

INSIDE THIS ISSUE

AIB – independent, enabling and open-minded	2
AIB support for RECS certificates	4
New AIB Public Information Sheets	4
RE-DISS – the final conference	5
How EECS implements the RES Directive	7
Statistics	11

Annual
Report
2011



AIB

association of issuing bodies

NEWSLETTER 17

Vol 5 | Issue 2 | 31 December 2012

SYNOPSIS OF ARTICLES

AIB – independent, enabling and open-minded

For some time, the independence of AIB has been questioned. Let us be clear:

- AIB supports governments in their implementation of national law. It has no preference for one type of support scheme over another.
- AIB has no political views other than that Guarantee of Origin markets should operate effectively
- AIB is totally independent of RECS International.

This article discusses how AIB came into being, and the views that it holds.

AIB support for RECS certificates

Discussions between the AIB and competent bodies from non-member countries highlight concerns about RECS certificates and their support by the AIB. RECS International has decided to close down the RECS certificate system, but has yet to set a date. In view of this, AIB will cease to support RECS certificates from the start of 2016.

New AIB Public Information Sheets

AIB has produced the first in a series of “public information sheets” discussing practical implementation of national certificate law in member domains. The first such information sheet relates to expiry regulations.

RE-DISS – the final conference

The RE-DISS project (Reliable Disclosure Systems for Europe) sought to help competent authorities for GOs and disclosure in the EU and EEA countries transpose the RES and IEM Directives into a reliable and sound framework for the tracking of electricity.

RE-DISS presented its achievements, including a set of Best Practice Recommendations for implementing the Directives, at its final conference on 12th September in Brussels. The event attracted a wide audience including representatives of 17 competent authorities for GOs and/or Disclosure.

How EECS implements the RES Directive

The European Energy Certificate System (EECS®) ensures the reliable

operation of international energy certificate systems across Europe, and has proved to be a highly effective, efficient, fraud-resistant and low cost way of enabling trade between the certificate schemes of 16 European countries.

The EECS Rules provides a framework for creating and administering international energy certificate systems, and makes sure that the registries of AIB members are reliable, secure and inter-operable, in order to help Member States meet the RES, Energy Efficiency and Internal Electricity Markets Directives, and to comply with national legislation.

This article identifies the relevant provisions of the RES Directive (the Energy Efficiency Directive is broadly the same with regard to its provisions for guarantees of origin).

Statistics

The AIB continues to issue, transfer and cancel increasing numbers of certificates. Read about current certificate activity.

AIB - Independent enabling and open-minded



The Birth of AIB

AIB came into being as the result of the “RECS Test Phase” – an EU Commission-supported project to prove the viability of international energy certificates by means of practical field trial. The project was conceived by a group of producers, electricity suppliers, transmission system operators, electricity regulators, and sought to transfer 100,000 1MWh “RECS certificates” between 3-4 countries. In fact, by the end of 2002 close to 15m certificates were issued, and of these 5m had been cancelled and 740,000 transferred (35,000 internationally). The test was a success.

The AIB and RECS International were institutional products of the test phase: the AIB being a service organisation for RECS market parties. The founder members of AIB were:

- Elektrizitäts-Control GmbH (Austria, energy regulator)
- Elkraft System A.m.b.a. and Eltra A.m.b.a. (Danish TSOs)
- Fingrid Oyj (Finnish TSO)
- Gestore Reta Trasmissione Nazionale S.p.A. (Italian TSO)
- Observer'ER (French NGO)
- Öko-Institut (German Environmental Institut)
- Statnett SF (Norwegian TSO)
- Svenska Kraftnät (Swedish TSO)
- TenneT B.V. (Dutch TSO)
- The Green Certificate Company (English energy markets consultancy).

The development of EECS

The main product of the test phase was a concept document known as “The Basic Commitment”. This gradually developed throughout the test phase, and it continued to be elaborated by AIB for several years afterwards. At this point, AIB was required to consult RECS International over changes to the Basic Commitment.

In mid-2003, members of the AIB agreed to adapt the framework of the Basic Commitment, recognising that it provided an excellent vehicle to support the new RES Directive (2001/77/EC). As a result, they commenced the lengthy and careful process of converting the concept document into a more detailed document which set out all possible eventualities, providing remedies for breach of its provisions, on what became known as the European Energy Certificate System (“EECS”).

As the legal traditions of members were different, and in order to develop a replacement document which would regulate member behaviour without the need for undue arbitration, it was decided to draft the document under English law. For this reason, the document – known as “the Principles and Rules of Operation of the European Energy Certificate System” (“the PRO”) was perhaps more lengthy and proscriptive than it might have been under other legal systems.

Separation from RECS International

Given that EECS now supported national and EU law, it was improper for the AIB to have to seek the support of the market in order to make changes to the system, and hence the linkage with RECS International was fully severed.

This remains the case. That being said, relations with RECS International have been maintained to encourage the exchange of ideas, providing an opportunity for the AIB to understand the concerns of the market actors represented in RECS International, while seeking their opinions on proposed initiatives; and allowing RECS International to suggest market enhancements, while gaining a better comprehension of the reasons for the actions of the AIB and its members.

The creation of the EECS Rules

Practical experience showed that the PRO, while it was well constructed from a legal perspective, created barrier to the operation of a liquid market, and one which supported simple inter-registry transfer, as it required a different form of certificate for each legal (or voluntary) instrument. The new RES Directive 2009/28/EC also provided stimulus for change to the PRO, in that it provided new data items and clarified the purpose of a GO – i.e. disclosure.

Furthermore, the PRO only supported electricity; and certificates for heating and cooling and for energy efficiency were being discussed, along with the possible use of certificates for biogases, biofuels and bioliquids. Also, the document needed change so as to be able to support non-EU countries more effectively.

Hence it was decided to revise the document so as to provide a simpler platform for certificate system administration. This was undertaken during the period 2008-2011, and the resulting document - “the EECS Rules” – is being implemented over an 18-month transitional period commencing September 2011.

The Hub

At the outset, the AIB operated with a peer-to-peer (star) network: each member connected its registry to each other member. This worked with a small number of members, but as membership grew it became unwieldy; and members realised that the development of a central Hub would reduce to one, the systems to which they needed to connect. This would simplify change to registries, reduce testing, and provide a central point for dispute resolution.

The initial Hub has since been upgraded substantially, and is a major benefit of membership. However, it remains of concern that members still need to connect to the registries of non-members – which do not use the EECS standard – and hence a solution was sought.

Non-member use of the Hub

The need to simplify the connection to non-members was supplemented by certain non-member countries, notably Germany, which sought to use the Hub without taking advantage of membership. To support this, the AIB is developing a legal framework which will support non-member use of the Hub; while providing both members and non-members with the same level of protection from legal action by other market parties.

Discussion surrounding the provision of a service has offered the AIB the opportunity to allay concerns among non-members concerning the position of the AIB on matters of policy, and in particular on three issues:

1. Whether the AIB is unduly influenced by RECS International on those issues where the latter is involved in lobbying activity.

For the past 8 years, RECS International has no longer any controlling influence over AIB; whose members have, and diligently exercise, a duty to their governments.
2. Whether the AIB is involved in lobbying for one type of support scheme over another.

Since the outset, the AIB has maintained that energy certificates can be used in association with support schemes, as they provide empirical evidence of the source and single-use of 1MWh of energy. However, different forms of support scheme exist in European countries, including quota obligations, feed-in tariffs and bonus systems. The AIB has no preference whatsoever for one form of support scheme over another.

For disclosure schemes, however, the AIB does have a preference – no more – for explicit, rather than implicit, forms of evidence of energy production; and has a preference for guarantees of origin in this respect.

3. Whether the AIB lobbies for any other political views.

The AIB does not lobby politically, and only expresses its views regarding the effective administration of guarantee of origin systems and energy source disclosure.

Summary

In summary:

- The AIB supports governments in their implementation of national law. It has no preference for one type of support scheme over another;
- The AIB has no political views other than that Guarantee of Origin markets should operate effectively; and
- The AIB is totally independent of RECS International.

AIB support for RECS Certificates

EECS certificates fulfil the function of tracking the ownership of certain attributes of a MWh of energy.

