Case Study

Paramount Software Solutions

Blockchain in Power & Energy

Client Information

The Energy Blockchain Consortium (EBC) seeks to identify and solve critical problems and address energy sector opportunities with blockchain technology.

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HYPERLEDGER GENERAL MEMBER

THE LINUX FOUNDATION

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015

Case Study

Transforming Energy Trading with Blockchain

Energy Blockchain Consortium

SOLUTION

Blockchain

VERTICAL

Power & Energy

FUNCTION

Provenance & Tracking

Background

Effective carbon management is an important tool that can reduce the impacts of climate change. EBC seeks to develop a peer-to-peer energy trading system allowing homeowners with solar systems to trade energy on grid Networks. Trading energy from solar systems eliminates energy waste from a homeowner's energy surplus.

At its core, the zero-waste movement has one goal: to stop waste from piling up on Earth. To achieve this lofty yet necessary goal, zero wasters focus on two things: waste prevention and resource lifecycle changes. People who practice zero waste principles aim to create no trash. They avoid single-use plastics and other non-compostable products.

Problem Statement

The government alone cannot comprehensively deal with the climate change crisis. The only sure-fire way is to coordinate with the private sector, investors and businesses through the carbon offsetting scheme.

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Solution

Reducing emissions through installation of carbon offsets from a project that reduces carbon (e.g., tree farm, wind farm etc.) and setting up geothermal energy systems and plants. The Carbon Footprint Calculator is built to help reduce household carbon emissions, providing a simple means for households to see their impact on the overall carbon footprint of their country.

Approach

Blockchain technology – a decentralized, distributed, public ledger that records transactions – has disrupted several industries driving increased transparency and security. While the energy sector has been relatively slow with its adoption of blockchain, its potential and application are being realized rapidly, making inroads into the industry.

Blockchain Advantages

Transparency

Data on the blockchain is recorded in chronological order and can be accessed by all blockchain members. The increased transparency for stakeholders can lead to better demand management.

Efficiency

Eliminate time-consuming record reconciliations and speed up transactions. With fewer intermediaries operational efficiency is increased & costs are reduced.

Security

Members verify all data before being attached to a block, and each block is cryptographically secured. The high encryption leads to increased data protection & fewer fraud risks.

Decentralization

Any member can add transactions to the ledger without third-party intervention & data created is accessible by all network members.

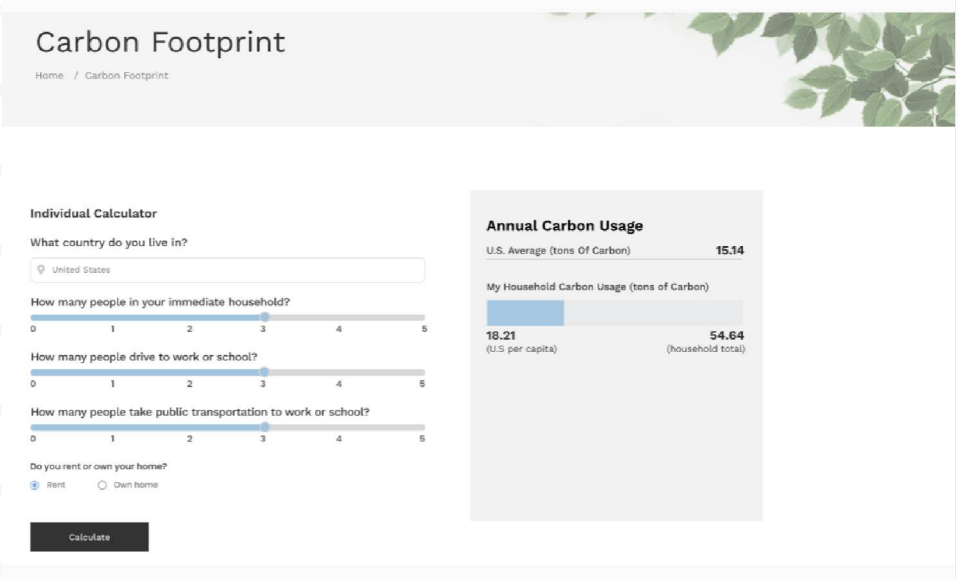
Immutability

Data on the blockchain, cannot be changed by participants. If the transaction recorded includes an error, a new transaction must be added to reverse the error.

Carbon Footprint Calculator

The Carbon Footprint Calculator reliably measures the annual carbon usage of a household. The app also benchmarks against the national average, providing a guideline for carbon usage.

App Dashboard



Conclusion

The registered user can log in to the EBC application and calculate their carbon footprint (their annual carbon usage) and then purchase carbon offsets to reduce their annual carbon footprint.

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For more information on developing a PoC for solving your business problems reach out to us at enquiry@paramountsoft.net
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