

**Zero Labs**

Programmable  
Sustainability

zerolabs.green



# Programmable Decarbonization with Digital Renewable Energy

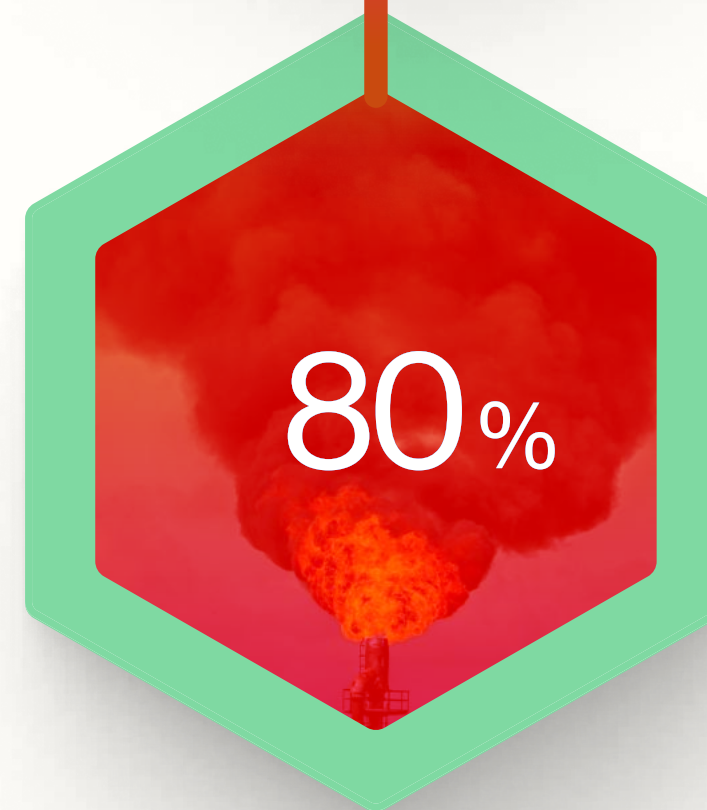
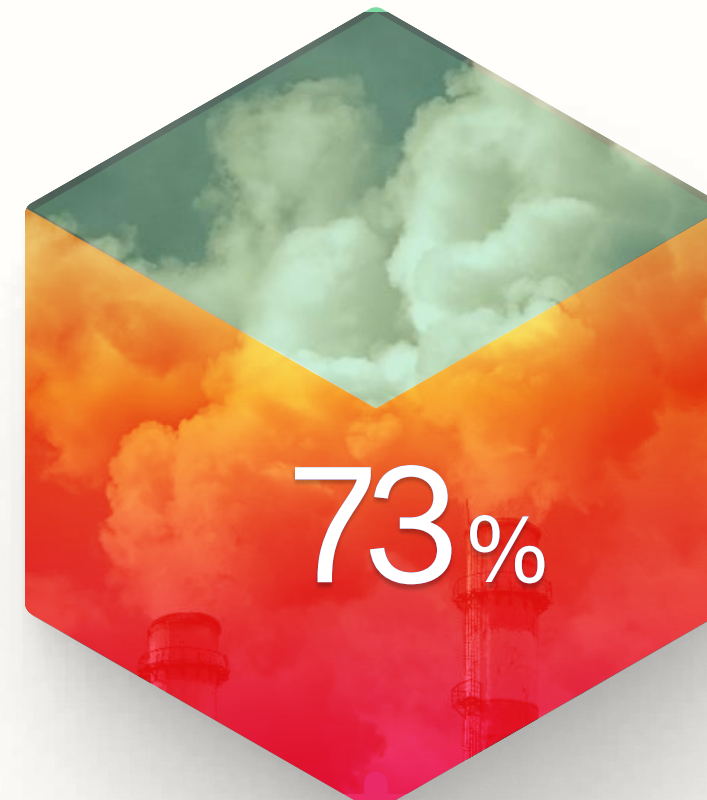
the fastest, simplest and cheapest way  
to buy renewable energy and prove it

# The Problem - Zero or Bust!

Energy is the **biggest problem** of all in the climate crisis

**73%**  
of greenhouse gases causing global  
warming are emitted by energy  
production or consumption

source [world in data](#)



**80%**  
of global energy is still being  
produced with fossil fuels

source REN21





# Climate Action is hard

A person is shown from behind, pushing a large, dark, rounded rock up a grassy hill. The person is wearing a backpack and dark clothing. The background features a range of jagged, snow-capped mountains under a hazy sky. The entire scene is overlaid with a semi-transparent teal/green filter.

Everyone wants to be sustainable and decarbonize, but climate action can be difficult, complex, sometimes it's expensive. Everyone wishes for an easy way to make real and reliable impact



# Renewable Energy Certificates are a gated market

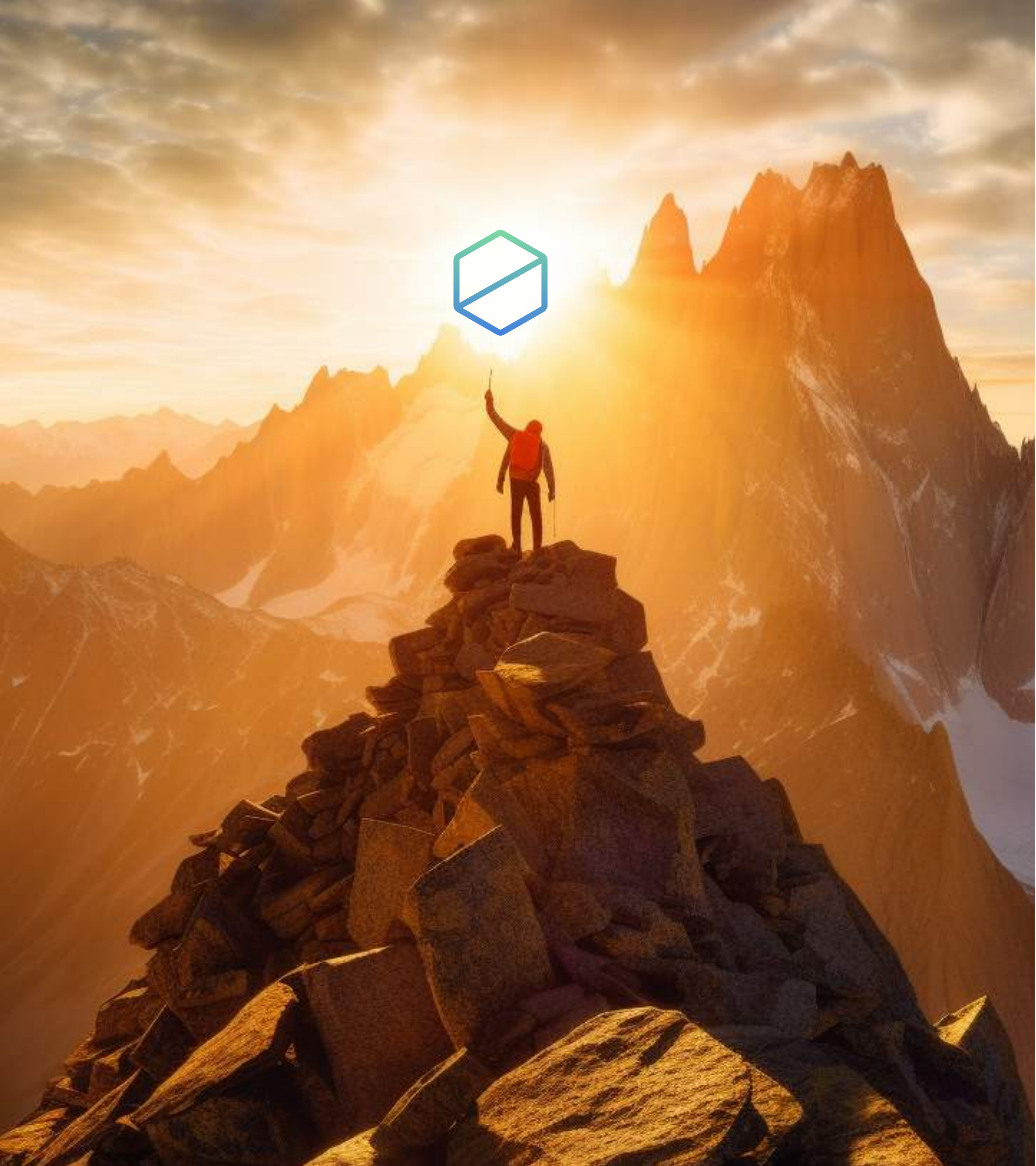
The Renewable Energy Certificates market  
is slowed by analog processes, disconnected,  
and accessible only to elite corporate buyers



