

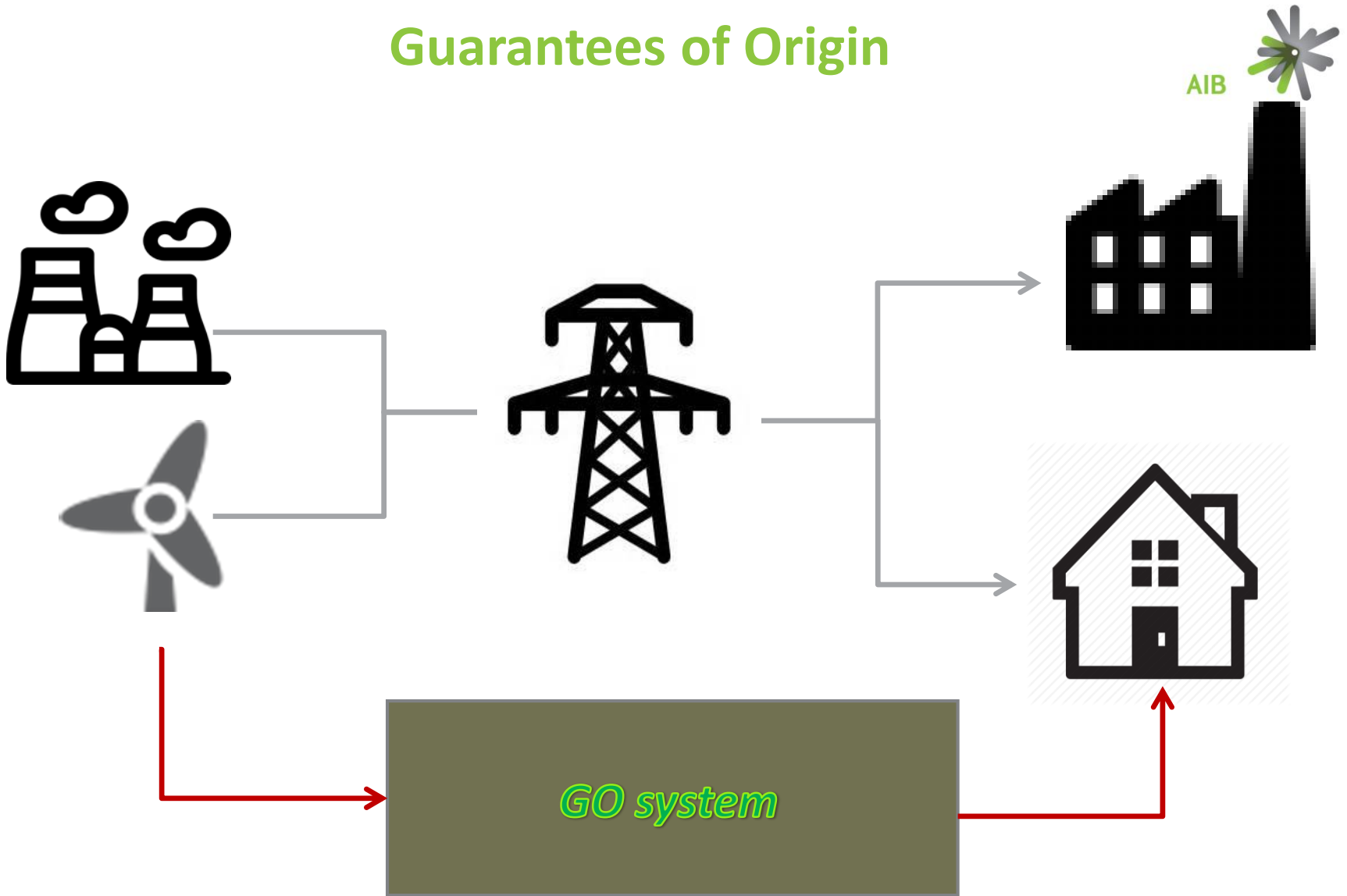
The European Energy Certificate System (EECS) and its application to renewable gases

REGATRACE, 28th June 2019

Katrien Verwimp, Chair Workgroup Internal Affairs

- **AIB**
 - The AIB & member activity
 - Standards: why are they needed, and EECS
 - History and future
 - Gas

Guarantees of Origin





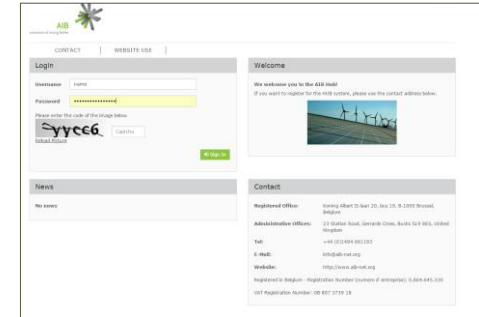
AIB

association of issuing bodies



- **Not-for-profit Brussels-based association - AISBL**
- **21 countries connected (24 members)**
- **Stakeholders: consumers, markets, governments, EU Commission**
- **Developer and custodian of the EECS™ standard**
- **All of the AIB's members are competent bodies for GOs**
- **About half AIB's members are also competent bodies for disclosure**
- **30% annual RES production in EU, EEA, Energy Community + Switzerland**
- **... and the vast majority of GO-guaranteed renewable electricity production**

Association of Issuing Bodies (AIB)



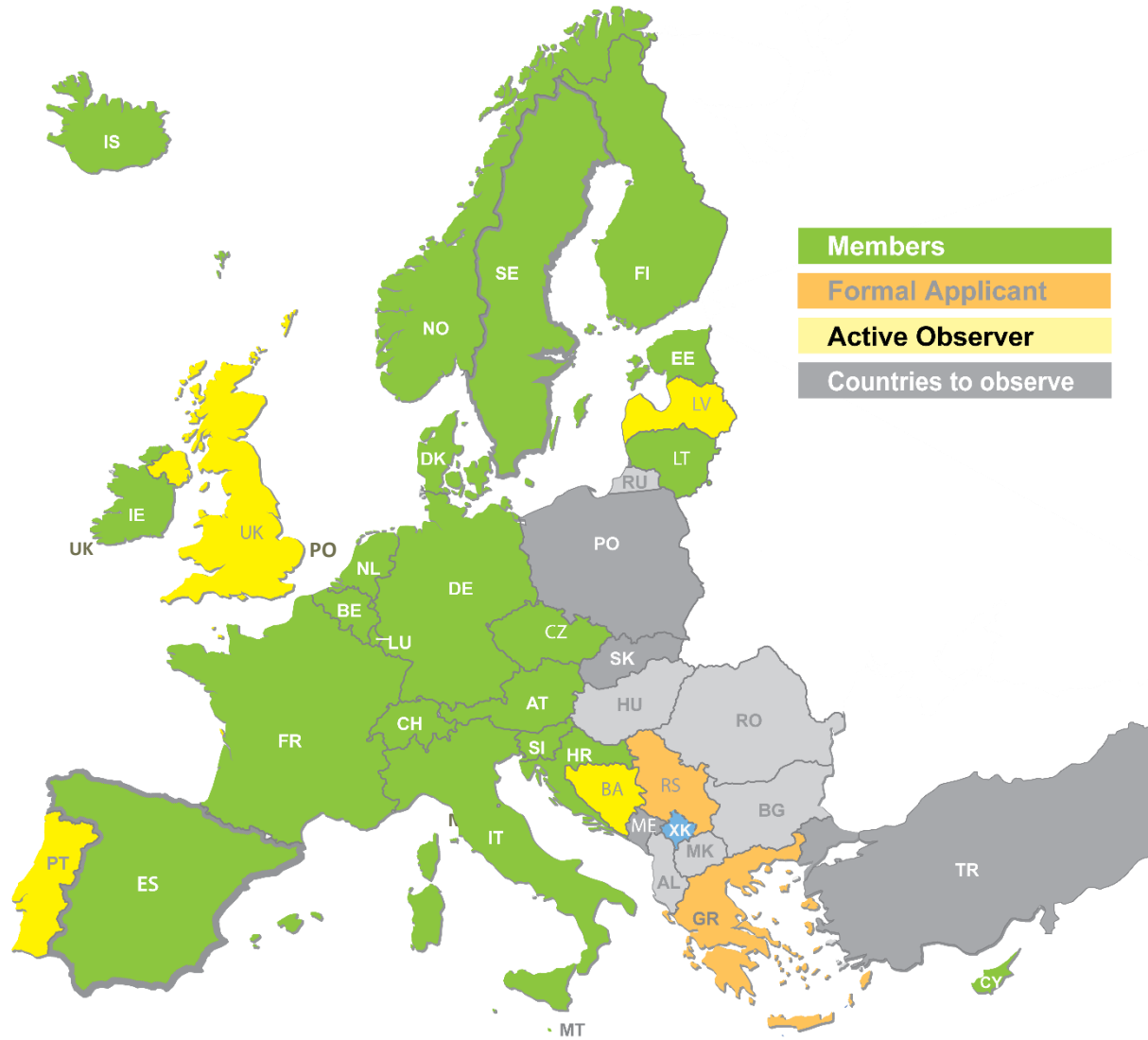
- **Initiator and Governor of EECS**
European Standard for Guarantees of Origin
- **Maintains the AIB HUB, providing secure inter-registry communication**
- **Why? So consumers can...**
 - **Choose** the origin of their electricity freely ('Vote with their feet')
 - Take **responsibility** for their impact on the environment and are able to influence it
 - **Trust** that electricity tracking works and does not lead to double-counting

