



Frequently Asked Questions

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BENEFITS

What are the benefits of having a certificate market?

Certificates could be non-transferable, but then they would need to be used as evidence for contractual purposes, which suggests contract tracking would be necessary if you wanted to find the consumer to whom energy had been supplied. It is extremely difficult to follow the contractual path from generator to consumer, as this can involve many contracts, some of which will not distinguish between energy sources. If done properly, analysing contracts is expensive and prone to error.

Assuming certificates are transferable, and that there is differing demand for electricity from different sources, then this suggests that they will have a value, as they can be used to differentiate between the various energy sources.

The introduction of a market in certificates bring all of the usual market benefits, including improved customer choice, transparency, efficiency and so on.

What are the benefits of having an AIB? What is the role of AIB, if Guarantees of Origin are issued according to national regulations?

The AIB – through the European Energy Certificate System - guarantees collaborative and effective operation of certificate schemes across Europe; providing a structured environment for the harmonisation of such matters as registration of production devices, coding schemes, definition of certificates and so on.

Furthermore, the AIB will soon offer an electronic Hub, providing a single point of contact for certificate registries; enabling risk reduction by means of simple interfacing with other registries and sharing of common information; and providing a central repository of information relating to market activity (although note that prices of trades will not be captured).

While the AIB cannot change national legislation, by working closely with the issuing bodies for guarantees of origin, it can help them to implement national schemes in a way which will be acceptable across Europe, thus promoting the effective operation of the RES Directive (2001/77/EC), CHP Directive (2004/8/EC) and Internal Markets Electricity Directive (2003/54/EC).

CONTENTS

Do certificates represent all environmental attributes?

Certificates provide evidence of how and when energy was generated, allowing the environmental impact of any “scheme” to be assessed – whether this is a governmental support scheme or a private sector green supply tariff.

The environmental benefit of the associated energy refers to the reduced environmental impact of using such energy compared with that of using fossil or nuclear fuels.

What information does a certificate contain?

A RECS certificate contains evidence of how and when energy was generated, and of its environmental impact.

More specifically, all certificates contain:

- Scheme (e.g. CHP-GO)
- Unique certificate number



- Production start date
- Production end-date
- Issue date
- Energy source / technology
- Production device
- Certificate size (in 1MWh)
- Issuer Earmark (= support)

In addition, CHP-GO certificates contain:

- Use of heat (category)
- Lower Calorific value (MJ/kg)
- CO2 emitted
- Primary Energy savings (%)
- Actual amount (MJ)
- CO2 savings (%)

DEFINITION

What is the difference between a label and a certificate?

A label provides the consumer with proof of the quality of supplied energy. The claims made by such labels may be supported by the supplier proving that it owns a certificate for each megawatt hour of supplied energy during the period of supply.

A certificate, on the other hand, is simply evidence of the quality of a megawatt hour of electrical energy.

What is EECS?

The acronym "EECS" stands for the "European Energy Certificate System".

EECS provides standards for the operation of public and commercial certificate systems. This allows certificates to be transferred securely between countries and regions across Europe.

What is an Issuing Body?

An Issuing Body is the body that is appointed by government or by industry to take responsibility for ensuring that certificates provide unique and reliable evidence of the source of energy, enabling them to be transferred between market parties, and regulating the way in which they are used.

They do this by:

1. Ensuring the technology used by participating plant are properly identified and recorded, along with any changes, and that only properly registered plant are permitted to participate.
2. Recording the amount of fuel consumed and energy generated by participating plant, and confirming that this is both accurate and reasonable.
3. Recording details of plant and certificates in a registry.



4. Transferring certificates between accounts on instruction from certificate-holders, including transferring them into redemption accounts as proof that the associated energy has been consumed.
5. Preventing the transfer of certificates that have been placed into redemption accounts.

They may also administer the provision of public support to the holders of redeemed certificates.

What is the purpose of a certificate?

The purpose of a certificate is to provide evidence of the source, time and means of production of one megawatt hour of electrical energy. This can then be used to prove to consumers or to government such matters as the environmental impact of the energy.

What is RECS International?

RECS International is a group of market participants that trade in renewable energy certificates throughout Europe. It started in 2001, as a voluntary initiative to create a uniform system for cross-border certificate trading, and there are now more than 100 members trading certificates in over 15 European countries.

RECS works closely with the Association of Issuing Bodies (AIB), in order to protect its investment in a secure, workable and efficient market, holding quarterly international meetings and sponsoring workshops and open seminars.

In addition, RECS International effectively lobbies national and European governments for harmonisation of the pan-European market for certificate trading

MARKET

Where can you use a certificate?

Certificates are principally used to disclose the energy source, and thus the environmental impact of energy production, to consumers; and can be used to demonstrate to government the achievement of national targets.