# Regulation is ~~coming~~ here

Medium to large companies in the USA and EU will soon be required to report their clean energy, and most don't know how to do it or don't have the time or money to do it





Solution

# Renewable Energy SaaS

making it super simple for anyone anywhere to **easily buy** renewable energy and **prove it**

we do it by **digitizing** Renewable Energy, turning it into a **programmable** building block that can be easily “**embedded**” in every digital process, software or app



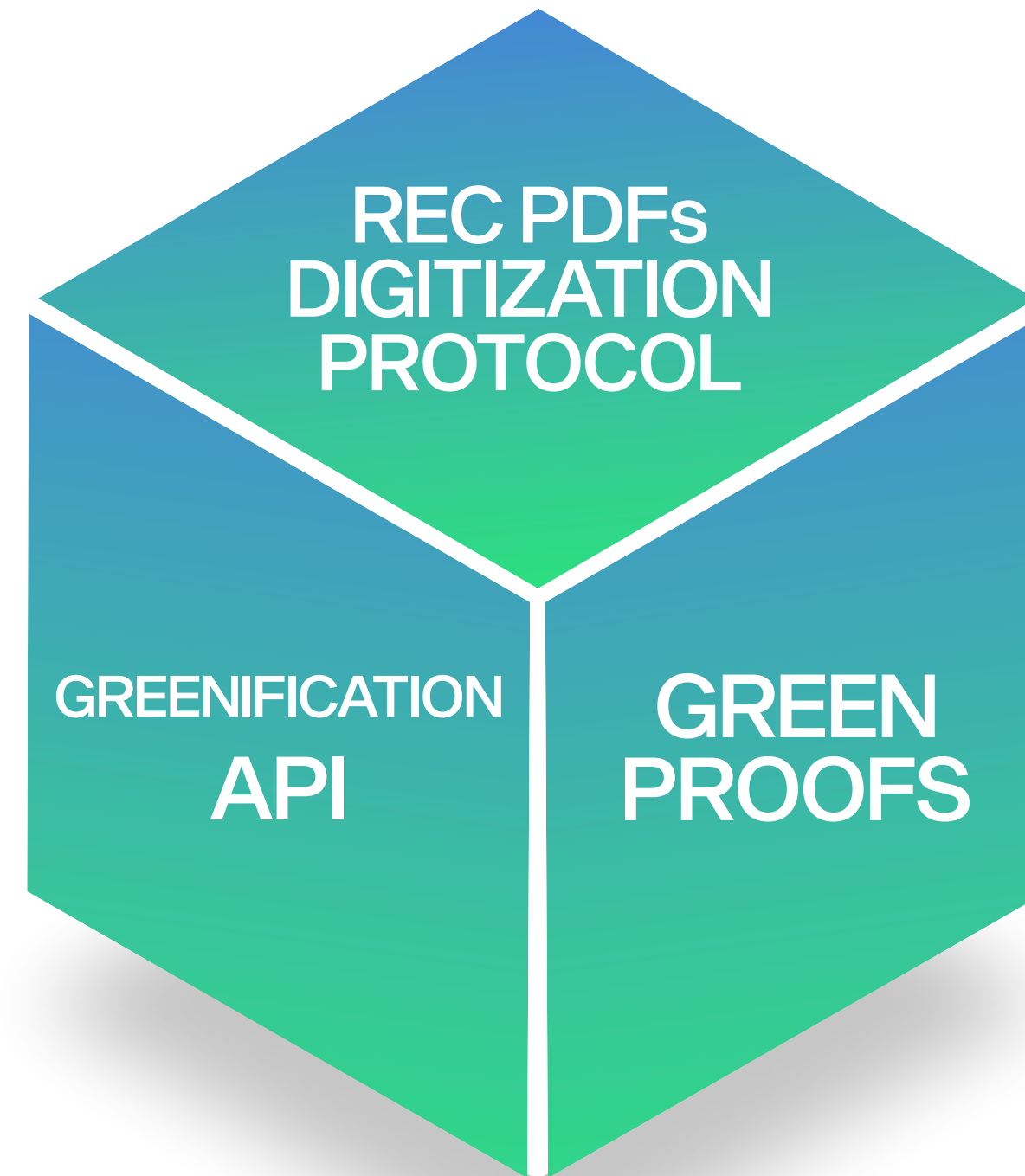
**1** We Digitize Renewable Energy Certificates

to make them a digital, fast and **programmable building block**: digital RECs enable **fractionalization**, democratizing access to renewable energy for small buyers and sellers who can now buy and sell any amounts

**2** We provide a simple API

enabling any developer in the world to **program decarbonization** into their apps, or to build provably **green-first products & services**, without having to deal with tedious market complexities or knowing how to work with energy, blockchains, or digital RECs.

This **radically simplifies buying renewable energy** and allows to make climate action automatic and omnipresent



**3** We automatically provide easy-to-understand web proofs

beautiful and **easy-to-understand Green Proof** that both tells the **story of your impact** and enabling anyone to **verify** that the claims are real and follow **industry best practices and sustainability reporting standards**






Filecoin is a decentralized cloud storage network designed to store humanity's most important information, with built-in economic incentives. Filecoin decarbonized their global network of Storage Providers since launching it in 2020. Filecoin uses our decarbonization API in their [filecoin.energy](#) dashboard and for their [Green Reputation Score](#)


01  The Green Hero

f0763337 

02  Has bought

93 MWh of Renewable Energy Certificates 

03  To greenify

Filecoin Storage Provider  
f0763337 

Consumption Entity Impact Verify

Filecoin Storage Provider  
f0763337

Filecoin is a decentralized storage network designed to store humanity's most important information, with built-in economic incentives to ensure data is stored reliably over time

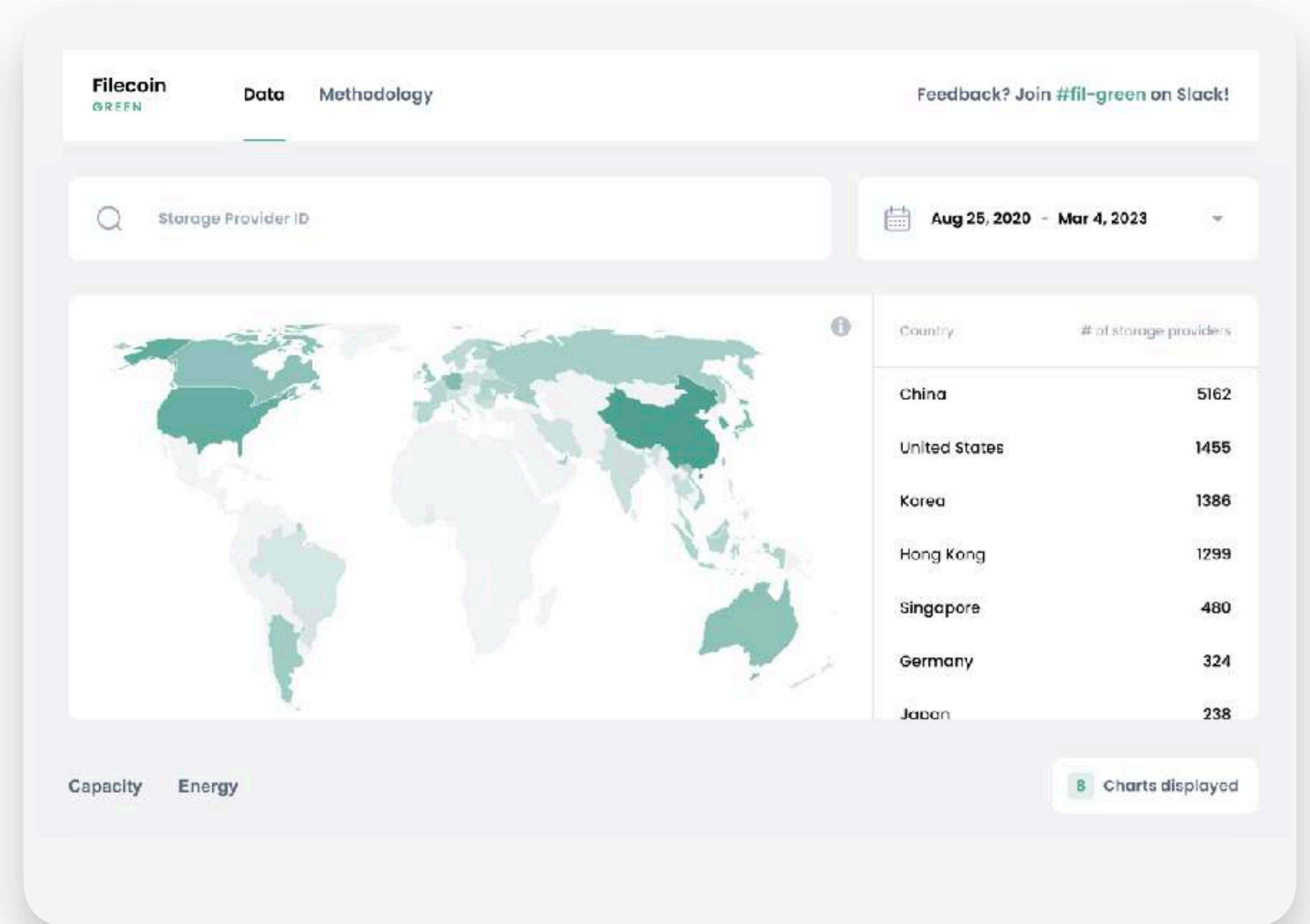
[More info](#)

