

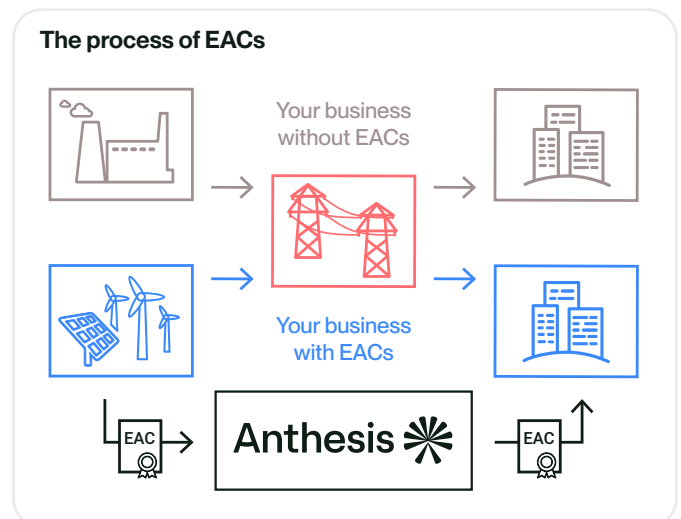


Accelerate the energy transition with Renewable Energy Attribute Certificates

The use of renewable energy is an important part of a net zero transition. It reduces your scope 2 emissions according to the GHG protocol, in line with mandatory legislation and voluntary reporting standards. When producing your own renewable energy isn't possible due to legislation or technical hurdles or when it's not available for purchase, buying Energy Attribute Certificates (EACs) is an easy sustainable choice. Using EACs is the only credible and verifiable way to claim renewable energy consumption.

What are Energy Attribute Certificates (EAC)?

EACs were created to track electricity from producer to consumer. Electricity is not a tangible product, it is a charge that must be maintained on a grid. When we buy electricity, we buy the right to take a given amount off the grid. The only way to connect the production and use of a specific megawatt-hour (MWh) of power is through a tracking system. It registers the EACs when the electricity is injected into the grid and can transfer those unique attributes to their consumer who then can make a credible and verifiable claim that they used a certain type of electricity. EAC tracking systems all have one common function: to track the attributes of a specific megawatt-hour (MWh) of electricity from a producer to a consumer.



What kind of technologies for renewable energy do we recommend?

1. Solar Power
2. Concentrated Solar Power
3. Hydro Power
4. Wind Power
5. Geothermal Power

Bundled and unbundled

An EAC can be sold either together with the underlying electricity or separately. When the EAC and underlying electricity are traded in a contract together, it is described as 'bundled'. When both are traded in separate contracts, it is described as 'unbundled'. In either case, the principles remain unchanged and there are two separate product streams: 1. the electricity, and 2. the underlying attributes, as represented by an EAC. Both bundled as well as unbundled use of EACs are valid means of renewable energy consumption.

EACs are defined as MWh and are used to lower a corporate scope 2 emission. Besides producing your own green electricity, EACs are the only proof for claims around renewable energy consumption. Carbon offsets may be used to compensate for the remaining emissions in scope 1, 2 and 3. To accelerate the energy transition, a company should demand in its procurement procedure that its suppliers must have EACs for their scope 2 or have their own renewable energy sources. This will reduce the corporate scope 3 emissions.

The 'A' in EACs

EACs label the Attributes of each MWh that is produced.

The most important ones are:

- The date of production.
- The location of the generation device.
- The type of generation technology (e.g. wind turbine, hydropower plant, solar, etc.).
- The age of a production device (should be no more than 15 years old from January 2024)

Getting started with EACs

The process for procuring EACs is straight-forward:

1

Determine how much electricity you have used or will use per country per year.

2

We can advise you on the appropriate attributes, taking your preferences and reporting standards into account.

3

Arrange the procurement process of the corresponding EACs including the official cancellation.

