

Renewable EV charging using Web 3 technology

Using Energy Web's operating system, Vodafone's global connectivity platform, and Mastercard's payment system, Energy Web's first of its kind green charging solution provides a guarantee that energy used for charging electric vehicles comes from renewables.



Introduction

What is Green Charging?

The green charging solution enables anyone to acquire proof that energy purchased for charging an electric vehicle comes from renewables. Using a single application with an integrated mobile wallet, users can also pick the best priced electricity and pay for it automatically.

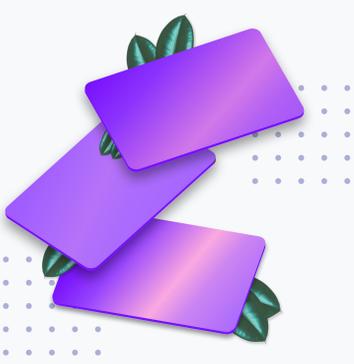


EV Charging

About the solution

Leveraging the full potential of the Energy Web stack, Energy Web worked with Vodafone and Mastercard to deliver an enterprise grade green charging solution for the e-mobility sector.

In this project, Vodafone's network identifies electric vehicles at charging stations, Mastercard's payment gateway is used to facilitate transactions between users, and the Energy Web stack provides the underlying operating system enabling users to prove that energy for charging electric vehicles comes from renewables.



The green charging solution can also be used by corporates to provide detailed proofs in support of environmental, social, and governance claims.

Collaboration

Who is building the solution?

Energy Web, Vodafone and Mastercard have built and deployed this first version of the green charging solution.

Vodafone is one of the world's leading technology communications providers, connecting people and organizations of all sizes to the digital society. Vodafone has extensive experience in connectivity, convergence and the Internet of Things, as well as championing mobile financial services and digital transformation in emerging markets.

MasterCard is a technology company in the global payments business connecting consumers, financial institutions, merchants, governments and businesses worldwide. Mastercard has pioneered technology to make payments simpler, smarter and safer to help its users across 210 countries and territories realize their greatest potential.



EV Charging

How does it work

The green charging solution is a digital framework for tracing renewable energy used to charge electric vehicles with an integrated payment solution. Energy Web, Vodafone, and Mastercard integrated their systems into a unified solution that validates and matches data throughout the whole lifecycle of the charging process.



Trace and validate energy used to charge an EV.



Simple, user-friendly onboarding for market participants.



Integrate with any car or charging station manufacturer.



Provide privacy guarantees for underlying data via decentral technology.



Some of the benefits of Green Charging

Transparency

Users can seamlessly verify if electricity used to charge individual electric vehicles comes from renewables.

Scalability

green charging can be used in any electricity network across the world. It also works with any type of charging infrastructure and electric vehicle.

Automation

electric vehicle identification and financial transactions within the solution are fully automated, making it extremely easy for users to interact with and adopt it.

Interoperability

systems from Energy Web, Vodafone, and Mastercard are integrated together in a single Web 3 solution to enable data processing and exchanges between enterprise users.

Whats next

Energy Web, Vodafone, and Mastercard expect to make the green charging solution publicly available for consumers and companies in the first half of 2022.

Energy Web will work with the various project stakeholders to provide a digital infrastructure based on decentralized identifiers (DIDs) and Energy Web's first of a kind open-source decentralized identity and access management platform, Switchboard, to provide secure and verifiable access to different types of data, promoting additional use cases around e-mobility by embedding DIDs within EVs and their charging infrastructure.

Download this Energy Web Case Study in PDF below

Download ↓

WHY

Our Mission

WHAT WE DO

Technology
Projects Map
Case Studies

INDUSTRIES

Grid Operators
TSO
DSO
Vertically integrated utilities
Aggregator & OEM
Energy Suppliers
EV Fleets + Charge Points
Big Tech
Crypto

BUILD

Work with us
Why build with us
How we work
Built on EWC
Join our Team

LEARN

Tech Overview
EW Academy
Documentation
Github

ABOUT

Team
The Foundation
Our History
Foundation Council
Transparency
Become a Member
EWC Validators
FAQs
Contacts

Labs

Explore our Cutting edge R&D