

# **EXPANDING**

## Annual Report 2016



## **EXPANDING**

In 2012, the AIB celebrated its 10<sup>th</sup> anniversary and we titled the Annual Report 'GROWING'. Looking back to 2016, getting closer to the 15<sup>th</sup> anniversary, we can say that AIB is EXPANDING.

We know that AIB is still growing, because more countries are already on their way to becoming members. As we grow in maturity, the following are expanding:

- An internal, structural change process was started to help us to be better prepared for the future.
- AIB's vision and goals have been communicated actively, e.g. with events in Brussels and by taking part in the EU consultation process.
- Implemented a Stakeholder Strategy, leading to AIB becoming active as 'lobbyists' for improvements in disclosure regulation – this is a new task for AIB.
- AIB also expanded its remit by taking over the Residual Mix calculations from the RE-DIIS II project.
- AIB is considering its role in supporting Guarantees of Origin for gas, and has been working on improvements to the disclosure of Carbon emissions.

We are looking forward to the future, and with the title written in red we refer to our interests and activities in European policy development – the acronym for the new Renewable Energy Directive is **RED**.

# CONTENTS

<b>President's introduction</b>	<b>2</b>
<b>Chair's Statement</b>	<b>3</b>
<b>Certificate activity for 2016</b>	<b>4</b>
<b>2016 Achievements</b>	<b>14</b>
External life	17
Internal life	19
Working Group Internal Affairs	20
Working Group Systems	21
Working Group External Affairs	22
Budget / Actual expenditure and income	23
 <b>Reports from Members</b>	
Austria	26
Belgium (Brussels)	28
Belgium (Flanders)	30
Belgium (Wallonia)	32
Belgium (Federal)	34
Croatia	36
Cyprus	38
Czech Republic	40
Denmark	42
Estonia	44
Finland	46
France	48
Germany	50
Iceland	52
Republic of Ireland and Northern Ireland	54
Italy	56
Luxembourg	58
The Netherlands	60
Norway	62
Slovenia	64
Spain	66
Sweden	68
Switzerland	70
 <b>Reports from Observers</b>	
Federation of Bosnia and Herzegovina	72
Greece Mainland and Grid Interconnected Islands	73
Serbia	74
United Kingdom	75
 <b>Annex 1 Contacts</b>	<b>78</b>
<b>Annex 2 Audit Report</b>	<b>80</b>
<b>Annex 3 Financial statement</b>	<b>83</b>
 Production and Graphics	84

# PRESIDENT'S INTRODUCTION



AIB President

Dirk van Evercooren  
of VREG, Flanders

## Dear reader of the AIB Annual Report,

2016, what a year it was... It started promisingly, with the positive buzz resulting from the Agreement on ambitious climate policy goals and commitments to reduce greenhouse gas emissions, at COP 21 in Paris in December 2015 with participation from more countries than ever before. The year started with a lot of hope for the future! Then somehow, some things went wrong.

Attacks of terror struck in many European cities and several political events created a shock at first, and raised concerns for the future, right after that shock faded. The decision of the UK to leave the European Union and the election of a new US president who spoke out sceptically on global warming are just two examples.

These events are also relevant to the AIB, directly in the case of Brexit, indirectly in the case of the US elections. For the AIB itself, the year started well, as we gained an important new member in the form of Spain and Germany was accepted as a full member, rather than as a Hub user. This only confirms the relevance of our organization as a key player in the European market for GOs. Furthermore, the AIB published the residual mix calculations for the first time, receiving many positive comments.

Yet, also for the AIB, 2016 held some disappointments. The chair of Working Group Internal Affairs, and both a member and the chairman of the AIB Board left our organization, taking with them considerable experience and knowledge. It speaks a lot for the resilience of the AIB that their exit did not leave the organization in a state of passive regret, but rather created a new dynamic. I am happy to say that in my opinion, WGIA and the AIB Board are doing very well, thank you very much! The Board is currently enlarged and much more feminine than ever before with three of the four Board members – including the chair – being ladies. I welcome the new members and chair of the Board and am looking forward to the new paths that we will explore in 2017.

New paths were also taken with the new AIB Hub becoming operational in 2016. This new, improved facility was put at the service of the AIB members, the issuing bodies of GOs, and hence of the companies using and therefore trading GOs, and ultimately allows us to offer better service to consumers in all AIB member countries, which now rank 20. This massive IT project was very well managed by all involved, and special thanks need to go to the project team and Working Group Systems! The AIB also reached out to the market players in the GO market, innovating the formula provided by the Open Markets Committee. All ambitions have not yet been fully delivered, but the potential is there, as evidenced by the overall very positive feedback that was received. We recognize that we can only do a good job if we get feedback from both our members and the market parties!

Finally, the European legislative process that will lead to new Directives that determine the context in which AIB must work, was kicked off on 30 November with the publication of the 'Clean Energy for All Europeans' package. Our organization put a lot of effort into the preparation of this package, in developing a vision of the role that Guarantees of Origin and disclosure information must play in the future of the European internal energy market and the Energy Union. This vision, written down in the Reflection paper we published in 2015 and that we brought under the attention of the European Commission and all European stakeholders, clearly influenced the proposals in the package. Unfortunately, the Commission did not fully follow – or should we say "did not dare to fully follow"? – our vision of 'full disclosure', using GOs for tracking all electricity. Still, the GO as an instrument is clearly reinforced: the Commission proposes mandatory use of GOs for disclosure of electricity from renewable sources, and mandatory issuance of GOs for all electricity from these sources. GOs will also track renewable heat and cold and renewable gas. This is progress and reinforces the instrument that is at the core of our activities.

