



Contribution ID: 14

Type: **not specified**

## **Decentralized Autonomous Organizations for the life cycle assessment of energy system's management for small-scale infrastructures**

*Wednesday 29 June 2022 12:07 (11 minutes)*

Blockchain and Decentralized Autonomous Organizations (DAOs) as concepts have gained increased popularity in the last 15 years, with the use of these structures becoming prominent in the financial industry. Although further uses have been researched and a variety of implementations, from financial to utilities, have been idealized, the use of blockchain and DAOs applied to energy system's management for small-scale infrastructure is a novelty, with little academic references found on the subject. The lack of a full DAO description for any infrastructure life cycle assessment makes the work produced in this sense relevant, given its ability to be used and scaled for other industry-related projects, as well as further diversifying its applications to other industries and utilities.

This project proposes the development of a DAO for managing the life cycle of a energy microgrid infrastructure, focusing mainly on the first three stages of this life cycle: the proposal of new projects and upgrades by members, the selection of the best proposals using voting mechanisms, and the funding of winning proposals using Decentralized Finance. The application of DAOs to the energy industry can ensure the decentralization of service providers, and a grid infrastructure and pricing market oriented for the social benefit of the community, contributing to the sustainability of the industry and our society.

**Author:** BASTIANA, Eduardo

**Presenter:** BASTIANA, Eduardo