The RES Directive

A sound Guarantee of Origin (GO) market - key to a well-functioning competitive Internal Energy Market - will be implemented by the new Directive 2009/28/EC, which is due to be published on 5th June 2009 and will go live 20 days afterwards. The AIB has long championed this initiative, calling for:
- electronic transferable GOs
- separate energy & virtual GO markets
- cancellation of GO as proof of consumption of the associated energy
- the use of GO to facilitate disclosure.

The Directive contains all of this, and is a major improvement over the existing Directive 2001/77/EC.

The AIB is now reviewing the provisions of the new RES Directive, and adjusting the European Energy Certificate System (EECS) to support the new Directive, as well as expanding its scope to address other energies such as heating and cooling, and biogas.

Statistics update

(All figures 1MWh certificates)

Since 2001:
- ISSUED: 574 million
- TRANSFERRED: 224 million
- CANCELLED: 330 million

In 2008:
- ISSUED: 184 million
- TRANSFERRED: 95 million
- CANCELLED: 111 million

In 2009:
- ISSUED: 61 million
- TRANSFERRED: 34 million
- CANCELLED: 54 million

Events of note during the first quarter of 2009 were:
- Issue of the first Disclosure-GO certificates for fossil and nuclear electricity

AIB Statistics

European activity

<table>
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<th>Country</th>
<th>2009 events</th>
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<td>Switzerland</td>
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Inside this issue:
The EU-Commission has recently faced a number of challenges in preparing the energy package, and in particular the new renewables Directive, which seeks to promote RES electricity and increase the share of renewable energy sources contributing to electricity production in the EU.

Guarantees of origin (GO) support the achievement of this by providing an electronic document that ensures that the origin of electricity produced from renewable energy sources can be guaranteed as such, and have 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.

On 25 June 2009, the Association of Issuing Bodies (AlB) is organising a workshop in Brussels to create a forum for discussion and action on topics related to disclosure of electricity in the Internal Energy Market; and by extension the relationship between all forms of transferable certificates and support schemes.

Who should attend?

Attendees at the GRC will include competent bodies from EU, ECSEE and EEA countries for regulation and control of electricity disclosure and GOs for electricity from renewable energy sources and high-efficiency cogeneration. Also, AlB members will attend. It is possible that future meetings will also include bodies in charge of regulation and control of other types of energy certificates, such as GO for RES heat & cooling and biogas.

The GRC will meet once or twice a year, and elaboration of specific action points could be delegated to Task Forces, as appropriate. Discussion points for this meeting will include:

1. Redesign and harmonisation of disclosure

Several Member States (MS) have not complied with the provisions for disclosure under Directive 2003/54 concerning disclosure, while the implementation in compliant Member States could be improved and further aligned. The new RES Directive clearly defines the GO as having disclosure as its sole purpose. Consequently, most MS will need to revise their legislation on disclosure.

2. Calculation of residual mix

A residual mix is currently calculated in a minority of the MS. Many others use uncorrected statistical data for disclosure purposes, which leads to double-counting of electricity attributes. The methodological principles underlying this calculation are not always clear to the consumer, and differ from one MS to another. Further, the anonymous transfer of energy via power exchanges adds to the complexity of the calculation of a residual mix.

A reliable residual mix calculation must be based on consistent use of data, related to energy transfers and transfers of GO between MS. A harmonised approach with respect to residual mix calculation can avoid double counting and discussions between MS.

3. Prevention of double counting

The new RES Directive emphasises the uniqueness and reliability of the GO. Transparent description, harmonisation and review and audit of procedures are needed to guarantee conclusive proof to the consumer of the source of energy. Other types of disclosure instruments should be aligned with the GO.

4. Trade

Standardisation fosters trade, and therefore improves market functioning. With respect to support and targets, trade within the context of the cooperation mechanisms proposed by the RES Directive can help MS to reach their targets in a cost-efficient manner.

5. Possible future extension of scope towards relationship with support certificates

6. Relation with Markets

AlB has agreed to chair a separate Committee with market participants on a regular basis.

Registration

Attendance at this workshop is free for governmental officials and regulators.

Please register before 12 June 2009 in writing to the Secretary General of the AlB, at the following address:

Association of Issuing Bodies
21/23 Station Road
Gerrards Cross
Bucks SL9 8ES
United Kingdom
Tel: +44 (0)1494 681183
Fax: +44 (0)1494 681183
Email: info@aib-net.org
MEMBERSHIP

Luxembourg is currently seeking membership; while Croatia is developing an EECS-compliant GO system.

