

# Review of: "Quantifying the Environmental Impact: A Comparative Analysis of Consensus Algorithms in Blockchain for Carbon Footprint Reduction and Mitigating Climate Change"

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Potential competing interests: No potential competing interests to declare.

The research value of this article lies in its in-depth exploration of the environmental impact of blockchain consensus algorithms, particularly in terms of reducing carbon footprint and combating climate change. It provides insight into well-known consensus algorithms such as Proof of Work (PoW), Proof of Stake (PoS), and Delegated Proof of Stake (DPoS), as well as emerging consensus mechanisms. This kind of research has important implications for understanding the potential applications of blockchain technology to global issues, as well as its impact in terms of environmental sustainability.

The proposed method is feasible in theory. By evaluating key criteria such as energy consumption, scalability, safety, carbon footprint reduction potential, it is possible to quantitatively compare the environmental impact of different consensus algorithms. In addition, through the calculation formula of carbon footprint, the environmental impact of different consensus algorithms can be quantitatively analyzed. This approach can provide researchers and decision makers with useful information to help them better consider environmental factors in the application of blockchain technology.

However, the practical application of this method may face some challenges, such as obtaining accurate energy consumption data, detailed information needed to calculate the carbon footprint, etc. Therefore, more data support and method refinement may be needed in practical applications to ensure the accuracy and reliability of the assessment.