They can also be used to enable many types of support schemes, whether voluntary (green energy and green label schemes); or obligatory (such as supply obligations, portfolio standards and feed-in systems). They do so by enabling source of the energy to be guaranteed, and can be traded internationally.

Is there a market within Europe for certificates from outside Europe?

Yes, but it is extremely small at the moment

Is anyone allowed to buy a certificate? To whom can certificates be sold?

In order to buy an EECS certificate, you must have an account with an Issuing Body that is a member of AIB.

EECS certificates can be sold to anybody who has an account with an Issuing Body that is a member of AIB, provided they are transferred into the account of the purchaser. Where they are used as evidence of the nature of supply to a consumer, then they must first be redeemed by the supplier.

What is the price of a certificate? Do different types of certificates have different prices?

The price of a certificate varies depending upon the type of certificate.



That of RECS certificates and guarantees of origin is set by the market, and influenced by such factors as when the energy was produced, the source of the energy and the type of production device. It is also influenced by the size of the transaction, large trades attracting lower prices than small trades.

Currently, EECS does not support those certificates put in place by governments specifically to support national support schemes: the price of these being set (or influenced) by government.

RELIABILITY

Can you copy an EECS certificate?

The most important core principle of the PRO prevents EECS certificates from being created or used more than once for the same energy; and it also prevents them being created where other certificates have been (or can be) created:

"The arrangements for issuing, transferring and Redeeming EECS Certificates should be such as to eliminate the possibility of EECS Certificates of the same type being issued, registered or Redeemed in respect of the same energy.

The arrangements for issuing EECS Certificates should be such as to eliminate the possibility of EECS Certificates being Issued in respect of the same energy and attributes for which other tradable Certificates (other than EECS Certificates of a different type where specifically permitted by the PRO) have or will be issued."

In short, the answer is most emphatically "no"!

Can you print EECS certificates?

No. This would make it far too easy for certificates simply to be photocopied and sold twice. There are similar reasons in the world of currency exchange, where electronic funds transfer is fast overtaking the use of banknotes, in order to reduce opportunities for forgery and other forms of fraud.

Some certificate issuers will provide written proof that a certificate has been "redeemed" (cashed in). However, this reduces the value of the guarantee provided by a certificate. While this practice is not banned by AIB, it is discouraged.

Why should certificates be electronic?

Certificates must be electronic in order to:

- provide guarantees against fraud
- provide a manageable environment for administering many, many certificates (currently over 60 million certificates are issued each year)
- enforce the rules.

But in particular, making certificates electronic makes it much, much easier to prevent duplication.

Why are certificates reliable?

Internationally standardised certificates offer a more reliable form of evidence of the environmental impact of production than contracts and statistics: statistics are by their nature not accurate, and so they will always misrepresent the energy blend to the consumer; and it is extremely difficult to follow the contractual path from generator to consumer: this can involve many contracts, some of which will not distinguish between energy sources. For this reason, analysing contracts is expensive and prone to error.



The reliability of certificates depends on the presence of a standardised and reliable framework for certificate administration. This is provided by EECS, which addresses all of the administrative aspects and has been developed by an international group of practitioners over several years of practical experience, and is guaranteed by an organisation independent of the market and of any particular certificate system administrator.

TYPES OF CERTIFICATE

Are there certificates for all types of electricity?

EECS now supports the following:

- Renewable energy is supported by EECS-GO (obligatory guarantees of origin under Directive 2001/77/EC) and RECS (voluntary) certificates;
- Fossil and nuclear energy are supported by EECS Disclosure certificates (these support the Internal Markets in Electricity Directive 2003/54/EC); and
- High efficiency CHP is supported by CHP-GO (obligatory guarantees of origin for CHP, under Directive 2004/8/EC).

What is an EECS Certificate?

EECS certificates have standard contents. They contain information about:

- the issuer
- the time and date of production
- the source of the energy and the technology used to convert it into its current form
- the identity and location of the generation plant
- units of energy (e.g. megawatt hours)
- whether public support has been received by the plant (investment support) or the owner of the associated energy (production support).

In addition, for Disclosure and CHP certificates, carbon dioxide emissions information is carried.

This information is presented in a standard way, using agreed codes, data formats and rules. EECS certificates also have quality criteria: the certificate issuers are bound by a code of conduct prohibiting such matters as issuing several certificates for the same energy, and forbidding them to take a position in the market.

EECS certificates may be transferred to other certificate issuers by means of the EECS network.

What is an energy certificate?

An energy certificate provides proof of the source of 1,000 kWh of electrical energy (an average European household would need 5 certificates each year to prove where its electricity comes from).