MARKET ACTIVITY

National summary (2009)

The market continues to grow rapidly, major certificate issuing countries remaining Norway (which has issued 66% of certificates this year) and Sweden, then the Netherlands and Finland. Regarding cancellations, Norway, Germany, the Netherlands and Sweden cancel the most certificates. The largest exporters are Norway, Sweden and Finland; while major importers are now Flanders, Germany, Sweden and the Netherlands.

Of these, 57% of all certificates issued since 2002 have been cancelled.

Technology / energy sources

Hydropower now provides 93% of issued certificates; while wind power contributes 4%. Most cancellations (91%) are for hydropower (and to a far lesser extent wind and biomass).

Since 2008, Disclosure-GO certificates have been issued for nuclear and fossil electricity, in the following proportions:

MEMBER ACTIVITY

BENELUX

Brussels has registered many auto-consumed PV production devices, producing about 100MWh per quarter but increasing.

Flemish issuing activity was similar to last year, along with imports and cancellation.

Wallonia has commenced international trade and expects to commence issuing soon.

Dutch cancellation continues to increase, while issuing is the same and trading is down on previous years. The Netherlands is a major market for Nordic EECS certificates.

NORDIC / NORTH EUROPEAN

Norwegian activity continues at a far higher rate than before, some increases in trade perhaps being linked, explaining the relative increase in trading activity.

Since early 2009, Finland continues to issue and trade at near previous rates. However, cancellation has increased markedly.

Cancellation and import increases such that Danish activity is now much higher.

Sweden issues, trades and cancels more certificates than before. It also issues Disclosure-GO for nuclear electricity, some 27 million certificates being issued in December for 2008 electricity, of which 22 million were cancelled recently.

Ireland is now considering implementing transferable GO.

MEDITERRANEAN / SOUTH EUROPEAN

The French market continues to grow in most areas, imports and cancellations being much higher since 2008.

Issuing grows in Italy, as does cancellation of RECS certificates, as Italy commences importing for the first time. Last year, Italy also issued 3.3 million non-EECS RES GO, and is discussing a decree improving RES GO and disclosure.

Since resuming operations at the start of 2009, the Spanish domain has seen relatively high activity levels. It remains to be seen whether these will be sustained, or whether this is simply clearing the backlog left over from 2008.

Portugal continues to issue a small number of certificates, but has otherwise been inactive.

CENTRAL EUROPE

Austria has virtually ceased issuing, although it has recently started to trade more.

Issuing virtually ceased in Germany last year, apart from the issue of landfill gas, and methane certificates - the first fossil fuel Disclosure GO to be issued. Import, export and cancellation have increased, the rapid increase in imports and cancellations being due to demand for 100% RES-E.

Swiss activity continues to rise. AIB has accepted Swissgrid into the Disclosure GO scheme: RES GO will now be eligible as Disclosure GO (not vice versa).

Slovenia has cancelled a few certificates this year, but has otherwise been inactive.
### THE RAW DATA - BY COUNTRY

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**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.
The tables above display issue and cancellation statistics for each year to date, and for 2001-8 in total. These, and the following charts, show that volumes issued, transferred and cancelled continue to increase at a far greater rate — more than double — during 2007 and 2008 than in previous years.
Source of certificates: country

Comparing 2009 with 2008, the major certificate issuing countries remain Norway and Sweden, then Finland and the Netherlands; with Norway continuing to increase its share.

Source of certificates: technology

Hydropower has increased its predominant position; most other technologies having virtually ceased to contribute; although wind power and biomass still contribute 3% and 4% respectively.

Destination of certificates: country

Norway, Germany, Finland, France and Spain have continued to increase their share of cancellations, principally at the expense of the Netherlands and Flanders.

Cancelled certificates: technology

Again comparing 2008 with 2009, but this time for cancelled certificates by technology, hydro has held its market share along with wind, at the expense of other technologies.

Realisation of value

The proportion of certificates that were cancelled has again risen to over 57% overall, but during 2009 it is 88% (up from 60% in 2008), as large numbers of guarantees of origin are cancelled as evidence for disclosure purposes. Interestingly, it appears that most certificates are now cancelled within 12 months of the production of the associated electricity.
Cumulative issue and cancellation

Overall, issuing and cancellation continue to increase rapidly as guarantees of origin are increasingly used for disclosure across Europe. The volume of hydro issued and cancelled continues to eclipse everything else (except wind and forestry).