proof: <https://app.proofs.green/proof/2673bab8-fbaf-4edf-9ac8-153c873cb38c>





Filecoin is a decentralized cloud storage network designed to store humanity’s most important information, with built-in economic incentives. Filecoin decarbonized their global network of Storage Providers since launching it in 2020. Filecoin uses our decarbonization API in their [filecoin.energy](#) dashboard and for their [Green Reputation Score](#)




views of the Filecoin Green energy dashboard - [filecoin.energy](#)


view a Green Proof for a Filecoin Storage Provider: <https://app.proofs.green/proof/2673bab8-fbaf-4edf-9ac8-153c873cb38c>






We helped our partner Zumo provably decarbonize their Bitcoin holding. Explore the [proof](#). Moreover, Zumo also integrates our API and offers an SDK for Banks and tradFi institutions to offer to their clients to easily buy provably decarbonized Bitcoin, Ethereum and other crypto assets


01  The Green Hero

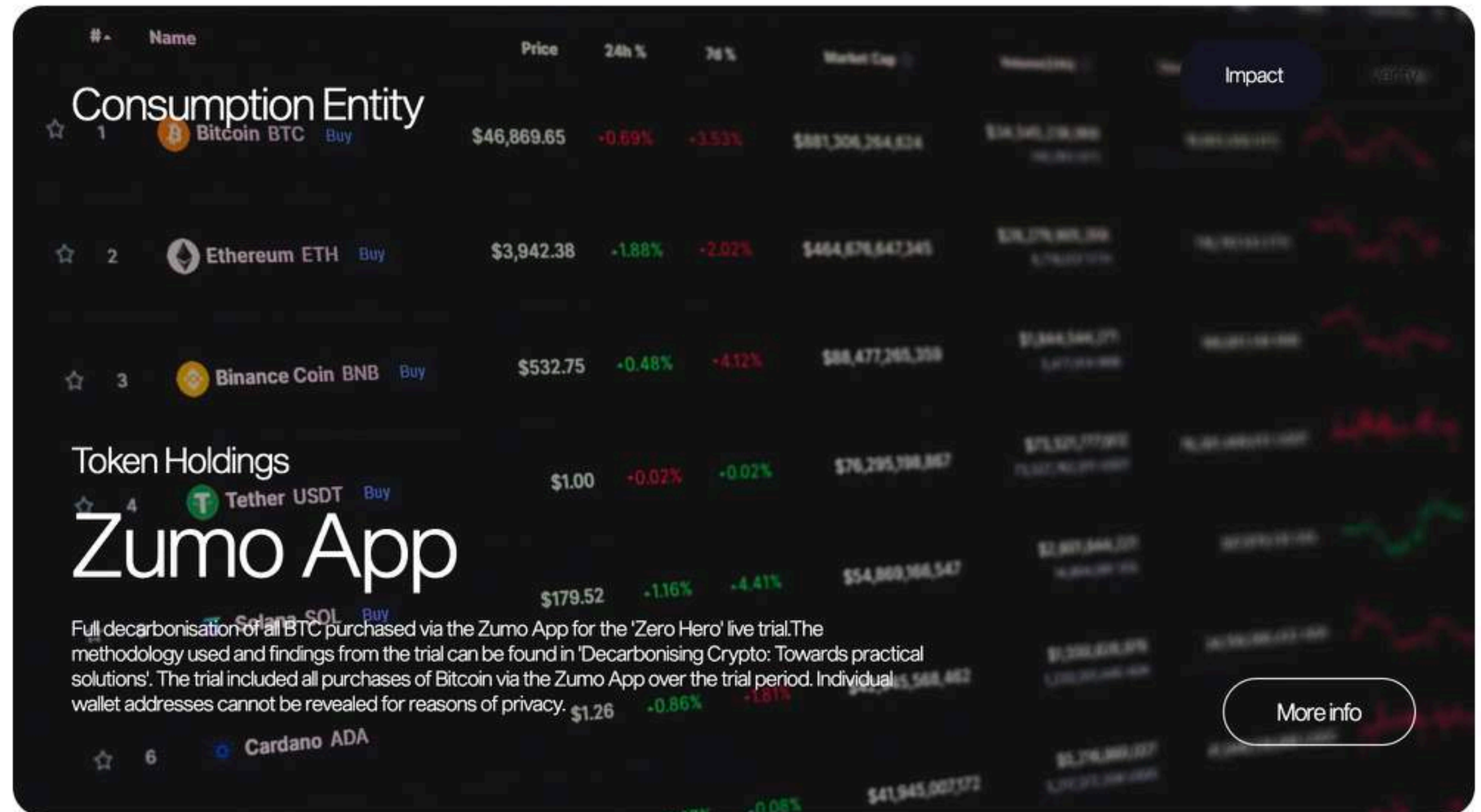
Zumo 

02  Has bought

850 MWh of Renewable Energy Certificates 

03  To greenify

Token Holdings  
Zumo App 



proof: <https://app.proofs.green/proof/81d54964-58ef-487a-88f0-5ec01bbb5bb4>



# Green Proofs - Impact view

● GREEN HERO PROOF

01 The buyer


**Zero Labs**

02 Has bought **14.04 MWh** of Renewable Energy Certificates

03 To greenify

**Blocks Garden Plot 15534859**

Green Hero



Zero Labs

[More info](#)

Consumption Event

14.04 MWh

September 2022 Europe

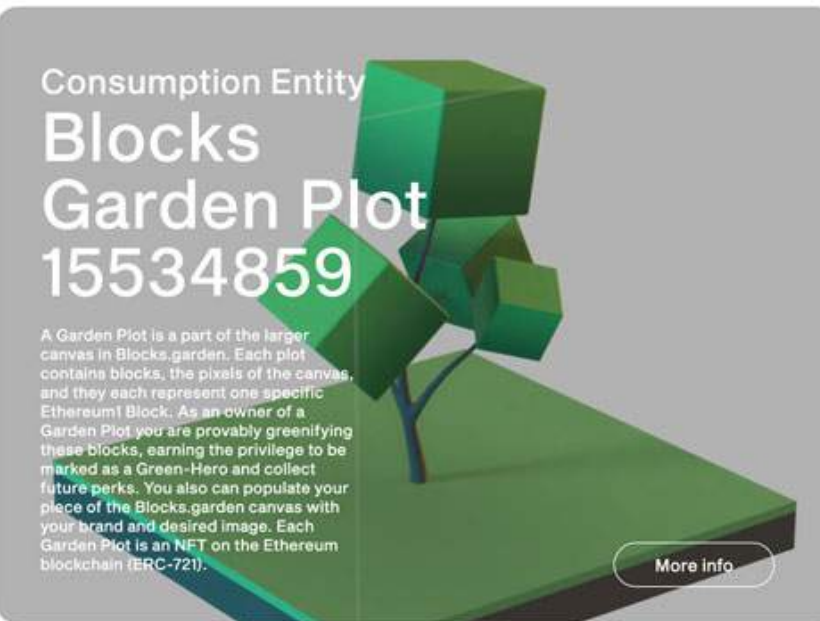
What are Renewable Energy Certificates?

Renewable Energy Certificates (RECs) are tradable, non-tangible energy certificates that represent proof that 1 megawatt-hour (MWh) of electricity was generated from an eligible renewable energy resource or power plant.

[More info](#)

Consumption Entity

Blocks Garden Plot 15534859



A Garden Plot is a part of the larger canvas in Blocks Garden. Each plot contains blocks, the pixels of the canvas, and they each represent one specific Ethereum Block. As an owner of a Garden Plot you are provably greenifying these blocks, earning the privilege to be marked as a Green Hero and collect future perks. You also can populate your piece of the Blocks Garden canvas with your brand and desired image. Each Garden Plot is an NFT on the Ethereum blockchain (ERC-721).