4

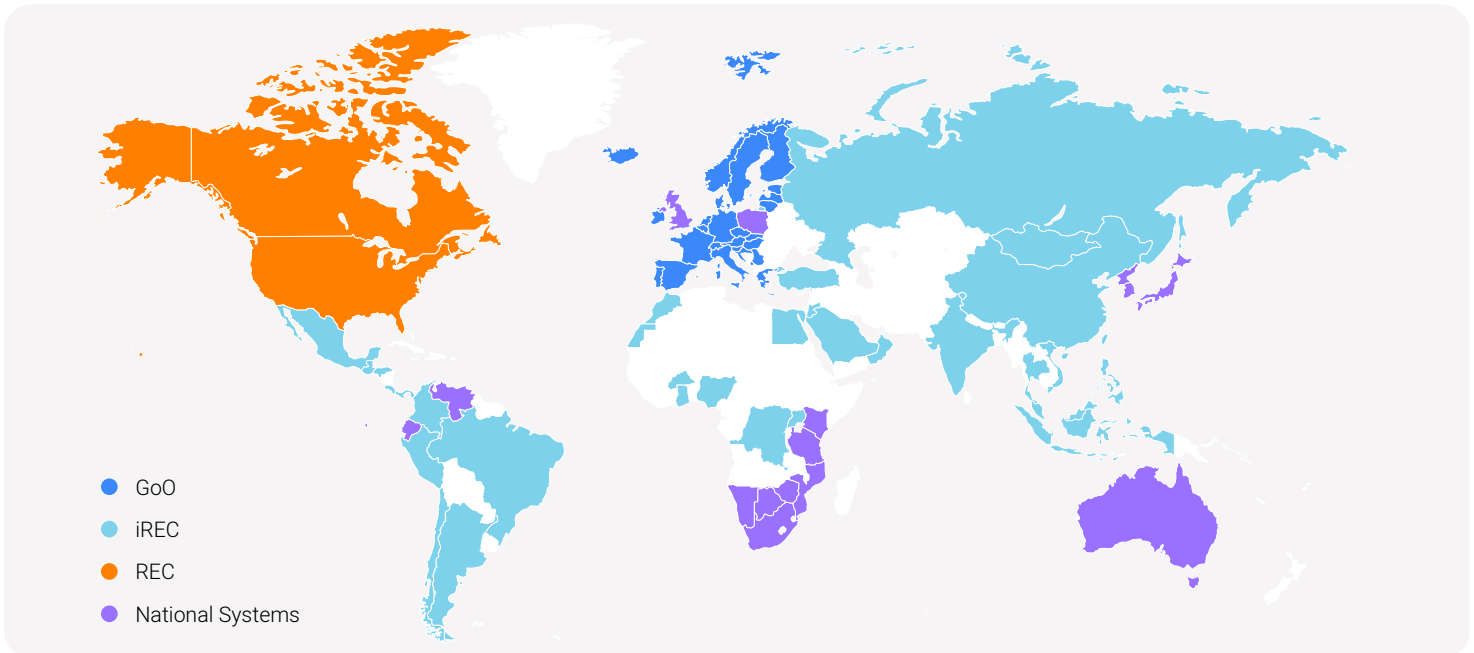
You can make a reliable claim about the use of renewable energy to communicate about.

This way, an organisation whose objective is to be 100% renewable and have 0 emissions market-based in the year 2024 will be able to communicate this milestone, provided that it acquires a volume of EACs equivalent to the consumption of non-renewable electrical energy consumed for that year. So when you calculate the scope 2 emissions of your GHG inventory, your electrical energy consumption will be 100% renewable, having zero emissions, accredited by the redemption certificates of the EACs procured.



EAC markets

Globally, there are several different EAC systems to track the production and use of renewable energy. The map below shows the participating countries and market boundaries of the most common schemes:



Each system comes with its own set of rules and a registry system. There are four main geographical markets:

- 1. Guarantees of Origin (GoOs):** These certificates are used within Europe. All European countries that are a member of the Association of Issuing Bodies (AIB) are part of the European Energy Certificate System (EECS).
- 2. Renewable Energy Certificates (RECs):** These are the common schemes in most states of Canada and the United States.
- 3. International Renewable Energy Certificates (iRECs):** Many countries around the world work with iRECs.
- 4. National country systems:** Several countries have their own scheme, for example:
 - a. Poland (accredited by TGE, the Polish licensed commodity exchange, and runs via the Polish registry).
 - b. Renewable Energy Guarantees of Origin or REGO: the system for the United Kingdom.
 - c. Tradeable Instruments for Global Renewables (TIGRs): many countries around the world work with TIGRs such as Singapore and Taiwan.
 - d. Other examples are Australia (Renewable Energy Target Certificates and Large-scale Generation Certificates), Japan (Non-Fossil Certificates), South Africa (zaRECs).

Phasing out Chinese iRECs

In the short run, it will not be a problem to use and find iRECs from China. But recently, the iREC system has stopped accepting new installations from China. These are already subsidised by the Chinese government and created a lot of controversy in the market, due to the double accounting or financing of each EAC generated. Therefore, as we get closer to the 15-year commissioning date functioning, there will be no more Chinese iRECs available.

Why can't Singapore and Indonesia, which have their grids connected, be considered the same market?

While Singapore and Indonesia may have the potential to collaborate and align their EAC markets in the future, achieving integration will require efforts to address regulatory, market, and institutional barriers while fostering cooperation and coordination between the two countries. We recommend carrying out a transparency exercise. They have not been able to be 100% renewable in these states because there are no mechanisms but are working with the relevant states and national actors to facilitate its creation.

My country does not have an EAC market

When a country does not have a market or system for EACs, there are challenges in tracking and incentivising renewable energy generation and carbon emission reductions. Without an EAC market, there may be limited mechanisms in place to verify and trade attributes associated with renewable energy production, such as the environmental benefits or carbon emissions avoided.

Can any EAC type, regardless of where it was produced, be used to reduce the consumption of non-renewable electrical energy in any country?

While using EACs from any country to offset non-renewable energy consumption in another country is theoretically possible, practical considerations such as regulatory alignment, market compatibility, and verification mechanisms must be addressed to facilitate cross-border transactions effectively. International cooperation, harmonisation of standards, and transparent market mechanisms can help overcome barriers and enable the global trade and use of EACs to support renewable energy deployment and carbon emissions reduction efforts worldwide.