We will continue our work with European decision makers and stakeholders in further developing this package, with the final goal of putting Europe's energy consumers truly in the driver's seat and allowing them to steer Europe towards a low carbon energy model in 2017 and beyond!

# CHAIR'S STATEMENT



Chair of the Board  
Angela Tschernutter  
of E-Control, Austria

The AIB can look back on an interesting year. It was a year of success in gaining new members, as Spain joined and Germany became full members; the number of traded certificates rose and the relationships with external working partners and the Commission were very close. Currently, the AIB has 23 members representing 20 countries. The Association will continue its extensive work and dialogues with all potential new countries which consider establishing a GO system and working with the AIB standard.

The internal organisation of AIB was dominated by changes in the functions of the chairpersons of the Systems and Internal Affairs Working Groups and the Board. The working groups are led by very experienced people and the members are energetic and enthusiastic in their contributions. The Board changed in December and has continued its work with a motivated team. In the name of the Board, I would like to thank the outgoing members for the great work they have done for the AIB and the legacy they left behind.

In 2016, the revision of the European Directives, especially the RES Directive 2009/28/EC, was predominant for AIB's work. The main issue we would like to see in the revised Directive(s) is the implementation of full issuing and full disclosure in all European member states. This, unfortunately, is not yet reflected in the revised text of the Directive(s). Therefore, we will continue lobbying in that direction in 2017.

Implementing a well-functioning Hub with a new service provider was the biggest step we took in 2016. The AIB now offers a modern Hub connection from which all members benefit. The Hub system is technically up to date and reflects the high quality standard of the AIB.

As the primary aim of issuing GOs is to use them for disclosure purposes, AIB publishes residual mix calculations on its website; for many countries, these are an essential data source to display on the suppliers' disclosure statements. We use a slightly adapted calculation method from the RE-DIIS project, based on member input.

Our regular member audits will include the publication of a country profile that contains details on national disclosure practices. These are meant to help countries decide whether foreign GOs meet their national regulations and requirements and can be used for disclosure purposes; more generally, they will also increase understanding of foreign disclosure schemes. A questionnaire based on the RE-DIIS project has been developed and will be available on the AIB website in early 2017. The results will be presented in a country profile, also on the AIB website.

As environmental parameters, especially CO<sub>2</sub> emissions, are more and more in the spotlight in relation to GOs, we have intensively discussed the calculation method and the way to present the CO<sub>2</sub> figures to make the information reliable and comparable amongst countries for customers.

These points highlight the interesting work of the year 2016 within the AIB.

In 2017, the AIB will become even more professional. Major steps in that sense will be taken in the areas of internal revisions of structures and working procedures. Further, our lobbying work for the implementation of full issuing and disclosure systems in Europe will continue. These are two major issues with a wide range of implications, and AIB is looking forward to taking on all the new challenges and adventures with the same enthusiasm as always, thanks to a great team of individuals from the AIB member countries and observers. Further, the Secretary General and the Secretariat, as well as the professionals working for the AIB, have done a tremendous job. I would like to express my thanks to them, to all chairs of Working Groups and Task Forces and to all members and observers who have contributed to a successful year 2016 for the AIB.