[More info](#)

● IMPACT

Well done! That's quite an impact

14.04 MWh

of clean energy in the Europe in September 2022

= 9.95 MT CO<sub>2</sub>

of emission reductions

14 MWh = 9.95 TONS CO<sub>2</sub>

Current impact

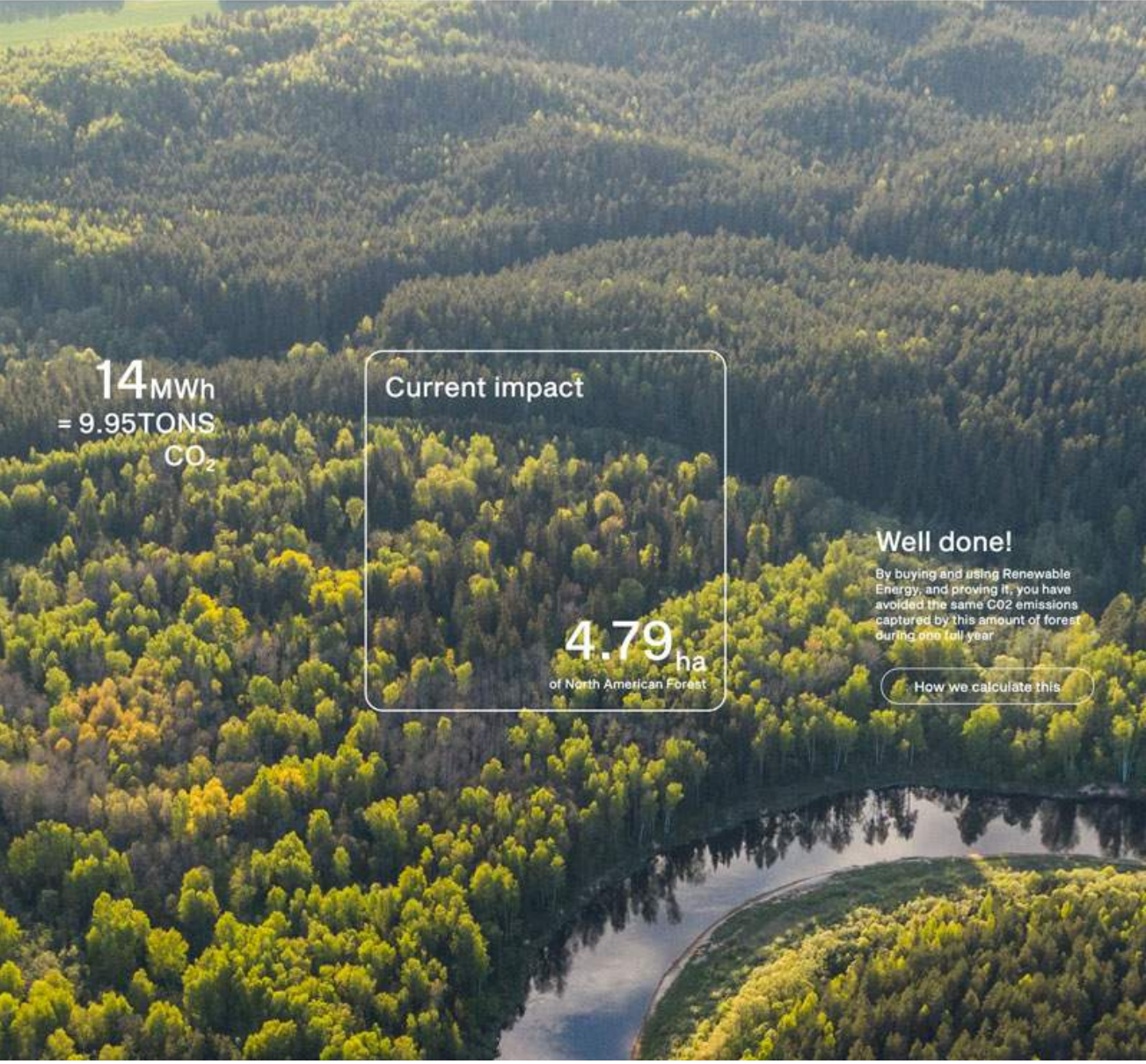
4.79 ha

of North American Forest

Well done!

By buying and using Renewable Energy, and proving it, you have avoided the same CO<sub>2</sub> emissions captured by this amount of forest during one full year.

[How we calculate this](#)



Our easy-to-understand and automatically generated Green Proofs will help you

- communicate your **impact** to the world
- and enable anyone to **verify** the environmental claim and that you are following industry best practices and sustainability reporting standards

● IMPACT COMMITMENTS AND PROGRESSION

## Beneficiary goals

Let's make decarbonizing crypto easy

● UNLOCK THE STREAKS

1/3

14.04 MWh

Sep 2022

2/3

3/3


Special achievement

This is the beginning of your green journey! if you keep being green for months in a row you will unlock special achievements and perks.

● SUPPORTED RENEWABLE PROJECTS


### Generator Details

Name	ENERTRAG AISNE VII SAS DE GOUDELANCOURT EST
Source	Wind
Region	Gourelancourt-lès-Pierrepont, France
Location	49.6928237 3.8474539
Nameplate Capacity	7.2 MW
Commissioning date	2018-10
Generator ID	0xB3eD...e233





# Green Proofs - Verify view



Impact Verify

Proofs → Proof ID: 1 → EAC Delivery Proof

## Proof of Renewable Energy Consumption ▾

This page is a proof that the buyer **0x1234...ABCD** has bought **35 MWh** worth of [Renewable Energy Certificates](#), and that they have been [redeemed](#) in their name

**Consumption event**

**Redeemed RECs**

Amounts of RECs redeemed in the name of this user

350 MWh

of clean energy

More info

this user bought

350 MWh

of clean energy

between

December 2020 - February 2021

**Consumption entity**

**Filecoin Mining**

Network: ETH Mainnet

Minting TX: 0x1234...abc1

Contract address: 0x4567...bcd3

More info

**Green hero**

**Beneficiary information**

Beneficiary type: Filecoin Storage Provider

Beneficiary ID: F123456

Beneficiary address: 0x4321...efgk

More info

**Supplied by**

**Seller**

Seller ID: 0xSEL3...MTH1

Seller Name: Monsoon Carbon

Address: Mt Arrakis 42, Dune plains, Aix en Provence, 12345, France

Contact Person: Paul Attreides

**Certificate information**

Proof ID	0xABCD...1234	Period	2020-12-01 / 2021-02-01	Region	Norway, Oslo
Beneficiary	F123456	Generator	0xCEFD...4567	Redemption date	2022-01-04
Product	CO	Energy source	Hydro	Seller	0xSEL3...MTH1

Download official Attestation

I-REC\_Redemption-Certificate\_20210802-1234-ABD...EFG.pdf

[↓](#)

