental risks and compliance with relevant laws. The authors of the letter were particularly concerned about the Proof-of-Work consensus algorithm [4]. As an alternative, the Congressmen are proposing a “less energy-intensive” Proof-of-Stake technology.

But PoS technology has significant, well-known disadvantages, including higher level of centralization, very high entry threshold into the network, 'Nothing-as-Stake' problem, etc. [3], which really causes a fair protest of the Bitcoin community. In addition, the shifting to PoS is technologically complex [1].

**2 May 2022.** Some big crypto farms focuses on using green and renewable energy to mine crypto [5]. However, as the practice in many countries shown that the “green energy” is more expensive. Form the other side, the ASIC’s or Video Graphic card’s power consumptions stays the same regardless of the type of energy (clean, thermal or nuclear).

So, the Bitcoin’s code (PoW technology) should be changed. Really, it is not so hard to fix the Bitcoin’s Energy Problem if to use the novel Proof-of-Measurement (PoM) consensus algorithm that would remove the huge computational cost of verifying new crypto transactions by smart, accurate measurements.

## SAVE THE ENERGY WITH A NEW MINING METHOD



**Proof-of-Work (PoW)**

**Proof-of-Measurement (PoM)**

The PoM technology is proposed by Eco IFSA startup [6]. The shifting to PoM will be not technologically complex. Such solution will be also free from all PoS algorithm's disadvantages. Bitcoin enthusiasts will be able to continue mining, but the hardware will be reduced to a USB flash memory stick size unit with the power consumption in 60,000 times less in comparison with the modern ASIC unit for the crypto mining.

Finally, one more benefits, which PoM can bring into the up-upgraded Bitcoin Network: transaction speed will be higher in twice in comparison with the best existing today's solution – Solana !

### References:

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- [3]. Sergey Y. Yurish, To Mine or Not to Mine ? That's the Question !, *Eco IFSA Newsletter*, 21 February 2022.
- [4]. <https://huffman.house.gov/imo/media/doc/Crypto%20letter%20to%20EPA%20FINAL.pdf>
- [5]. Ryan Browne, Can crypto go green? Major companies are trying — but it's easier said than done, *CNBC*, 2 May 2022.
- [6]. Eco IFSA: <https://eco-ifsa.net>

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