



# REDDEX

# Targeting Net-Zero For Your Organisation



**Trace, Trade, Trust**  
[www.reddex.eco](http://www.reddex.eco)

# COP28 - A Landmark Event for the World

With developments at COP28 spearheading decarbonisation initiatives, many companies are increasingly aware of their carbon footprint and the negative effects that it has on the earth.

116 countries have signed the Global Renewables and Energy Efficiency Pledge, in agreement to triple worldwide installed renewable energy generation capacity and double the global average annual rate of energy efficiency improvements from around 2 percent to more than 4 percent ever year until 2030.

50 oil production companies have also signed on to the Oil and Gas Decarbonization Charter (OGDC). Some key actions that signatories agree to, include investing in renewables, low-carbon fuels and negative emissions technologies.

With these developments, it is inevitable that companies and individuals will start being more conscious of their carbon footprint. Other than the severity of climate change in today's world, companies have many more reasons to implement renewable energy into their operations.



# Why Go Green?

Organizations have compelling reasons to adopt environmentally sustainable practices and "go green."

These reasons span economic, social, and environmental considerations, and they contribute to the overall concept of corporate sustainability. Here are several key reasons why organizations should prioritize adopting environmentally friendly practices:

## **Environmental Stewardship:**

Going green helps protect ecosystems, biodiversity, and natural resources. It reflects a commitment to minimizing negative impacts on the environment and supporting overall ecological health.

## **Cost Savings:**

Implementing energy-efficient practices and technologies can lead to significant cost savings over time. This includes using renewable energy sources, optimizing energy consumption, and investing in energy-efficient technologies. For example, in 2013, GE reduced greenhouse gas emissions by 32% and water use by 45% as compared to 2004 and 2006, saving \$300 million. [1]

## **Regulatory Compliance:**

Governments and regulatory bodies are increasingly imposing environmental regulations and standards. Going green helps organizations stay compliant with these regulations, avoiding legal and financial penalties. In 2019, Singapore implemented a carbon tax. Facilities that directly emit at least 25,000 tCO<sub>2</sub>e of greenhouse gas (GHG) emissions annually need to pay a tax of S\$5 per metric tonne of emissions. [2]





### **Enhanced Reputation:**

Environmentally responsible practices is a key component of ESG. Organizations that demonstrate a commitment to sustainability can enhance their reputation, build trust with stakeholders, and attract environmentally conscious customers and investors. A study conducted in 2015 observed that good sustainability performance has a positive correlation with sustainability reputation. [3]

Going green can provide a competitive advantage in the marketplace and attract a growing market segment of environmentally conscious consumers.

### **Attracting Talent:**

Employees, particularly younger generations, are increasingly drawn to organizations that align with their values, including environmental responsibility. A review showed that going green can help attract and retain top talent. [4]

### **Market Competitiveness:**

Consumer awareness of environmental issues is on the rise, and many individuals prefer to support businesses that prioritize sustainability.



[1] <https://everestenergy.nl/new/wp-content/uploads/HBR-Article-The-comprehensive-business-case-for-sustainability.pdf>

[2] [https://www.nccs.gov.sg/singapores-climate-action/mitigation-efforts/carbontax/#:~:text=The%20carbon%20tax%20is%20levied,sulphur%20hexafluoride%20\(SF6\).](https://www.nccs.gov.sg/singapores-climate-action/mitigation-efforts/carbontax/#:~:text=The%20carbon%20tax%20is%20levied,sulphur%20hexafluoride%20(SF6).)