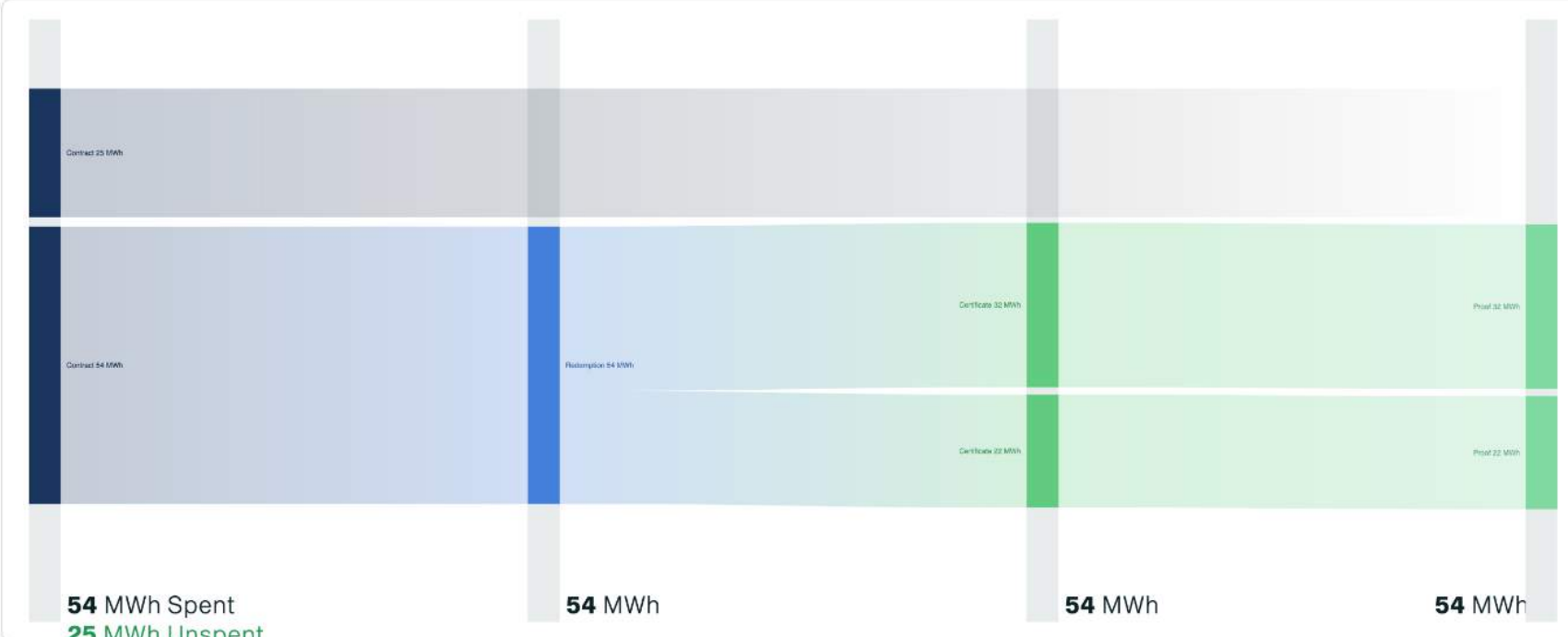
Download ZeroLabs' Proof of Attestation

ZeroLabs\_Attestation\_20210802-1234-ABD...EFG.pdf

[↓](#)

● **CERTIFICATE PROOFS & HISTORY**

Habitant erat neque tempor nec consectetur euismod aliquet dapibus. Neque sagittis urna auctor adipiscing felis.



54 MWh Spent  
25 MWh Unspent

54 MWh

54 MWh

54 MWh

● **BLOCKCHAIN PROOFS & HISTORY**

Habitant erat neque tempor nec consectetur euismod aliquet dapibus. Neque sagittis urna auctor adipiscing felis.

Transaction	Date	Amount	From	Account	Transaction proof
👤 On Chain Registration	2020.12.11		0x0000...0000	buyername.zero...ewc	0xAT5F...4TY7 🔗
➡️ Transfer of Ownership <span style="background-color: green; color: white; border-radius: 5px; padding: 2px 5px;">IN</span>	2020.12.11	740 MWh	0xABCD...9XYZ	labs.zero...ewc	0xAT5F...4TY7 🔗
➡️ Transfer of Ownership <span style="background-color: #ccc; border-radius: 5px; padding: 2px 5px;">OUT</span>	2020.12.11	740 MWh	0xABCD...9XYZ	buyername.zero...ewc	0xAT5F...4TY7 🔗
📄 Certificate Redemption	2020.12.11	740 MWh	0xABCD...9XYZ	labs.zero...ewc	0xAT5F...4TY7 🔗

◀ **Compliant with standards**

The official Renewable Energy Certificate attestation provided by the EAC registry is always available for you and anyone to download and verify. Feel safe that you are making an impact that is both real, provable and compliant with reporting standards

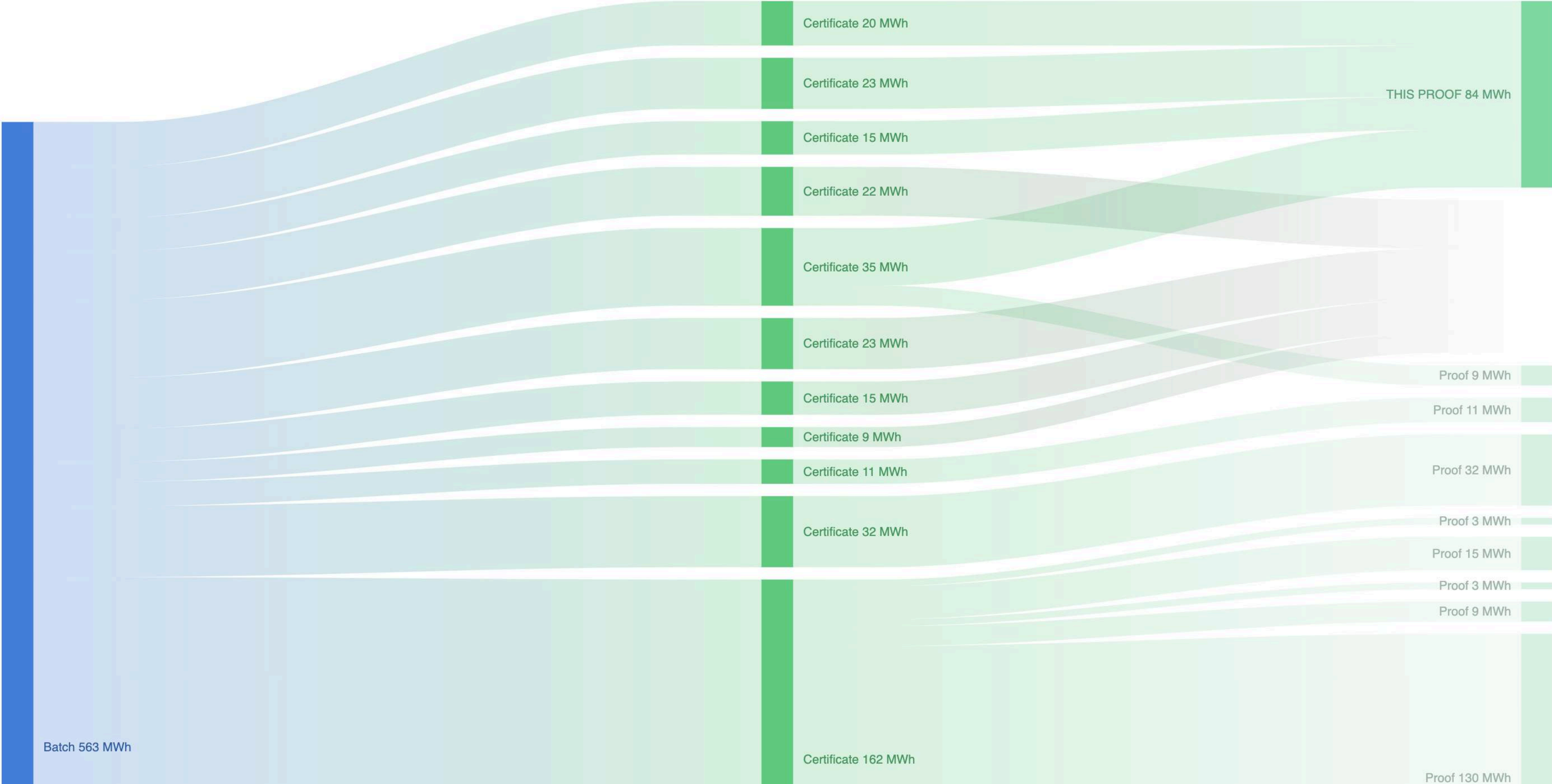
◀ **Radically easy transparency**

The sankey diagram allows anyone to trace from their fraction of a REC upstream to the main official registry attestation and beyond



# Green Proofs - Radically easy transparency

The sankey diagram allows anyone to trace from their fraction of a REC upstream to the main official registry attestation and beyond







# Explore a Real Green Proof Decarbonize a Museum

<https://app.proofs.green/proof/8ae4172f-8cb0-4827-a77a-74d5f3211597>

● INTRO

The Berrocal Studio-  
Workshop is using  
Renewable Energy  
and here's the Proof