Advantages of AIB membership

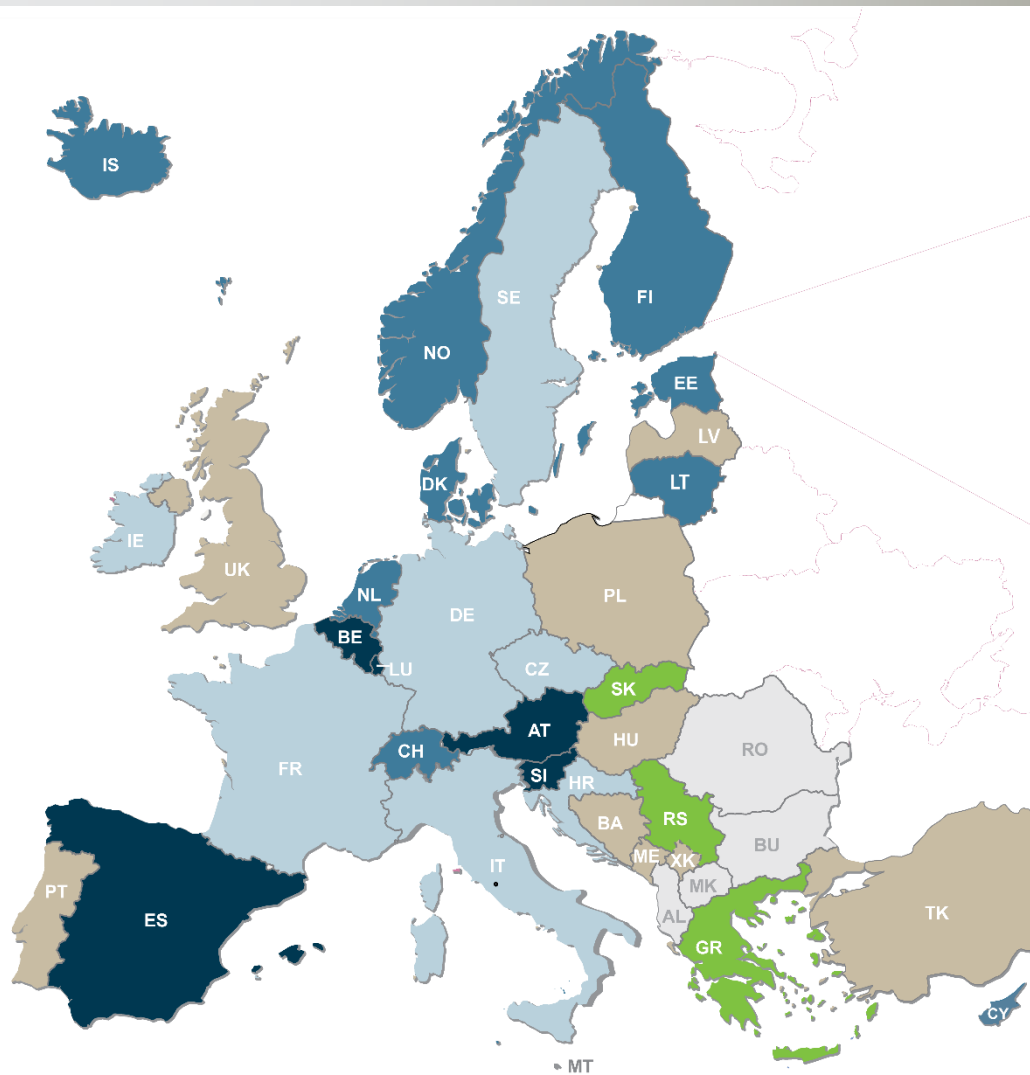






- Common standard (CEN standard EN16325 is embedded into EECS)
- Implements RES, IEM & EE Directives
- Opportunity to influence system & Hub design
- Learning from other members
- Tried and tested system, ready to use 'straight from the box'
- One-to-many connection through the Hub
- Low-cost implementation