Growth

Last year, 111 million certificates were cancelled; and it looks likely that this will be easily exceeded in 2009.

Rolling three month averages show that the market continues to grow at a cyclical and increasing rate.
Technology Contribution

Analysis of energy sources shows that significant growth in hydropower certificates is not wholly matched by the market for these certificates – although around 93% of certificates issued this year are for hydropower, only 91% of the cancelled certificates are, so demand for other forms of certificate (wind and biomass) is proportionally higher.

Also of note is the recent appearance of nuclear Disclosure-GO certificates (and fossil, in the form of methane - but these volumes are too small to see).

The predominance of hydro - and the emergence of nuclear - masks the growth of the renewable electricity market. Removing hydro and nuclear from the picture exposes the growth in wind power, at cost to biomass.
TRADE

The following graphs summarise monthly issuing and cancellation, clearly showing the influence on international trade of the producing countries – Norway, Sweden, Finland and the Netherlands; and of the consuming countries – Flanders, Sweden, Norway, Germany and the Netherlands.

Exports and imports

The largest exporters remain Norway (by far), then Sweden and Finland; while Flanders, Germany, Sweden and the Netherlands are the major importers.

NATIONAL PARTICIPATION

Membership continues to grow, with Spain now having been readmitted as a member of the RECS scheme, via its issuing body, GCC.

The Ljubljana General Meeting extended membership of the GoO RES-E scheme for countries wishing to issue support certificates as well as GoO RES-E. As a result, Brussels, Flanders, Wallonia, Finland, Norway and Sweden can now exchange GoO RES-E together.
Issuing, international transfers and cancellation have all continued to grow increasingly, at a rate unmatched in previous years—in fact, activity in most areas is close to twice that of 2007.

This has been driven by the Nordic countries and Belgium requiring the cancellation of guarantees of origin as evidence for disclosure purposes, and by increasing public interest from Austria, Belgium and Germany for similar reasons.
COUNTRY REPORTS

Country report: Austria

Austria has virtually ceased issuing, although it has recently started to trade more.

For more information, contact:
Christian Schönbauer
E-Control (Issuing body for Austria)
Tel: +43 (1) 24724 707
Email: christian.schoenbauer@e-control.at
Brugel has registered a substantial number of accounts and production devices, most of which relate to photovoltaic production which is fully auto-consumed by producers. For the moment, this only represents about 100 MWh per quarter, but it is increasing fast and will be reported in the next newsletter.

For more information, contact:
Pascal Misselyn
Brugel (Issuing body for Brussels)
Tel: +32 (2) 563 0202
Email: pmisselyn@brugel.irisnet.be
Country report: Belgium (Flanders)

So far, issuing activity has been similar to last year, along with imports and cancellation.

For more information, contact:
Thierry van Craenenbroeck
VREG (Issuing body for Flanders)
Tel: +32 (0) 2 553 13 59
Email: thierry.vanbraenenbroeck@vreg.be
CWaPE has commenced international trade of GO, and expects to commence issuing in the very near future.
Country report: Denmark

Cancellation and import is now increasing to the extent that Danish activity in these areas is now running much higher than in previous years.

For more information, contact:
Louise Rønne
Energinet.dk (Issuing body for Denmark)
Tel: +45 7622 4439
Email: lro@energinet.dk
Country report: Finland

Since the start of 2009, Finland has continued to issue and trade internationally at close to previous rates. However, cancellation has increased markedly.

For more information, contact:
Marko Lehtovaara
Grexel (issuing body for Finland)
Tel: +358 (9) 251 22211
Email: marko.lehtovaara@grexel.com
The French market continues to grow, with higher issued, exported and redeemed certificates than in previous years.

The high levels of import and cancellation reported in 2007 were linked to once-off transactions, and unlikely to be repeated in the foreseeable future. However, imports and cancellations are considerably higher than in the years prior to 2007.
During 2008, issuing virtually ceased, apart from the issue of some landfill gas and methane certificates in December - the latter being the first fossil fuel Disclosure-GO to be issued within EECS.

The import, export and cancellation of increasing numbers of certificates have continued at a much higher rate than previous years. The rapid increase in imports and cancellations seems to be due to increasing numbers of consumers and suppliers switching to supply of 100% renewable electricity.

Germany changed registry in December 2008, and details of activity prior to this point was retained on the old registry (LogActiv), which is no longer accessible over the internet.
Country report: Ireland

Following the commencement of the Single Electricity Market (both Northern Ireland and the Republic of Ireland) late in 2007, Ireland is considering what it has to set up under the RE and CHP Directives on GoO. However, the competent body has still yet to be appointed and delay is anticipated until the new RES Directive has been enacted.

