AIB Statistics

All figures 1MWh certificates

In 2011 (to July 2011):

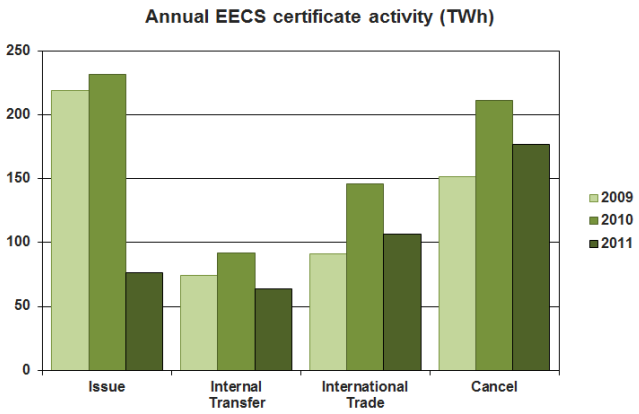
- ISSUED: 76 million
- TRANSFERRED: 108 million
- CANCELLED: 177 million

In 2010:

- ISSUED: 232 million
- TRANSFERRED: 148 million
- CANCELLED: 211 million

Since 2001:

- ISSUED: 1,068 million
- TRANSFERRED: 532 million
- CANCELLED: 817 million



Inside this issue:

New EECS Rules

Following two years of hard work, the old EECS regulatory framework (the PRO) has been replaced by the new EECS Rules. In this article., Phil Moody delves into the detail.

Replacement of the PRO by the EECS Rules was undertaken to implement the recent RES Directive, enlarge the scope of EECS and to rationalise and clarify the EECS Rules.

We anticipate that this will simplify and homogenise the market, making trading more simple and so improving liquidity.

The EECS Rules introduce some new concepts:

- Independent Criteria Schemes - these are voluntary certification schemes (such as labels and RECS certificates); and
- EECS products - these are specific types of certificate, normally implemented within a geographic area).

Note that the term "certificate" extends to all electronic transferable documents offering evidence of the source of energy.

The EECS Rules also improve the cancellation process; provide support for labels; and improve the portability of certificates between domains.

The transition between the old PRO and the new EECS Rules will take place during the period 1st September 2011 and 31st March 2013.

Norwegian Trade

Niels van der Linden of Statkraft, and Hans-Petter Kildal of Bergen Energi write about the value of guarantees of origin (GOs) and international GO trading, with particular emphasis on Norway.

They also comment upon the growing awareness of environmental products among consumers, and of the changing legislative and regulatory framework within Norway.

New AIB Hub

Marcel Doyer of CertiQ, who has been coordinating AIB's for Hub replacement, writes about the project.

The existing AIB Hub proved the concept of a central point of contact for registries .

This is now being replaced by a more robust fully-featured Hub developed by Atos Origin.

The new Hub will fully replace the old Hub in a 'big bang' implementation; which will take place on 1st September 2011.

Some competent authorities often have legal reasons for not joining non-governmental, voluntary bodies such as AIB.

The availability of the Hub has opened the opportunity for AIB to offer non-members access to the Hub.

Not only will this extend the reach of the network, it also serves to protect the quality of GOs to user organisations and their countries.

Improving the RES and Cogeneration Directives

The RES and Cogeneration Directives propose Guarantees of Origin.

GOs provide evidence of the source and means of production of the underlying energy.

GOs and the energy can be traded separately, so protecting existing physical energy markets and facilitating markets for reliable renewable energy products.

However, what is needed now is a common approach for both RES GOs and Cogeneration GOs.

This will require clarification of the existing RES Directive, and consideration in the new Energy Efficiency Directive.

This article proposes areas for clarification and harmonisation, and offers suggestions for how this might be achieved.

The new EECS® Rules – a fresh start for the certificate market

Why change the EECS® Rules?

There were a number of reasons for replacing the old Principles and Rules of Operation (the PRO) with the new, improved EECS® Rules; and these included the following:

1) Implementing the new RES Directive

Directive 2009/28/EC introduces fundamental improvements to guarantees of origin over Directive 2001/77/EC, which it replaces.

In particular, the purpose of a GO is clarified as disclosure of the source of energy to consumers. Also, third countries are included within the scope of the system, so there is no longer any need for "non-EU" certificates.

Naturally, not all countries will implement the new Directive in the same way, or at the same time, so a period of transition is inevitable.

2) Enlarging of the scope of EECS®

There is a pressing need to enable new countries to join, including those outside of the European Union.

Also, it is becoming recognised that in future GOs may be issued for energies other than electricity, such as heat and gas: EECS® should include provisions for these.

3) Rationalising the current rules (the PRO)

It makes sense to bring together all types of certificate, administering them according to a common process regardless of type; and building the strengths of each scheme into the core regulations of EECS® such that there are the same provisions and quality standards for each type of certificate.

4) Clarifying the current rules

The PRO is written according to the prescriptive and detailed Anglo-Saxon legal tradition in order to minimise areas of uncertainty, and to simplify dispute resolution.

In this it has been successful, but alas this methodology has the disadvantage of introducing complex provisions which are not easy to read for non-native speakers (and even for some native speakers!).

5) Homogenising the market and so improving liquidity

The currently different treatment of different certificates leads to "gaps": these should be closed off.

Also, AIB needed to get rid of discrepancies in the treatment and status of GOs, depending upon whether they were issued inside or outside of the EU and European Economic Area (EEA).

How are the EECS Rules structured?

EECS has been divided into four parts:

Part I. The principles of EECS®, being the Core Principles, and definitions of terms

Part II. The Certificate System, being measures for harmonising the registration of generation plant and the issue, transfer and cancellation of certificates; and the rules for acceptance and administration within EECS® of each type of certificate.

Part III. Scheme Administration, being the rules by which AIB manages the relationship between itself and its members, and their behaviour, addressing matters such as dispute resolution and changes to EECS.

Part IV. Scheme-specific rules for certificates for electricity, and in future such energies as gas, heating and so on.

How did AIB approach this?

In developing the EECS Rules, the AIB has sought to keep the fundamentals of the PRO intact, making specific changes under formal change control.

These included the changes introduced by the new Renewables Directive, including new information items on certificates.

The rules themselves were also improved, including: facilities to support Independent Criteria Schemes (including labels); the holding and cancellation of GO by bodies other than authorised issuing bodies; and the addition of consumer information to cancellation statements.

Structurally, the old "chapters" (for RECS, RES GO, Cogen GO etc.) have been merged and schemes have been redefined such that the commonalities have moved to the core of EECS; and the old concepts of chapters and domain schemes have been replaced by that of EECS Products.

What major changes will we see?

The major changes to the old PRO lie in:

- the linkage between EECS certificates and obligatory and voluntary schemes
- the contents of an EECS certificate; the definition of "schemes"
- the introduction of the concept of "EECS Products"
- the treatment of cancellations in one domain for use in another ('ex-domain redemptions')
- the treatment of cancellations by an issuing body other than the Competent Authority for a domain
- the introduction of "Independent Criteria Schemes" and
- the portability of old and new certificates between domains.

The EECS Rules and the PRO have substantial differences, and hence there will be a period of transition between the two.

1) Linkage between EECS certificates and obligatory and voluntary schemes

An issuing body is authorised to administer a mandatory certificate schemes under national legislation. Thus, under EECS, the focus on EU Directives has been de-emphasised. The Directives are used as a "best practice" guide, and their criteria have been applied universally.

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The new EECS® Rules *(continued from previous page)*

For instance, the provisions of the RES and Cogeneration Directives have been extended to other sources of energy – an approach followed by the draft CEN standard for GOs.