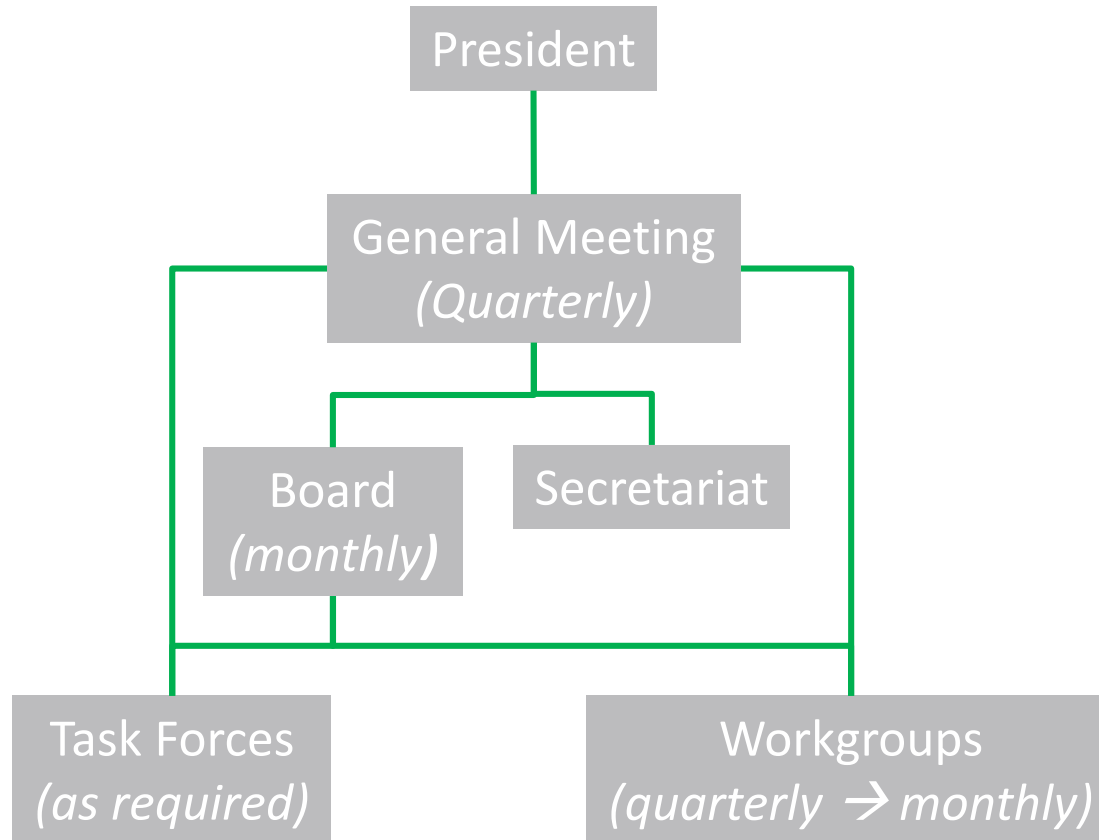
Member countries: AIB



Type of member

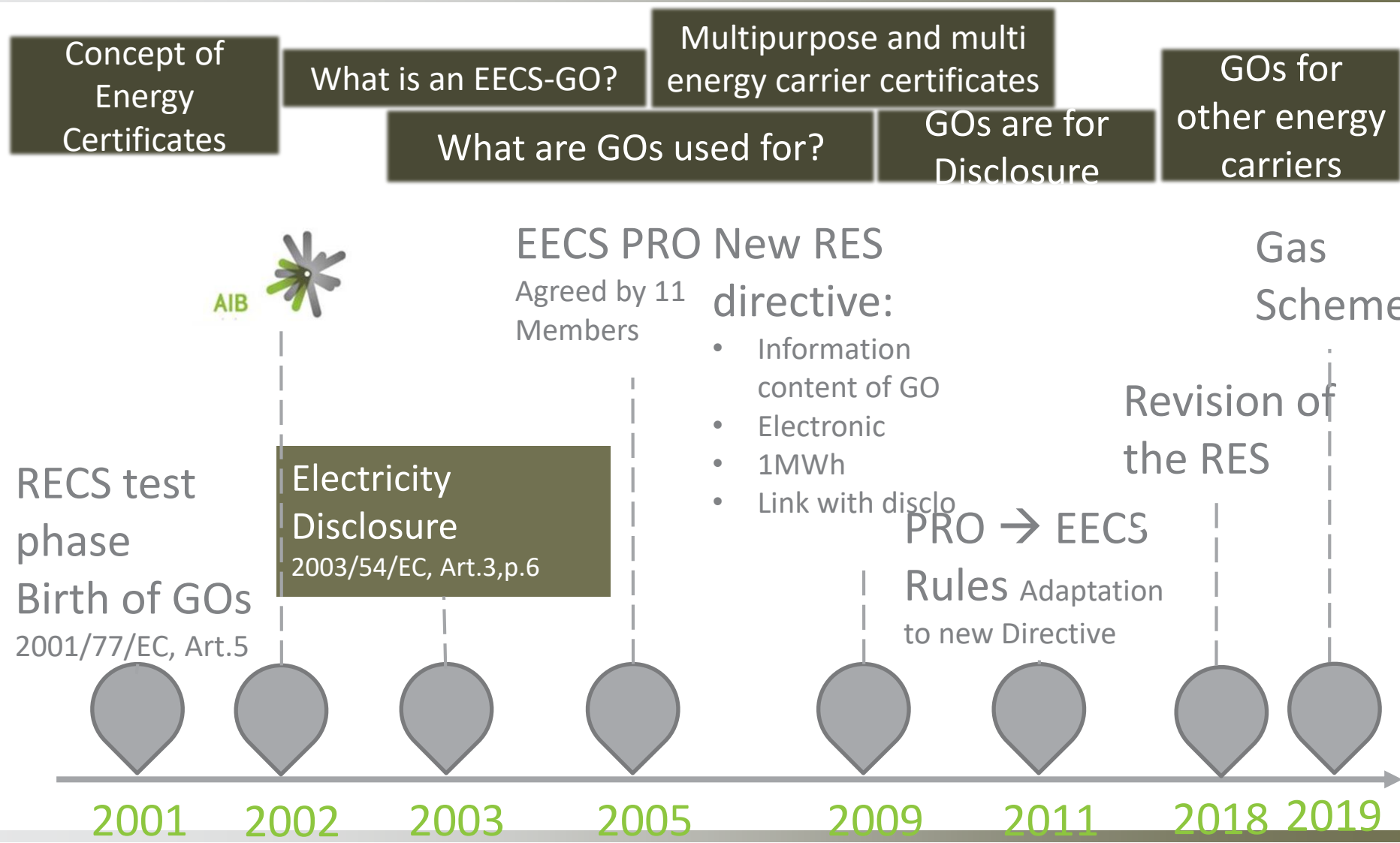


	Regulators	8 ... AT, BE (Fed, B, F, W), ES, LU, SI
	TSOs	9 ... CH, CY, DK, EE, FI, IS, LT, NL, NO
	Market operators ...	4 ... CZ, FR, HR, IE
	Other	3 ... DE, IT, SE
	Applicants	2 ... GR, RS, SK
	In discussion	10 ... BA, HU, LV, ME, PL, PT, TK, UK, XK



Workgroup Internal Affairs

Evolution of GO in 2000's



Working Group External Affairs



Joining the AIB

August 2017

Structure of EECS* (continued)

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

For a Member to become a member of an individual EECS Scheme, the process is applicable to that Member. However, the Director Scheme may also apply for the general requirements of

the EECS Rules and the specific requirements specifically relevant to that scheme.

The Director Scheme consists of the applicable technical and administrative arrangements regarding the issue of certificates, together with the Commission and the Member's Standard Terms and Conditions.

Member States are not bound by the EECS Rules itself, but by the applicable legislation in their domestic and their contractual obligations in compliance with the Commission's Principles.

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 that plants cover the production, installation, and the plant, including relevant technology and possible energy outputs, site, measuring device and output data and details of the registration process. Such applications must also include details of the arrangements for monitoring energy outputs and inputs, including the presence of any production facilities, pumping systems and on-site storage.

Registration requires the plant to comply with legal requirements and the requirements of the relevant EECS Scheme as set out in the Director Scheme - the Issuing Body is notified to inspect the plant to confirm the Registrant is held responsible for satisfying the Issuing Body of any design to the plant.

Issuing of EECS Certificates

Once a plant has been registered, there is a right to issue EECS Certificates.

Measurements of the energy and/or capacity, where such outputs have been certified, taken by the body approved to do so by the Issuing Body, or authorized to do so by the Competent Body approved by government to take such measurements for that Director.

The EECS Certificate that is issued into the market for trade in those which represent an offering on the grid. These will have been produced out of any energy used by production facilities or pumped storage plants for pumping water back to the reservoir.

For a system of verification to discharge their functions effectively, verifiability - production, trading, supply, contracts, TSOs and generation - must be confirmed that the certificates are issued reliably. The EECS framework ensures all stakeholders have confidence in the verifiability and ownership by members of the AIB.

Life Cycle

The life cycle of an EECS Certificate encompasses three phases: issuance, trade and cancellation. The way in which a certificate is issued is shown in the registration process in the following diagram.

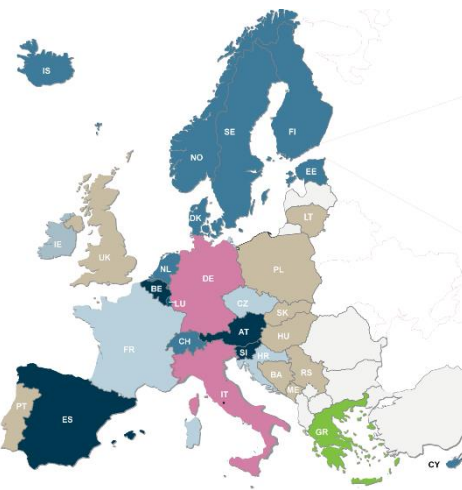
Use of EECS Certificates

Certification of the quality of a product and the method of its production, whether the product is energy or physical in nature, provides a cost-efficient mechanism for ensuring that:

- the quality and method of production of such products are applied to consumers;
- progressively higher targets for the use of certain technologies and production under circumstances of such products, for the purposes of stimulating investment in certain categories of plants.