This page is a proof that

01 - The Green Hero

Fundacion Escultor Berrocal

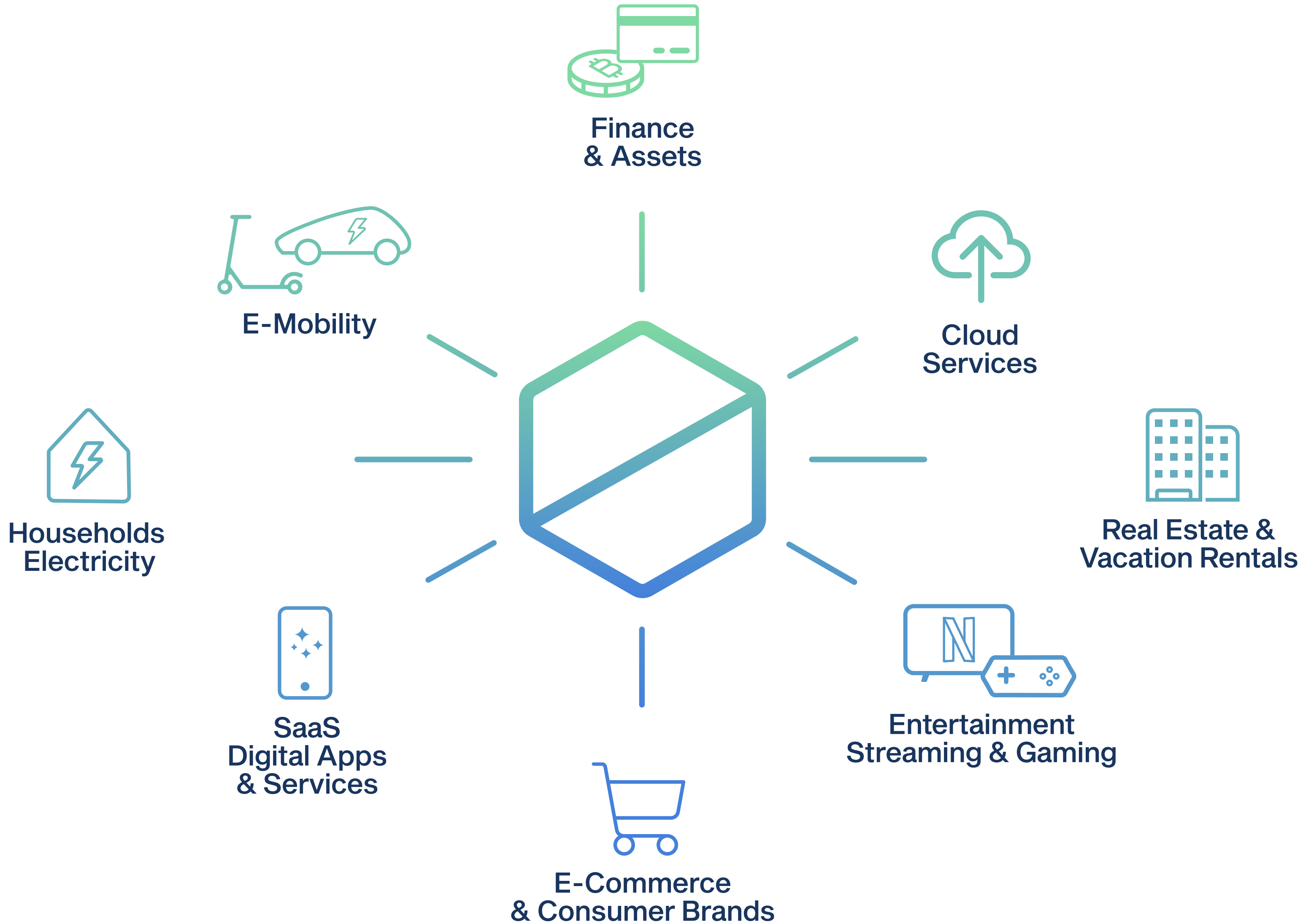
02 - Bought

0.743 MWh of Renewable Energy  
Certificates

03 - To decarbonize their

Berrocal Studio-Workshop







# Non-Zero Facts

GWh Decarbonized

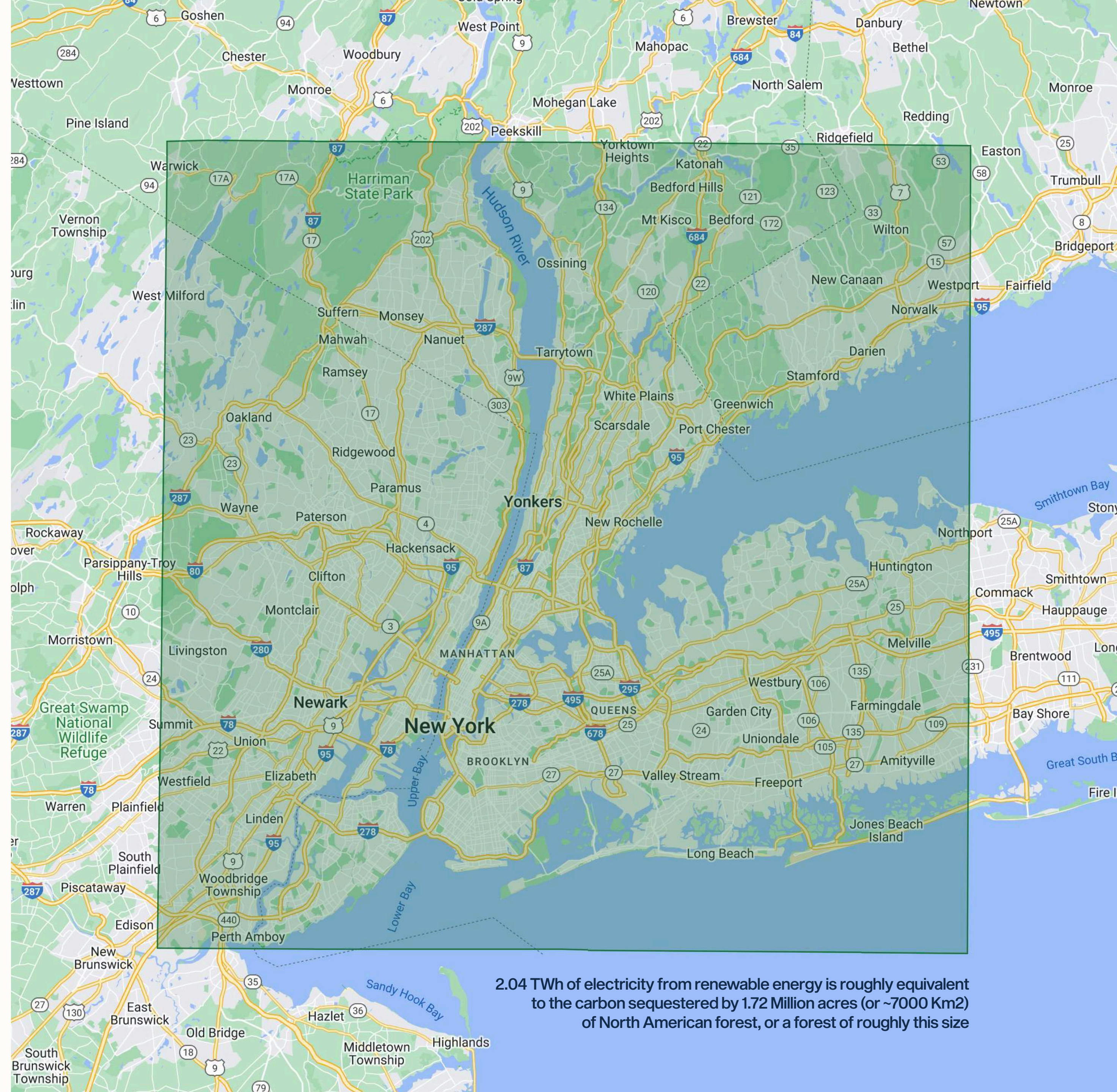
2040

BUYERS

2283

COUNTRIES

7



2.04 TWh of electricity from renewable energy is roughly equivalent to the carbon sequestered by 1.72 Million acres (or ~7000 Km<sup>2</sup>) of North American forest, or a forest of roughly this size





Renewable Energy SaaS  
the fastest and simplest way  
to buy renewable energy and prove it

MONEY  
20/20

We are 🎉 thrilled to announce that Zero Labs is the 🏆 winner of **Money20/20** Europe's Got Access competition!

At ZeroLabs, we are dedicated to creating a sustainable future by helping businesses and individuals transition to clean energy effortlessly, rapidly, and transparently.

This recognition fuels our mission to 🚀 accelerate **#climateaction** and the adoption of **#renewableenergy** globally

♥️ A huge thanks to Money20/20, Commerce Ventures and the amazing judges:  
- **Katherine Brown** - Head of Sustainability at **Visa**  
- **Liz Rich** - Head of Strategy and Corporate Development **Bloomberg News**  
- **Scarlett Sieber** - Chief Strategy and Growth Officer at Money20/20  
- and **Dan Rosen** - Founding Partner, Commerce Ventures who is handing out the 100.000 K\$ award

and thanks for this fantastic opportunity to drive change and onboard the fintech industry onto the path to Zero Emissions!



# Renewable Energy Certificates

The secret ingredient to changing energy related behaviours

## What are Renewable Energy Certificates?

Renewable Energy Certificates (RECs) are tradable, non-tangible energy certificates that represent proof that **1 megawatt-hour (MWh)** of electricity was generated from an eligible renewable energy resource or power plant.



