

Community Energy Distribution and Incentivization Platform

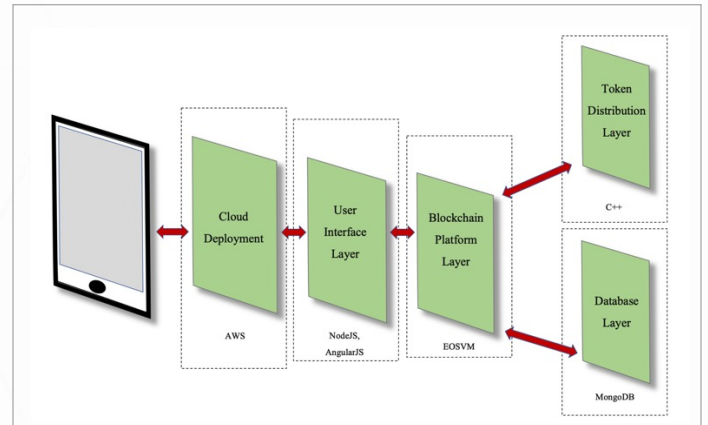
VTIP 20-021: “Blockchain-based Community Energy Distribution and Incentivization Platform Automated with Smart Contracts”

THE CHALLENGE

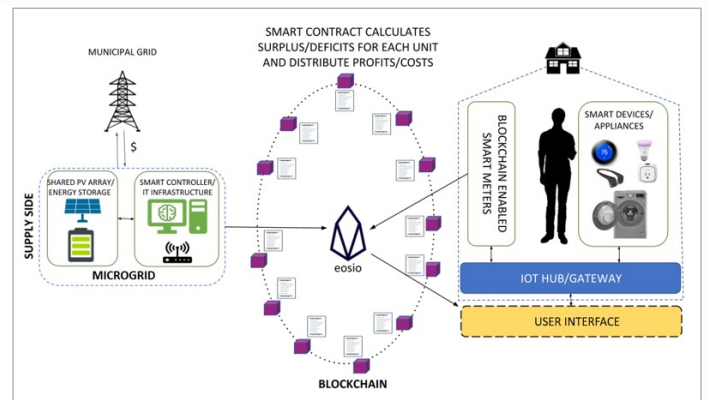
Communities with shared energy resources such as high-density apartment buildings offer renewable energy as an option for tenants; however, distribution and incentivization of energy conservation have proven difficult.

OUR SOLUTION

Zach Gould, Arjun Choudhry, and Ikechukwu Dimobi have designed a way to leverage blockchain technology to automatically distribute credit to individual households for their fair share of a shared renewable power resource. If users opt into the market, smart contracts automatically trigger energy trading on the network, giving those who most efficiently use power the best available rates. Performance ranking along with the application of several other behavioral economic strategies incentivizes participation and more energy efficient behavior from participating households.



The integration of the proposed model with the external peripherals. The blockchain layer binds the entire architecture via the use of smart contracts which enable property managers or renewable asset owners to transparently and securely distribute energy credits to participating households. The hybrid database layer allows for learning and other more computationally intensive operations off-chain.



The relationships between the power grid, blockchain-based smart contracts which automatically rank and distribute incentives to each unit, and the end user interface within the home.



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