[3] <https://link.springer.com/article/10.1057/crr.2015.17>

[4] [https://www.researchgate.net/profile/Aranganathan-Posarajan-2/publication/324697084\\_GREEN\\_RECRUITMENT\\_A\\_NEW-FANGLED\\_APPROACH\\_TO\\_ATTRACT\\_AND\\_RETAIN\\_TALENT/links/5addcd300f7e9b285941a7c1/GREEN-RECRUITMENT-A-NEW-FANGLED-APPROACH-TO-ATTRACT-AND-RETAIN-TALENT.pdf](https://www.researchgate.net/profile/Aranganathan-Posarajan-2/publication/324697084_GREEN_RECRUITMENT_A_NEW-FANGLED_APPROACH_TO_ATTRACT_AND_RETAIN_TALENT/links/5addcd300f7e9b285941a7c1/GREEN-RECRUITMENT-A-NEW-FANGLED-APPROACH-TO-ATTRACT-AND-RETAIN-TALENT.pdf)

### **Innovation and Adaptability:**

Embracing green practices encourages innovation and positions organizations to adapt to changing market dynamics. It fosters a culture of continuous improvement and resilience in the face of environmental challenges and market shifts.

### **Long-Term Viability:**

As global demand for resources increases, businesses that adopt sustainable practices are better positioned to ensure a stable and secure supply chain. This contributes to long-term business viability.

Going green is not only an ethical choice but also a strategic business decision. Organizations that prioritize sustainability can benefit from cost savings, regulatory compliance, enhanced reputation, and improved relationships with customers, investors, and employees. Moreover, they play a crucial role in addressing global environmental challenges and contributing to a more sustainable and resilient future.



# How RECs Work

Renewable Energy Certificates (RECs), also known as Energy Attribute Certificates, are tradable environmental commodities that represent proof that one megawatt-hour (MWh) of electricity was generated from a renewable energy source. These certificates are separate from the actual electricity produced and can be bought and sold independently.

Here's how the process generally works:

**Renewable Energy Generation:** Renewable energy producers, such as wind farms, solar facilities, or hydroelectric plants, generate electricity from clean and renewable sources.

**Issuance of RECs:** For each megawatt-hour of electricity produced, one REC is created. This REC certifies that the electricity was generated using renewable resources.



**Certification:** The RECs are certified by relevant authorities to ensure their legitimacy and compliance with established standards.

**Separation of REC and Electricity:** The REC and the actual electricity generated are separated. The electricity is fed into the grid and used by consumers, while the REC represents the environmental attributes of that renewable energy.

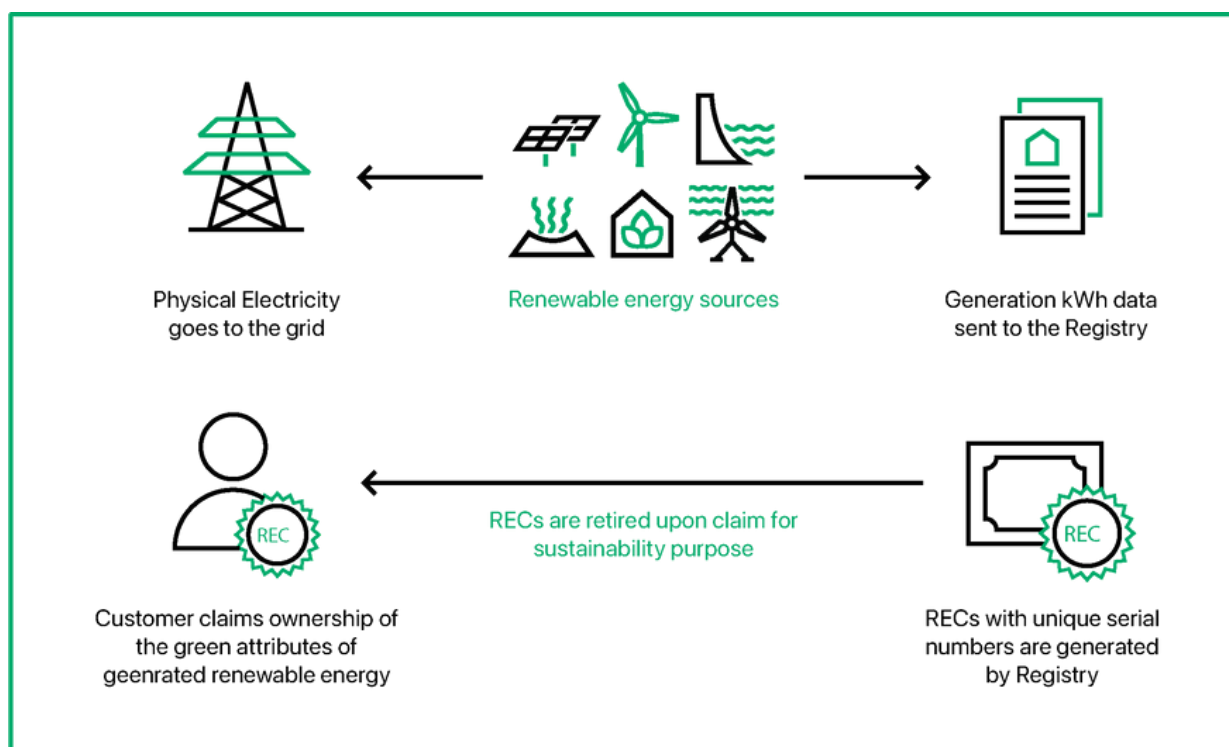
**Trade and Sale:** RECs can be bought and sold on the open market. Buyers, such as businesses or individuals looking to support renewable energy, purchase RECs to offset their own carbon footprint or to meet renewable energy goals.