WIKIPEDIA
The Free Encyclopedia



INSIDE THIS ISSUE

- Next Generation Generation of Origin
- In the Light of the Energy Union
- Corporate demand for renewable electricity
- The new AIB Hub - preparing for the future
- Belgium - Brussels and Belgium - Flanders
- The Netherlands - Amstam - CertiQ's Trust
- Report of the EERC Working 'Guaranteed Green'
- European Environmental Market and green energy with AIB members
- Statistics
- Endorsing events

AIB article in ICER chronicle

AIB association of Issuing Bodies

NEWSLETTER 24

2018 - Issue 2 - 1st Half only

SYNOPSIS OF ARTICLES

Next generation of GOs
The AIB supports the reliable operation of electricity energy source disclosure in Europe, to protect the interests of electricity consumers. Hence we support the Commission's wish to improve arrangements giving them more choice, greater energy security and reduce emissions, and hope the revised Renewable Directive proposal of GOs to support disclosure of the source of all electricity, and to identify carbon emissions associated with the electricity.

Joint paper AIB, market parties and consumer organizations
To support its work developing the next generation of GOs, joining together with other like-minded associations to chart the way for energy choice, carbon emissions transparency, and comprehensive disclosure.

Energy Union
Since February 2015 long-established objectives of EU energy get more traction power. Read more about this fundamental mission of Europe's energy system.

Corporate demand for renewable electricity
The growth in the GO certificate market shows the increased corporate demand for renewable energy. Follow this from the perspective of

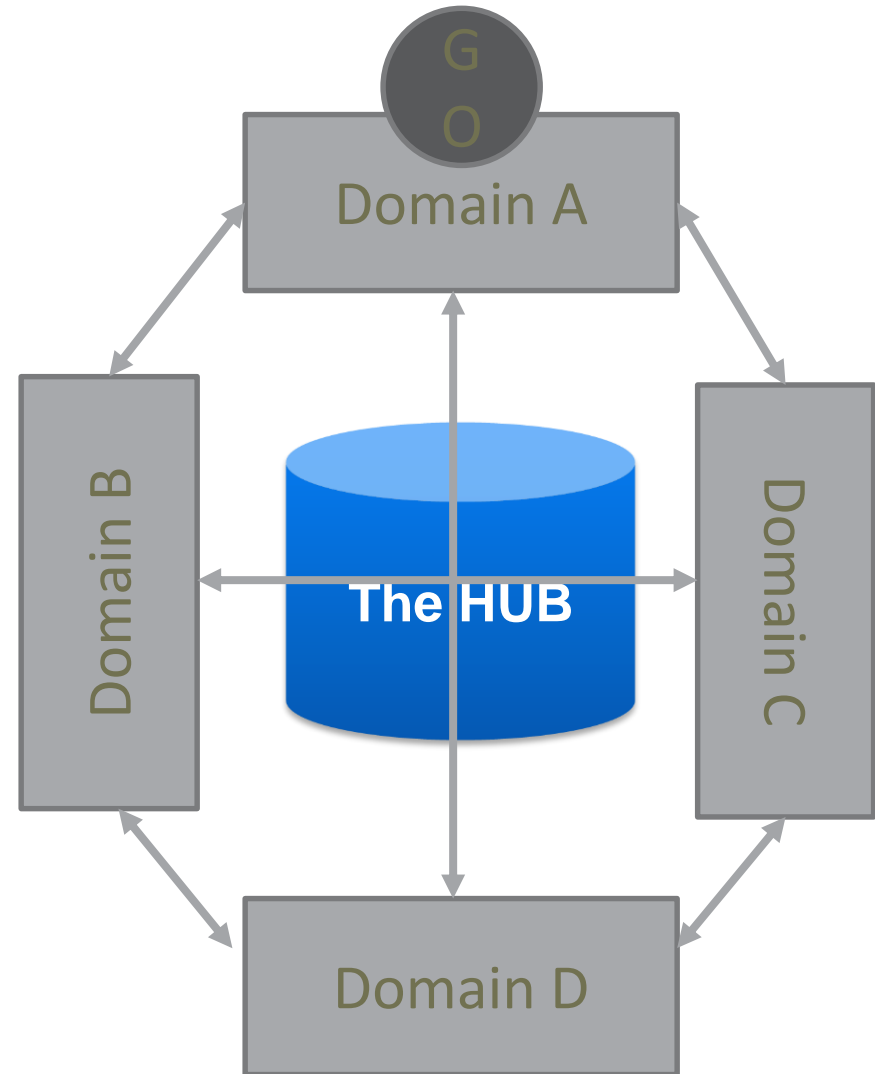
Netherlands - Amstam - CertiQ
Host for the final General Meeting in 2017 will be CertiQ, a daughter company of TenneT. The meeting will take place in Amstam, which is

EXPANDING

Annual Report 2016



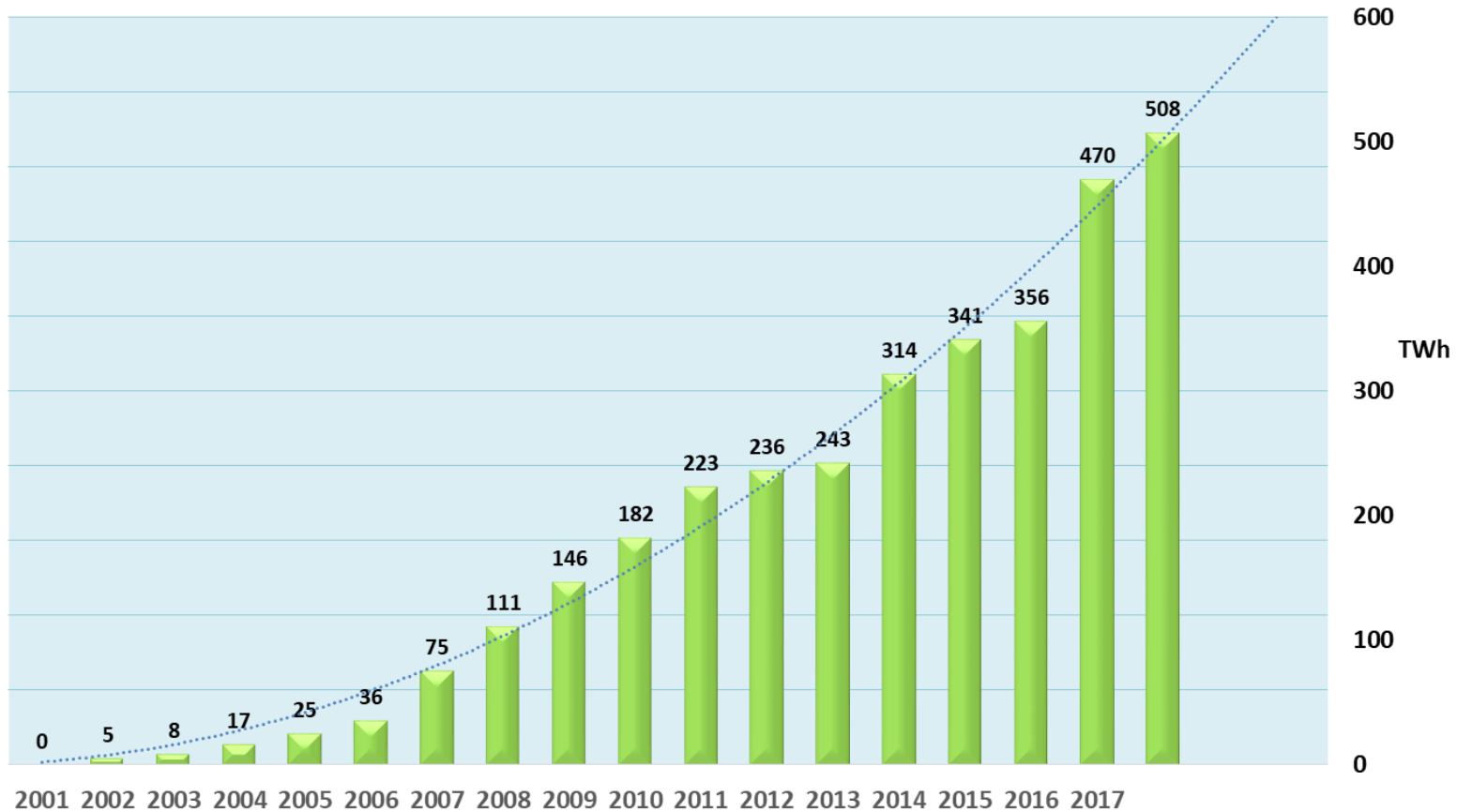
- **2005: HubCom**
 - Common technical standard for GO registries
- **2006: Hub v1**
 - Pilot
- **2011: Hub v2**
- **2016: Hub v3**
 - Fully functional
 - Secure
 - Evolving



