

AIB SIMPLIFIES INTERNATIONAL TRANSFER OF ENERGY CERTIFICATES

Energy certificates are electronic documents which offer evidence of the source of a quantity of energy, including the method and quality of its production. Certificates are held in accounts on registration databases, and are transferable between account holders. They are used to inform consumers of the quality of their energy.

The **Association of Issuing Bodies (AIB)** is the leading enabler of international transfer of energy certificates, and guarantees the European Energy Certificate System - no other international energy certificate scheme exists worldwide.

Most members of the AIB are energy regulators and transmission system operators. They

have been appointed by governments to issue renewable electricity guarantees of origin (GO) under the EU Directives for renewable energy (2009/28/EC and its predecessor 2001/77/EC); and Cogeneration (2004/8/EC).

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 highly effective, efficient, fraud-resistant and low cost.

EECS® currently enables trade between the certificate schemes of 16 European countries.

EECS® certificates are uniquely identifiable, tradable and contain standard information including: unique certificate number, identity of issuer, country and date/time of issue, type of certificate, source of energy, receipt of public support and the type, location, capacity, commissioning date and identity of the plant.

Members of the AIB first commenced operation in 2001. Since then, over 1 billion certificates – each representing one megawatt hour of electricity – have been created, and 80% of these have been used. 232 million were issued in 2010, demonstrating the high level of acceptance of AIB services. This growth reflects the increasing demand for certification of renewable electricity, for disclosure of fuel mix.

WHAT ARE THE EECS RULES?

Purpose of the EECS® Rules

The EECS® Rules govern the European Energy Certificate System. This provides a commercially funded, integrated European framework for issuing, holding, transferring and otherwise processing electronic records (EECS® Certificates). These certify, in relation to specific quantities of energy, attributes of its source and/or the method and quality of its production.

For example, for a specific period, the number of certificates issued to a windmill will be directly proportional to the electricity produced by that windmill. These certificates guarantee that the electricity has been produced from wind energy.

The purpose of the EECS® Rules is to secure, in a manner consistent with European Community law and relevant national laws, that systems operating within the EECS® framework are reliable, secure and inter-operable. The implementation, under the EECS® Rules, of harmonised standards for issuing and processing EECS® Certificates enables the owners of EECS® Certificates to transfer them to other account holders both in the same country, and in other countries.

Effect of the EECS® Rules

The EECS® Rules is a constitutional document of the AIB, and sets out the membership obligations of AIB Members. These obligations are owed to the AIB: the EECS® Rules does not in itself create duties or obligations owed to third parties, nor does it create obligations that are enforceable (other than through the auspices of the AIB) between Members themselves.

The effectiveness of the EECS® Rules in achieving its purpose depends on the AIB, which assumes a regulatory function. In this regard, the AIB relies in part on Members conducting “peer reviews” of each others’ systems.

Members’ duties in relation to the areas for which they are responsible (Domains) include oversight of their customers’ compliance with obligations that are not adequately covered by applicable legislation.

Where such matters fall within their jurisdiction, supervision by governmental agencies and national regulators of the activities of Members and their customers also assures the coherence and reliability of EECS®.

Structure of EECS®

The EECS® Rules establishes harmonised standards for the creation, maintenance, transfer, cancellation and other processing of EECS® Certificates. They require Members to adopt these standards as a pre-requisite for participation (as a Scheme Member) in individual EECS® Schemes – the parts of the EECS® framework which relate to specific types of energy output, such as electricity, gas etc.

EECS® Certificates may be based on guarantees of origin issued pursuant to European Community legislation as implemented by Member States. They may also be issued in connection with other legislative certification schemes or under other, entirely voluntary, arrangements.

The processing of each type of EECS® Certificate is subject to requirements applicable to all EECS® Certificates. In addition, the EECS® Rules imposes requirements specific to individual types of output.

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Structure of EECS® (... continued)

For a Member to become a member of an individual EECS Scheme, the provisions applicable in that Member's Domain (its Domain Scheme) must satisfy both the general requirements of the EECS Rules and the specific requirements specifically relevant to that scheme.

