Virtual Renewable Energy Network Project

Community solar goes global with the help of the Operating System for Climate Action, where members can register the emissions, offset them with renewable energy projects, and validate the offsets through a DAO.

A community solar project is one where many members subscribe to a solar farm. The output of the solar farm is purchased by their utility, which credits the members of the solar project on their utility bills. This allows people who are renting, who live in multi-unit buildings, or who are temporary residents to gain the financial and environmental benefits of solar energy without entering into long-term contracts for installing solar panels at their homes.

In this MVP concept, we take the standard community solar but go global and virtual to offer both higher financial and environmental benefits for investing in renewable energy. Using the three elements of the Operating System for Climate Action, members of the network would:

1. Record their energy use emissions with the Utility Emissions Channel Project
2. Vote on whether emissions reductions from a renewable project meet their standards using the DAO Project
3. Receive the emissions reductions of validated renewable projects through the Emissions Tokens Network Project.

The utility bills would be placed on a permissioned Hyperledger Fabric utility emissions data channel and then tokenized with the Emissions Tokens Network Project.

Renewable energy projects are proposed via the DAO Project and voted on by members of the network. If approved, their emissions reduction would be entered with the Emissions Tokens Network Project as offsets, which members could purchase either individually or as part of a smart contract plan. Members could hold some of these offsets to certify with a certifying authority later and re-sell while using others to offset their own emissions.

Separate platforms, including both blockchain and traditional peer to peer finance platforms, could allow members to invest in the renewable projects. Returns from these investments could fund the purchases of the offsets. These are not part of this project. We do not endorse any particular investment or investment platform.

References:

CDM ACM0002: Grid-connected electricity generation from renewable sources --- Version 20.0

VCS Project 1090

VCS Project 2257

Get Involved

This is an open source project and anyone is welcome to get involved and we will be happy to see you contribute.

1) Start by subscribing to the Climate SIG mailing list for updates and meeting notifications.

2) Join our bi-monthly Peer Programming Zoom call for developers on Mondays at 9 AM US Pacific time (UTC-07:00 America/Los Angeles.) Please check the calendar for the next call.

3) Check out the good first issues from our blockchain-carbon-accounting in Hyperledger-labs and feel free to contribute a fix for one that looks interesting to you.

4) See our How to Contribute page for other ways how you could get involved.