EECS currently supports certificates based on EU or national legislation, and RECS certificates. The major difference between the two is that while the former are supported by national legislation, the latter are not. In addition, while guarantees of origin (GO) expire after a year, RECS certificates need not. Note that in some countries an EECS certificate can be either a GO, or a RECS certificate, or both.

RECS certificates are sometimes issued in competition to GO. This means that the operators of the RECS and GO schemes in a domain

must cooperate if national disclosure schemes are to be effective, and to avoid double counting.

In discussions between the AIB and competent bodies from countries which are not currently members of the AIB, concerns have been raised about the existence of RECS certificates, and their support by the AIB. RECS International has clearly declared that it intends to terminate the operation of RECS certificates at some point in the future: however, the exact date for this has yet to be set.

Given this background, the members of the General Meeting of the AIB decided to stimulate the implementation of GO systems in all EU

countries in accordance to the RES and Energy Efficiency Directives by:

1. Ceasing to issue RECS Certificates from the end of 2014 and
2. By withdrawing their support for RECS Certificates from 1st January 2016, such that they will no longer permit RECS Certificates to be:
 - a. held on their registries or
 - b. transferred through the Hub.

New AIB “Public Information Sheets”

No.1: Expiry Rules

This new information sheet sets out the regulations that are in place in each EECS domain concerning the expiry of EECS certificates, and results from a survey of AIB members during the period 7th July to 11th September 2012.

Note that expiry relates to the certificate itself, rather than its eligibility as a specific type of certificate. That is, when a certificate expires, so does its eligibility as a guarantee of origin and/or a RECS certificates.

Public Information Sheets can be found by clicking [here](#).



The RE-DISS final conference



The RE-DISS project (Reliable Disclosure Systems for Europe, www.reliable-disclosure.org) has been discussed in previous newsletters. The aim of this project was to help competent authorities for GOs and disclosure in the EU and EEA countries transpose the RES Directive (2009/28/EC, article 15) and the IEM Directive (2009/72/EC, article 3 §9) into a reliable and sound framework for the tracking of electricity.

RE-DISS presented its achievements at its final conference, on 12th September in Brussels. VREG kindly hosted the event, which attracted representatives of 17 competent authorities for GOs and/or Disclosure, and a mixed audience of suppliers, traders, consumer associations and energy consultants.

In the introductory session, Tom Howes of the European Commission (DG ENER) stressed the importance of E-TRACK and RE-DISS to “make up for the broad words of the Directive”. RE-DISS helps the different tracking systems implemented in individual Member States to work together effectively. Mr Howes also stressed that such projects promote higher protection for electricity consumers, and strengthen development of their interest in renewable energy.

RE-DISS proposes a set of Best Practice Recommendations (the RE-DISS BPR) for implementing the Directives: the 11 competent authorities formally participating in the project agreed to support and develop these in their own countries.

Christof Timpe of Oeko-Institut (the project coordinator) explained the latest developments of the BPR (which can be downloaded from the website by clicking [here](#)¹). They consist of criteria for recognising GOs from other EU and EEA countries. This helps implement articles 15.9 and 15.10 of the RES Directive, which provide that a Member State can solely refuse GOs from another Member State if it has well founded doubts on their reliability, veracity and accuracy. The BPR

contains the following elements to assess the reliability of GOs:

- Electronic interfaces for imports should be specified
- GOs should be issued based on Art. 15 of Directive 2009/28/EC or compatible national legislation, and should meet related requirements
- Exporters should have implemented full disclosure, reflecting the export of GOs
- Issuing and exporting countries should have implemented measures to avoid double counting of GO attributes, including:
 - ensuring the exclusivity of GO for disclosure purposes
 - having implemented clear rules for domestic disclosure
 - using a proper Residual Mix (or equivalent measures)
 - ensuring that GO attributes are not used in issuing or exporting countries unless such GOs are cancelled there.

It is also recommended that a registry should be maintained where Member States may notify GOs they have accepted or rejected.

The RE-DISS BPR also takes into account the Cooperation Mechanisms, and states that these relate to target accounting rather than relating directly to disclosure. However, joint projects and joint support schemes should clarify the allocation to stakeholders of GOs relating to the electricity produced under such mechanisms – for instance, what proportion of GOs go to the supporting party from the other country, and what proportion of GOs go to the hosting country?

In the first panel discussion, Angela Puchbauer-Schnabel (E-Control), Katrien Verwimp (VREG), Helga Bardadottir (Icelandic Ministry of Industry and Energy) and Christian Nielsen (Energinet.dk) endorsed the benefits of following the recommendations of RE-DISS.

Exporters following the RE-DISS recommendations know that they





run little risk of their GOs being rejected by importing Member States; while importers will be comforted that there is no double-counting of the imported GOs by knowing that exporters are abiding by RE-DISS recommendations. Katrien Verwimp stressed that “Belgium produces 7% of RES electricity, but if one adds all commercial mixes, the share of RES-E amounts to more than 50% thanks to imported GOs. Disclosure is a really big thing in Belgium.” Protecting end-consumers is crucial for any regulator, and avoiding double-counting is a major aspect of consumer protection. During the second panel discussion, it became clear that competent authorities for disclosure find the calculation methodology explained in the RE-DISS BPR most useful.

This was born out by the analysis carried out by Claudia Raimundo (IT Power) and Diane Lescot (Observ’ER). This shows that 11 out of the 15 countries represented have a methodology for calculating a residual mix that is either based on – or close to - the RE-DISS BPR. Competent authorities participating to the RE-DISS project urged other competent authorities to follow their lead in using the AIB inter-registry Hub, and implementing the methodology for calculating their residual mix: “This would make everybody’s life easier!” stressed Angela Puchbauer Schnabel.

Helga Bardadottir highlighted that the RE-DISS BPR represent very operational guidelines for Member States that have not thoroughly transposed the European legislation on disclosure and GO, and that the RE-DISS project offered an opportunity to learn from the experience of other Member States.

Markus Klimscheffskij (Grexel) calculated that double-counting errors

linked to implicit tracking had been substantially reduced thanks to the implementation of the RE-DISS methodology. The size of the reduction amounted to 150 TWh, of which 110 TWh is renewable source electricity. This represents a correction of about 7%, given that the total consumption for the 15 countries is close to 2,170 TWh. The potential for further error correction is even higher: improvements linked to explicit tracking include prohibiting the use of contract and RECS certificates as tracking instruments, and using the EECS standard for GOs.

While RE-DISS made important progress during the last three years, tracking systems need to be fine-tuned in a number of Member States, and implemented in others - specifically those countries where the electricity market has yet to be fully opened.

RE-DISS has proposed to the European Commission a follow-up project (RE-DISS II), which will pay specific attention to CO₂ and additionality, and which Dominik Seebach (Oeko-Institut) introduced to the audience. This project will also focus more on the supplier side than RE-DISS, where the primary target was competent authorities for GOs and disclosure. It has been recommended for funding by the EACI, and the consortium is now negotiating the contract. RE-DISS II should start in time to enable residual mixes for 2012 to be produced during spring 2013.

¹ <http://www.reliable-disclosure.org/documents>

How EECS implements the RES Directive



The European Energy Certificate System (EECS®) is well-tested, and based on a harmonised environment, structures and procedures. It ensures the reliable operation of international energy certificate systems across Europe, and has proved to be a highly effective, efficient, fraud-resistant and low cost way of enabling trade between the certificate schemes of 16 European countries. EECS certificates are uniquely identifiable, tradable and contain standardised information.

EECS is governed by the EECS Rules, which provides a framework for creating and administering international energy certificate systems. The purpose of the EECS Rules is to make sure that the registries of AIB members are reliable, secure and inter-operable, in order to help Member States meet the RES, Energy Efficiency and Internal Electricity Markets Directives (2009/28/EC, 2012/27/EC and 2009/72/EC respectively); and to comply with national legislation.

This article identifies the relevant provisions of the RES Directive (shown below in italics), commenting on how EECS fulfils each (in the grey boxes, below). Note that the Energy Efficiency Directive is broadly similar to the RES Directive with regard to its provisions for guarantees of origin).

