

Building Customer Trust in Carbon Markets: The Role of AI and Blockchain

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Abstract

This paper examines how blockchain technology and artificial intelligence can be used to build customer trust in the carbon market. Through an analysis of global milestones and practices in carbon trading, and highlighting persistent issues such as double counting and greenwashing, we propose a three-step enhanced framework – focus on built-in trust, set a transparent baseline, and quick implementation. A real-world application, Singapore-based company Hestiya, illustrates how cutting-edge technologies enable secure, automated certification, dynamic baseline adjustments and efficient market operations. The findings suggest that combining AI and blockchain can improve market efficiency and reduce transaction costs while strengthening customer trust and inclusivity, especially for smaller players. With climate change becoming a critical concern, this short paper could provide a promising path for the global transition to net-zero emissions by offering a more credible, transparent and effective carbon market.

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