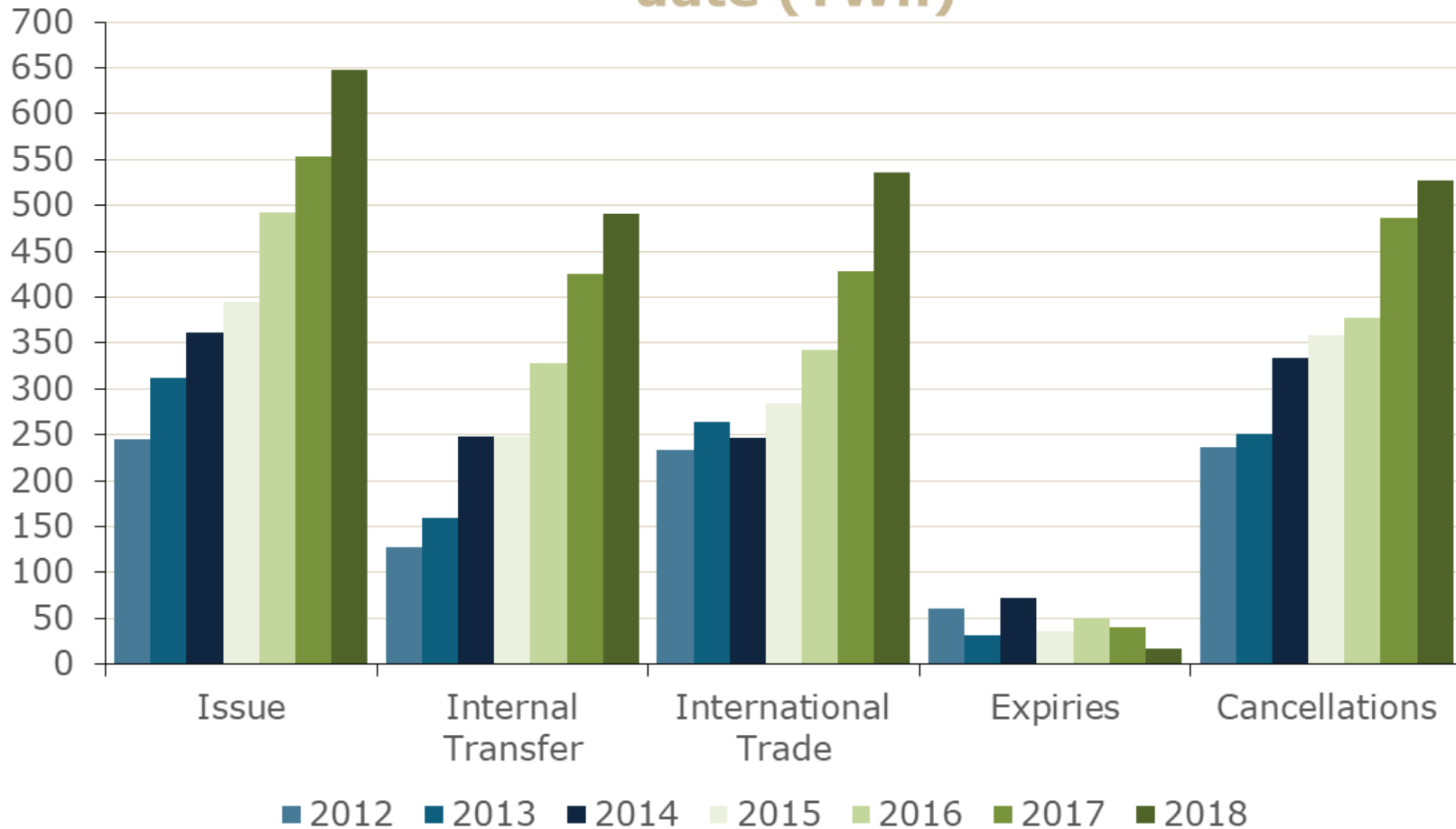
Power of the Voluntary Market

Market demand for renewable electricity documented with Guarantees of Origin in Europe

Q4 2018



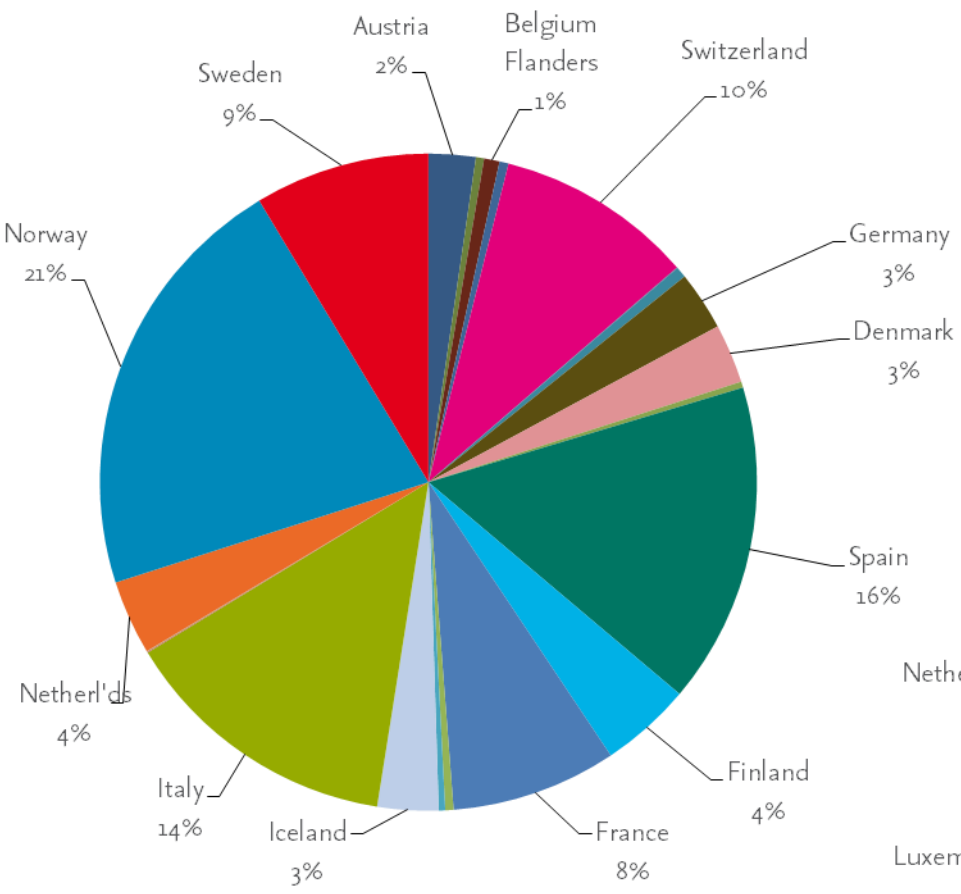
Annual EECS transactions by transaction date (TWh)