Preamble

The preamble to the Directive sets the scene for the provision of an electronic instrument – the guarantee of origin, or ‘GO’ - which can be used by energy

suppliers to prove the source of renewable energy that they supply to their customers, and which can be exchanged separate to the energy to which it relates.

- EECS defines in detail an electronic energy certificate that meets the requirements of the Directive for renewable energy guarantees of origin (RES GOs).

These GOs may only be used for disclosure to consumers, and should be quite distinct from those used in association with support schemes. (Preamble (52) and (56))

- EECS RES GOs clearly identify their intended usage as being limited to disclosure of energy produced from renewable energy sources.

The Directive requires each member state to put in place a system for administering the issue, transfer and cancellation or expiry of GOs. This system must prevent duplicate GOs being issued, and individual GOs being used more than once. It must also prevent energy from being sold as renewable if the related GO has been sold. (Preamble (52))

- EECS provides a protocol for the creation, transfer and cancellation or expiry of RES GOs and CHP GOs, which prevents duplicate GOs being issued, ensures that each GO can only be used once, and ensures that energy can only be claimed to be renewable when accompanied by the relevant GO.

The Directive allows Member States to require suppliers of renewable electricity to include in their supply a minimum proportion of energy from recently-constructed renewable energy installations. (Preamble (53))

- This provision is outside of the scope of EECS, although EECS

does provide Member States with the tools to monitor and identify the component sources of supplied energy.

The Cogeneration Directive 2004/8/EC also provides for the use of guarantees of origin by energy suppliers as proof that electricity has been produced by high-efficiency cogeneration plants but, to avoid the possibility of double-counting, those issued to cogeneration plants consuming renewable energy may not be used to disclose as renewable the source of such energy. (Preamble (55))

- EECS defines in detail an electronic energy certificate that meets the requirements of the Directive for cogeneration guarantees of origin (Cogeneration GOs), clearly identifying their intended usage as being limited to disclosure of energy produced by cogeneration plants.

Article 1: Subject matter and scope

The Directive establishes a common framework for the promotion of energy from renewable sources.

It sets mandatory national targets for the overall share of energy from renewable sources in gross final consumption of energy and for the share of energy from renewable sources in transport. It lays down rules relating to statistical transfers between Member States, joint projects between Member States and with third countries ...

- While RES GOs are not intended to be used for measuring target compliance, or for enabling statistical transfers and joint projects, EECS has been carefully designed to be able to support a certificate-based system for measurement of compliance with targets, should this ever be required.

... guarantees of origin, administrative procedures, information and training, and access to the electricity grid for energy from renewable sources. It establishes sustainability criteria for biofuels and bio liquids.

- EECS exclusively addresses the provision of a functioning and effective Europe-wide GO system, which identifies the eligibility of GOs under named sustainability schemes.

Information, training and grid access are outside of the scope of the EECS Rules.

Article 2: Definitions

For the purposes of this Directive, the definitions in Directive 2003/54/EC apply.

The following definitions also apply:

j. 'guarantee of origin' means an electronic document which has the sole function of providing proof to a final customer that a given share or quantity of energy was produced from renewable sources as required by Article 3(6) of Directive 2003/54/EC;

- EECS provides a system of standardised and transferable GOs which provides the evidence required by the IME Directive (Directive 2003/54/EC has now been replaced by Directive 2009/72/EC) (EECS Rules: B1.1.1 – Definitions: "Guarantee of Origin")

Article 15: Guarantees of origin of electricity, heating and cooling produced from renewable energy sources

1. For the purposes of proving to final customers the share or quantity of energy from renewable sources in an energy supplier's energy mix in

accordance with Article 3(6) of Directive 2003/54/EC, Member States shall ensure that the origin of electricity produced from renewable energy sources can be guaranteed as such within the meaning of this Directive, in accordance with objective, transparent and non-discriminatory criteria.

EECS proposes a system of transferable electronic energy certificates which complies with the definition of RES GOs provided by the RES Directive

2. To that end, Member States shall ensure that a guarantee of origin is issued in response to a request from a producer of electricity from renewable energy sources.

EECS provides a harmonised system which allows GOs to be issued on request to producers of renewable energy. (EECS Rules: C3, D2.2, N5)

Member States may arrange for guarantees of origin to be issued in response to a request from producers of heating and cooling from renewable energy sources.

Such energy is currently limited to electricity, but the system has been carefully designed to enable it to support other forms of energy, such as heating and cooling. (EECS Rules: C3,5,4)

Such an arrangement may be made subject to a minimum capacity limit.

The limitation of such a system is discretionary upon Member States, and as such is outside of the scope of EECS. However, national implementations of EECS will support this should they be required to do so.

A guarantee of origin shall be of the standard size of 1 MWh.

All EECS certificates are for 1MWh. (EECS Rules, C3,5,4(l), N3,1.1)

No more than one guarantee of origin shall be issued in respect of each unit of energy produced.

It is a fundamental 'core principle' of EECS that GOs are unique to a specific unit of produced RES electricity. (EECS Rules: A2)

Member States shall ensure that the same unit of energy from renewable sources is taken into account only once.

It is a fundamental 'core principle' of EECS that GOs can only be used once to disclose the source of such consumed energy. (EECS Rules: A2)

Member States may provide that no support be granted to a producer when that producer receives a guarantee of origin for the same production of energy from renewable sources.

The allocation of support to a producer is outside of the scope of EECS. However, EECS registries associate a GO with a specific unit of energy, which can be used to determine eligibility for support under such a regime.

The guarantee of origin shall have no function in terms of a Member State's compliance with Article 3. Transfers of guarantees of origin, separately or together with the physical transfer of energy, shall have no effect on the decision of Member States to use statistical transfers, joint projects or joint support schemes for target compliance or on the calculation of the gross final consumption of energy from renewable sources in accordance with Article 5. 3.

While RES GOs are not intended to be used for measuring target compliance, or for enabling statistical transfers and joint

projects, EECS has been carefully designed to be able to support a certificate-based system for measurement of compliance with targets, should this ever be required. (EECS Rules: C3.5.4(o))

3. Any use of a guarantee of origin shall take place within 12 months of production of the corresponding energy unit.

While the definition of 'use' varies between Member States, EECS supports all such definitions.

EECS provides for the expiry of GOs after a period of time defined by the Member State in whose registry they reside. (EECS Rules for expiry of GOs: C6.1.1(c), C8.3, E6.2.1(h))

A guarantee of origin shall be cancelled once it has been used.

EECS provides provisions for the cancellation of GOs, including the production and administration of cancellation statements (which provide evidence that a cancellation has taken place). In emergency circumstances, it offers provisions which regulate the cancellation of GOs by one Member State for use with the consumption of energy in another. (EECS Rules: C7)

4. Member States or designated competent bodies shall supervise the issuance, transfer and cancellation of guarantees of origin.

EECS clearly defines the Member State and Competent Body that issues a GO, recording this on the GO. (EECS Rules: C3.5.4(i), (m) and (o))

EECS provides a harmonised protocol for Member States to collectively administer the Europe-wide EECS GO system.

The designated competent bodies shall have non-overlapping

geographical responsibilities, and be independent of production, trade and supply activities.

All EECS competent bodies have non-overlapping geographical responsibilities, and are independent of production, trade and supply activities. This is confirmed by means of peer-review during the membership application process, and audited from time to time during the period of membership. Where discrepancies are discovered, then membership is either withheld or suspended, as appropriate. (EECS Rules: E5.2.1, F5, F6 and F7)

5. Member States or the designated competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin shall be issued, transferred and cancelled electronically and are accurate, reliable and fraud-resistant.

EECS provides a harmonised protocol for Member States to collectively administer the Europe-wide EECS GO system.

The fundamental objective of EECS is to provide a GO system that is accurate, reliable and fraud-resistant (EECS Rules: A4.1.2, E3.3.7, E3.3.9, M1.2.1(e), M5.1.1, M6.1.1).

6. A guarantee of origin shall specify at least:

EECS certificates contain all of the required information, and EECS provides rules for the format and validation rules for this information, along with harmonised codes where appropriate.