On markets with multiple markets (such as the EU, the US and Canada), do I need to buy credits in each country or can I bundle across all our sites?

In the EU or North America, you can purchase and assign EACs to a specific postal address, but they can be used by the rest of the sites at the carbon accounting level. For instance, a client has energy consumption in Holland, Germany and Spain. It buys the total of the AIB GOs for the 3 countries and removes them from the market by assigning them to the German site, regardless of whether those EACs will apply to the 3 countries, to say that they are 0 emissions.

Quality criteria for selection by RE100

We strongly advise that the use of EACs to reduce scope 2 emissions is made in a correct, verifiable and sustainable way.

We keep track of the latest developments, which include the guidelines set by [RE100](#).

RE100 is a global corporate renewable energy initiative bringing together hundreds of large and ambitious businesses committed to 100% renewable electricity. This voluntary initiative was established by the non-profit organisation Climate Group in partnership with CDP. RE100 companies are switching to renewables, generating positive local impacts and influencing suppliers, policymakers and utilities while aligning with the growing expectations of customers, shareholders and employees.

Anthesis can assist you with the full process. Regarding the specific use of EACs, the RE100 states that:

- Only renewable energy sources such as wind, solar, and geothermal are allowed. Biomass and hydropower may only be used if it is sourced sustainably.
- Vintages of EACs should be reasonably close to the reporting year of the electricity consumption.
- Compared to your footprint, EACs must be sourced and purchased from within the same defined geographic region as your market.

These requirements are put in place to prevent double counting and to assure that EACs are real and stand for 1 MWh Renewable energy. Sustainable labels may be used to claim environmental or social safeguards. Examples of these quality labels include EKO Energy, OK Power, Green-e and Gold Power. These labels are not a requirement for RE100 compatibility but may strengthen your take on renewable energy consumption.

Case:

The advantage of buying EACs locally

A client from California wanted to buy EACs produced there because he wanted the production of the EAC to be as close to his electricity consumption. Even though these EACs were much more expensive than those produced in another state on the other coast of the United States, also valid. Although customers can buy validated EACs throughout the United States, we often see that they prefer to buy EACs produced in their state, to promote local decarbonisation (emissionality). We recommend, whenever you can, to buy EACs as close to your point of consumption as possible.

Do EACs have an expiration date?

EACs use a 6-12-3 month rule. Here's how that works concerning the validity of EACs:

1 6 Months: Renewable energy generators typically have six months from the start of commercial operation of their renewable energy project to begin generating EACs. This period allows for the initial ramp-up phase of the project and ensures that EACs are generated only once the project is fully operational and producing renewable energy.

2 12 Months: After the initial six-month period, renewable energy generators have an additional 12 months to issue and sell the EACs associated with the renewable energy generated during the previous six months. This timeframe allows for the processing, certification, and trading of EACs in the market.

3 3 Months: Finally, there is a three-month settlement period following the end of the 12-month issuance window, during which any outstanding administrative tasks related to EAC transactions, such as verification, reconciliation, and payment, can be completed.

During this 21-month window, renewable energy generators must ensure that the EACs they claim and sell accurately reflect the renewable energy generated by their projects within the specified timeframe. Once EACs are issued and sold, they can be traded, retired, or used by energy suppliers, consumers, or other entities to demonstrate compliance with renewable energy targets or sustainability commitments.

While EACs themselves may not have an expiration date, the 21-month window establishes a timeframe within which renewable energy generators must take specific actions to claim and trade the associated EACs effectively. Failure to comply with the requirements of the 6-12-3 rule may result in penalties or disqualification from participating in EAC markets.

Key Benefits of EACs

- **Traceable:** Each MWh is tracked from producer to consumer in national and international registries. There is no risk of double counting as EACs are cancelled at the moment of consumption.
- **Cost efficient:** EACs are low in costs compared to other ways of sourcing renewable electricity.
- **Effective:** The procurement of EACs is an easy and effective way of lowering your scope 2 emissions.
- **Transparent:** By unbundling your renewable energy consumption, you have certificates which prove the consumption of renewable energy. You are also aware of the region and the type of device used when producing the electricity. This evidence may help you in audits.
- **Adopted by standards:** EACs are recognised as a tool to reduce scope 2 emissions by renowned international standards such as CSRD and our own Climate Certification Programme, which results in a lower organisational carbon footprint.
- **Claims:** By purchasing EACs, claims such as 'in line with RE100' or '100% Renewable' can be made.



How can we help you?

- **One-stop shop**
From footprinting to EAC purchase: we can assist you in every step of this process and further towards net zero in 2050, also for your scope 3 emissions.
- **Tailormade solutions**
We make custom proposals that are in line with your electricity consumption and other preferences.
- **Adhering to standards**
We can make sure that EACs are in line with the latest policies from international standards such as CSRD and voluntary initiatives as RE100, SBTi, CDP, and our Climate Activator Certification Standard.

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