**Retirement:** Once a REC is purchased, to own the attribute of the REC, it is retired to the name of the buyer.

Retirement ensures that the environmental benefits associated with the renewable energy are not double-counted.



# How Renewable Energy Certificates (RECs) Can Help You Attain Your ESG Goals



The primary purpose of RECs is to encourage the development and use of renewable energy sources by creating a market for the environmental attributes of clean energy. This market-based approach allows consumers and businesses to support renewable energy even if they are not directly connected to a renewable energy facility.

RECs play a role in promoting sustainability, reducing greenhouse gas emissions, and supporting the growth of the renewable energy sector.

REDEX offers a full suite of services to manage Renewable Energy Certificates (RECs), which are used to offset scope 2 emissions.

REHash marketplace by REDEX is a blockchain-based platform which tracks and certifies transfer of ownership and retirement of RECs, using a proof of stake concept to prevent double-counting of ownership.

Through the REHash platform, clients can register their renewable energy assets, buy and sell RECs, as well as retire RECs to achieve their energy sustainability goals.

# Scope 1, Scope 2, Scope 3 Emissions

Scope 1, Scope 2, and Scope 3 are categories used to classify and measure greenhouse gas emissions associated with an organization's activities.

These categories are part of the Greenhouse Gas Protocol, which is a widely used accounting tool for understanding, quantifying, and managing greenhouse gas emissions. The three scopes help organizations identify and address emissions across their value chain. Here's a brief explanation of each:

## **Scope 1 Emissions: Direct Emissions**

Scope 1 emissions are direct greenhouse gas emissions that result from sources that are owned or controlled by the reporting organization.

Examples: This includes emissions from on-site fuel combustion in boilers, furnaces, vehicles, and other equipment owned or operated by the organization.



## **Scope 2 Emissions: Indirect Emissions**

Scope 2 emissions are indirect greenhouse gas emissions associated with the generation of purchased or acquired electricity, heat, or steam consumed by the reporting organization.

Examples: These emissions are produced off-site but are associated with the organization's activities. They include the emissions from the power plants that generate the electricity and energy purchased and used by the organization.





### **Scope 3 Emissions: Other Indirect Emissions**

Scope 3 emissions are all other indirect emissions that occur in the value chain of the reporting organization, including both upstream and downstream activities.

This category encompasses a broad range of emissions, including those from the production and transportation of purchased goods and services, employee commuting, business travel, waste generated, and other activities outside the direct control of the organization.

#### **In summary:**

Scope 1: Direct emissions from owned or controlled sources.