Also, EECS is now able to support a variety of different schemes based on national legislation both inside and outside the EU/EEA, and for multiple energies.

The EECS Rules introduce Independent Criteria Schemes - sets of criteria and requirements which have been defined, and are governed, by organisations usually other than AIB and its members, and which requires agreement between the ICS authority and the AIB. Note that AIB continues to operate the RECS scheme on behalf of RECS International; and its own Disclosure GO scheme for fossil and nuclear.

ICSs include voluntary certificates supported by AIB, and other certification schemes cooperating with AIB, which is currently the ICS for RECS certificates on behalf of RECS International.

2) Contents of an EECS GO

The contents of a GO are listed below, with the new items in bold:

- **Medium** *(e.g. electricity)*
- Unique certificate number
- Production start and end dates
- Energy source *(e.g. energy crops)*
- Installation technology *(e.g. CHP)*
- Plant identity, location and capacity
- **Certificate size** *(e.g. 1MWh)*
- Identity and country of issuer *(e.g. Grexel, Finland)*
- **Identity and country of competent body** *(e.g. Fingrid, Finland)*
- **Purpose of certificate** *(e.g. Disclosure)*
- Issue date
- **Applicable Independent Criteria Schemes** *(e.g. RECS)*
- Support received by type *(production and/or investment)*
- CHP information - *use of heat, lower calorific value, primary energy savings and* CO_2
- Nuclear waste

3) Merging chapters & redefining schemes

The current chapters have been consolidated into a single electricity scheme, and a new concept has been introduced: EECS Products, which is similar to the current EECS Schemes, but applies in a defined geographic area.

EECS Products are those certificates which are supported by EECS – one EECS certificate can include more than one type of Product or Purpose.

Electricity Scheme members may only issue EECS Products within their geographic area if they have been authorised to do so; and can import, export and cancel any EECS Certificate for electricity.

4) Conversion from Scheme to Products

While most EECS Products correspond to the current EECS Schemes, there are a few complexities concerning EECS Disclosure GOs such that in Sweden these are GOs for non-renewable electricity under Swedish law; and in Switzerland these are GOs for renewable electricity under Swiss law.

5) Cancellation for use in another domain (Ex-Domain Redemption)

In the past, it was fairly common practice for market parties wishing to avoid transaction costs to cancel (the old word for this was 'redeem') a certificate in one country, and then provide the buyer with a "redemption statement" from the issuing body that cancelled the certificate, as proof that the certificate had indeed been cancelled.

This had a number of disadvantages. There was no proof that the cancellation statement had not been used more than once. The importing authority did not know of the trade, so it could not adjust its residual mix accordingly. Hence trade in cancellation statements prejudiced the reliability of the market.

Consequently, AIB has acted to prevent such trade, unless in the following circumstances:

1. Electronic transfer must be impossible
2. Both exporting and importing issuing bodies must agree in writing to the use of cancellation statements, sending a copy to the AIB Secretariat
3. The exporting issuing body must inform the importing issuing body and the AIB Secretariat of each such use of a cancellation statement.

6) Cancellation by an issuing body other than the Competent Authority for a domain

Where an EECS certificate is cancelled by an issuing body that is not the Competent Authority duly appointed by government, then it must inform the Competent Body of each such cancellation.

7) Introduction of "Independent Criteria Schemes (ICS)"

A new opportunity emerged with the AIB's adoption of the new EECS® Rules, last June: the possibility of registering a brand on an EECS® certificate, thanks to the creation of Independent Criteria Schemes within EECS®.

An ICS is a scheme for the certification of energy which has been established voluntarily by a private organisation (an ICS operator), rather than the national legislative schemes establishing guarantees of origin and support certificates.

The ICS supported currently by AIB is RECS certificates, which are physically virtually identical to GOs, but are issued by private organisations.

For the moment, EECS® certificates can only be issued for electricity, so this will mainly concern the organisations which operate electricity labels.

By being recognised as an ICS, ICS operators can ensure that the EECS® certificates issued for a plant carry, along with mandatory data, information that the associated energy was generated in a plant that meets the criteria for the label - making managing labels much easier and more reliable.

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The new EECS® Rules *(continued from previous page)*

ICS operators will have to inform national issuing bodies of the plants which meet the criteria for their labels: this information will be recorded on all certificates issued for such plants.

The verification of compliance with label criteria will not be part of the duties of the issuing body: this will be the responsibility of the ICS operator.

AIB may, in certain circumstances, grant the right to the ICS operator to include on labels any information outside of mandatory information recorded on all EECS certificates but required to prove compliance with label criteria.

The procedure for registering an ICS, including a standard agreement between AIB and the ICS operator, has yet to be established by the AIB. This is scheduled to be addressed by Workgroup Internal Affairs, and should be ready by the end of this year.

7) Transferability of old and new certificates between domains

Current situation

The current situation is rather complicated. Under the PRO, only the members of a scheme can hold certificates for that scheme.

Thus, Norway (a member of the RES GO and the RECS schemes) can import, export and hold both types of certificate; but Flanders (RES GO scheme member) can only import, export and hold RES GO.

If Norway exports a RECS/RES GO to Flanders, then the exported certificate is no longer a RECS certificate, and can only be treated as a RES GO.

Scheme memberships are listed on the AIB website at http://www.aib-net.org/portal/page/portal/AIB_HOME/AIB_OPE/MARKET_INFORMATION/SCHEME%20MEMBERSHIP.

New Rules

This situation changes on 1st September: all AIB members will be able to import and export all types of EECS certificates to each other member.

This should make certificate trading much more simple, and remove an unnecessary barrier to trade.

8) Transitional issues

Rather than a "big bang" approach, which would have required all registries to adopt the new format simultaneously, with all the risk that this would imply; it was decided that a transitional approach was more secure, and better recognised the different speeds with which members were likely to adopt the new rules. This is illustrated in the diagram below.

The new Hub will come into operation on 1st September 2011; national registries being upgraded to support the new rules between 1st September 2011 and 31st March 2012.

Certificates can continue to be issued in the old format until 31st March 2012, and will remain valid until 31st March 2013, after which they will no longer be supported by AIB.

Certificates will be able to be transferred in the new format from 1st September 2011 (subject to successful testing of the interface between the Hub and the national registry). This transition is one-way: once a member adopts the new format, then it cannot revert to the old format.

Unfortunately, having a transitional period introduces two unwanted side-effects: some data may be lost if a "new" certificate is exported to an "old" registry; and some data may not be present if an "old" certificate is moved to a "new" registry.

Otherwise, new and old format certificates are interchangeable.

For more information about the EECS Rules, contact:

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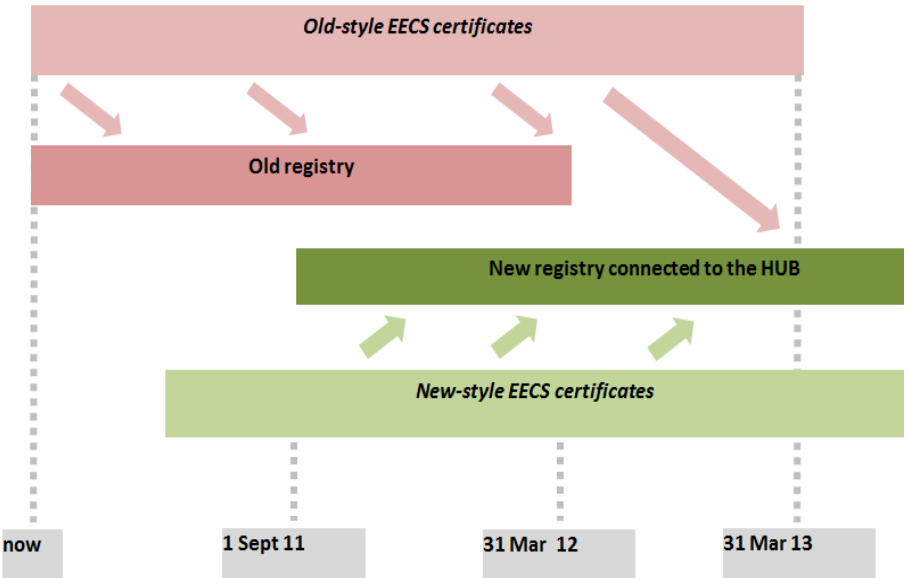

The new AIB HUB
- going live on 1 September 2011 -

Why is the AIB introducing a new Hub?