## Why do we need RECs?

Once an electron has been added to the electric grid, there is no way to know where it came from. Renewable Energy Certificates represent the verified amount of clean electricity that has been added in a specific period; therefore **RECs are the only way to prove your electricity green**

## What's the difference between RECs and Carbon Offsets?

RECs prove that a certain amount of electricity consumed was green, and carbon credits represent a project, somewhere in the world, whose activities reduced emissions or enhanced GHG removal from the atmosphere. **RECs** are special because they **incentivize the adoption of renewable energy** while Carbon offsets redirect the sustainability effort to external projects



# Renewable Energy Certificates (RECs)

a REC is a PDF, issued by non-profit registries around the world, that represent that **someone** used a certain **amount** of renewable energy (min. 1 MWh), in a specific **location**, and in a specific **time** frame

## What a REC represents

1 REC is a proof that **1 Megawatt-hour (MWh)\*** of clean energy was added to the grid

\*equivalent to 1.1 Months of electricity of an average US household



**1 REC = 1 MWh**



## PDF representation of the REC

**Green-e® Energy** AUDIT YEAR: 2021

**GREEN-E® ENERGY RENEWABLE ATTESTATION FROM WHOLESALE PROVIDER OF ELECTRICITY OR RECS**

**I. Wholesale Provider Information**  
 Name of Wholesale Provider: 3Degrees Group Inc.  
 Address of Provider: 205 Montgomery St, Suite 200, San Francisco, CA 94104  
 Contact Person: Alison  
 Telephone: (415) 299-1111

**II. Declaration**  
 I, Steve McDougal, of 3Degrees Group Inc. further declare that the renewable attributes of the Web AG (EWAG) ("Purchaser") are:

- 1) all the renewable attributes represented by the renewable energy facilities listed below;
- 2) to the best of my knowledge;
- 3) Provider sold the renewable attributes to the Purchaser in accordance with the applicable federal, state or local standard, or other renewable energy standard;
- 4) the renewable attributes were not sold to any other entity, and
- 5) the electrical energy generated by the facilities that generate the renewable attributes is sold to the Purchaser as listed below.

**III. Additional Statement required of Provider selling electricity to Purchaser**  
 I declare that the electricity listed above was delivered into the NERC region(s) or ISO(s) in which the Generator(s) listed above are located.

**IV. Additional Statement required if Provider is selling only RECs to Purchaser and selling the associated electricity to a utility or load-serving entity**  
 Please write the name of the utility or load-serving entity here: \_\_\_\_\_

As an authorized agent of Provider, I attest that the above statements are true and correct.

Signature: Steve McDougal Date: 08/30/2021  
 Place of Execution: San Francisco, CA

**Table:**

Provider Reference Number (Optional)	Generator Name	Generator ID Number (SA or QF)	Nameplate Capacity (MW)	Fuel Type (if biomass, be specific; i.e. Landfill Gas)	# MWhs RECs / Elec. Sold	First Date of Generation (mm/yy)	Period of Generation (quarter#yy or mm/yy)	Selling as Green-e® Certified Wholesale? (Yes/No)
129955	Valentine Wind, LLC (NE)	59736	1.85	Wind	622.00	2014-09-01	2021-01-01 - 2021-03-31	Yes
					622.00	<b>Total # RECs / Elec. Sold</b>		

**Footnote:**  
 This Attestation form is used by the Center for Resource Solutions to verify the accuracy of claims made by participant renewable energy providers. The information on this form is held strictly confidential and will not be shared with any other party except in aggregate form.

February 2021 Green-e® Energy Renewable Attestation from Wholesale Provider of Electricity or RECs  
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## Standards names

EAC = Energy Attribute Certificate

**GO** Guarantees of Origin

**REC** Renewable Energy Certificate

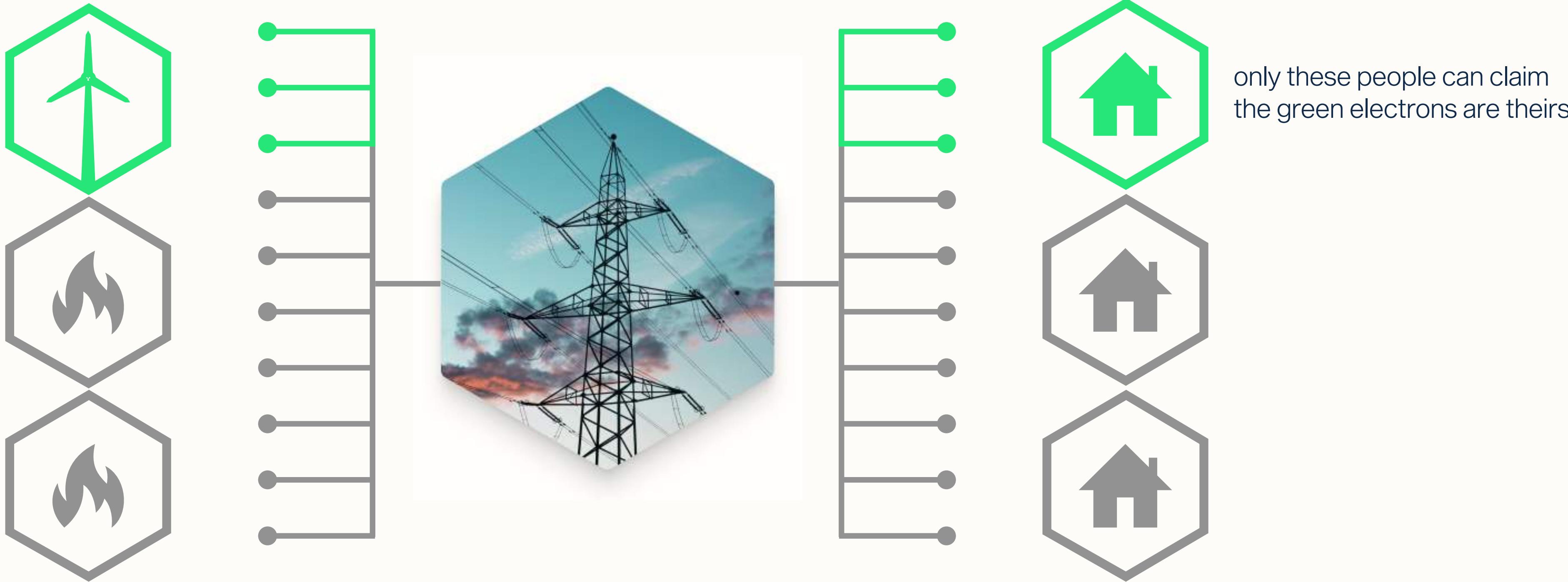
**I-REC** International Renewable Energy Certificate





# Why we need RECs?

Once an electron has been added to the electric grid there is no way to know where it came from.  
RECs are the only way to **prove** that your electricity is green





# How are RECs different from Carbon Offsets?

both tools are needed in the fight against climate change, but they have important differences

## REC

Renewable Energy Certificates prove that a certain amount of electricity consumed was green



VS



## Carbon Offset

a carbon offset represents a project, somewhere in the world, whose activities reduced emissions or enhanced Greenhouse Gases (GHG) removal from the atmosphere:

**Deterministic**

**Rapid Cycle** (even live & 24/7)

**Incentivizes** new renewable project  
(by making RE investments more profitable)

energy consumer = green activist

**Contextual methodologies**

**Slow Cycles**

**Only Erases emissions**  
(but it doesn't change the future)

energy consumer  $\neq$  green activist







Zero Labs

## What you can build with our Programmable Decarbonization tech

[inquiries@zerolabs.green](mailto:inquiries@zerolabs.green)

WHAT

### What it is

WHY

### Advantages

HOW

### Examples



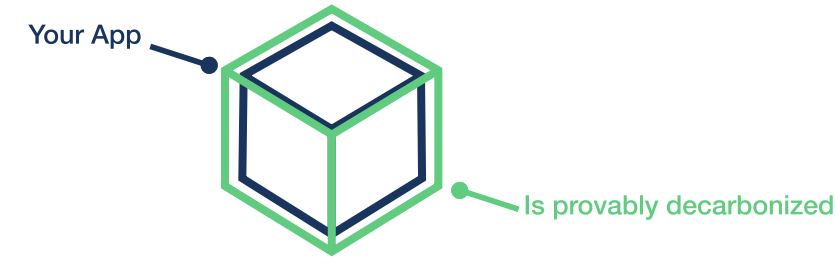
01

### Greenify your Users, your Actions, or your Individual Projects

An integration project that, with a few simple API calls, can add one more added value to your existing offering

- + Create **new revenue streams** by upselling/reselling to your users the green features of your product
- + Create **real impact!** Make your **users be sustainable** through your app and contribute to reducing global emissions through **industry best practices and sustainability reporting standards**
- + **Easy and fast to execute**  
Through a simple and friendly API that any developer can use
- + Automatically give to your users their **Green Proofs that include your brand** as a delivery partner

- Travel and Hotel platforms sell and track renewable energy purchases by their hosts and locations and offer them a “powered by clean energy” amenity or badge and onboard them to a “Green Stays” listing category on their site.
- Shared e-scooter rentals that charge an extra micro-fee on every trip for provably charging with renewable energy