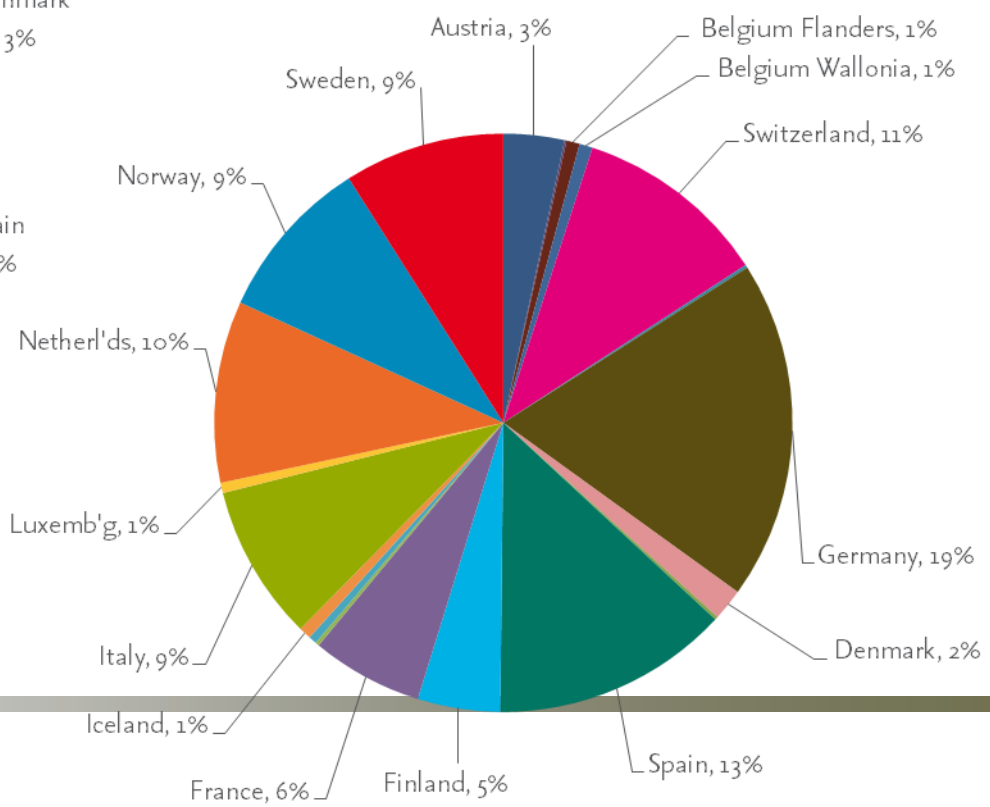
Where do they comes from / go to? (2018)



2018 Issue

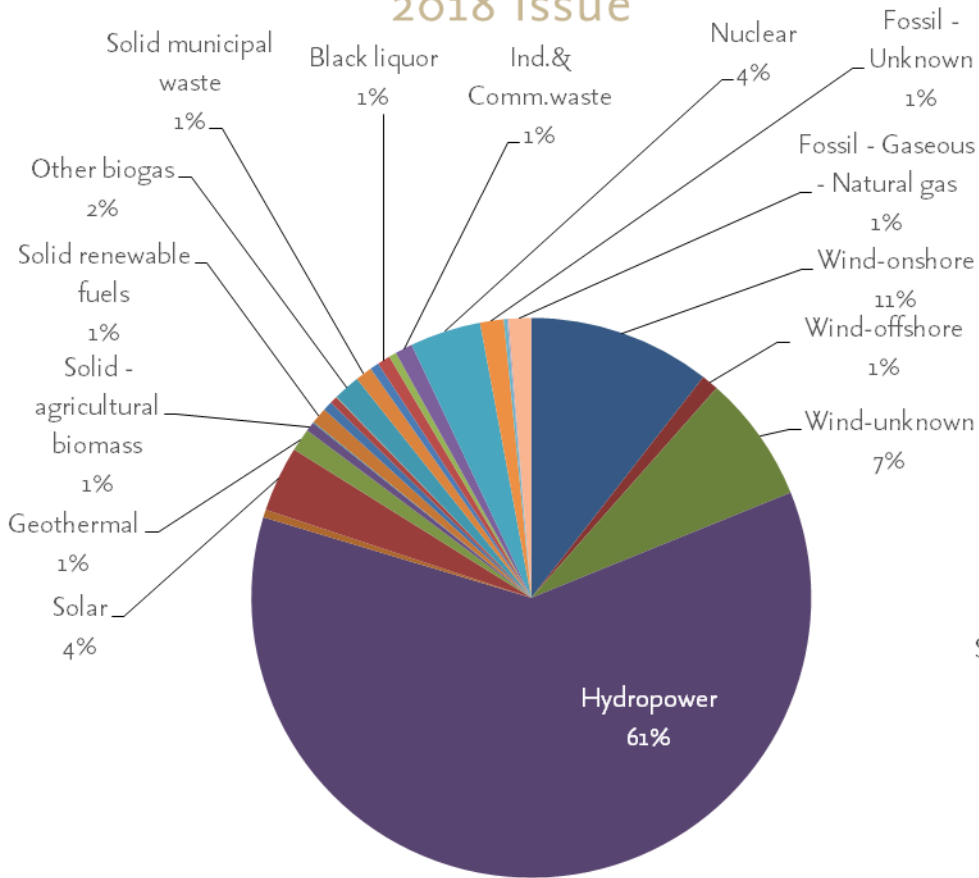


2018 Cancel

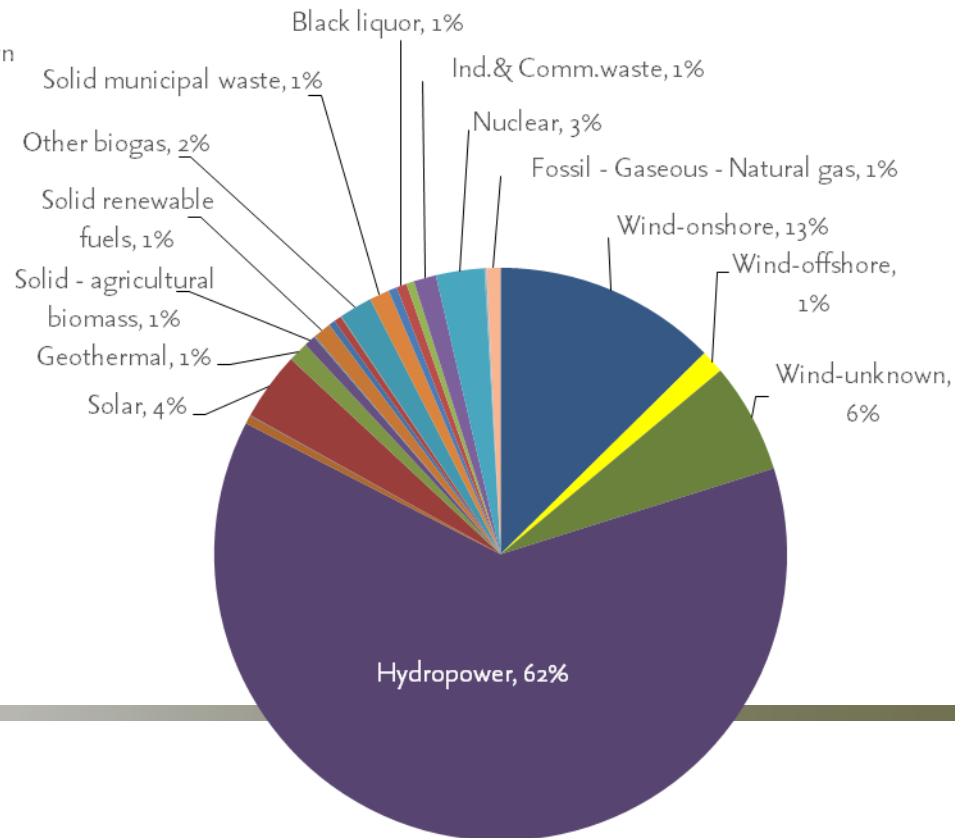


What is produced / what do consumers buy? (2018)

2018 Issue



2018 Cancel



Why have standards?



Why isn't the law enough?