Certificate trade is international and the exchange of certificates is complicated. It is therefore necessary to update the Hub to handle the increasing challenges accompanying the new EECS Rules and the introduction of Independent Criteria Schemes.

Besides offering the international EECS standard, the AIB also provides a technical infrastructure for exchanging certificates between members: all members communicate with each other, simply by connecting to the HUB.

The HUB is fundamental to the AIB's support of the international certificate market.

As the current HUB will soon be unable to meet the functional demands of AIB, the AIB has decided to replace it with a new HUB, which will support international certificate trade in accordance with the new EECS Rules.

What do you need to know about the transition?

The new HUB is scheduled to go live on 1 September 2011: each local EECS issuing body will be obliged to connect to the new HUB by 31 August 2011 at the latest.

Please note that there will be **no** migration of data between the current Hub and the new HUB.

As the current HUB will cease to operate from 31 August 2011, all transactions must be completed on the current HUB by that date.

To prevent the loss of certificates from accounts, we strongly urge our members to stop using the current Hub from 30 August 2011.

We also ask our members to pass this information on to their account holders, urging them not to export any certificates between 30 and 31 August 2011.

For more information about the Hub, contact:

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- open to non-members of AIB for exchange of GOs from 2012 -

The aim of the AIB has always been to provide a certification system, which will allow the exchange of electricity attributes between market participants across Europe.

The AIB's European Energy Certificate System - EECS® - provides a set of regulations for the operation of the system. It also provides a central telecommunications Hub which acts as a central point of contact for all AIB members.

This Hub allows AIB members to transfer certificates (including guarantees of origin - GOs) between themselves, substantially reducing the effort which would be needed to establish bilateral connections between each party.

For this reason, some of the competent bodies which have been appointed to administer GO schemes, but are not members of the AIB, have expressed interest in using the AIB Hub.

These organisations have various reasons for not joining AIB: for instance, some EU Member States are not able to become AIB members for legal reasons.

However, Directive 2009/28/EC requires reliable exchange of electronic GOs between Member States.

In order to enable non-members to transfer GOs reliably, the AIB has decided to offer use of the Hub to a new user group – the group of "non-members".

Provided they fulfil the specific conditions defined by the AIB, non-members will be able to connect to the central Hub. This will allow them to exchange GOs with the other competent bodies using the Hub, regardless of their membership of the AIB.

The requirements for connecting to the Hub will be mainly of a technical nature (e.g. use of the AIB transfer protocol messaging model, and AIB requirements for registration databases), and may also include some quality checks.

This means that from 2012 all competent bodies that are responsible for GOs and have been accepted by the AIB (including successfully concluding tests of their interface with the Hub) will be able to communicate with all other competent bodies similarly connected, in a reliable and safe manner.

This will help guarantee a first technical level of quality as far as GOs are concerned, and will play a role in their acceptance by other member states.

This clearly represents a huge step forward in the harmonisation of exchanges of GOs throughout Europe.

For more information about non-member use of the Hub, contact:

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Feedback from the Marketplace: Norway

Recently, the AIB interviewed representatives of two Norwegian energy companies:

Niels van der Linden of Statkraft Markets
a developer and producer of electricity;
and
Hans-Petter Kildal, Vice President Sustainability at Bergen Energi AS
an independent provider of services within energy procurement, energy risk management and administrative services

AIB: What kind of effect do you expect the implementation of the Disclosure mechanism to have in your country, and how will it affect the use of RES GOs?

Niels van der Linden: Since 2007, in accordance with the EU Renewables Directive, all energy retail suppliers in Norway must provide information about their fuel mix. The information is based on the fuel mix statistics from previous years, and appears either on customer invoices or by reference to the NVE's web page (see: http://www.nve.no/no/Kraftmarked/Sluttbrukermarkedet/Vare-deklarasjon1/).

Furthermore, Energy Norway has cooperated with several energy companies, energy authorities and the Consumer Ombudsman to develop an industry standard for trading RES GO power contracts. This standard ensures that information and marketing of RES GO power contracts are understandable and in accordance with the framework of current laws and regulations.

The NVE's RES GO statistics show that the share of hydro and wind power in the Norwegian mix has dropped from 82.5% (2007) to 23.6% (2010). This is a result of the export of certificates - the exported volumes have been replaced by an 'undefined' part.

Statkraft strongly recommends that the NVE improves the calculation by further detailing this 'undefined' part, which can be done by replacing the 'undefined' part with the residual mix of those countries to which Norway exported certificates. This is the only way of fulfilling the goal for energy source disclosure: transparent electricity products which raise awareness of what consumers actually consume. This may then stimulate Norwegian demand for renewable electricity products.

Hans Petter Kildal: *The impact of the disclosure mechanism will affect a number of things. In particular, this will increase the focus on the origin of electricity supplies among electricity consumers; and increase debate about the difference between the production mix and the supply mix. It will also stimulate growth in the market for electricity suppliers delivering electricity with Guarantees of Origin (GOs); and increase the revenues of renewable power producers.*

AIB: What impact do governmental and regulatory initiatives have on the Norwegian renewable electricity market?

Linden: The publication of the energy mix described above is clearly a result of Norwegian regulation. So far, this has not led to any changes in behaviour or demand within the country.

Apart from disclosure regulations, many other countries have implemented a support system for renewable electricity. Also, Norway will implement such a system by joining the Swedish electricity certificate market.

As a consequence, Norwegian producers will only export certificates from certain new power plants to countries such as Germany, if consumers pay more. This will lead to reduced availability, or much higher costs, for German ecolabels like OK-Power, or TUEV EE01.

We expect the Elcert support mechanism to increase the production of renewable electricity, possibly leading to lower electricity prices in the Nordic countries.

Kildal: *An el-certificate market is being established from 1st January 2012 in Norway. This market will be linked to the Swedish el-certificate market established in 2003. The ambition is that the common Swedish-Norwegian market will initiate new investments, which will lead to 26,4 TWh of extra electricity production by 2020. To this end, the government has implemented laws which clearly distinguish between el-certificates and GOs: el-certificates are used by a support system which subsidises new investments in renewable power production; while GOs are used by an information system which gives consumers information about the origin of the supplied electricity.*

The government is supporting the development of the disclosure mechanism and the use of GOs. Necessary regulation of the disclosure mechanism and GOs has been implemented in Norwegian law. The legal body for the disclosure mechanism (Norge Vasdrags og Energi direktorat) has implemented a system for presenting national electricity disclosure based on best available data, and has actively supported the development of a harmonised disclosure system in Europe.

The Renewables Directive 2009/28/EC has not yet been implemented in Norwegian law. A delayed implementation could affect the future development of the market for el-certificates and for GOs.