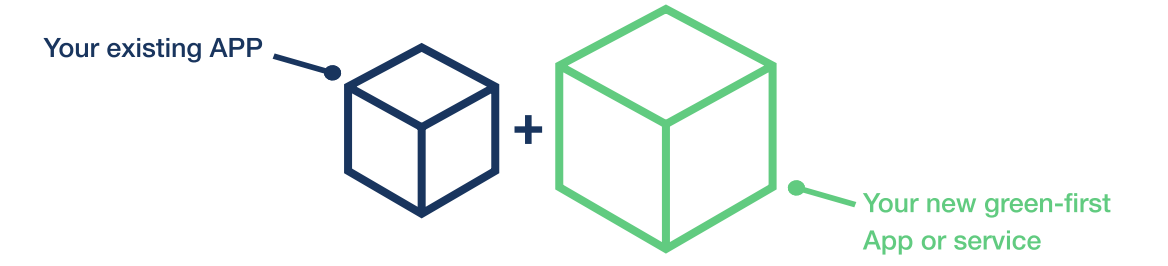
02

### Greenify Your App or Company

A way to make your app or software green (by decarbonizing its energy consumption) and proving it to your users

- + **Stand above the crowd/competition** showing your commitment to building a sustainable business
- + Ours is the **easiest, fastest, cheapest way to reduce your carbon footprint** from electricity, today!
- + Get a new **“Powered by Renewables” credential or badge** for your site and products

- Filecoin, a distributed crowdsourced cloud storage provider, makes it easy for its “storage providers” to easily buy renewable energy for the electricity consumed by their cloud servers spread all over the world.
- Sustainability conscious restaurants and local businesses, that don’t own a roof where to put solar panels, nor can get a real green tariff, can now display a “Here we use Renewable Energy” badge that links to the online green proofs.



03

### Create New Green Products and Services

A Way for you to create completely or partially new “green” products and services for current or new users

- + Cater to **Gen-Z and climate conscious buyers**
- + Create a **truly and provably sustainable brand**
- + **Innovate with programmable decarbonization** and stand way above your competitors
- + Leverage a team of creative climate experts

The sky’s the limit here, but here are a couple of examples to illustrate the **power of programmable decarbonization**

- Build a **Green Reputation Score for your users** that incentivizes them to be sustainable (with renewable energy) within the context of your app. See how Filecoin [built this tool](#) by unleashing the creativity of developers.
- Build an **in-app or in-game “green power-up”** that gives the users that buy it some temporary super power, ability or perk. Gamify the experience of your app and of buying renewable energy.





# Less is more, but Zero is better!

we build radically accessible and transparent tools for programming decarbonization into business and household operations alike



## Decarbonize & Prove it

We make it easy to decarbonize your operations and prove it, through open, public proof pages that anyone can check, even programmatically with our API

Proofs → EAC Delivery Proof → EAC Delivery Proof

Impact Verify

## Proof of Renewable Energy Consumption

This page is a proof that the buyer **0x1234...ABCD** has bought **35 MWh** worth of **Renewable Energy Certificates**, and that they have been **redeemed** in their name

**Consumption event**

**Redeemed RECS**  
Amounts of RECs redeemed in the name of this user

More info

this Green Hero bought **35 MWh** of clean energy between **December 2020 - February 2021**

**Consumption entity**

**Filecoin Mining**

Minting TX: [ETH Mainnet](#)

Minting TX: [etherscan.io/tx/0x123...ABC](#)

Contract Address: [etherscan.io/tx/0x123...ABC](#)

More info

**Green Hero**

**Beneficiary information**

Beneficiary type: [Filecoin Storage Provider](#)

Beneficiary ID: [F123456](#)

Beneficiary address: [0x123...ABC](#)

More info

**Sourced By**

**Sellers**

sold by **Zero Labs**

sourced by **Monsoon Carbon**

Seller Name: -

Seller ID: [0x123...ABC](#)

**Certificate information**

Proof ID	0xABD_123	Generator	0xCEF_456	Consumption Period	2020-12-01 2021-02-01
Beneficiary	F025211	Energy Source	Hydro	Reporting Period	2020-12-01 2021-02-01



## Trust the trustless blockchain and the sustainability standards

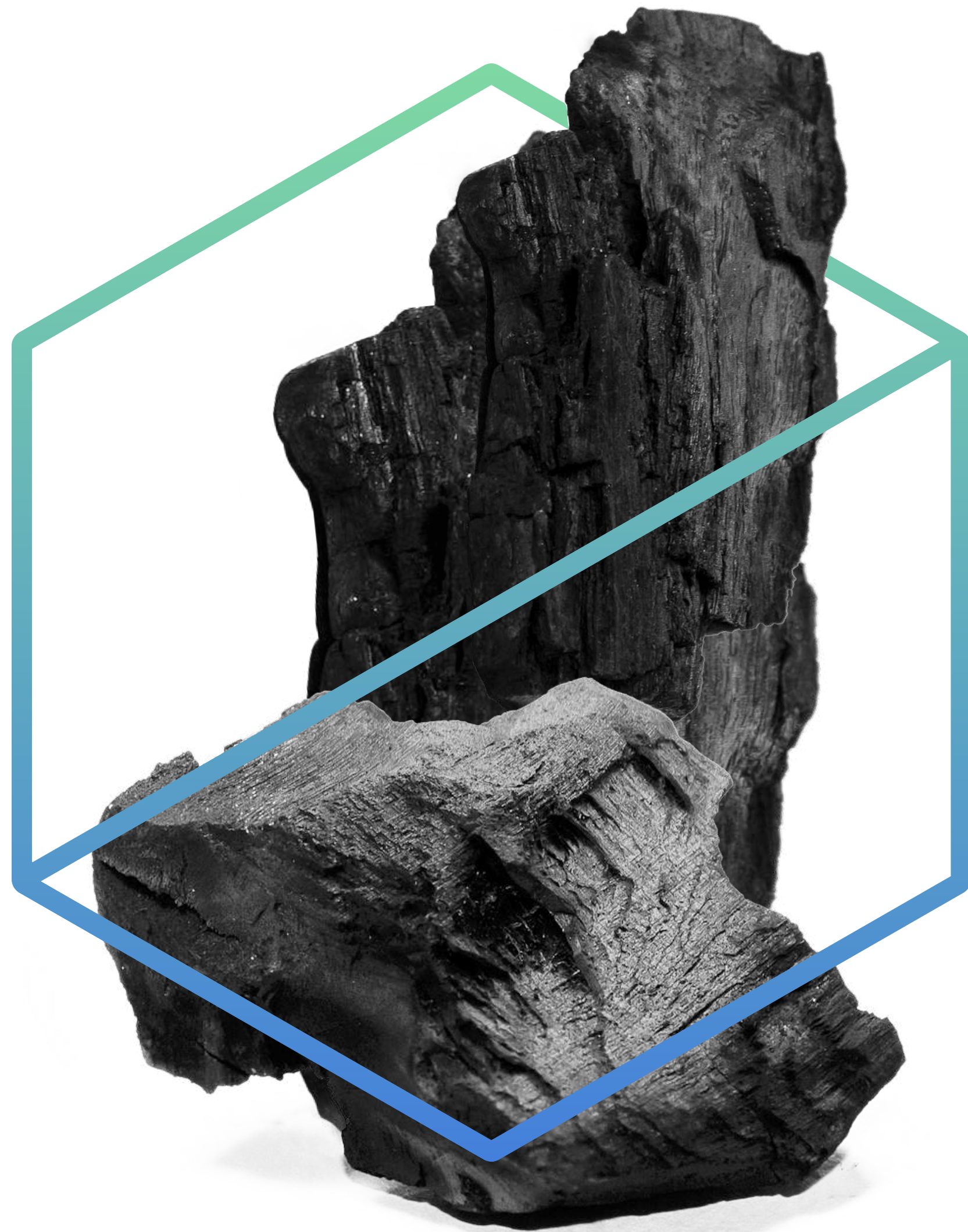
We digitize Renewable Energy Certificates, enabling anyone to verify that the claims are real and follow industry best practices and sustainability reporting standards. Feel safe that you are making an impact that is both real and provable



Zero Labs  
Programmable  
Decarbonization

www.zerolabs.green  
app.proofs.green





# Join the Mission to Zero Emissions

[https://\*\*Zerolabs.green\*\*](https://zerolabs.green)

[twitter.com/\*\*zerolabsx\*\*](https://twitter.com/zerolabsx)

[outreach@zerolabs.green](mailto:outreach@zerolabs.green)



**Zero Labs**

programmable  
decarbonization