- (a) the energy source from which the energy was produced

EECS provides a harmonised and exhaustive list of energy

sources, allowing Member States to decide for themselves the degree of detail they prefer (for instance, a Member State can variously refer to "Wind" or "Wind Onshore"). (EECS Rules: C3.5.4(f), Fact Sheet 5)

and the start and end dates of production;

EECS requires the start and end dates of production to be recorded on each EECS GO. (EECS Rules: C3.5.4(d) and (e))

- (b) whether it relates to:
 - (i) electricity; or
 - (ii) heating or cooling;

EECS requires the medium by which energy is conveyed to be recorded on each EECS GO, where this can be electricity, heat or fuel. (EECS Rules: C3.5.4(a))

- (c) the identity, location, type and capacity of the installation where the energy was produced;

EECS requires identity (either number or name) of the installation to be recorded on each EECS GO. (EECS Rules: C3.5.4(h))

EECS requires location (either geographical coordinates or postal code) of the installation to be recorded on each EECS GO. (EECS Rules: C3.5.4(j))

EECS requires type of the installation to be recorded on each EECS GO, and provides a harmonised and exhaustive list of types of installation, allowing Member States to decide for themselves the degree of detail they prefer (for instance, a Member State can variously refer to "Hydro" or "Run-of-River

Hydro”). (EECS Rules: C3.5.4(g), Fact Sheet 5)

EECS requires capacity of the installation to be recorded on each EECS GO. (EECS Rules: C3.5.4(k))

(d) whether and to what extent the installation has benefited from investment support, whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;

EECS requires the receipt of support to be recorded on each GO (where appropriate), along with whether this was associated with investment, production, both or where this is not known). (EECS Rules: C3.5.4(q))

(e) the date on which the installation became operational; and

EECS requires the date on which an installation became operational to be recorded on each EECS GO. (EECS Rules: C3.5.4(c))

(f) the date and country of issue and a unique identification number.

EECS requires the date and country of issue, and the unique identification number of the GO, to be recorded on each EECS GO. (EECS Rules: C3.5.4(n), (i) and (b))

7. Where an electricity supplier is required to prove the share or quantity of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC, it may do so by using its guarantees of origin.

EECS clearly confirms that the purpose of GOs is disclosure

of renewable energy to consumers, and provides facilities to support this. (EECS Rules: A2.1, C3.5.4(o) and (p))

8. The amount of energy from renewable sources corresponding to guarantees of origin transferred by an electricity supplier to a third party shall be deducted from the share of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC.

The calculation of national and international residual mixes is outside of the scope of EECS, although EECS GOs provide Member states with a valuable tool for determining this.

9. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive exclusively as proof of the elements referred to in paragraph 1 and paragraph 6(a) to (f). A Member State may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. The Member State shall notify the Commission of such a refusal and its justification.
10. If the Commission finds that a refusal to recognise a guarantee of origin is unfounded, the Commission may adopt a decision requiring the Member State in question to recognise it.

The acceptance and/or refusal of GOs is outside of the scope of EECS, although EEC does provide a benchmark by which accuracy, reliability and veracity might be measured. (EECS Rules: A4.1.2, E3.3.7, E3.3.9, M1.2.1(e), M5.1.1, M6.1.1)

11. A Member State may introduce, in conformity with Community law, objective, transparent and non-discriminatory criteria for the use of guarantees of origin in complying with the obligations laid down in Article 3(6) of Directive 2003/54/EC.

The way in which a Member State uses GO for purposes of disclosure of the source of energy to final consumers is outside of the scope of EECS.

Where energy suppliers market energy from renewable sources to consumers with a reference to environmental or other benefits of energy from renewable sources, Member States may require those energy suppliers to make available, in summary form, information on the amount or share of energy from renewable sources that comes from installations or increased capacity that became operational after 25 June 2009.

The requirement of suppliers by Member States to notify consumers of new capacity is outside of the scope of EECS.

Article 22: Reporting by the Member States

1. Each Member State shall submit a report to the Commission on progress in the promotion and use of energy from renewable sources by 31 December 2011, and every two years thereafter. The sixth report, to be submitted by 31 December 2021, shall be the last report required.

The report shall detail, in particular:

...

(d) the functioning of the system of guarantees of origin for electricity and heating and cooling from renewable energy sources and the measures taken to ensure the reliability and protection against fraud of the system;

This is outside of the scope of EECS, although the information collected during the operation of a system based on EECS can provide the basis of such a report.

Statistics



Methodology

Frequency of reporting

Statistical data is collected and reported quarterly. Where available, data has been collected for all months since 2000, as this permits a high level of reconciliation between individual and total figures.

Data items recorded

Data is collected for each domain and month, and relates to single energy sources or groups of energy sources. For each domain / month / source the following is recorded:

- By production date: issued, expired and cancelled - this lets the market know how many certificates of each vintage are available for trade, so informing price setting.
- By transaction date: transferred within domain, imported, exported, expired and cancelled - this helps in judging the level of market activity, and making certificate expiry dates visible further informs pricing and trading strategy; and also enables AIB to calculate its membership fees.

Energy source codes

The list of codes has been prepared by reference to the codes used by all registries, and member preferences. EECS Rules Fact Sheet 5 provides the definitive list of energy source codes, aggregating reported codes into higher-level codes where codes: are inactive (e.g. hydro and wave power will be aggregated until such time as wave power becomes more widely used); are unknown (e.g. sold renewable fuel may be used where conversion between codes has resulted in the original code becoming unknown); are not demanded by the market (e.g. orimulsion is simply reported as "Fossil").

Analysis

Where possible, the statistical reports will provide a disclaimer

explaining shortcomings in the data. This might include domains that do not provide certain items of data, and those that have not contributed to the latest report. The value of publishing data which contains such shortcomings is felt to outweigh the absence of such data.

Some items may solely be useful at a pan-European level (e.g. domains will not know if certificates they issued and exported have been cancelled). Hence it will be possible to know the length of the market across Europe, but not necessarily for certificates issued in a specific country).

Certificates withdrawn by the issuer (perhaps those issued in the wrong quantities or for the wrong technology) are statistically insignificant, and have therefore been ignored.

General

All certificates are 1MWh. As metering data is the basis for issuing certificates, there is always some delay in gaining accurate statistics for the corresponding data for a specific month, so the most recent quarter's issuing activity will always be understated and consequently this information should be treated with caution.

Statistics for certificates issued in a specific month are not presented, as the value of this data is not clear. In general, "issued by transaction date" will be similar to, but slightly later than, "issued by production date", due to the inevitable delays in processing meter data. Currently, close to 100% of the certificates for energy produced in a month will be issued within the following 6 months.

Explanatory notes to statistics issued 20 December 2012

These statistics were completed on 20 December 2012 and based

on statistics gathered either from statistics published AIB member websites, or where such data is not available, from data provided to the AIB by individual members. The data itself was provided on the following days:

Country	Collection date	Source
Austria	18 December	Website
Belgium		
Brussels	12 January	Spreadsheet provided by issuing body. No update received since Jan'12
Flanders	28 August	Spreadsheet provided by issuing body. Data errors in latest update could not be fixed by the deadline
Wallonia	14 December	Spreadsheet provided by issuing body
Denmark	20 December	Website
Finland	20 December	Website
France	06 November	Spreadsheet provided by issuing body
Germany	18 December	Website
Iceland	20 December	Website
Italy	02 October	Spreadsheet provided by issuing body
Luxembourg	20 December	Website
Netherlands	23 November	Spreadsheet provided by issuing body
Norway	17 December	Website
Portugal	18 December	Website
Slovenia	10 January	There is only one market party currently, so publication of data would expose their trading position. It is anticipated that other market parties will commence trading in 2013, at which point trading data will again be made available.
Spain	18 December	Website
Sweden	20 December	Website
Switzerland	18 December	Website

In some cases detailed data has been aggregated. For instance “manure” also refers to “pig manure”, and “fossil” also contains “unknown source”. Further, unspecified renewable energy contains that which originates from technology codes T05000000 (combustion) and T07000000 (known).