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Feedback from the Marketplace: Norway *(continued from previous page)*

AIB: What is the role of cross-border trading within the EECS system?

Linden: EECS certificates are increasingly traded cross-border; which is an important element of EECS.

Kildal: *From a long-term perspective, cross-border trade is one of the key arguments for having a pan-European system of GOs. Renewable resources are not evenly distributed across Europe, and cross-border trading of GOs allows their comparative advantages to be utilised.*

AIB: In the past, RECS certificates could be used indefinitely. However, the new RES Directive requires RES GO to expire one year after the production of the associated electricity. Is there a market for certificates relating to electricity generated more than a year ago; and what impact do you think these provisions of the new Directive will have upon the market?

Linden: Yes, there are a few markets where the use of old RES GO was possible. However, a small study done by RECS International revealed that in the countries analyzed (Scandinavia and Germany), more than 98% of the RES GO were used within the same year as the production of the corresponding RES GO. We don't expect fundamental changes, but we do think that this measure will make the RES GO market more credible.

Kildal: *Electricity consumers want GOs to relate to the same year as the electricity production. We do not see a large market for certificates older than one year, and find the provisions of the new Renewables Directive to be both rational and relevant to consumers.*

AIB: How could EECS be improved in order to improve the quality of certificates and make the market more transparent?

Linden: We believe that, at present, EECS is not the main concern when it comes to improvements. We had hoped that the 2009 Renewable Directive would have led to improvements in the EU, with respect to aligning systems, timelines and rules. Unfortunately, the opposite seems to be the case - such as in Germany, where the authorities seem to re-invent the wheel rather than implement EECS.

Kildal: *A single certificate database should be implemented across Europe, rather than several national registries; with a harmonised fee structure across Europe. Also, environmental information such as CO_2 emissions and nuclear waste should be included on the certificates.*

AIB: To what extent do you feel that renewable electricity products meet customer needs, and in particular those who are concerned with the environment? Is the market for such products increasing, and is it likely to continue to do so?

Linden: The market for such products is increasing, but the European aspect is also missing here. Currently, high quality renewable electricity products are mainly based on standards of national labels, which do not have a focus on the European market. This is unfortunate, as large corporate customers are looking for a European solution for their European-wide electricity consumption. We hope that labeling organizations will pick up this wish and develop a European label, like the Green-E in the USA.

Kildal: *The market is increasing! But customers need more information from reliable and neutral sources about the system for GOs and electricity disclosure. Customers also want to have more information about the power plants they buy certificates from.*

For customers to find products credible in the future, more information about the power plants and their environmental performance is needed. Environmental data like CO_2 emissions and nuclear waste should be included in the information on the certificates.

AIB: Do you have several renewable electricity products, each reflecting the needs of a different type of customer?

Linden: A large part of our total sold volume is based on "plain" RES GO. Apart from that, we are registered with all European labels (e.g. OK-Power, naturemade, TUEV EE ...) to sell certificates to suppliers in line with the requirements of these labels. In addition, we have created two products for which we ourselves set the standard: Statkraft Pure Energy Plus, and Statkraft Pure Physical Energy. These reflect our large hydro and wind generation capacity, and our experience in cross-border trading and electricity transmission. We strongly believe that traders active in this market should be flexible, and not restrict their activities to standard products.

Kildal: *Bergen Energi is not an electricity supplier. We help electricity suppliers to 'green up' their portfolios. Suppliers that use our services have several different renewable electricity products, each targeting different customer segments. Among the mass-market portfolios, we see products ranging from power-plant specific products, to products claiming to deliver CO_2-free electricity. In deliveries to business customers, we see an increasing trend of tailor-made solutions.*

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The current RES and Cogeneration Directives: how might they be improved?

The RES Directive and the Cogeneration Directive each propose Guarantees of Origin (GOs). These provide evidence of the source and means of production of the underlying energy. The GOs and the energy can be traded separately, so protecting existing physical energy markets and facilitating markets for reliable renewable energy products. However, what is needed now is a common approach for both RES GOs and Cogeneration GOs.

The RES Directive (2009/28/EC)

The new Renewable Energy Directive went live on 25 June 2009; and has been implemented in several EU Member States.

Improvements over last Directive

This Directive introduced some real improvements over the existing Directive 2001/77/EC in the treatment of the transferable electronic guarantees of origin for renewable energy (RES GOs) that it creates. In particular:

- **RES GOs must be cancelled to prove the associated energy has been consumed**
- **Each RES GO represents 1MWh of renewable energy**
- **All RES GOs must be used within a year of the associated production**
- **RES GOs can be issued for heating & cooling**
- **RES GOs now carry extra information (energy source, plant location, "extent" of support and date the plant went into operation).**

These are substantial improvements over the old (2001/77/EC) regime, and the AIB applauds the Commission for instituting them.

However, GOs are also issued for that cogeneration considered highly efficient under the criteria introduced by the Cogeneration Directive (2004/8/EC).

This means that energy produced by highly-efficient cogeneration is subject to the provisions of both Directives. It is important that these do not conflict, and that the objectives of each are supported by the other.

Potential for further improvement

It would be beneficial for a few further changes to be introduced to the RES Directive. This could either be achieved as the result of a successor Directive, or as the result of a Commission decision, and is relevant in the following areas:

1. **Usage of GOs**. The definition of "used" is not clear (does this mean cancellation, association with a specific tariff, declaration to the competent body …?) and has been interpreted in different ways by individual competent bodies.

   In addition, the treatment of used GOs is not clear (are these cancelled immediately upon use, or following declaration to the competent body?).

2. The **definitions** of some data items are not clear:

   - Is **date operational** the initial date when a plant first started to produce; or should this refer to dates of refurbishment or additional capacity?
   - To what degree should **energy source** be detailed?
   - What is the **location** of a production device: its postal address, or its grid location?
   - What is the **"extent" of support**?

     Is this the scheme(s) under which it is (or has been) supported?

     How far back must such information go? Or is it the actual amount of support received – in which case, does one draw the line at the major scheme or two, or should all possible sources of support be included?

     And how much support is conferred in the case of certificates traded at market price?

3. **The relationship between GOs and the EU Emission Trading System** needs consideration, such that the role of GOs becomes more clear; and their treatment more consistent with that of EU-ETS certificates.

4. **Biogas.** It is not clear how this might be used for transport. Further, there is scope for double-counting within heating and cooling.

The Cogeneration Directive (2004/8/EC)

This Directive is also live, and implemented in a number of member states.

The Commission is currently considering how to revise the Directive to correct some of its shortcomings and support the Energy Efficiency Action plan. The proposed Directive on Energy Efficiency and the impact assessment is at: http://ec.europa.eu/energy/efficiency/eed/eed_en.htm.

From the perspective of GOs, items requiring attention are:

- **Adoption of a similar approach for Cogeneration GOs to that for RES GOs, introduced by the RES Directive 2009/28/EC**
- **Resolution of issues outstanding from 2004/8/EC**
- **A single GO for both RES and high-efficiency cogeneration**
- **Distinction between GOs and exchangeable certificates**
- **A single issuer of GOs for both RES and high-efficiency cogeneration.**

These are each considered in the following paragraphs.

Adoption of a similar approach for both CHP GOs and RES GOs

The provisions for GOs are similar in the old RES Directive (2001/77/EC) and the current Cogeneration Directive (2004/8/EC).

... continued on next page ...

The current RES and Cogeneration Directives: how might they be improved? *(... continued from previous page)*

To better align the provisions of EU legislation relating to RES and Cogeneration, the provisions for RES GOs introduced by Directive 2009/28/EC should be introduced for cogeneration GOs in the new Cogeneration Directive.