# CERTIFICATE ACTIVITY FOR 2016

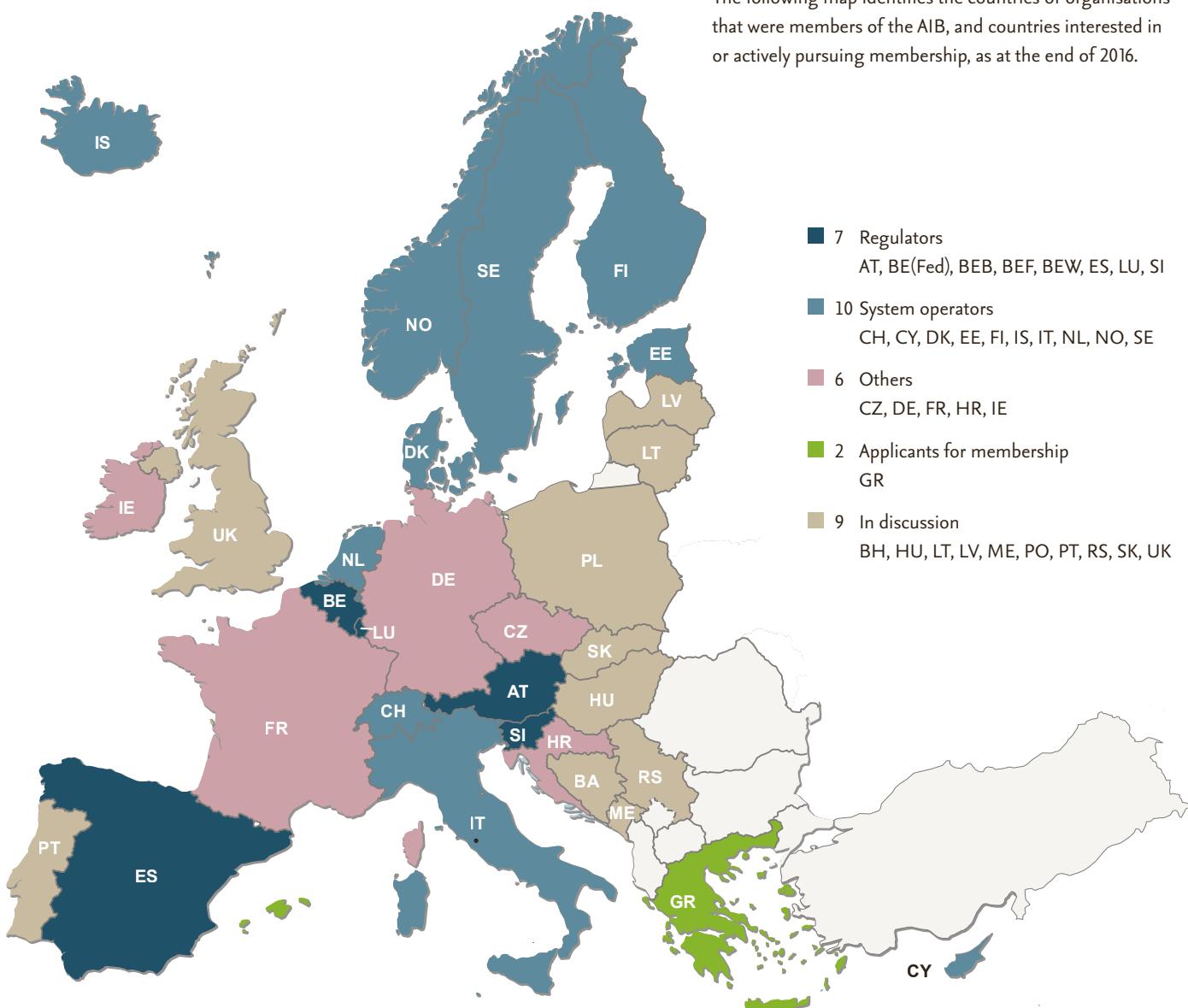
## Membership

At the end of 2016, AIB had a total of 23 members, representing 20 countries (the Belgian regions of Brussels, Flanders and Wallonia each have their own issuing body, as has Federal Belgium, which has responsibility for offshore production). CNMC of Spain joined the AIB in March 2016, and at the same time UBA of Germany became a full member rather than a non-member user of the Hub.

The issuers of guarantees of origin (GOs) for Greece (LAGIE) and Sweden (Energimyndigheten) continued the membership application process.

Discussions progressed with interested parties in Bosnia (REERS), Federation of Bosnia and Herzegovina (RES Operator), Hungary (MEKH), Latvia (AST), Lithuania (Litgrid), Montenegro (ERA), Poland, Serbia (EMS), Slovakia (URSO) and the UK (Ofgem).

The following map identifies the countries of organisations that were members of the AIB, and countries interested in or actively pursuing membership, as at the end of 2016.



## Market Activity

### New features of the statistics

Statistics are available for: certificate activity in a month; and certificate activity relating to electricity produced in a month. So it is possible to analyse the quantity of certificates which are issued, transferred and cancelled or expired in a month; as well as those which were issued, cancelled or expired for the electricity produced in a month. This makes it possible to see how many of each 'vintage' of certificate are still available on the market; and to review seasonal certificate activity.

**Health warning:** in reading these statistics, the reader should be aware that not all registries yet report:

- 1 certificates issued by date of issue; or
- 2 certificates cancelled or expired for electricity produced in a specific month.

The situation has improved this year, but this should be borne in mind when developing conclusions based upon these statistics. Some statistical information – in particular that relating to 2016 production – is incomplete. This is due to such information only becoming available after the Annual Report is produced.

### Overview of activity

Market activity continues to increase, with continued growth in the quantity of certificates used by suppliers to prove the source of electricity. Transfers within the same country have started to rise again as the use of GOs for disclosure purposes gains support, and there has been continued increase in international transfers and cancellations; with more and more certificates finding a value (distinguishing between cancellation and expiry in some

registries was not always possible in the early days of the market, so cancellations were overstated).

By the end of 2016, 75% of certificates issued for electricity produced during 2015 and 17% of certificates issued for electricity produced in 2016 were reported as having been cancelled. 7% of certificates issued for electricity produced in 2015 have now expired, slightly lower than the previous year.

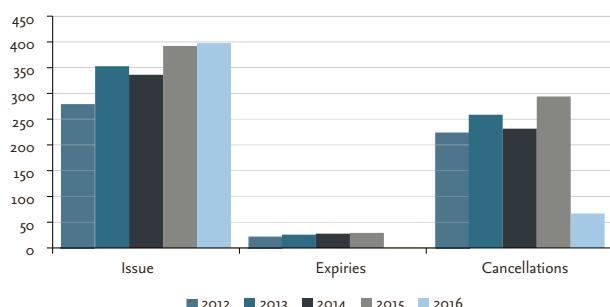
This again demonstrates that increasing numbers of competent bodies are expiring certificates, and that stocks of certificates more than 12 months old are rapidly depleting in response to the requirement under the EU Renewable Energy Directive (2009/28/EC) for certificates to expire within 12 months of production of the associated energy. This has led to increased demand for new sources of supply; and coincides well with the growth in member states seeking to comply with the Directive in a cost-efficient way by joining the AIB and/or using the Hub.

The number of issued certificates for electricity produced during 2016 will be finalised during the next few months, and we anticipate a higher final number of certificates issued for this production year than that reported in this article – historic trends suggest an increase of about 20%.