The Grexel registries (DE, DK, FI, IS, LU, NO and SE) provide all required information, and have done for a number of months. However, information from these domains relating to periods prior to the adoption of this version of the registry is not always available. For instance, the previous registries did not record the quantity of cancellations by production date that had taken place during the life of these registries.

The LogActiv registries (ES and PT) do not currently provide facilities for the expiry of certificates.

The Atos registries (AT and CH) and the “on demand” registries (BEF, FR, IT and NL) do not currently provide expiry data, or production-based expiry and cancellations.

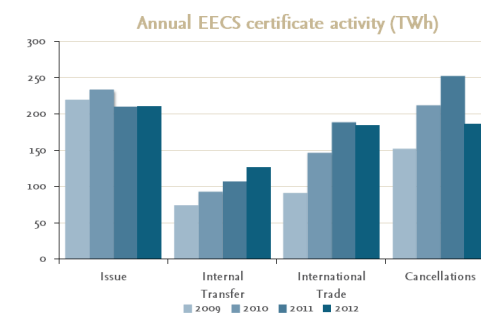
The difference between total exports and imports is the result of absences in the information gathered, and due to exports to Belgium needing to be accepted by the importer, introducing delay registering the transaction (and which is potentially treated differently by different registries).

During 2012, market activity has continued to increase, and in particular the use of certificates for disclosure purposes.

The number of certificates issued during 2011 was down on the previous year, due to the requirement to re-register Swedish production devices, and the use of domestic GOs rather than EECS GOs internally, but this decrease looks to have stopped. Bearing in mind the normal 20% lag in certificate

issuing, we might reasonably expect certificates to be issued for a total of about 250TWh 2012 production.

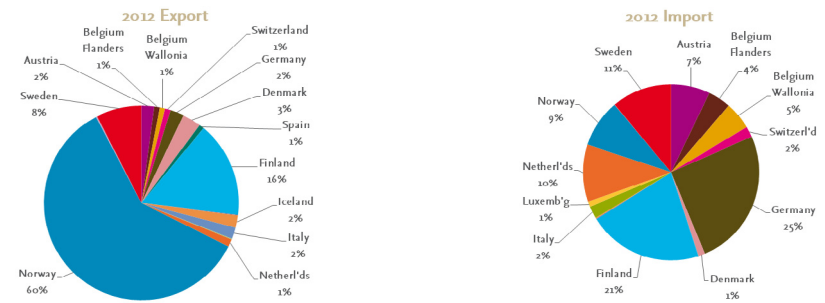
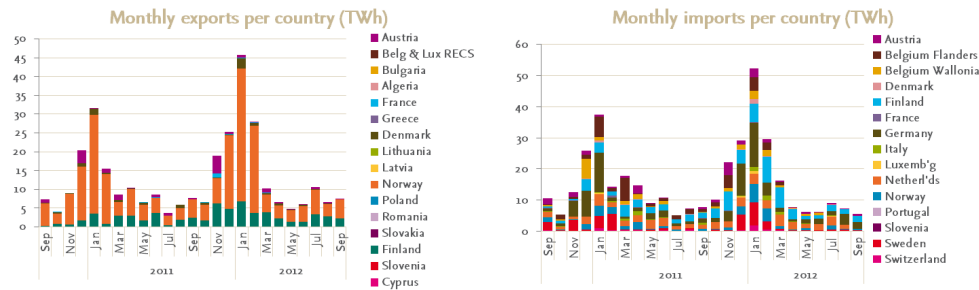
Transfers and cancellations continued to increase, although this increase may have slowed a little, as market demand becomes satisfied. It will be interesting to see the impact of the growth in membership and scope of activity that is anticipated for 2013.



The monthly discrepancy between exports and imports is due to not all transfers being instantaneous, and hence trades which commence in one month can complete the following month.

Norway, Sweden and Finland continue to be the major exporters; although Denmark, Austria, Iceland, Italy and Belgium continue to make their presence felt. Regarding imports, these continue to be dominated by

Finland and Germany, followed by Netherlands, Belgium, Norway, Sweden and Austria. Some countries (e.g. Norway, Finland and Sweden) figure in both exports and imports, suggesting trading activity. Limited trade exists in the form of the cancellation of certificates in one country for use in another: the EECS Rules only permit this where transfer is technically impossible.



The pie charts on this page show the certificates issued and cancelled last year and this year, in summary.

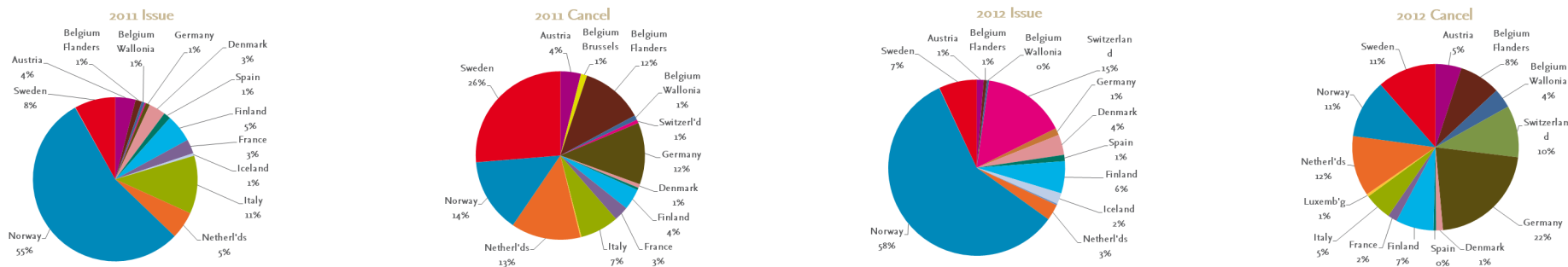
Again, these charts show the large role that the Nordic region has in this market, and the interest in renewable products elsewhere in Europe. Notable changes include the application of the EECS Rules to all Swiss production, and not solely to international transfers, and significant growth in cancellation of German certificates.

During 2013, a number of new members are eagerly anticipated, and there are planned changes in current member domains: Croatia, Estonia, the Czech Republic and Cyprus are preparing their domain protocols; France is expected to replace the past RECS system with guarantees of origin; and Germany is exploring

use of the AIB Hub as a non-member.

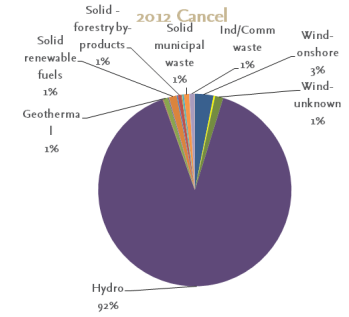
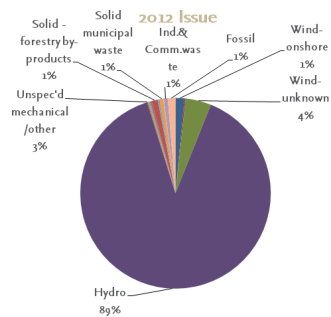
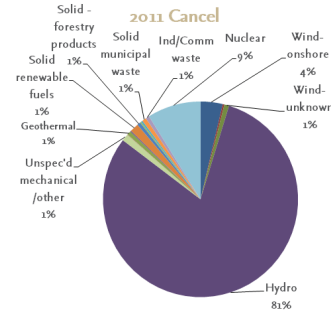
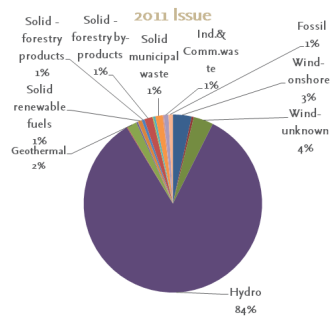
Regarding cancellation, as expected Belgian and Italian cancellations have decreased due to changes to their compliance policy, and those of Norway have also decreased, although for less clear reasons. Sweden has decreased from 44 TWh to 22 TWh so far in 2012, due to statistical/system changes.

Recalling that last year there was a deficit (209 TWh issued and 229 TWh cancelled), the shortfall being made up by old certificates; but with the “12 month expiry rule” this is no longer possible. It will be interesting to see whether there will be a flush of cancellations in late 2012, as traders seek to get rid of 2011 GOs before they expire. This position has changed little in 2012.