Resolve issues outstanding from Directive 2004/8/EC

The existing Cogeneration Directive, along with its annexes and guidelines, leaves a number of issues unresolved or ambiguous.

In order to resolve these and to assist competent bodies across Europe, the AIB developed a model which interpreted a number of issues arising out of the Guidelines. In doing so, we consulted relevant stakeholders: Cogen Europe, Euro Heat & Power, RECS International and the EU Commission.

The approach that we adopted to resolve the ambiguities and unresolved issues was as follows:

- The overall Primary Energy Saving test ("**the PES test**") was adapted so that the Primary Energy Saving is an information item on a Cogeneration GO: it is not mandatory for a plant to pass this test, for it to be eligible for GOs. The test is based on operational data from a reporting period, rather than over the preceding 12 months.
- **Power-to-heat ratio** is calculated, instead of this being an input field. It is based on measured values and 15% unavoidable heat losses, which actually strengthens the Commission Decision and minimises implementation costs for issuing bodies.
- Useful steam output is corrected for **returned condensate**. The Commission is not prescriptive in this matter, which prevents harmonisation of Cogeneration GO.
- The guidelines do not say what should be done when a cogeneration installation produces **more than one type of heat**. The AIB model uses the predominant heat type, and only affects the number of GOs when Primary Energy Savings approaches 10%.
- Cogeneration installations that feed into **more than one grid level** are treated in a similar manner to cogeneration installations supplying more than one type of heat.
- The guidelines do not say whether **heat for drying biomass or producing biogas** is useful heat: the AIB model considers these to be useful heat.
- The guidelines do not say whether to **annual or monthly average temperature** should be used where the reporting period is one month. The AIB model allows either.

In developing its new legislation, the Commission is encouraged to consider these pragmatic solutions, which will help to harmonise the market.

Possible areas for additional change include:

- **Demand**. No international demand exists at the moment. For Cogeneration GOs to be effective, strong demand for them needs to be stimulated by Member States in a similar manner to the growing demand for RES GOs.
- **Reference values** required protracted and difficult debate during the drafting of Directive 2004/8/EC, and should therefore be revisited with care.

Single GO for both RES and high-efficiency cogeneration

Adopting the above proposals, in particular harmonisation of the treatment of High-Efficiency Cogeneration and RES, and adoption of common information on RES GOs and Cogeneration GOs, will undoubtedly benefit the treatment of biomass used in high-efficiency cogeneration.

It will also increase the efficiency of competent bodies, by allowing them to consolidate their internal systems and procedures.

Distinction between GOs and exchangeable certificates

The nature of GOs, and in particular the ability to distinguish them from "exchangeable certificates" , needs clarification. The Cogeneration Directive says (preamble 22): "*It is important to distinguish guarantees of origin clearly from exchangeable certificates*" - which helps, but is nowhere near as explicit as that in the RES Directive, which (among other clarifying provisions) requires "*It is important to distinguish between green certificates used for support schemes and guarantees of origin*". It is important that both Directives clearly prescribe:

1. who can use a GO (suppliers, producers, consumers ...);
2. that GOs are exchangeable separate to the associated energy; and
3. whether such GOs might be used within support schemes in addition to their role for energy source disclosure purposes.

Single issuer of GOs for RES and high-efficiency cogeneration

In the same way as the RES Directive requires the appointment of a single competent body for each region / country; so a single competent body should be appointed for both high-efficiency cogeneration and RES.

This will promote a coherent market, with no overlaps or scope for double-use of GOs, and is particularly relevant to highly-efficient cogeneration from biomass.

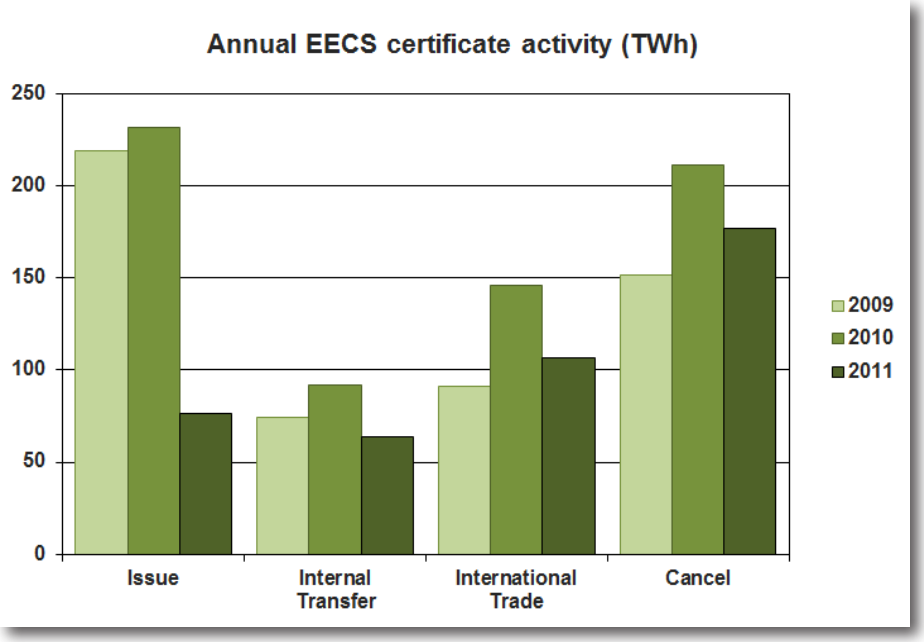
Summary of Activity

Over the past year market activity has continued to increase.

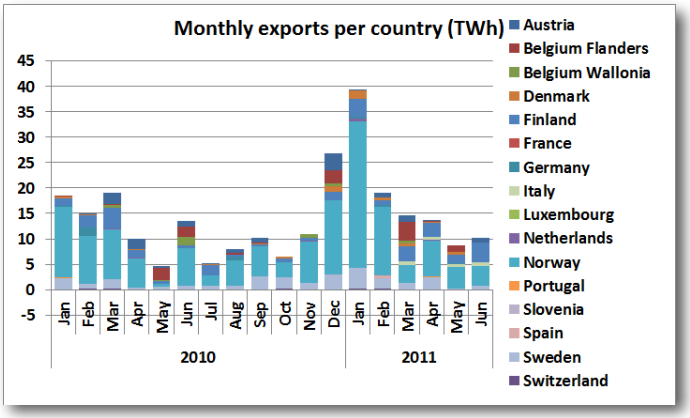
Unexpectedly, the number of certificates issued continues to rise, despite lower reservoir levels.

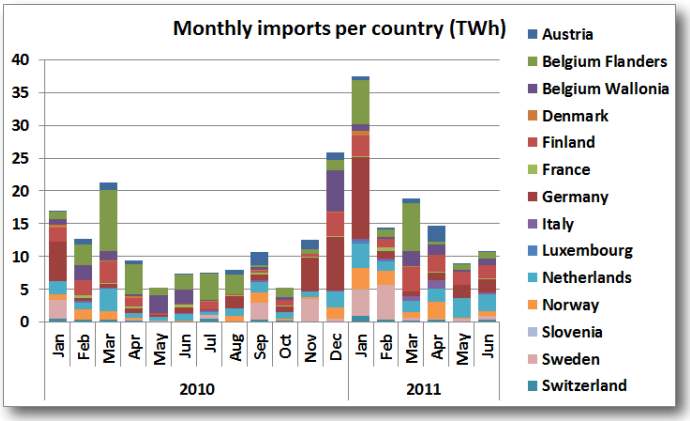
Certificates are increasingly used by suppliers to prove the source of electricity, and this has again led to significant increases in internal trade and cancellation: indeed, cancellations in 2010 were 40% higher than in 2009, and look like being higher still in 2011.

