

Peer-reviewed Research

Utility of the Blockchain for Climate Mitigation

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Abstract

The blockchain is the enigmatic technology that gave birth to Bitcoin and the cryptocurrency movement. By fate or by good fortune, carbon markets and cryptocurrencies face common problems: a need to find consensus on data, and a need to trade value between distrustful strangers. Could the blockchain ledger enable a consensus on carbon budgets, and deliver value for carbon mitigation services? Could blockchain technologies help to resolve the climate crisis? To answer these questions, we need to examine the opportunities for decentralized ledgers in carbon and energy markets. Here we show that the blockchain offers a unique opportunity to improve accountability in carbon markets and to develop renewable energy micro-grids, but for the blockchain to reach its full potential—to be *the* game changer—it should be combined with macro-economic policies and macro-prudential regulatory frameworks that can finance a multi-trillion-dollar transition.

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