During 2011, hydropower remained by far the prevalent renewable energy source, followed by wind and biomass. Note that certificates for nuclear are issued during the following year; and that certificates for

fossil are being issued once again as countries increasingly certify all source of energy, and not solely renewable energy. Again, the picture is much the same for 2012.

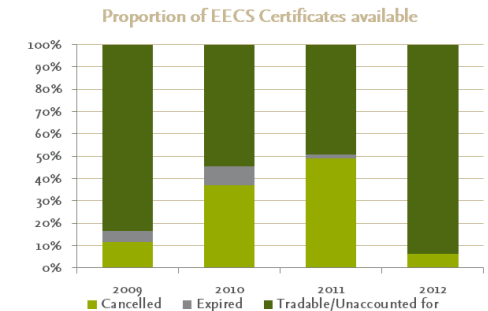
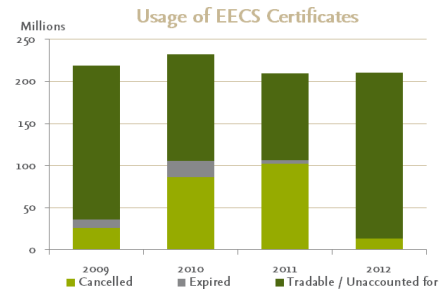


Comparing the status of different vintages of EECS certificate, we can see what has happened to the certificates that were issued for energy produced in the last four years; that is, whether the certificates have:

- been cancelled as evidence of supply
- expired due to it being more than one year since the associated energy was produced (as required by Directive 2009/28/EC) or
- whether their whereabouts is unknown. This may mean that they remain available for trade, but it could also be that they have been transferred to a registry that does not currently report expiry and cancellation by the date of production.

Note also that some registries do not yet support expiry. AIB members are currently working to provide such information from their registries, but it may be a while before this is available: the reader is asked to be patient in the meanwhile.

Two graphs are shown. In the first, actual numbers of certificate are given; while the second illustrates the proportion of certificates in each category.



The following tables display the raw data by domain at a yearly level. Aggregated totals are given for the period since records began (2000); and for the period from January 2010 until the date of collection of the data (between October and December 2012, depending upon registry – the implementation of the new version of EECS meant that not all registries can provide the required information upon request – see also “Explanatory notes to statistics issued 20 December 2012” in this statistical report).

	TOTAL : 2001 to 2012								2010 to 2012							
	Production			Transaction					Production			Transaction				
	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel
Austria	33,859,664			44,863,444	27,348,505	68,973,546		47,674,066	20,024,262			38,137,376	25,115,651	33,750,988		27,691,411
Belgium Brussels -	10,794			881		6,092,332		6,019,620	8,244			881		5,994,468		5,921,756
Belgium Flanders -	12,731,879			49,532,602	18,432,315	109,974,341		95,110,236	6,195,233			45,403,116	15,489,258	66,483,270		76,126,328
Belg & Lux RECS -	113,390					2,031,496		2,048,355								
Belgium Wallonia -	4,859,121		107,982	9,065,044	6,384,904	43,440,999		29,613,334	3,861,124		207,982	7,116,467	6,126,840	35,226,449		23,519,243
Belgium	17,715,184		207,982	58,598,527	24,817,219	161,539,168		132,791,445	10,064,601		207,982	52,520,464	21,616,098	107,704,187		105,567,327
Switzerland	36,209,063			202,015	6,975,573	13,114,918		24,385,666	33,070,312				4,150,459	9,526,623	1	20,965,592
Germany	4,462,776		87,908,959	48,066,433	11,107,669	155,180,106		122,782,147	4,393,524		75,442,623	39,323,818	9,816,906	110,147,341		91,572,167
Denmark	28,205,285	2,771,964	4,575,042	6,563,344	18,844,901	6,621,232	2,771,964	6,406,487	20,078,095	1,026,063	4,411,890	5,979,358	14,239,105	4,830,355	2,771,964	5,241,024
Spain	12,026,353				4,779,767	58,371		6,543,588	6,134,986				3,349,951	58,370		2,847,219
Finland	99,756,057		29,714,580	24,406,040	126,964,012	105,008,270		45,171,290	34,816,086		24,921,238	18,156,604	82,844,074	88,374,212		29,568,507
France	26,632,654		3,663,208	8,304,037	2,037,498	18,014,841		37,477,577	15,065,624		3,663,208	3,238,472	1,889,442	3,735,371		16,692,248
Ireland	162,414				10,001											
Iceland	5,369,201				4,346,896	300,001			5,369,201				4,346,896	300,011		
Italy	55,530,164		18,488	20,928,864	10,079,660	9,676,660		47,519,003	36,219,033		18,488	17,869,642	10,079,660	9,320,556		36,249,946
Luxembourg	727		1,637,357	401,631	324,706	2,898,333		1,637,357	727		1,450,498	401,631	324,706	2,898,333		1,637,357
Netherlands	70,314,830			45,641,124	8,606,103	136,524,384		182,888,751	27,574,165			23,389,746	6,373,265	60,957,928		82,825,134
Norway	696,442,415	52,290,737	25,410,839	212,162,872	457,801,267	44,374,465	52,287,452	162,720,283	340,888,120	3,296,871	25,339,078	121,220,714	308,043,529	39,477,953	52,287,452	85,433,370
Portugal	1,064,568		3,850		957,256	58,702		68,426	467,047		3,850		957,255	58,695		57,270
Sweden	321,561,239	25,641,005	80,879,652	11,991,665	100,449,892	78,083,602	25,641,005	257,728,534	98,721,308	18,514,657	66,901,698	5,191,698	46,581,539	47,691,942	25,641,005	142,973,884
Slovenia	4,002,666			668,004	117,018			1,927,200					200,001	100,002		35,652
Total	1,413,405,418	80,703,706	234,019,957	482,029,996	806,118,929	800,543,627	80,700,422	1,077,721,820	652,887,091	22,837,591	202,360,553	325,429,523	539,927,537	518,932,867	80,700,422	649,362,108