This means that more and more certificates are finding a value. Now that almost all activity figures have now been collected for 2010, we can see that the number of certificates cancelled was 97% of the number produced in 2009, compared with 69% the previous year, and a fairly constant 52% over the preceding five years.



International Trade





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 and Belgium continues to make their presence felt.

Regarding imports, these continue to be dominated by Belgium, followed by Germany and the Netherlands; while other countries play a lesser part.

Some countries (Norway, Denmark and Sweden) figure in both exports and imports, suggesting trading activity.

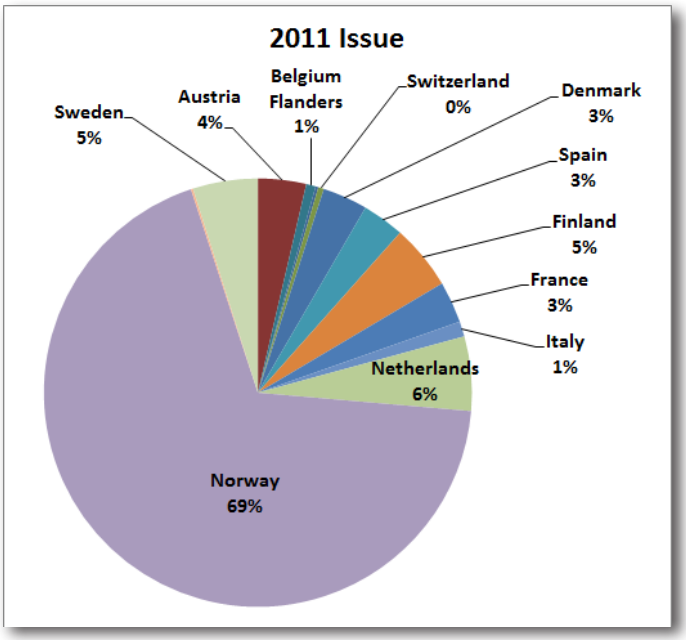
Other trade exists in the form of the cancellation of certificates in one country for use in another: the new EECS Rules will discourage this, except where the affected report provide such information for inclusion in this report (this accounts for about ten percent of cancellations).

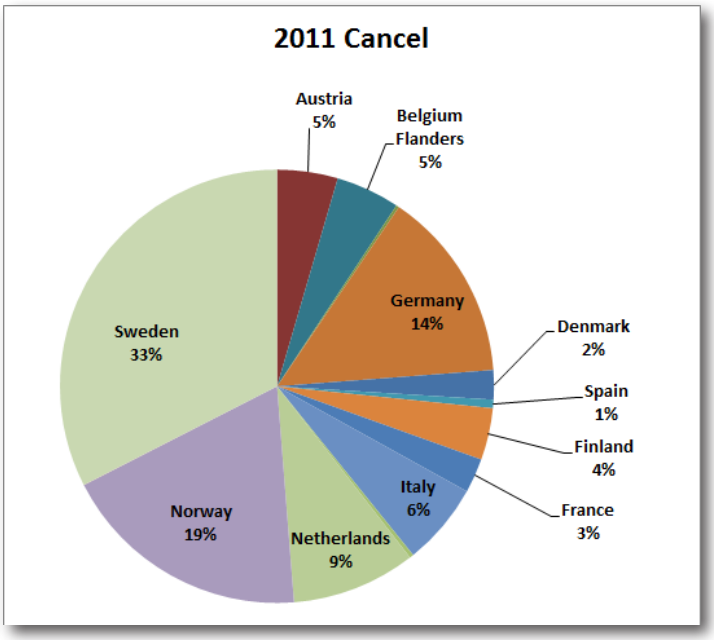
Analysis by Country

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

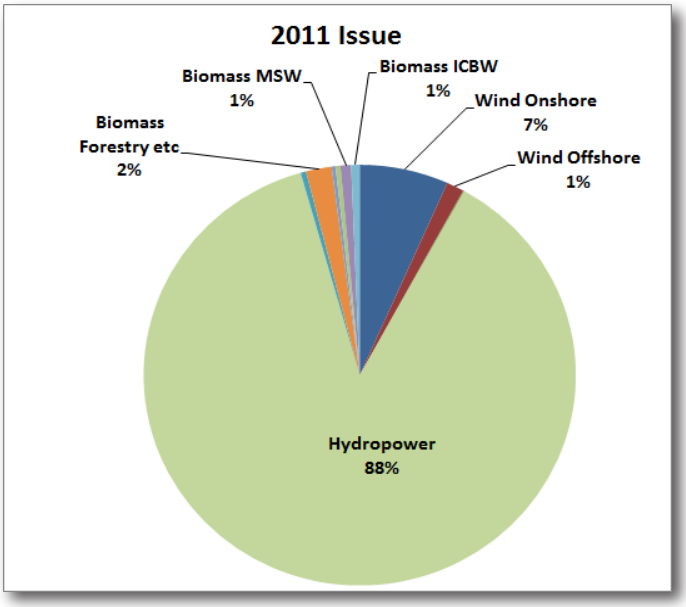
Again, these charts show the large role that the Nordic region has in this market, and the interest in renewable products elsewhere in Europe, in particular Germany, Benelux and Italy.

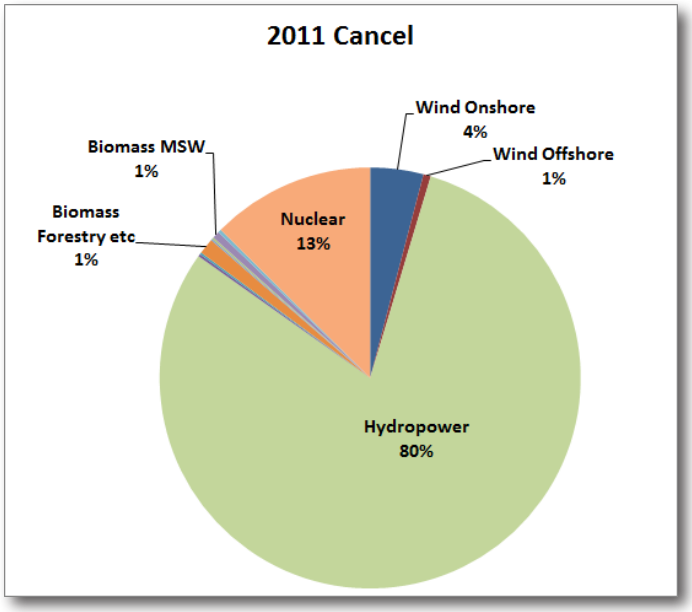
They demonstrate the continued flow of certificates from the Nordic region to the Netherlands, Belgium, Germany, France and Italy.





Hydropower remains by far the prevalent renewable energy source, followed by onshore wind and biomass.