- Differences between national markets
- Impact of related legislation
- Infrastructure / technology differences
- Lack of precision
- Interpretation

A GO must specify at least:

- (a) the source of the energy, and period of production
- (b) whether it relates to electricity or heating or cooling
- (c) the identity, location, type and capacity of the installation where the energy was produced
- (d) the extent to which plant and each unit of supplied energy have benefited from support received, and the type of support scheme
- (e) the date when the installation became operational
- (f) the date and country of issue and a unique identification number

Topics for standardisation

AIB



Topic	Issue	Standard
Accredit plant	<ul style="list-style-type: none">Really renewable?- Can you prove it?- Can you measure it?	<ul style="list-style-type: none">- inspection procedure- acceptance criteria
Issue GO	<ul style="list-style-type: none">What is being burned?- What energy content?- What to record?	<ul style="list-style-type: none">- GO format- data definitions & validation criteria- issuing procedure & calculations
Audit plant	<ul style="list-style-type: none">- Did they prove it?- Has it changed?	<ul style="list-style-type: none">- audit practices & criteria- auditing periods- correction procedures
Transfer GO	<ul style="list-style-type: none">- Who got the certificate?- Did they want it?	<ul style="list-style-type: none">- message definitions- inter-registry GO transfer protocols- correction procedures
Cancel GO	<ul style="list-style-type: none">- Did it get withdrawn from the market?- What happened to it?	<ul style="list-style-type: none">- cancellation procedures- disclosure best practice



Components of the standard



EECS Rules

- *Certificate Administration*
 - Core principles – objectives & aspirations
 - Plant registration
 - Certificate issue, transfer and cancellation
- *EECS participation rules*
 - Membership, admission, compliance, disputes & change
- *Scheme specific rules*
 - e.g. electricity, gas ...

Detail
 ("subsidiary documents")

- *Decision-making – disputes, voting etc*
- ***Registry system & networking standards***
- *Approval of agents*
- *Change management*
- *Assignment of codes*
- *Audit & periodic reviews*

Dynamic information
 ("fact sheets")

- *Addresses, membership details, codes, guidelines ...*

Domain protocols

- *Description of regulations in a specific country*

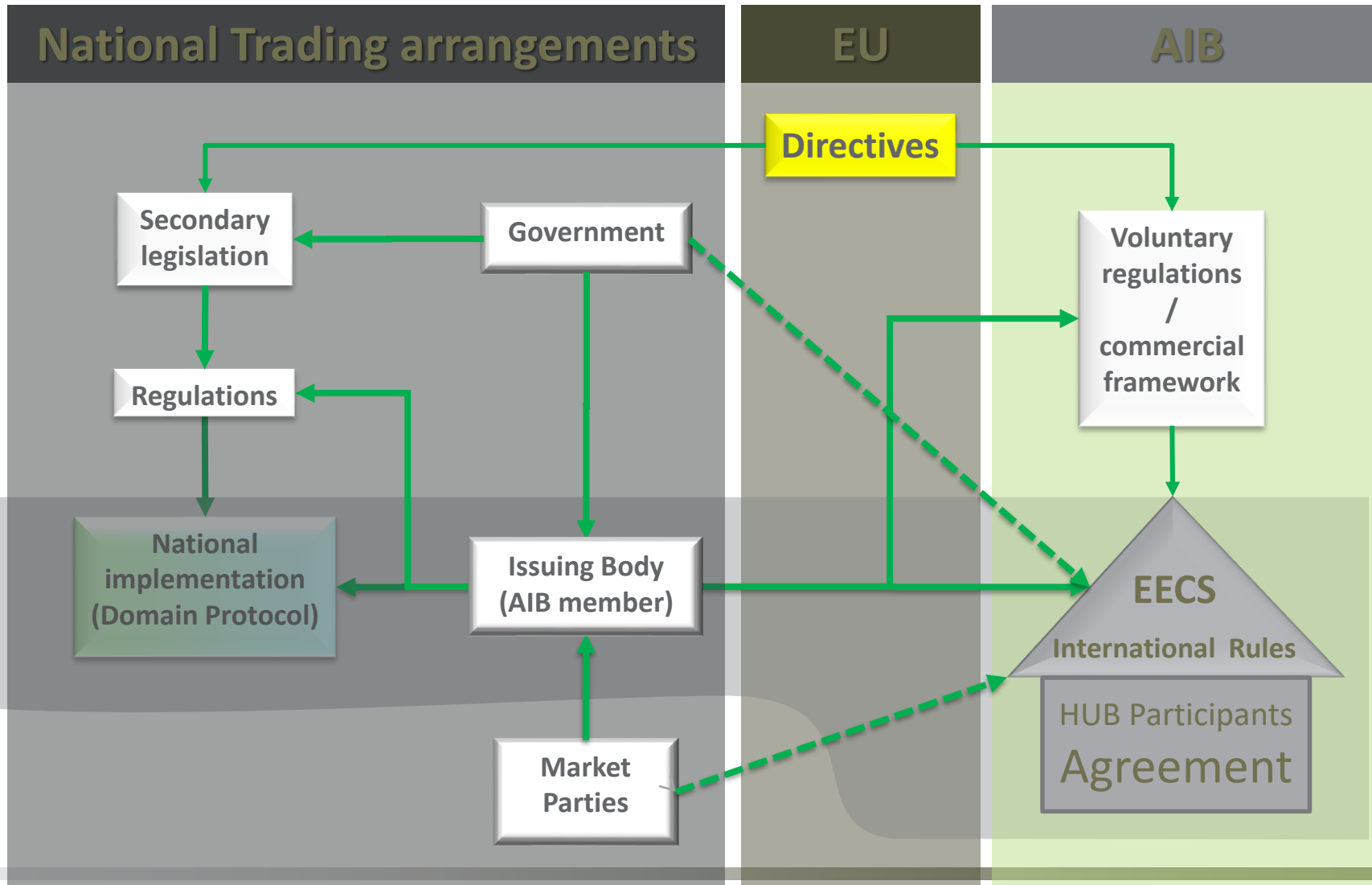


E E C S

EUROPEAN
ENERGY
CERTIFICATE
SYSTEM



Legal structure of EECS



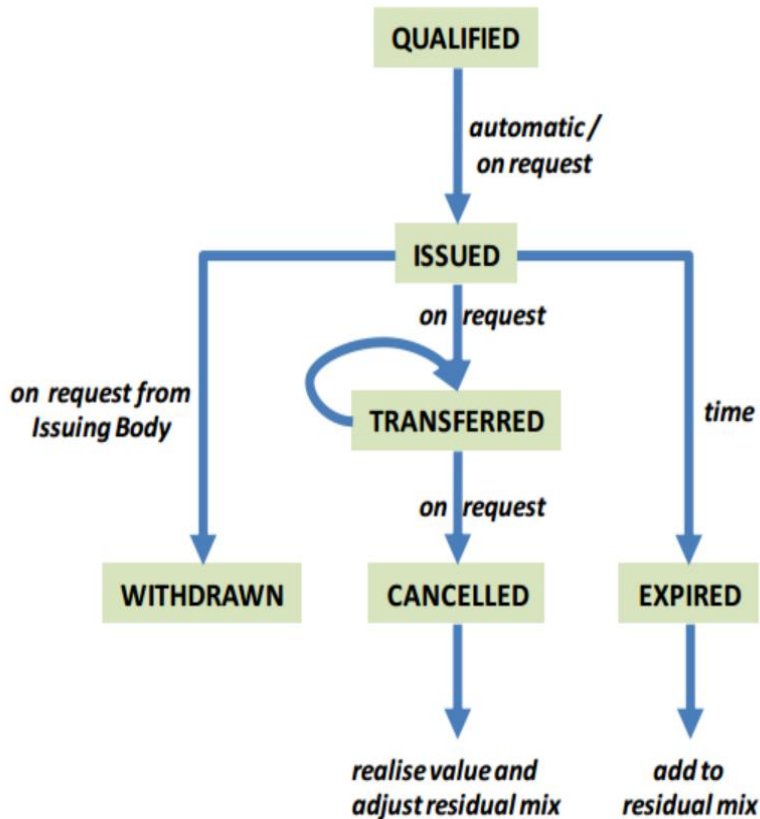
- **Chapters A-M: generic on energy certificates**
- **Chapter N: Electricity Scheme**
- **Draft chapter O: Gas GO Scheme**
- **Room for extra chapters**
- **Subsidiary Documents**
- **Fact Sheets**