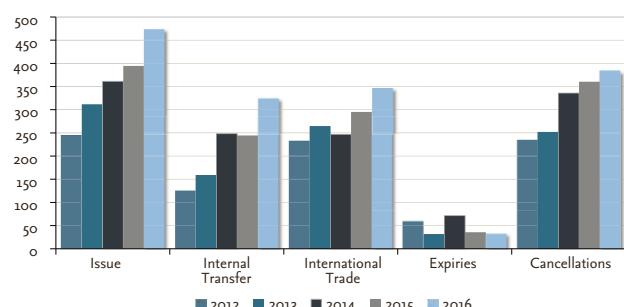
The following graphs show:

- 1 the annual quantity of certificates issued, cancelled and expired for production during that year; and
- 2 those that have been issued, transferred within a country, transferred internationally, and expired and/or cancelled during that year.

graph 1    **Annual EECS transactions by production date (TWh)**



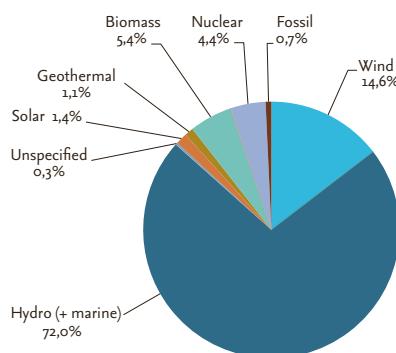
graph 2    **Annual EECS transactions by transaction date (TWh)**



### Source of certificates – technology / energy sources

Hydropower continues to be the major source of electricity for which certificates are issued and cancelled, and is slightly down on 2015, at 72%. The proportion of certificates for nuclear power issued has fallen again, this time from 5.8% to 4.4%, and it has also dropped for biomass (from 6.5% to 5.4%), geothermal (1.6% to 1.1%) and fossil (1.0% to 0.7%). However, it has risen for solar (0.4% to 1.4%) and wind (9.9% to 14.6%). Unspecified energy source accounts for 0.3%.

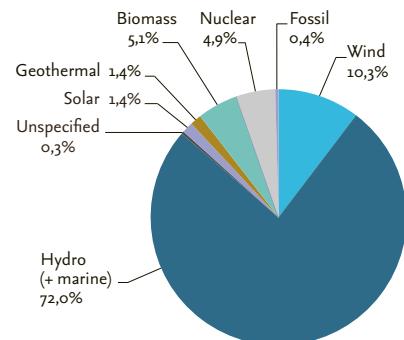
graphs 3 + 4 EECS certificates issued per technology (2016)



At the same time, the cancellation of hydro (76%), wind (10.3%), geothermal (1.4%), nuclear (4.9%) and fossil (0.4%) remain similar to 2015, while solar has increased (0.4% to 1.4%) and biomass has decreased (6.0% to 5.1%). 0.3% of unspecified certificates have been cancelled.

The following graphs show the annual quantity of certificates issued for a production period; along with those that have been cancelled during that period.

EECS certificates cancelled per technology (2016)



### Source of certificates – country

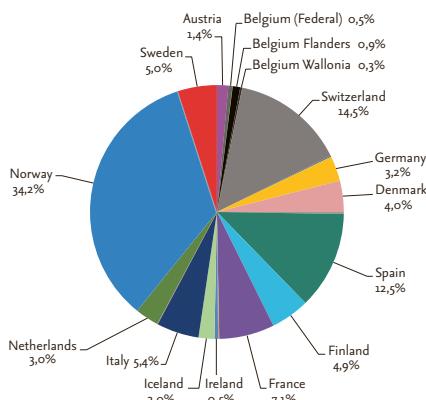
Regarding national activity, Norway and Switzerland remain far the major suppliers of certificates, supplying 49% of all certificates issued, followed by Spain, supplying 12.5%, and Finland, Sweden, France and Italy, which issued a further 22%.

Germany, Switzerland and the Netherlands are now the major consumers of certificates, cancelling 48.7%

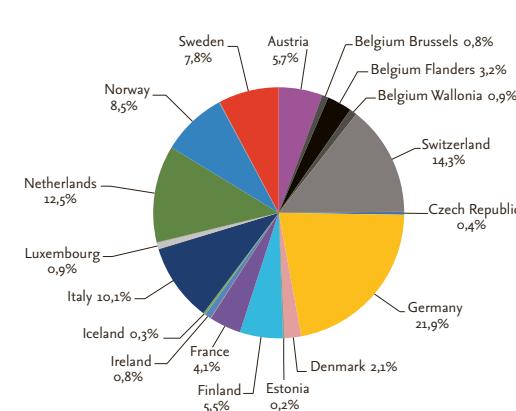
of all certificates between them; while Norway, Sweden, Italy, Finland, Belgium and Austria collectively cancelled a further 42.5%.

The following graphs show the annual quantity of certificates issued for a production period; along with those that have been cancelled during that period.

graphs 5 + 6 EECS certificates issued per country (2016)



EECS certificates cancelled per country (2016)