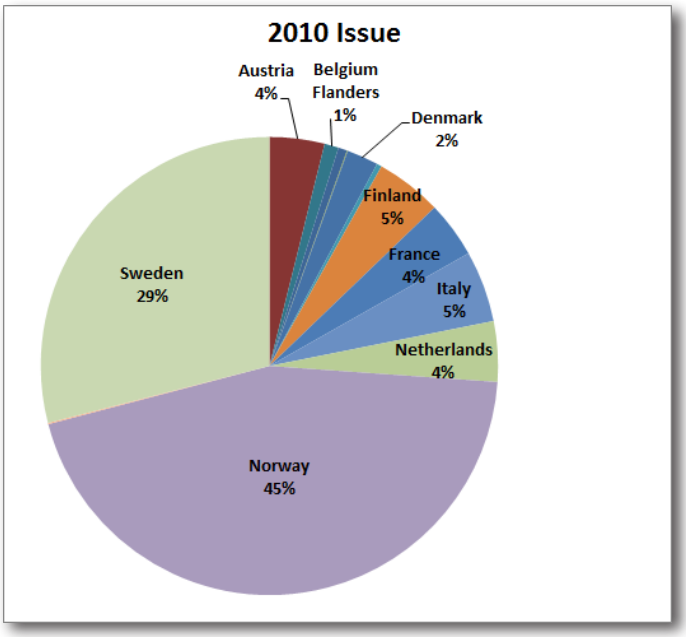
Detailed national activity can be found by going to the AIB website at:
http://www.aib-net.org/portal/page/portal/AIB_HOME/AIB_OPE/MARKET_INFORMATION/MARKET_ACTIVITY.

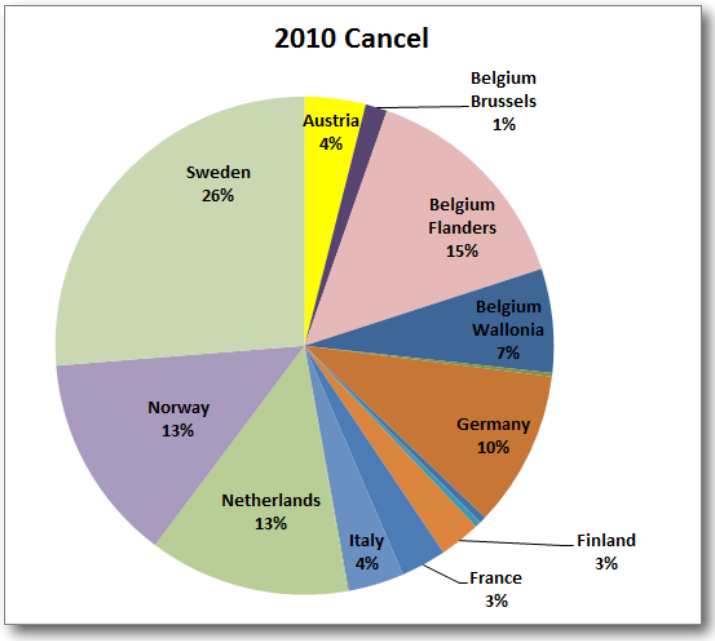
Analysis by Country

The pie charts on this page show the certificates issued and cancelled last year, in summary: almost all data from 2010 having now been collected.

These charts clearly demonstrate the large role that the Nordic region had in this market, where it is mandatory to use GO as proof of renewable supply; and the rising interest in renewable products elsewhere in Europe, in particular Germany and Belgium.

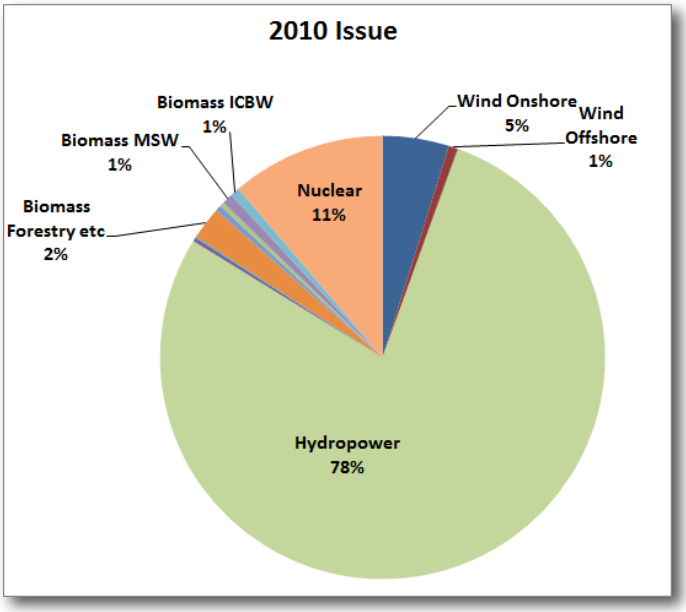
They also demonstrate where certificates come from; and where they eventually end up: originating mostly from the Nordic region, they travel to the Netherlands, Belgium, Germany, France and Italy.

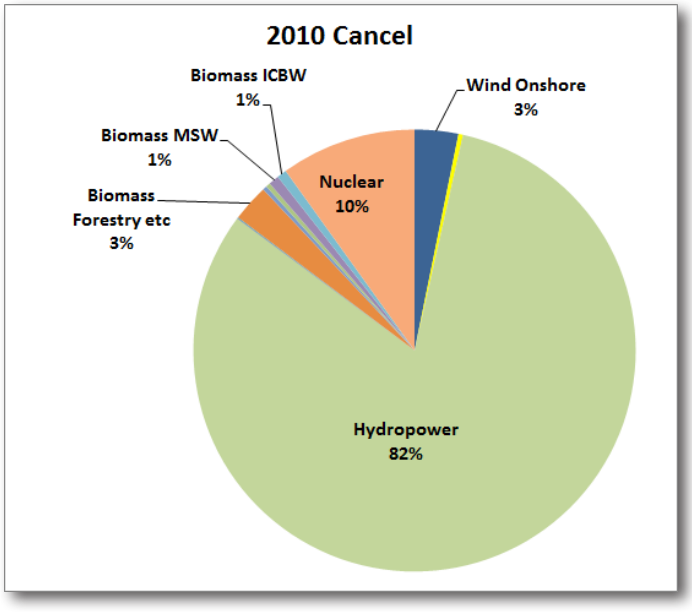


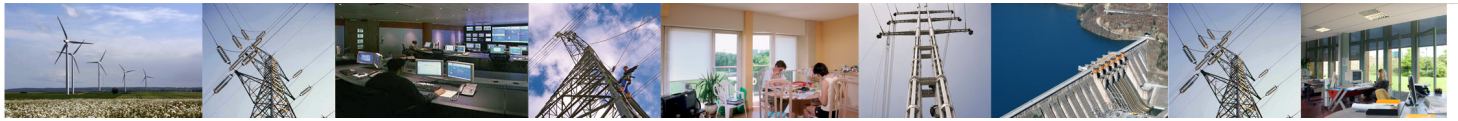


From the perspective of energy sources, a different picture emerges.

Hydropower remains by far the prevalent renewable energy source, followed by onshore wind and biomass; while nuclear power provides the major contribution of the non-renewable energies.