A Domain Scheme consists of the applicable legislative and administrative arrangements regarding the issue of certificates, together with a Domain Protocol and the Member's Standard Terms and Conditions. The Domain Protocol supplements legislative provisions, making sure that the Domain Scheme satisfies the general and specific requirements of the EECS Rules. Standard Terms and Conditions contractually

oblige the Member's customers to comply with the Domain Protocol. Standard Terms and Conditions also deal with commercial matters such as service provision and the Member's fees.

Account holders are not bound by the EECS Rules itself, but by the applicable legislation in their Domain and their contractual obligations to comply with relevant Domain Protocols.

HOW DOES EECS WORK?

Registration of Plants

EECS Certificates can only be issued to the owners of plants that have been registered for an EECS Scheme. Registration involves formal application.

Application for registration under EECS requires the plant owner to provide information about itself and the plant, including the relevant technology and possible energy sources, commissioning dates and capacities and details of public support received. Such applications must also include details of the arrangements for measuring energy sources and outputs, including the presence of any production auxiliaries, pumping stations and on-site demand.

Registration requires the plant to comply with legal requirements and the requirements of the relevant EECS Scheme as set out in the Domain Scheme – the Issuing Body is entitled to inspect the plant to confirm this. Registrants are held responsible for notifying the Issuing Body of any changes to the plant.

Issuing of EECS Certificates

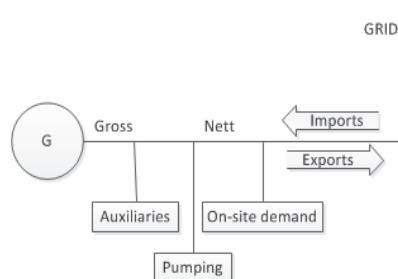
Once a plant has been registered, then it is eligible to issue EECS Certificates.

Measurements of the energy created (and used, where combustible fuels have been used) will be taken by the body approved to do so by the Issuing Body, or authorised to do so by the Competent Body appointed by government to take such measurements for that Domain.

The EECS Certificates that are released onto the market for trade are those which represent

energy flowing into the grid. These will have been produced nett of any energy used by production auxiliaries or (pumped storage plant) for pumping water back to the header lake.

Certificates representing the source of the energy used by production auxiliaries, pumping and on-site demand are normally automatically cancelled upon issue – see diagram below.



Use of EECS Certificates

Certification of the quality of a product and the method of its production, whether this product is energy or physical in nature, provides an efficient mechanism for accounting for:

- the quality and method of production of such products, as supplied to consumers;
- progress made towards targets for the use of certain technologies; and
- production and/or consumption of such products, for the purposes of stimulating investment in certain categories of plant.

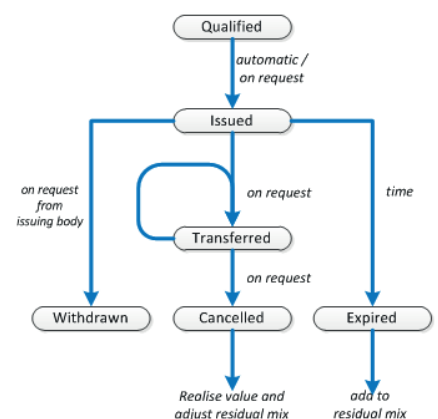
Moreover, certification allows a value to be given to specific types of product; and for this to be traded separate to the product itself.

For a system of certification to discharge these

functions effectively, stakeholders – producers, traders, suppliers, consumers, NGOs and governments – must be satisfied that the certificates provide reliable evidence. The EECS framework ensures all stakeholders have confidence in the certificates issued and processed by AIB members.

Life Cycle

The life cycle of an EECS Certificate encompasses three phases: issuance, transfer and cancellation. The way in which a certificate transits between these three major states is shown in the following diagram:



- Electronic EECS Certificates are issued on registries operated by, or on behalf of, AIB Members for the output of plants registered in connection with national legislation or, otherwise, specifically for the purposes of an EECS Scheme.

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How Does EECS Work?

(...continued)

- Certificates may be transferred from the account of the producer to that of a trader or energy supplier, and from there to the accounts of other traders and energy suppliers; either within the country of origin or to other registries operated by, or on behalf of, AIB Members across Europe.
- Cancellation is the mechanism whereby the EECS Certificate is removed from circulation. Cancellation occurs at the point at which the value of the Certificate is realised. EECS Certificate are mostly cancelled in connection with payment from a consumer in recognition of the qualities represented by certificate. The EECS Rules provides for EECS Certificates to be Cancelled only once, at which point they may be used to adjust any residual mix.