	2012								2011								2010								
	Production			Transaction					Production			Transaction					Production			Transaction					
	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	
Austria	2,666,803			17,785,373	4,479,979	13,210,148		9,433,964	8,351,182			12,136,227	9,904,395	11,870,389		9,895,907	9,006,277			8,215,776	10,736,277	8,670,451		8,361,540	
Belgium Brussels -									5,700					2,946,000		2,951,700	2,544			881		3,048,468		2,970,056	
Belgium Flanders -	1,238,459			15,919,595	1,948,447	7,710,044		14,983,940	2,616,009			15,587,116	5,429,930	26,255,664		30,174,468	2,340,765			13,896,405	8,110,881	32,517,562		30,967,920	
Belg & Lux RECS -																									
Belgium Wallonia -	821,750		207,982	2,508,615	1,844,304	9,329,547		7,093,442	1,226,142			1,627,446	866,036	8,598,216		2,292,250	1,811,232			2,980,406	3,416,500	17,298,686		14,133,551	
Belgium	2,060,209		207,982	18,428,210	3,792,751	17,039,591		22,077,382	3,849,851			17,214,562	6,295,966	37,799,880		35,418,418	4,154,541			16,877,692	11,527,381	52,864,716		48,071,527	
Switzerland	32,370,448				2,004,999	3,630,862		18,786,055	551,229				1,167,852	3,171,774		1,679,257	139,635				977,608	2,723,987		500,279	
Germany	2,728,637		4,795,407	20,472,150	4,766,849	46,779,495		40,351,276	1,664,887		38,588,994	8,466,613	2,208,085	37,496,307		29,799,910			32,058,222	10,385,055	2,841,972	25,871,549		21,420,979	
Denmark	7,890,292		206,183	3,058,416	6,582,081	2,257,487	351,892	2,508,386	6,930,020	319,597	2,359,901	1,946,563	5,264,978	1,331,983	2,420,072	1,810,761	5,257,783	706,466	1,845,806	974,379	2,442,046	1,240,885		921,875	
Spain	2,423,981				1,712,438	58,366		916,599	2,888,978				1,637,513	2		1,108,593	822,027							822,027	
Finland	12,436,323		1,379,314	10,048,919	33,582,350	38,952,982		13,794,366	11,502,900		13,751,377	5,333,664	33,169,239	33,349,087		10,161,513	10,876,863		9,790,547	2,772,021	16,082,485	16,072,143		5,612,628	
France				113,429	205,128	168,000		3,383,172	5,858,302			2,073,833	1,667,207	1,458,361		7,087,333	9,207,322			1,051,210	17,109	2,109,010		6,225,743	
Ireland																									
Iceland	4,293,220				4,346,896	300,011			1,075,981																
Italy	567,002		18,488	5,664,468	3,997,067	4,200,593		9,987,683	23,958,277			7,830,240	6,082,593	3,865,125		18,591,512	11,693,754			4,374,934		1,254,838		7,670,751	
Luxembourg	352			396,604	277,960	1,750,924		936,133	375		935,816	6,027	26,830	933,702		514,365			514,682		19,916	213,707		186,859	
Netherlands	6,211,829			6,480,125	2,662,180	19,437,037		21,896,896	11,348,039			9,255,721	3,293,122	25,518,613		33,478,114	10,014,297			7,653,900	416,963	16,002,278		27,450,124	
Norway	122,311,115		2,607,413	42,230,167	126,431,081	16,290,248	52,287,452	21,243,431	114,691,797	1,768,892	21,689,718	41,116,844	99,444,845	14,370,635		35,675,568	103,925,208	1,527,979	1,041,947	37,873,703	82,167,603	8,877,070		28,514,371	
Portugal	109,342		3,860		412,866	56,607		23,888	146,606				519,390	3,088		24,488	211,099			25,000				8,894	
Sweden	14,603,417		4,230,929	2,382,634	115,844,374	20,403,016	1,700,140	21,377,281	16,847,633	1,700,140	21,471,297	767,250	13,578,969	17,029,172		23,940,865	66,083,942			67,270,258	16,814,517	41,199,472		55,512,661	
Slovenia													100,001	100,002							100,000				35,652
Total	210,661,970	0	13,449,566	127,069,495	211,053,996	184,474,361	54,339,485	186,716,517	209,626,057	54,339,485	102,460,311	106,149,544	184,360,712	188,298,120	26,360,937	251,329,681	232,579,064	19,048,962	86,450,676	92,220,484	144,512,829	146,160,386	0	211,315,910	

Similar to the “by country” data above, the following tables display the raw data by technology at a yearly level.

	TOTAL : 2001 to 2012									2010 to 2012						2012									
	Production			Transaction						Production			Transaction			Production			Transaction						
	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	
Wind - onshore	52,112,453	33,964	1,221,696	24,386,524	21,043,507	28,853,503		42,077,726	18,949,694		1,050,896	15,039,426	12,199,681	18,636,337		21,779,514	3,157,811		1,246	5,285,230	1,128,895	3,374,694		5,835,130	
Wind - offshore	3,887,520			1,711,834	517,687	950,280		2,735,227	2,037,242			1,220,294	437,358	934,608		1,894,849	423,671			402,625	314,041	766,471		488,826	
Wind - unknown	19,728,058	3,217,406	4,391,069	5,808,305	15,771,936	8,023,185	3,368,062	4,534,054	19,728,058	690,967	4,290,476	5,808,305	15,771,936	8,023,185	3,368,062	4,534,054	9,191,484		212,625	3,941,269	10,685,268	6,821,022	1,770,412	2,566,726	
Wind	75,728,031	3,251,370	5,612,765	31,906,663	37,333,130	37,826,968	3,368,062	49,347,007	40,714,994	690,967	5,341,372	22,068,025	28,408,975	27,594,130	3,368,062	28,208,417	12,772,966		213,871	9,629,124	12,128,204	10,962,187	1,770,412	8,890,682	
Hydro/marine	1,151,565,894	61,637,046	204,725,420	399,795,234	742,892,406	733,189,569	61,517,069	880,168,025	545,684,476	6,574,024	185,100,075	266,708,294	499,086,012	474,963,579	61,517,069	539,928,740	187,689,634		13,116,214	102,854,793	193,040,121	169,473,613	52,447,172	167,684,047	
Unspecified mechanical/other			166,843	881		5,892,624		5,814,212			166,843	881		5,892,624		5,814,212									
Unspecified renewable energy			10,000	78,155	8,188	172,659		37,650			10,000	78,155	8,188	172,659		37,650			10,000	78,155	8,188	172,659		37,650	
Unspecified heat																									
Solar	764,166		46,248	518,561	70,992	82,232		346,678	707,590		46,248	505,000	70,982	82,222		327,443	278,672			133,921	862	529		169,479	
Geothermal	6,233,692			227,633	273,000	82,000		4,034,233	4,636,738			15,131	273,000	82,000		3,208,656	275,722			15,131	273,000	82,000		1,563,395	
Other	6,997,858		223,091	825,230	352,180	6,229,515		10,232,773	5,344,328		223,091	599,167	352,170	6,229,505		9,387,961	554,394		10,000	227,207	282,050	255,188		1,770,524	
Solid - agricultural biomass (inc. energy crops)	2,287,823	4,029	61	1,141,671	842,198	841,764	4,027	1,275,752	802,138	4,026	61	888,789	806,108	805,674	4,027	900,290	31,382			101,099	137,567	115,397	4,027	260,931	
Solid - agricultural products	259,883	1,975	105,799	22,372	84,956	96,704	1,975	61,101	259,883	1,975	90,799	22,372	84,956	96,704	1,975	61,101	102,407			22,355	19,617	30,508	1,975	61,101	
Solid - renewable fuels (inc. For&Ag bp & w)	47,472,460	76,214	327,903	18,488,095	17,243,757	15,893,799	76,217	40,901,757	7,069,662		211,192	11,504,863	4,852,597	3,879,216	76,217	10,464,333	504,294			3,345,208	1,012,570	1,016,516	2,495	2,387,836	
Solid - forestry products	2,975,526		36,006	4,551,574	845,958	1,726,157		3,147,849	2,176,290	68,800	36,006	3,803,428	840,031	1,592,280		3,008,606	486,379			354,219	650,644	472,136		373,514	
Solid - forestry by-products & waste	5,433,631	68,800	43,276	1,491,472	1,207,036	503,454	68,800	1,171,489	5,433,631		43,276	1,491,472	1,207,036	503,454	68,800	1,171,489	2,234,571			1,374,504	910,791	287,808	68,800	1,171,489	
Gas - landfill	3,450,819	2,339	198,678	2,130,680	175,630	250,336	2,339	2,310,393	1,549,571		198,678	1,482,493	156,365	181,048	2,339	1,381,804	89,352			167,324	50,968	66,299		244,533	
Gas - sewage	90,243				4,048	4,048		56,828	54,038				655	655		21,251	53,380				655	655		21,143	
Gas - other biogas	3,588,370	3,707	1,395	2,198,661	326,528	268,507	3,707	2,508,601	1,946,477	1,047	1,395	1,772,469	320,810	265,847	3,707	1,858,367	497,022		239	259,613	200,132	140,879	1,047	458,797	
Solid - municipal biogenic waste	13,445,409	239,981	326,003	4,682,369	2,212,957	1,862,542	239,981	9,618,790	5,945,099	85,394	326,003	2,737,733	1,651,888	1,376,925	239,981	4,939,434	1,271,875		8,005	1,081,692	944,341	693,005	21,980	1,612,025	
Liquid - renewable fuels (inc. Mun.waste)	59,254	17	8,012	158,895	53,533	9,664		100,768	59,254		8,012	158,895	53,533	9,664		100,768	56,559		94,395	158,895	53,533	9,664		100,768	
Liquid - black liquor	644,518		94,395	673,849	535,804	21,000			644,518			673,849	535,804	21,000		94,395	150,509			673,849	535,804	21,000		94,395	
Solid - unspecified wood	50,080				10,000			94,395	50,080		94,395		10,000				50,080				10,000			21,577	
Solid - industrial & commercial waste	13,719,286	21,561	28,530	9,271,576	1,538,679	1,359,471	21,578	10,808,701	4,709,593	14,691	23,530	6,826,019	1,100,468	953,057	21,578	4,539,198	1,402,329			2,117,958	616,872	469,379	121,901	1,506,082	
Biomass	93,477,302	418,623	1,170,058	44,811,214	25,081,085	22,837,446	418,624	72,056,424	30,700,234	175,933	1,033,347	31,362,382	11,620,251	9,685,524	418,624	28,541,036	6,930,139		109,481	9,656,716	5,143,494	3,323,246	54,339,485	8,292,614	
RENEWABLE	1,327,769,085	65,307,039	211,731,334	477,338,341	805,658,800	800,083,498	65,303,755	1,011,804,229	622,444,032	7,440,924	191,697,885	320,737,868	539,467,408	518,472,738	65,303,755	606,066,154	207,947,133		13,449,566	122,367,840	210,593,869	184,014,234		186,637,867	
NUCLEAR	81,232,969	15,396,667	22,272,623		2	2	15,396,667	65,835,301	26,043,335	15,396,667	10,646,668		2	2	15,396,667	43,217,304									
FOSSIL	4,403,364		16,000	4,691,655	460,127	460,127		82,290	4,399,724		16,000	4,691,655	460,127	460,127		78,650	2,734,837			4,691,655	460,127	460,127		78,650	
Total	1,413,405,418	80,703,706	234,019,957	482,029,996	806,118,929	800,543,627	80,700,422	1,077,721,820	652,887,091	22,837,591	202,360,553	325,429,523	539,927,537	518,932,867	80,700,422	649,362,108	210,681,970	0	13,449,566	127,059,495	211,053,996	184,474,361	54,339,485	186,716,517	