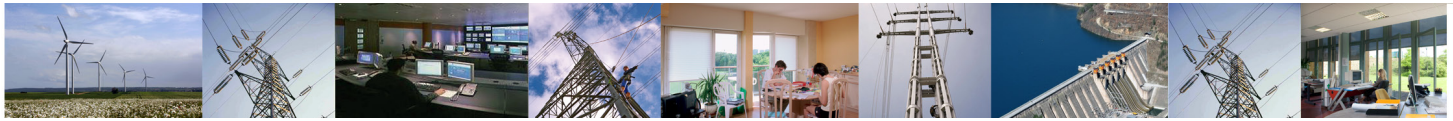
EUROPEAN ACTIVITY

The Raw Data - by Country - as at July 2011

	TOTAL					2011					2010				
	Issued	Transferred			Cancelled	Issued	Transferred			Cancelled	Issued	Transferred			Cancelled
		Internal	Export	Import			Internal	Export	Import			Internal	Export	Import	
Austria	25,608,288	20,286,136	16,586,653	48,349,408	36,350,609	2,766,609	5,344,292	3,617,522	4,456,399	8,006,414	9,006,277	8,215,776	10,736,277	8,670,451	8,361,540
Belgium Brussels	5,094	881		3,146,332	3,067,920						2,544	881		3,048,468	2,970,056
Belgium Flanders	9,413,968	26,972,878	13,648,949	93,264,886	58,389,165	549,639	8,946,985	4,899,629	17,256,247	8,437,436	2,327,721	13,896,405	8,110,881	32,517,562	30,967,920
Belg & Lux RECS	113,390			2,031,496	2,048,355										
Belgium Wallonia	2,607,591	5,347,738	3,990,066	31,824,195	20,338,733	160,366	508,669	317,326	6,310,595		1,449,228	2,890,492	3,414,676	17,299,050	14,244,642
Switzerland	3,631,590	102,015	4,461,130	8,433,055	4,324,238	323,164		626,158	2,120,773	373,845	139,675		1,009,858	2,723,987	500,319
Germany	69,252	24,525,674	5,138,514	91,234,691	77,979,180		5,398,004	1,005,779	20,330,377	25,348,221		10,385,055	2,841,972	25,871,549	21,420,979
Denmark	15,885,670	3,437,495	10,669,016	4,128,636	5,962,181	2,590,364	1,879,130	3,621,174	1,096,874	3,874,843	5,168,116	974,379	2,442,046	1,240,885	921,875
Spain	9,132,913		2,092,118	2	5,626,989	2,419,519		662,302	1	1,108,593	822,027				822,027
Finland	79,565,428	12,116,535	76,133,022	48,088,036	28,070,615	3,748,594	3,095,078	15,930,599	15,381,835	6,855,204	10,876,863	2,772,021	16,082,485	16,072,143	5,612,628
France	23,157,151	6,805,664	272,415	17,269,454	31,567,505	2,383,012	688,889	107,250	880,974	4,560,433	9,207,109	1,051,210	17,109	2,109,010	6,225,743
Ireland	162,414		10,001												
Italy	31,877,045	10,196,550	2,280,472	4,489,381	29,834,483	872,160	2,762,394	2,280,472	2,878,439	10,894,675	11,693,754	4,374,934		1,254,838	7,670,751
Luxembourg		3,000	43,746	748,909	701,224		3,000	23,830	535,202	514,365			19,916	213,707	186,859
Netherlands	56,883,290	35,673,495	3,575,640	106,097,547	143,906,733	4,271,801	5,768,217	924,839	14,528,813	16,392,992	9,879,342	7,653,900	416,963	16,002,278	27,450,124
Norway	511,689,876	158,013,617	298,064,265	23,889,796	138,967,903	52,210,373	29,197,756	62,712,831	10,116,214	33,166,619	103,925,208	37,873,703	85,524,565	8,877,070	28,514,371
Portugal	927,673		187,001	7	37,746	119,053		162,000		17,696	211,099		25,000	7	8,894
Sweden	293,850,473	9,323,844	81,776,105	51,617,798	227,880,081	3,740,284	482,063	10,749,283	10,966,386	57,612,770	67,270,258	2,041,814	17,158,469	10,259,752	55,512,661
Slovenia	4,002,666		668,003	117,017	1,927,200			100,000	100,001				100,000		35,652
Total	1,068,673,930	312,805,522	519,597,116	534,730,646	816,980,860	76,154,938	64,074,477	107,740,994	106,959,130	177,164,106	231,979,221	92,130,570	147,900,217	146,160,757	211,427,041

NOTE

All certificates are 1MWh. As metering data is the basis for issuing certificates, there is always delay in gaining accurate statistics for a particular month, so the most recent quarter is understated and corresponding information should be treated with care. International trade statistics continue to be misleading due to the practice of cancelling certificates in one country and transferring the renewable benefit over national borders by means of cancellation statements rather than via electronic certificate transfer; however, this will be addressed by the new EECS Rules, requiring such "transfers" to be notified to the issuing body of the "importing" country..



The Raw Data - by Energy Source - as at July 2011

	TOTAL					2011					2010				
	Issued	Transfer			Cancelled	Issued	Transferred			Cancelled	Issued	Transfer			Cancelled
		Internal	Export	Import			Internal	Export	Import			Internal	Export	Import	
Onshore wind	49,429,532	16,526,530	21,790,543	22,124,381	34,269,381	5,063,374	3,323,670	8,482,916	7,959,438	7,227,408	11,204,780	3,855,761	4,449,199	3,947,778	6,743,760
Offshore wind	4,352,652	2,317,802	254,737	161,458	2,543,259	995,631	1,503,131	123,223	99,603	1,001,835	1,506,743	323,131	51,185	46,183	701,046
Photovoltaic	263,220	104,859	146	11,719	63,101	70,652	51,600	110	11,709	13,647	136,562	39,698	26		30,223
Thermal	6				6					1					1
Hydropower	854,130,947	262,906,452	480,887,525	496,055,743	654,928,663	66,663,061	53,401,876	97,132,378	96,825,719	142,022,032	181,557,618	76,417,637	142,232,914	141,004,039	172,637,347
Onshore tidal															
Offshore tidal															
Onshore wave															
Offshore wave															
Geothermal	2,198,453	212,502			1,228,231					338,912	600,349				63,742
Energy crops	2,070,450	725,884	401,593	490,646	789,855	311,528	210,698	361,727	450,780	261,866	273,237	262,304	3,776	3,776	152,527
Forestry etc	48,177,983	17,274,404	14,899,801	14,580,235	38,452,040	1,463,319	3,552,969	1,362,180	1,341,357	2,149,886	5,512,630	5,990,057	1,106,461	1,090,416	5,725,485
Landfill gas	3,136,649	1,851,159	47,255	97,278	1,783,421	219,954	259,791	19,958	19,957	202,655	1,015,447	943,181	8,033	8,033	652,177
Sewage gas	36,205		3,393	3,393	35,577										
Other biogas	2,661,776	1,731,698	69,137	69,572	1,584,357	280,580	302,584	42,716	42,716	249,667	739,303	1,002,922	20,703	24,196	684,456
MSW	9,895,155	3,161,503	713,582	638,530	7,256,164	604,721	382,963	152,004	152,004	981,115	1,796,735	833,904	509	908	1,595,693
IB&CW	11,084,293	5,992,729	529,402	497,689	8,207,864	482,118	1,085,195	63,782	55,847	442,459	1,592,482	2,461,975	27,409	35,426	1,495,903
Nuclear	81,232,969		2	2	65,835,301					22,272,623	26,043,335		2	2	20,944,681
Fossil	3,640				3,640										
Total	1,068,673,930	312,805,522	519,597,116	534,730,646	816,980,860	76,154,938	64,074,477	107,740,994	106,959,130	177,164,106	231,979,221	92,130,570	147,900,217	146,160,757	211,427,041

NOTE

The tables above display issue and cancellation statistics for the last two years, and for 2001-11 in total. These show that volumes issued are growing less quickly than in the past, but that volumes transferred and cancelled continue to increase at a greater rate than in previous years.

The leading enabler of
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FORTHCOMING EVENTS

2011

23 September	Amsterdam	AIB General Meeting
08-09 December	Switzerland (?)	AIB General Meeting

2012

15/16 March	Berlin	AIB General Meeting
24/25 June	Helsinki	AIB General Meeting
23/24 September	Paris	AIB General Meeting
06/07 December	Rome	AIB General Meeting

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