

BLOCKCHAIN TECHNOLOGY IN PEER-TO-PEER ENERGY TRADING

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Abstract. *This paper examines the application of blockchain technology in the energy sector, particularly in peer-to-peer (P2P) energy trading, which is a way for users with distributed energy resources (DERs) to exchange energy with each other without relying on a centralized authority. Blockchain technology is an innovative and disruptive tool that can enable P2P energy transactions and smart contracts, and improve the efficiency, transparency, security, and sustainability of energy services. However, the blockchain technology adoption also faces many challenges and barriers, such as the technical maturity and scalability of blockchain solutions and the integration of blockchain with other technologies. The paper aims to provide an overview of the literature on blockchain technology in the energy sector, and to analyze the main application areas, benefits, challenges, and opportunities of blockchain technology in this field. In addition, it presents a theoretical model showcasing a P2P energy trading system utilizing Blockchain technology.*

Key words: Blockchain, Peer-to-peer, Distributed energy resources, Energy trading.

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