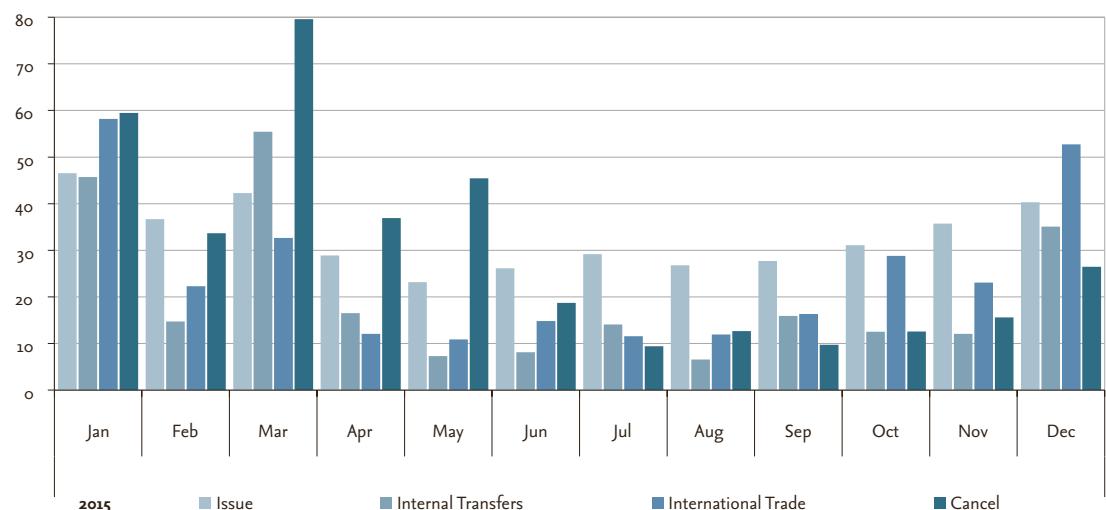
## Annual activity

Activity has continued to increase, with most activities rising at the turn of the year, and declining in the middle of the year.

The following graphs show, for the last two years, the annual quantity of certificates issued for a production period; along with those that have been transferred within a country, traded internationally and/or cancelled during that period.

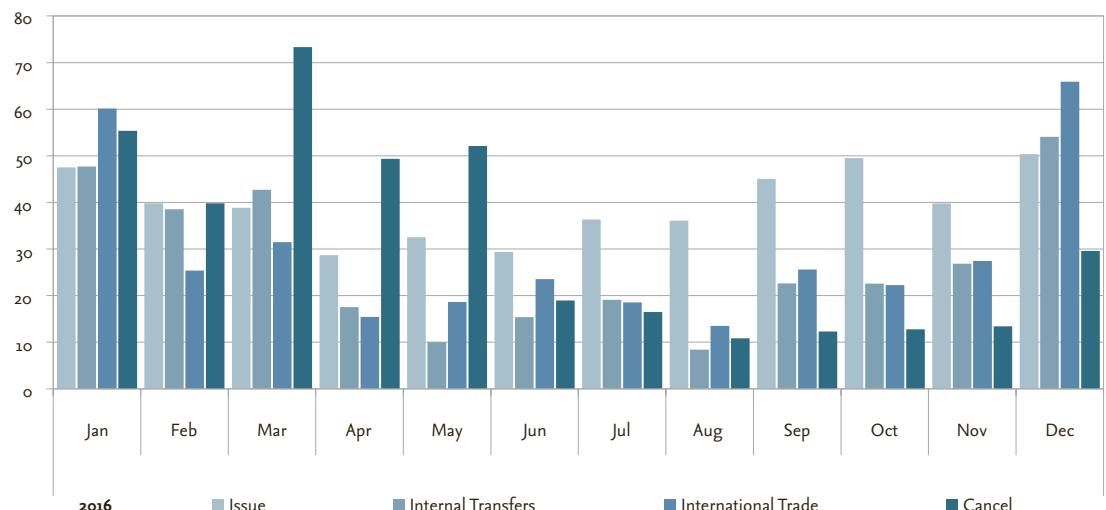
graph 7

### EECS certificate activity 2015 (TWh)



graph 8

### EECS certificate activity 2016 (TWh)



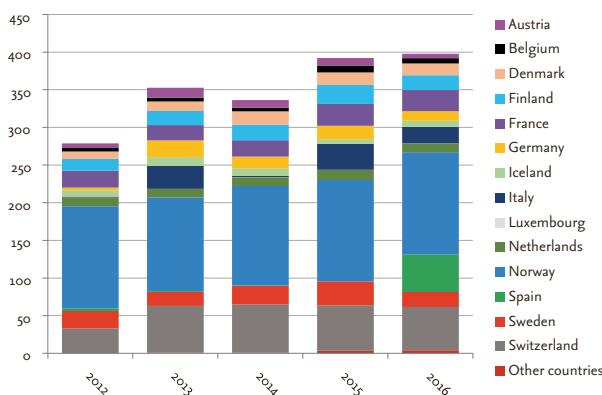
### Cumulative activity - national

As the following graphs demonstrate, the growth in issuing continues (note that the issuance of certificates for the remaining 2016 production will continue into 2017; and that historically a further 20% is possible, meaning the eventual total might be as high as 480 TWh). The following graph shows the annual quantity of certificates issued for production in each of the last 5 years.

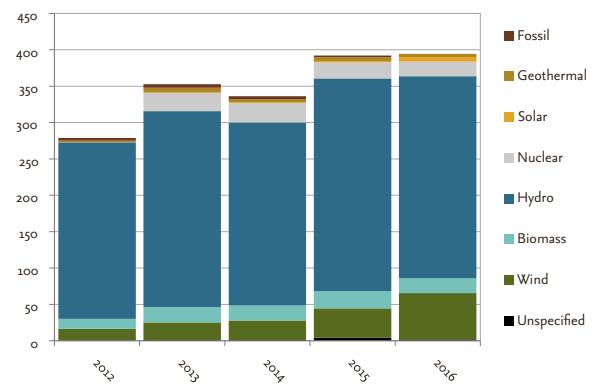
Norway is still the leading country supplying Guarantees of Origin; providing the market with approximately 134 TWh of Guarantees of Origin from Hydro in 2016. As the rest of the market keeps growing and developing, Norway's share of the total supply continues to decrease.