The diagram illustrates two other states:

- Withdrawn, for certificates that have been issued in error; and
- Expired, for certificates that have not been cancelled by a deadline and have thus been automatically cancelled, at which point they may be used to adjust any residual mix.

Why Join the AIB?

The issuers of internationally transferable energy certificates (such as GOs) face the same challenge: to develop an accurate, reliable, fraud-resistant system, which supports national and international legislation and harmonises with the systems of other countries; and to do so both quickly and cost-effectively.

The AIB offers a standardised solution, based on years of experience; and the support of members who have already implemented systems, and identified and overcome solutions to many common problems.

The members of AIB pool their common experiences and resources to develop systems such as EECS, and the inter-registry Hub (which transfers certificates between registries). AIB also provides a forum for members to address issues of common relevance, such as the calculation of national residual mixes.

AIB cooperates with the EU Commission, seeking solutions to issues of common interest, to ensure that EECS complies with European legislation. By briefing the Commission on common issues, AIB can beneficially influence mar-

ket design on behalf of stakeholders.

This is particularly useful where international legislation changes: AIB members can pool resources and experience in order to resolve the challenges raised by new legislation, in such a way as to act to the benefit of member systems and national policy intentions.

AIB also seeks to raise with national governments issues that arise from national support schemes, and have an international impact. In this way it can help protect policy objectives.

How to Join the AIB

If you are an issuing body for GOs or voluntary certificates and would like to see how AIB works for yourself for a trial year at no cost, then you may apply in writing for "Observer" status. As an Observer, you will naturally not be entitled to take part in decision-making, but your views will be welcome.

An "Applicant" is an issuing body that has formally applied to become a member of the AIB. It has no voting rights, and can remain an applicant for one year (paying no membership fee), after which it must pay the membership fee. In addition to the public part of the website, it will be granted access to relevant parts of the Members section.

Issuing bodies that have been granted membership of the AIB ("Members") pay the membership fee and can vote, and have access to the public part of the website plus the relevant parts of the Members section.

The procedure for setting up an AIB infrastructure in a country is as follows:

1. Appoint an Issuing Body
2. If required, appoint agents to support the activities of the Issuing Body. Select, implement and configure registry software
- 3a. Apply for membership of the AIB, completing the formal letter of application and questionnaire; and drafting a Domain Protocol, setting out how the market will operate in that country

- 3b. In parallel, test registry software or services
4. Gain the approval of the Association of Issuing Bodies (AIB)
5. Start registering plants, and issuing and transferring certificates.

The rest of this document describes these steps in more detail.

Any questions should be addressed to the Secretary General at secgen@aib-net.org, or call +44 (0)1494 681183. The website is also available, at <http://www.aib-net.org>.

Step 1: Appoint an Issuing Body

Appointment

National government appoints an Issuing Body for obligatory schemes; while private organisations do this for voluntary schemes.

The Issuing Body must be financially independent of market participants; may not profit from trade in certificates; and must undertake to ensure that it operates according to the rules of EECS.

The rules of EECS are set out in the “Principles and Rules of Operation for the European Energy Certificate System “ (the **EECS Rules**).

Responsibility

The Issuing Body is responsible for:

- Inspecting all plants that wish to participate
- Issuing, transferring ownership of and cancelling Certificates
- Recording in an electronic registry the details of all issued Certificates
- Complying with the EECS Rules and the Articles of Association of the AIB.

Step 2: Appoint Agents and software to Support Issuing Body

Appoint Agents

To fulfil its responsibilities, the Issuing Body can, if it wishes, appoint:

- **A Production Registrar**, to inspect plants on application from Generators and to verify energy consumption.

This ensures that the requirements of the EECS Rules and the Domain Protocol are satisfied.

- **An Auditing Body**, to verify the continued fulfilment of the conditions for registration according to the standards set out in a Domain Protocol.