Issuing ceased in autumn, and no trade or cancellation took place during 2008. That being said, Ireland remains a member, and further activity is anticipated for 2009.

For more information, contact:
Edmund Everson
GCC (Issuing body for Ireland)
Tel: +44 7941 236053
E-mail: ed_everson@green-certificates.co.uk
Country report: Italy

Domestic issuing continues to grow in Italy, but major growth has been experienced in cancellation of RECS certificates, some of these originating from other countries, as Italy commences importing for the first time.

During 2008, Italy issued 7 million certificates, making it the fifth largest issuer. The proportion of certificates redeemed (3.8%) is also the fifth highest.

During 2008, Italy also issued 3.3 million RES GO (3.3 TWh) outside of EECS - these RES GO are understood not to be redeemable, and are transferred outside of the scope of the GSE system. As a result, a decree providing improved implementation of RES GO and disclosure is under discussion.

For more information, contact:
Natascia Falcucci
GSE (Issuing body for Italy)
Tel: +39 (06) 8011 4827
E-mail: natascia.falcucci@gse.it
Country report: The Netherlands

During 2009, cancellation has continued to increase, while issuing follows earlier trends and trading down on previous years.

The Netherlands continue to be one of the major markets for EECS certificates, which mostly originate from the Nordic countries.

For more information, contact:
Gineke van Dijk
CertiQ (Issuing body for Netherlands)
Tel: +31 (26) 373 1754
E-mail: g.v.dijk@certiq.nl
Country report: Norway

Norway has continued to issue, import, export and cancel certificates at a far higher rate than ever before, continuing the increase following the 2007 changes to legislation requiring evidence of the consumption of renewable energy to be provided by means of the cancellation of guarantees of origin.

Some of the increases in imports and exports may be linked, perhaps explaining the relative increase in trading activity.

For more information, contact:
Tor Bjarne Heiberg
Statnett (Issuing body for Norway)
Tel: +47 (2252) 7573
E-mail: tor.heiberg@statnett.no
Country report: Portugal

Portugal continues to issue a small number of certificates, but apart from that has been inactive.

There has been no international trade other than some tests.

For more information, contact:
Pedro Cabral
REN (Issuing body for Portugal)
Tel: +351 (220) 012 416
E-mail: pedro.cabral@ren.pt
Slovenia has cancelled a small number of certificates this year, but has otherwise been inactive for the past year or so.

It is understood that Slovenia intends to implement guarantee of origin schemes in compliance with the EECS model.
GCC has now replaced Red Electrica España as issuing body for Spain, following its withdrawal from AIB membership due to the appointment of the Spanish Regulator (CNE) as issuer of renewable electricity and high-efficiency cogeneration guarantees of origin.

Since resuming operations at the start of 2009, the Spanish domain has seen relatively high activity levels. It remains to be seen whether these will be sustained, or whether this is simply clearing the backlog left over from 2008.
Sweden continues to issue and cancel far more certificates than ever before, and continues to import and export substantially more than in previous years.

The above statistics focus on renewable energy, and ignore nuclear electricity, for which Sweden now issues Disclosure-GO. Some 27 million Disclosure-GO certificates were issued last December for electricity produced during 2008, and 22 million of these were subsequently cancelled in May 2009.

The increase in the scope of EECS to encompass non-renewable electricity will provide better statistics for calculation of the Swedish residual mix.

For more information, contact:
Marko Lehtovaara
Grexel (Issuing body for Sweden)
Tel: +358 (9) 251 22211
E-mail: marko.lehtovaara@grexel.com
In the last quarter, Swiss RECS certificate activity has continued to rise.

As Switzerland is not part of the European Union, its RES GO have a different legal form to those of EU member states. For this reason, the AIB has accepted the amendments to EECS proposed by swissgrid such that swissgrid will admitted to the Disclosure-GO scheme; and RES GO will also be eligible as Disclosure GO (but not vice versa).

The current form of the forthcoming EU Renewables Directive includes provisions for the treatment of “third countries” outside of the EU such as Switzerland.
2009 : EVENTS

FORTHCOMING MEETINGS

June 24-25 Brussels General meeting
June 25 " Governmental & Regulatory Committee
June 26 " ETRACK
September 30 Geneva General Meeting
October 1-2 " Green Power Marketing Conference
December 10-11 Rome General Meeting