graph 9 + 10

### Issued per year of production (TWh)



### Issued per technology (TWh)



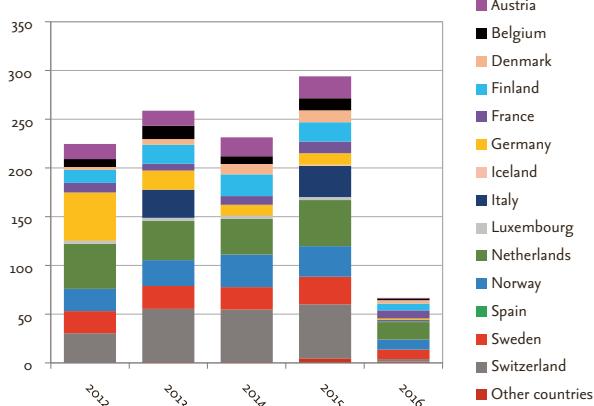
Cancellation continues to grow, reflecting growing consumption in a number of countries during 2016. The following graphs show the annual quantity of certificates that have been cancelled for production during each of the last 5 years; along with the certificates that have been cancelled in each year for all production periods.

In reviewing these graphs, please note that – in line with the provisions of the RES Directive 2009/28/EC – certificates are increasingly expired one year after the date of production (this was not the case before 2011, when certificates that had not been cancelled remained in registries for an unlimited time). Also, until relatively recently, registry operators only recorded the quantities

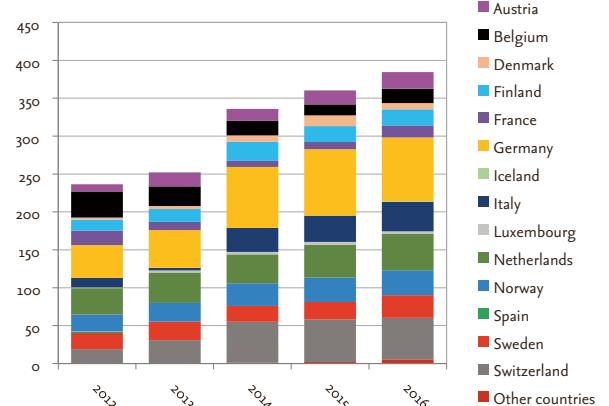
of certificates issued for each production period and those transferred and cancelled during a year for production during any year – increasingly, registry operators now record both.

Each of the above issues impact the statistics: for example, certificates are normally cancelled late in their life, which explains why most certificates for 2016 production have yet to be cancelled. Also, the slight dip in certificates for all years that were cancelled during 2012 and 2013 may have been due to energy suppliers using up old stocks of certificates before they expired, as the RES Directive came into force; plus the impact of changes of issuing body in Germany and France.

graphs 11 + 12 Cancelled per year of production (TWh)



Cancelled per year of transaction (TWh)



The continued rise in cancellations has led to demand of more than 384 TWh, over 11% of all European energy demand and 33% of all European RES electricity. The market continues to shorten.

Furthermore, market activity in Cyprus, Czech Republic, Slovenia and Spain are either not reported, or else not all data is currently available, for these and for non-member countries. When this is eventually added, we expect to see a further rise in reported market demand.

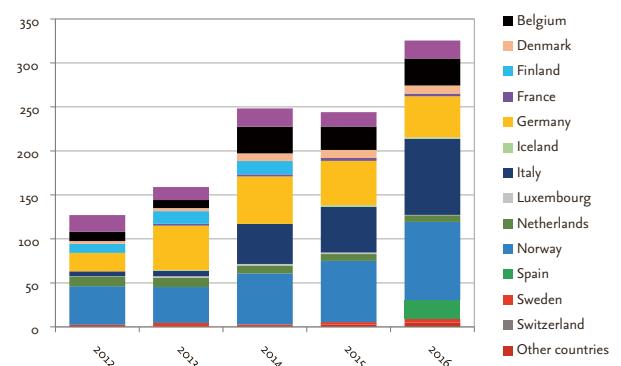
2016 saw one new country (Spain) taking its first steps into the market: this will gradually take a greater part in the market in 2017, along with Cyprus and Czech Republic.

Households, organisations and businesses all contribute to this impressive market growth; although it is clear that the corporate sector is the main driver. Global reporting initiatives like CDP (Carbon Disclosure Project) and the Greenhouse Gas Protocol, as well as the CSR Directive, emphasise that renewable energy is an important part of a broad corporate sustainability agenda. The Guarantee of Origin is the primary European tool for documenting the purchase of renewable energy.

Internal use of certificates continues to rise, with Norway, Germany, Italy and Belgium making a marked contribution, as shown in the following graph:

graph 13

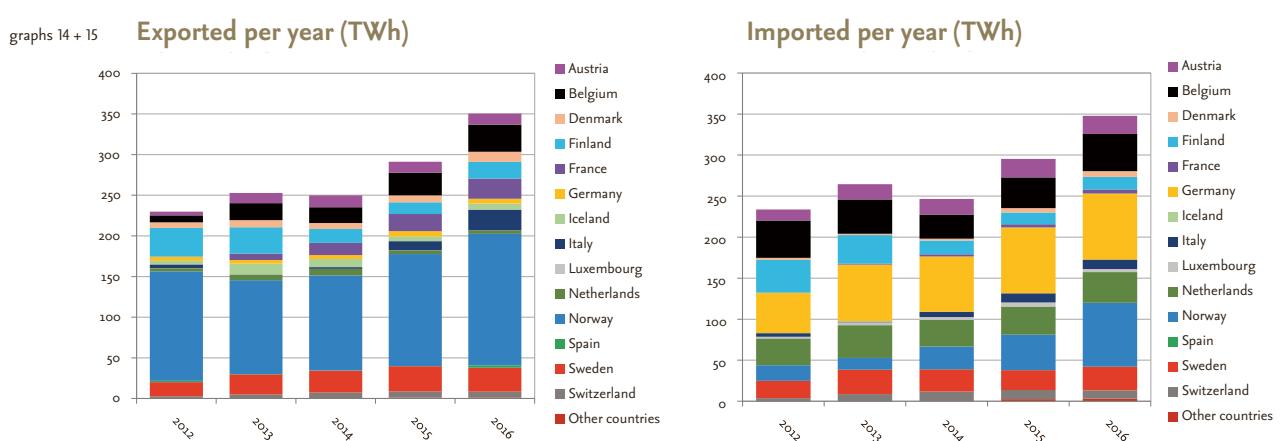
Transferred per year (TWh)