This will include comparing registered generation capacity with the issued number of certificates and other relevant data (e.g. wind speeds)

- **A Central Monitoring Office**, to administer the electronic registry.

This registry records details of the certificates that have either been issued for, or held by, participants within this country. The registry also records the status (transferable, cancelled, expired, imported or exported) and owner of each certificate.

Select, Implement and Configure Registry Software

Setting up a registry is the responsibility of the Issuing Body, which can develop its own software; or use commercially available software (see **Annex 1** of this document for known suppliers).

Prior to completion of the review process, the Registry Software must be operational.

Step 3a: Apply for membership of the AIB

Application

The Issuing Body applies in writing to the AIB Secretariat to become a member using the application form proforma, including a questionnaire, which are to be found at:

http://www.aib-net.org/portal/page/portal/AIB-HOME/AIB/How_to_join/AIB_membership_2011.doc

Consideration

The Secretary General of the AIB conduct an initial review of the application form, in order to identify any immediately obvious barriers to membership. Where possible, he will resolve these with the applicant.

The AIB will appoint reviewers to consider the application. Where they consider that the information on the application form is not acceptable, then they will seek to resolve this with the applicant. Where it is not possible to resolve any issues, then the reviewers will inform the applicant and place the matter before the next General Meeting of the AIB for its decision, which will be final.

The AIB holds four General Meetings each year, to consider matters concerning the policy and administration of the AIB. These meetings offer members the opportunity to catch up on recent events, and take part in decision-making, including deciding whether to reject applicants where the application form has been found unsatisfactory by the reviewers.

Prepare a Domain Protocol

Where the AIB reviewers consider the application form to be acceptable, or whether they do not do so and the General Meeting

Step 3a: Apply for membership of the AIB (continued)

subsequently overrules them, then the applicant will develop a Domain Protocol (DP). The reviewers will assist the applicant to resolve any issues raised in the development of this document.

The DP sets out how the applicant intends to apply the EECS Rules within the context of its own national laws and operational procedures, and within its geographic area (an AIB template is available to help applicant to draft this).

Typical issues which differ between countries and are addressed in a DP include verification and audit of plants, calculation of electricity generated, and measurement of the proportion of RES-E generated from biomass and/or pumped hydro.

Process Application for Scheme Membership

The applicant sends the completed DP to the AIB Secretary General, who reviews it to identify any issues which might require special consideration. He then passes the DP to the reviewers, along with his recommendations for areas of concern.

The reviewers check the DP for conformity with the EECS Rules and its Subsidiary Documents. If the reviewers request, the Applicant is required to explain any provisions that seem unclear, and may be required to amend its DP, and perhaps its operational practice, accordingly.

The reviewers will then inform the Secretary General either that they have approved the DP or that they have discovered matters of principal which in their opinion either prevent its acceptance by the AIB, or regarding the acceptability of which they seek the advice of the General Meeting.

Step 3b: Test Registry Software

Review

The reviewers check that the registry complies with the requirements of the EECS Rules and its Subsidiary Documents, testing the proper integration of the registry software and the AIB Hub in order to ensure that the transfer of certificates is both secure and reliable:

Contact: Anne Cathrine Petersen,
EdiSys, Oslo, Norway

Email: anne.cathrine.petersen@edisys.no

Tel: +47 (22) 42 13 80

Step 4: Gain the approval of the Association of Issuing Bodies (AIB)

The Secretary General will ask the next General Meeting to consider and approve this DP. Members of the AIB are invited to discuss any issues arising, following which the application will be put to the vote, membership being granted to the applicant provided 75% of the votes cast are in favour.

When its application has been approved, the new Member must provide the secretariat with details of its national support schemes, and the geographical map coordinate standards used in its Domain.

Membership, with all of its rights and duties, becomes operative the working day after the DP has been approved by the General Meeting; at which point the new Member will be invoiced the standing charge associated with the annual membership fee (see **Annex 2** of this document for details of the membership fee).

Membership is necessary before the member can issue EECS certificates; and the Applicant may not exercise its vote until the next General Meeting.

Step 5: Start Registering Plants and Issuing and Transferring Certificates

Registration of Plants

Owners of plants send the Issuing Body such documentation as it requires, on receipt of which the Issuing Body instructs the Production Registrar to confirm the details, if necessary by means of a visit.