See also the AIB website at http://www.aib-net.org/portal/page/portal/AIB_HOME/FACTS/Market%20Information/Statistics for Excel spreadsheets in both Excel 2003 and Excel 2010 formats, containing the detailed data since records began, summarised by year; and also by month.

	2012								2011								2011							
	Production			Transaction					Production			Transaction					Production			Transaction				
	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel	Issue	Expire	Cancel	Transfer	Export	Import	Expire	Cancel
Wind - onshore	3,157,811		1,246	5,285,230	1,128,895	3,374,694		5,835,130	7,091,214		607,240	5,889,048	7,037,054	11,313,865		9,200,563	8,700,669		442,410	3,865,148	4,033,732	3,947,778		6,743,821
Wind - offshore	423,671			402,625	314,041	766,471		488,826	837,298			494,538	77,134	121,954		704,977	776,273			323,131	46,183	46,183		701,046
Wind - unknown	9,191,484		212,625	3,941,269	10,685,268	6,821,022	1,770,412	2,566,726	7,564,987	234,110	3,147,766	1,867,036	5,086,668	1,202,163	1,597,650	1,967,328	2,971,587	456,857	930,085					
Wind	12,772,966		213,871	9,629,124	12,128,204	10,962,187	1,770,412	8,890,682	15,493,499	234,110	3,755,006	8,250,622	12,200,856	12,637,982	1,597,650	11,872,868	12,448,529	456,857	1,372,495	4,188,279	4,079,915	3,993,961		7,444,867
Hydro/marine	187,689,634		13,116,214	102,854,793	193,040,121	169,473,613	52,447,172	167,684,047	175,976,099	3,511,717	97,912,047	87,435,848	166,768,293	167,432,922	9,069,897	202,589,792	182,018,743	3,062,307	74,071,814	76,417,653	139,277,598	138,057,044		169,654,901
Unspecified mechanical/other														2,946,000	2,946,000				166,843	881		2,946,624		2,868,212
Unspecified renewable energy			10,000	78,155	8,188	172,659		37,650																
Unspecified heat																								
Solar	278,672			133,921	862	529		169,479	292,442		46,248	331,381	70,094	81,693		127,780	136,476			39,698	26			30,184
Geothermal	275,722			15,131	273,000	82,000		1,563,395	3,760,667							1,581,519	600,349							63,742
Other	554,394		10,000	227,207	282,050	255,188		1,770,524	4,053,109		46,248	331,381	70,094	3,027,693		4,655,299	736,825		166,843	40,579	26	2,946,624		2,962,138
Solid - agricultural biomass (inc. energy crops)	31,382			101,099	137,567	115,397	4,027	260,931	497,014	4,026	61	525,386	664,765	686,501		486,832	273,742			262,304	3,776	3,776		152,527
Solid - agricultural products	102,407			22,355	19,617	30,508	1,975	61,101	157,476		88,707	17	65,339	66,196					1,975	2,092				
Solid - renewable fuels (inc. For&Ag bp & w)	504,294			3,345,208	1,012,570	1,016,516	2,495	2,387,836	1,527,549		97,542	4,293,879	2,778,910	1,869,840	73,722	3,601,052	5,037,819		113,650	3,865,776	1,061,117	992,860		4,475,445
Solid - forestry products	486,379			354,219	650,644	472,136		373,514	1,054,579	17,466	35,929	1,324,928	158,293	1,022,588		1,385,052	635,332	51,334	77	2,124,281	31,094	97,556		1,250,040
Solid - forestry by-products & waste	2,234,571			1,374,504	910,791	287,808	68,800	1,171,489	3,110,451		42,496	116,968	296,245	215,646			88,609		780					
Gas - landfill	89,352			167,324	50,968	66,299		244,533	433,025		198,452	297,149	97,364	106,716	2,339	485,094	1,027,194		226	1,018,020	8,033	8,033		652,177
Gas - sewage	53,380				655	655		21,143	595							108	63							
Gas - other biogas	497,022		239	259,613	200,132	140,879	1,047	458,797	707,054	1,047	125	505,143	97,328	100,772	2,660	712,032	742,401		1,031	1,007,713	23,350	24,196		687,538
Solid - municipal biogenic waste	1,271,875		6,842	1,081,692	944,341	693,005	21,980	1,612,025	2,752,337	20,263	249,161	822,137	707,038	683,012	218,001	1,731,716	1,920,887	65,131	70,000	833,904	509	908		1,595,693
Liquid - renewable fuels (inc. Mun.waste)	56,559		94,395	158,895	53,533	9,664		100,768	2,695		7													
Liquid - black liquor	150,509			673,849	535,804	21,000		94,395	494,009															
Solid - unspecified wood	50,080				10,000		21,577																	
Solid - industrial & commercial waste	1,402,329			2,117,958	616,872	469,379	121,901	1,506,082	1,701,679		18,530	2,246,086	456,187	448,252	1	1,537,213	1,605,585	14,691	5,000	2,461,975	27,409	35,426		1,495,903
Biomass	6,930,139		109,481	9,656,716	5,143,494	3,323,246	54,339,485	8,292,614	12,438,463	42,802	731,010	10,131,693	5,321,469	5,199,523	296,723	9,939,099	11,331,632	133,131	192,856	11,573,973	1,155,288	1,162,755		10,309,323
RENEWABLE	207,947,133		13,449,566	122,367,840	210,593,869	184,014,234		186,637,867	207,961,170	3,788,629	102,444,311	106,149,544	184,360,712	188,298,120	10,964,270	229,057,058	206,535,729	3,652,295	75,804,008	92,220,484	144,512,827	146,160,384		190,371,229
NUCLEAR															15,396,667	22,272,623	26,043,335	15,396,667	10,646,668		2	2		20,944,681
FOSSIL	2,734,837			4,691,655	460,127	460,127		78,650	1,664,887		16,000													
Total	210,681,970	0	13,449,566	127,059,495	211,053,996	184,474,361	54,339,485	186,716,517	209,626,057	3,788,629	102,460,311	106,149,544	184,360,712	188,298,120	26,360,937	251,329,681	232,579,064	19,048,962	86,450,676	92,220,484	144,512,829	146,160,386	0	211,315,910

Forthcoming events

2013

13/14 March	Vienna	AIB General Meeting
19-21 March	Berlin	RECS Market Meeting
5 June	Reykjavik	Market Committee
5/6 June	Reykjavik	AIB General Meeting
? September	TBA	AIB General Meeting
? September	TBA	Green Power Marketing conference
27-28 November	Prague	AIB General Meeting