Externally, the exporting countries are predominantly Nordic plus France and Belgium.

The contribution of individual importers continues to show the Nordic countries, Benelux and Germany as the major importers, followed by Austria.

The following graphs show the annual quantity of certificates traded internationally during a period.

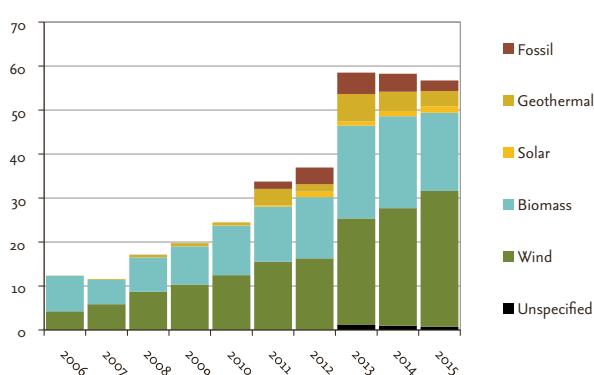


### Cumulative activity – technology

From the perspective of technology, production and transfer of electricity, hydro-power remains predominant among energies, followed by wind, nuclear and biomass.

The following graphs show the annual quantity of certificates issued for energy produced during a year, analysing these in more details for energy sources other than nuclear and hydro.

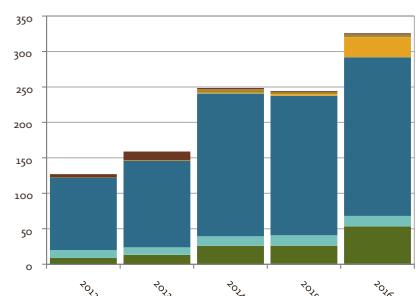
graph 16      Issued per technology (TWh) (except nuclear and hydro)



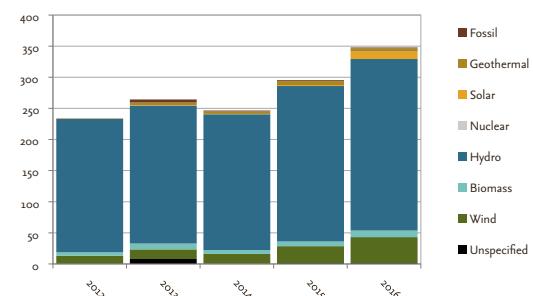
In addition, the following graphs show the volume of certificates by each energy source that have been transferred within a country, and those that have been traded internationally.

graphs 17 + 18

### Transferred per technology (TWh)



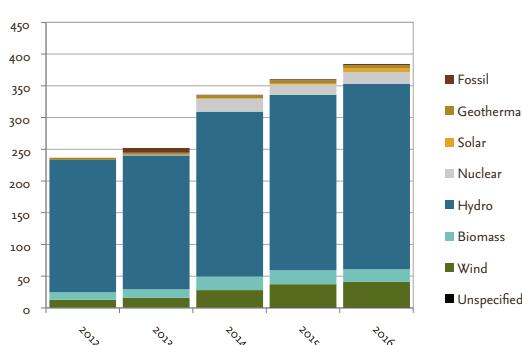
### Imported per technology (TWh)



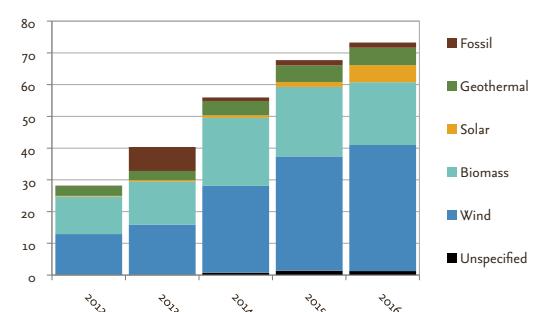
These graphs show the annual quantity of certificates cancelled during each year, analysing these in more details for energy sources other than nuclear and hydro.

graphs 19 + 20

### Cancelled per technology (TWh)



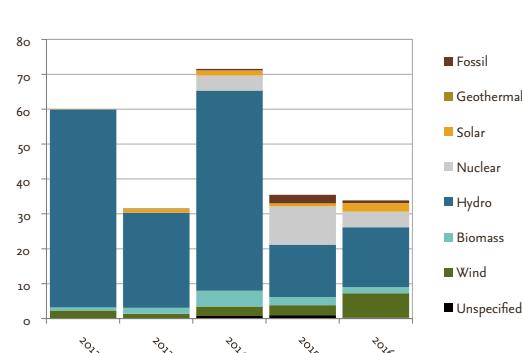
### Cancelled per technology (TWh) (except nuclear and hydro)