Issuing Certificates

Assuming the verification report is positive, the owner of the plant may start sending measurement data (and consumption data for pumped storage and combustion plant) to the Issuing Body.

At this point, the Issuing Body can then issue certificates.

A further membership fee of €0.01 per certificate issued will be charged at the next invoicing point - these are shortly after 1st January and 1st July of each year.

At the end of the first calendar year of operation, the annual fee for members exporting and/or importing more than 4 million certificates will rise to €20,000. Note that the maximum total membership fee - comprising the annual fee and the activity-based fee - is capped at €50,000.

ANNEX 2: AIB MEMBERSHIP FEES

The AIB membership fee seeks to share the costs of providing services equitably between members. At the same time, it seeks to reflect the greater benefits received by larger members, and by those with a wider scope of operations (perhaps those whose scope encompasses both renewable electricity and cogeneration); and the greater costs incurred by the AIB in providing the required services to such organisations.

The membership fee comprises two elements:

- the **standing charge**; and
- the **activity fee**, which depends on the number of certificates that they have exported plus those that they have imported during the **current** year.
- The membership fee is subject to an overall cap.

Certificate

A certificate is the term given to any electronic document which offers evidence of the source of a quantity of energy, including the method and quality of its production, and can be transferred between account holders. Certificates include those which are used to inform consumers of the quality of their energy; and those which are used to provide evidence of compliance with public obligations, perhaps as a prerequisite of receiving support. An EECS Certificate represents 1MWh of electricity.

Standing charge

The standing charge depends on the number of certificates that they have exported plus those that they have imported, during the **previous** year – this is known as their “activity level”:

- Members that have an activity level of less than 4 million are known as **small members**. Each pays a standing charge of €5,000.
- Members that have an activity level of 4 million or more are known as **large members**.

Each pays a standing charge of €20,000.

Activity fee

The activity fee is €0.005 per certificate imported or exported.

The activity fee is capped at €50,000, and does not apply to the first:

- one million certificates that small members export or import.
- four million certificates that large members export or import.

Countries with more than one member

Where more than one a member exists within a country (for example, the three regions of Belgium), then the membership fee is calculated according to overall activity; and shared according to the proportion of overall activity attributable to that member.

Thus if Belgium – a large country - imports 10 million certificates, and Flanders imports 6 million of these, then Belgium pays a membership fee of €50,000, of which Flanders will pay 60% of this: €30,000

Examples

Small members

A member exported 750,000 certificates and imported 100,000 certificates last year. It is therefore a small member. It exports 950,000 certificates and imports 150,000 certificates this year, and therefore pays:

Standing charge =	€5,000.00
[less than 4 million transferred internationally, so a small member]	
Activity charge =	€500.00
[= €0.005 * (950,000 + 150,000 certificates – 1 million free for small members)]	
TOTAL =	€5,500.00

Small (growing to large) member

A member exported 750,000 certificates and imported 100,000 certificates last year. It is therefore a small member. It exports 11 million certificates and imports 1 million certificates this year, and therefore pays:

Standing charge =	€5,000.00
[less than 4 million transferred internationally, so a small member]	
Activity charge =	€55,000.00
[= €0.005 * (11 million + 1 million certificates – 1 million free for small members)]	
TOTAL =	€50,00.00 (capped)

Large member

A member exported 1 million certificates and imported 4 million certificates last year. As this exceeds 4 million certificates per year, it therefore qualifies as a large member. It exports 2 million certificates and imports 4 million certificates this year, and therefore pays:

Standing charge =	€20,000.00
[more than 4,000,000 transferred internationally, so a large member]	
Activity charge =	€10,000.00
[= €0.005 * (2 million + 4 million certificates – 4 million free for large members)]	
TOTAL =	€30,000.00

Very large member

A member exported 10 million certificates and imported 2 million certificates last year. It is therefore a large member. It exports 12 million certificates and imports 3 million certificates this year, and therefore pays:

Standing charge =	€20,000.00
[more than 4,000,000 transferred internationally, so a large member]	
Activity charge =	€55,000.00
[= €0.005 * (12 million + 3 million certificates – 4 million free for large members)]	
TOTAL =	€50,000.00 (capped)