Electricity comes from many generators and is transported to consumers across an electricity grid. This mixes energy from various sources, so it is not possible for consumer to know where their energy comes from. However, it is possible to contract with a plant to generate into the grid, and suppliers do this on behalf of their customers, using certificates as evidence that the energy has been generated. Nobody knows where the electricity flows, but certificates let us see where the money has gone.



Energy certificates can be used to support the claims of generators, suppliers and consumers as evidence of energy production or consumption, whether as proof of "green supply"; as a condition of receiving public support; or as proof of "environmental credentials".

Certificates can be bought by entering into contract of sale, either with another market party or with an Exchange. This contract may specify what they can be used for, particularly in the case of certificates that are associated with public support schemes. Note that energy suppliers represent their customer base, buying certificates on behalf of consumers.

Energy certificates are created by an independent "issuing body", which guarantees their quality and credibility by means of various checks and controls. They can then be transferred between accounts held on a central registration database (otherwise known as a "CRD" or "registry") by market participants. When the associated energy is sold to a final consumer, or perhaps used as evidence by a public body, then the certificate is made non-tradable and moved to a separate account from tradable certificates.

Energy certificates which are used as evidence of the use of renewable energy are also called:

- Renewable Energy Certificates (RECs)
- Tradable Renewable Energy Certificates (TRECs)
- Tradable Renewable Certificates (TRCs)
- Green certificates.

What is the difference between a Guarantee of Origin and a RECS certificate?

Both Guarantees of Origin and RECS certificates fulfill the same function, and are of similar quality. Where they differ is that a Guarantee of Origin is required under the European "RES Directive" (201/77/EC), which is obligatory on all Member States of the European Union; whereas RECS certificates are a voluntary initiative by energy companies.

Although it is possible for Guarantees of Origin to be printed, the EECS standard does not support this: all EECS Guarantees of Origin and RECS certificates are electronic. The reasons for this are given elsewhere in these FAQ ("Why should certificates be electronic?" and "Can you have a printed certificate?").

Countries where the certificate issuer does not provide electronic and transferable Guarantees of Origin may adopt voluntary RECS certificates. Alternatively, they can contract with a service organisation to use the Guarantees of Origin as a basis for issuing EECS Guarantees of Origin, while preventing the original Guarantees of Origin from being reused.

If this sounds a little confusing, think of it this way. Gold assures the value of a currency in a similar way that Guarantees of Origin assures the value of an EECS Guarantee of Origin. You keep the gold (and the Guarantee of Origin) in the bank vault; and you trade the currency (and the EECS Guarantee of Origin).

Can you get financial support from the Government and have voluntary certificates too?

In certain circumstances this is possible, but it must be recorded on the voluntary certificate as an "earmark". This is because some purchasers of certificates do not want



to buy supported certificates. In other circumstances this is not possible: either certificates are not awarded to supported plant, or else they are immediately redeemed.

Are certificates a support system? What is the relationship between RECS certificates and national certificates like Elcert certificates?

Certificates are not in themselves a support system, but in certain circumstances they can be used to provide evidence of compliance with a support system.

RECS certificates and guarantees of origin are given a value by the market, which benefits all parties in the supply chain.

Within national support schemes that use them (for instance, Certificati Verdi in Italy, ROCs and LECs in the UK and Elcerts in Sweden), certificates have a value which has been conferred on them by government.

Why do we have many types of certificates, instead of just Guarantees of Origin?

RECS certificates were in place before guarantees of origin, and not all countries have yet joined the AIB in order to benefit from the European Energy Certificate System (EECS). For this reason, renewable energy is represented by both RECS certificates and renewable energy guarantees of origin.

Guarantees of origin are obligatory in all countries within the European Union under Directives 2001/77/EC (renewable energy) and 2004/8/EC (high efficiency CHP). However, there is no requirement for guarantees of origin for fossil and nuclear energy, or for lower efficiency CHP. It is useful to have certificates for all types of energy, as it lets anyone selling energy to consumers know where the energy comes from, rather than having to use a statistically-based "residual mix". For this reason, EECS provides "disclosure" certificates for fossil and nuclear energy.

Further, not all countries have implemented the Directive(s) in the same way: for instance, code "x" may be "wind" in one country, and code "y" in another. Also, the information on certificates is not always collected in the same way. This hinders the international transfer of guarantees of origin, and leads to market participants in some countries using the voluntary RECS scheme instead.

What is the difference between an EECS certificate and a TUV certificate?

While both relate to the output of a single production device, an EECS certificate relates to a single megawatt hour, whereas a TUV certificate relates to a number of megawatt hours.

In addition, a TUV certificate is the product of a single organisation, while EECS certificates are harmonised across many market parties and certificate administrators throughout Europe.

Finally, EECS certificates have been developed in cooperation with the European Commission (the RECS test phase was sponsored by the Commission, and CHP-GO were developed in close cooperation with the Commission).