EECS Rules Chapters A-M: Generic on energy certificates



- A. Core principles
 - *Uniqueness, Immutability, operational reliability, ...*
- B. Definitions
- C. Harmonisation measures
 - *Production Device registration, Issuing, Transfer, End of Life, Cancellation,...*
- D. EECS Products
- E. EECS Schemes
- F. Admission and Expulsion Procedures
- G. Probity of Members
- H. Members Agents and Measurement Bodies
- I. Compliance
- J. Disputes
- K. Assessment Panels
- L. Change Procedures
- M. General

GO Process Reliably Harmonised from Cradle to Grave



- Uniqueness
- Immutability
- Plant registration
- Information content
- Issue, transfer, cancel
- Error handling
- Measurement criteria
- National subsidiarity
- Legal Framework
- Reviews and audits
- ...



Certificates

- Single certificate for support, disclosure and target counting?
 - Consistency,
 - Simpler and
 - Cheaper to operate
- Or one certificate for each (support, disclosure, target counting)?
 - Flexibility

Contents of an EECS GO

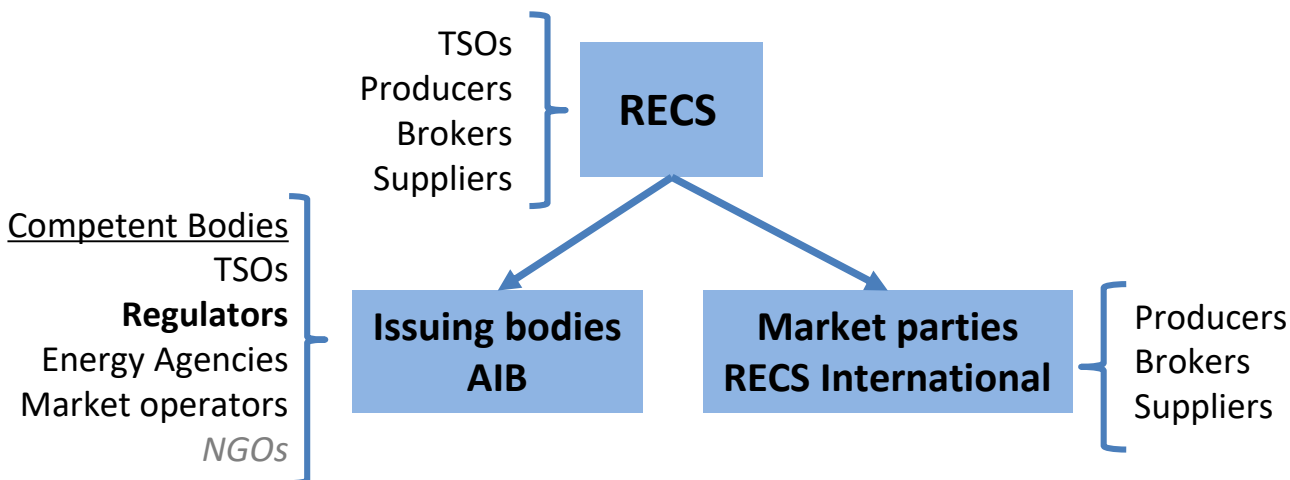


- Energy Medium (e.g. electricity/ gas/ heat)
- Product (e.g. GO / non-governmental certificate/...)
- Unique certificate number
- Production period (start and end dates)
- Type of installation (e.g. CHP, wind turbine ...)
- Production device
 - Identity
 - Location
 - Capacity ((capacity unit, and date operational)
- Face value (i.e. Certificate size – e.g. 1MWh)
- Identity and country of originating member (e.g. issuing body – e.g. Statnett, Norway)
- Identity and country of relevant competent body (e.g. Statnett, Norway – can be different to member)
- Purpose of certificate (i.e. Disclosure, Support or Target)
- Issue date
- Relevant Independent Criteria Schemes (e.g. Naturemade, EKOenergy)
- Support received by type (none, Production, Investment, both, unknown)
- Energy source (e.g. Biomass: energy crops : rapeseed oil)
- (If High Efficient Cogeneration
 - Use of heat (category)
 - Lower Calorific value (MJ/kg)
 - Primary Energy savings (*Percent and actual amount*) (MJ/MWh)
 - CO2 (*emitted and actual savings (hidden)*) (kg/MWh)

- **Define Roles and responsibilities for organisations in country/Domain**
 - **Competent authority**
 - Tasks: Issuing, transfer and cancellation of certificates
 - Independent of production, trade and supply
 - **Registry operator**
 - **Production Registrar / auditor**
 - Register production devices + re-registration after 5y
 - **Measurement body(s)**

1. Appoint an Issuing Body
2. Appoint agents to support the activities of the Issuing Body (if required)
3. Select, implement and configure Registry Software
4. Fill in AIB Application Form and Questionnaire
5. Draft a Domain protocol, setting out how the market will work in your country
6. Test the interconnection of your registry with the AIB Hub
7. Gain the approval of membership of the AIB General Meeting

AIB History



1999	Concept
2001 - 2002	Test phase COM project: voluntary RECS certificates
2003 - 2007	Directives RES-GO 2001/77/EC CHP-GO 2004/8/EC 2003/54/EC
2008 - March 2013	RES-GO 2009/28/EC 2009/7/2EC
2012 - March 2013	CHP-GO 2012/27/EC
2014 - 2016	End of RECS certificates

Governance of AIB

2001	AIB & RECS = same body
6/2002	AIB formed
12/2002	RECS international formed Memorandum of understanding between AIB & RECS
2005	Bodies formally separate Consultation with market parties and COM
2012	Discussions with CA-RES
2014	Hub Participant Agreements
2016	Professional Reviewers Group



- 2017 New Hub live. AIB develops position on RED II. Internal reorganisation commences
- 2016 Completion of Hub redevelopment. Work starts evaluating linking GOs with carbon. Replacement of website. Install Professional Reviewers Group.
- 2015 Replacement of the Hub. Reflection paper proposes "Full Disclosure".
- 2014 RECS certificates cease to be issued. From now on all EECS certificates are GOs and EECS Disclosure certificates
- 2012 Ten years of AIB!
- 2011 Implement EECS Rules and new Hub
- 2008-10 Re-design PRO into the EEC Rules incorporating new RES Directive 2009/28/EC, enabling energies other than electricity and simplifying the regulations
- 2007 Implement inter-registry Hub
- 2006 Develop new chapters for CHP certificates, and revise all member domain protocols to support the new EECS regulations
- 2005 Definition of a more robust business model for EECS and develop new chapters for disclosure
- 2004 Redevelop Basic Commitment to address Guarantees of Origin, certificates for other forms of energy and new, clearer rules
- 2003 Live running / Guarantees of origin
- 2002 Registry interfaces agreed, international trade commences, AIB and RECS International founded. End of test phase (18M certificates issued)
- 2001 Basic Commitment agreed - drafting of domain protocols, first certificates issues (Finland) and national trade commences
- 2000 Preparation commences - resolution of many detailed issues
- 1999 Foundation of RECS and test phase conceived to prove the concept

- **Implementing REDII**
- **Organisational restructuring**
- **Relation with Disclosure Competent Bodies**
- **Facilitating energy carrier conversion**
- **Drafting EECS Gas chapter**
- **Participation status for gas GO issuing bodies**

- **Chapter O of the EECS Rules**
- **Gas workgroup**
 - Existing members
 - Observer status - Scheme co-developer status
- **Reorganisation**

AIB - guaranteeing the origin of European energy

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AIB

association of issuing bodies