Scope 2: Indirect emissions from the generation of purchased energy.

Scope 3: Other indirect emissions, including those from the entire value chain.

Understanding and categorizing emissions into these scopes helps organizations develop comprehensive strategies for reducing their overall carbon footprint and environmental impact. It allows for a more holistic approach to sustainability and facilitates better decision-making to address emissions throughout the supply chain.

RECs can help to address the production of Scope 2 emissions of an organisation, while encouraging the stakeholders in the supply chain to purchase RECs can help to offset an organisation's Scope 3 emissions.



# How REDEX Can Support Your Renewable Energy Goals

REDEX is a leading solutions provider in Renewable Energy Certificates. We help companies to trade and adopt renewable energy solutions to reduce their Scope 2 emissions.

An established player in the renewable energy space, REDEX has helped many companies go green by greening their operations. It is often difficult for companies to adopt renewable energy directly by having solar panels on their premises, for example. Hence, our unique process of converting renewable energy into renewable energy certificates through our platforms enables companies to easily adopt renewable energy solutions without much hassle.

## Introduction to RECs Registries

REC Registries are databases that facilitate the creation, registration, transfer and redemption of RECs. They track the ownership and status of RECs, preventing double-counting.

Some examples of RECs Registries include:

- Evident Registry - for I-REC (E)
- APX TIGR Registry



RECs are differentiated by Country, Year and Energy Source.

Buyers of RECs typically need to buy RECs that are generated in the same location where they consume their electricity to claim their use of renewable energy. Alternatively, they can choose to buy RECs from other regions to achieve overall carbon neutrality.

The Year of REC generation should also generally be close to the year of energy consumption.

The energy source is determined by the type of asset that the RECs is generated from. For example, the energy source can be generated from wind turbines, hydro dams or solar power.

# RE100 and Supply Chain

What drives the demand for renewable energy and corporate decarbonization?

There are various decarbonization drivers, namely External Actors such as international institutions, governments, social groups, consumers and competitors. These entities drive the demand for organisations to pursue renewable energy. Internal actors include employees, talent, investors and suppliers.

The RE100 initiative brings together approximately 400 corporates with notable brands such as Apple, Google, Danone, Unilever, H&M and Nike to pursue the uptake of renewable energy. In fact, 75% of RE100 members aim to achieve 100% use of renewable energy by 2030.

# RE100

## REDEX's One-Stop Ecosystem for Voluntary RECs

REDEX has an end-to-end process from renewable energy generation to retirement.

From the time that a renewable energy asset is installed, REDEX can assist to register the asset along with IREC and TIGR, international asset registries.

The RECs generated are seamlessly transferred onto REDEX's platform for sale, while the generator receives the financial reward and access to liquidity of their renewable energy output.

As an approved official verifier for TIGR, APX issues the RECs checked by REDEX. We are also the one-stop shop to purchase RECs with one of the world's largest available supply of RECs across many countries in Asia.

REDEX also supports residential rooftop solar owners in monetising their renewable energy for sale.



# Suite of Applications

REDEX has launched a suite of applications to trace and trade renewable energy certificates (RECs)



## REHASH

### Trade RECs

A digital secured platform integrated with internationally recognized RECs registry.



## RECONNECT

### Sell Home Generated RECs

A mobile app to facilitate the easy selling of solar RECs.



## RESUITE

### Manage Renewable Goals

RESuite matches credible RECs to consolidated electricity consumption of business operations and supply chains in Asia, helping achieve renewable energy targets.

# REDEX for Your Renewable Energy Needs

REDEX has RECs available for sale to offset your organisation's Scope 2 energy usage via our REHash platform. One can easily sell or buy RECs for your organisation's needs.

Contact our representative for more information about how your organisation can adopt renewable energy solutions.

Contact email:

[enquiry@redex.eco](mailto:enquiry@redex.eco)

Website:

[www.redex.eco](http://www.redex.eco)