[English] Token System for Green Energy Certificates

German Booklet

The token system for green energy certificates is a unique approach that leverages the power of smart contracts, particularly those that adhere to the ERC20 standard. This system is designed to facilitate the creation, transfer, and trading of green energy certificates, which are essentially smart contracts that represent a verified amount of green energy.

The green energy certificate is created through a factory smart contract, typically owned by an energy service provider. This provider uses a 'create' function of the factory contract to generate a new green energy certificate. The factory contract is specialized for four types of energy-related activities: power generation, power consumption, CO2 emissions, and CO2 savings. Consequently, every green energy certificate is associated with one of these four categories.

When the energy service provider creates a green energy certificate, two things occur simultaneously: a new smart contract is established for the certificate, and ERC20 tokens are issued in the equivalent value of the certified green energy. Both the green energy certificate and the tokens are then transferred to the customer of the energy service provider.

The customer now has the freedom to trade or exchange both the tokens and the green energy certificate. The tokens, being ERC20 compliant, can be divided into smaller units and transferred individually, providing flexibility and liquidity. On the other hand, the green energy certificate, as a smart contract, ensures the authenticity and transparency of the certified green energy.

In summary, the token system for green energy certificates combines the benefits of smart contracts and tokens to create a transparent, verifiable, and tradable market for green energy. This system allows energy service providers to issue and sell green energy certificates, and customers to trade and utilize these certificates freely.

Revision #1
Created 10 July 2024 10:31:13 by Thorsten Zoerner
Updated 10 July 2024 10:32:26 by Thorsten Zoerner