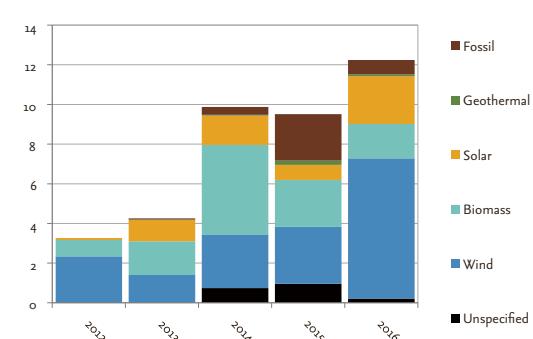
We can also see the growth in expiry of certificates as the requirements of Directive 2009/28/EC are implemented.

graphs 21 + 22

### Expired per technology (TWh)



### Expired per technology (TWh) (except nuclear and hydro)



### EECS market penetration

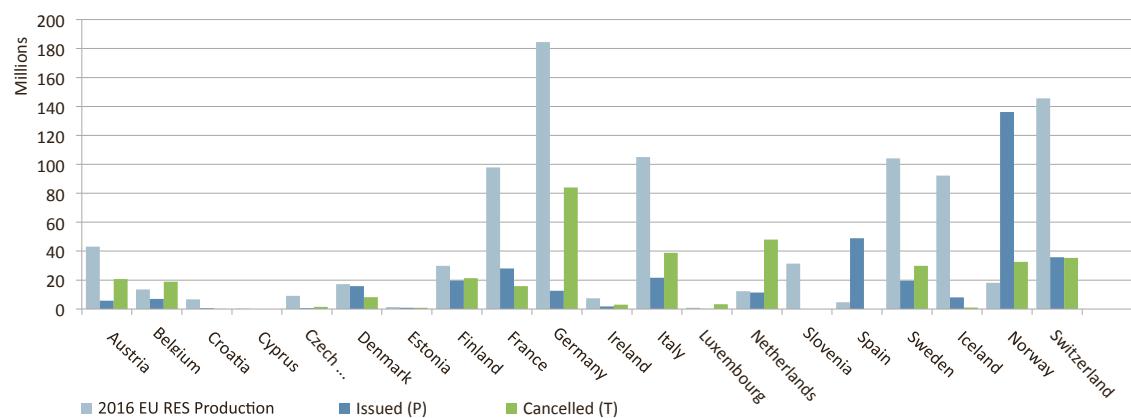
It is interesting to compare renewable electricity production in member countries with the number of EECS certificates issued.

Based on the latest available twelve months of ENTSOE statistical data (i.e. for the period September 2015 to August 2016) regarding the production of electricity, the following graphs compare electricity produced in 2016 with EECS certificates issued for this period. They

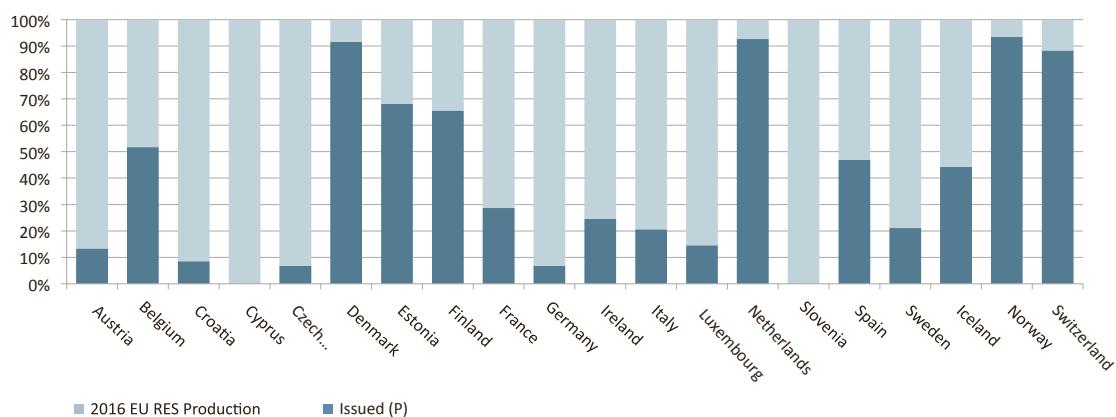
show the annual RES production and the quantity of EECS certificates issued for a production period in each member country.

These show that Norway, the Netherlands, Switzerland and Denmark predominantly use EECS GOs to provide evidence of the source of energy to consumers; and there are gains in a number of other countries.

graph 23    **EECS market penetration (Millions)**



graph 24    **EECS market penetration (%)**

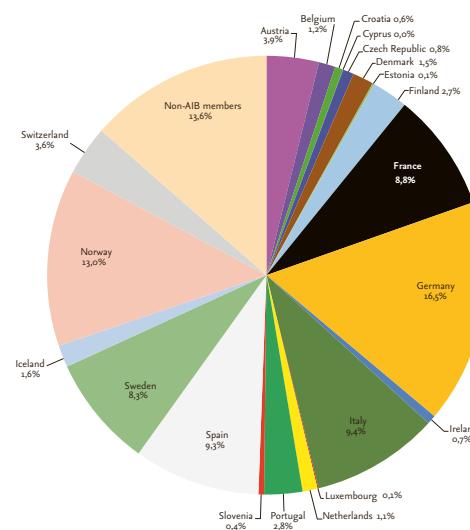


The following graphs also relate to 2016 production and show clearly that AIB members cover regions which, during 2016, were responsible for the production of 79% of European electricity, 89% of which was from renewable sources. Hence the electricity for which certificates are not issued is either:

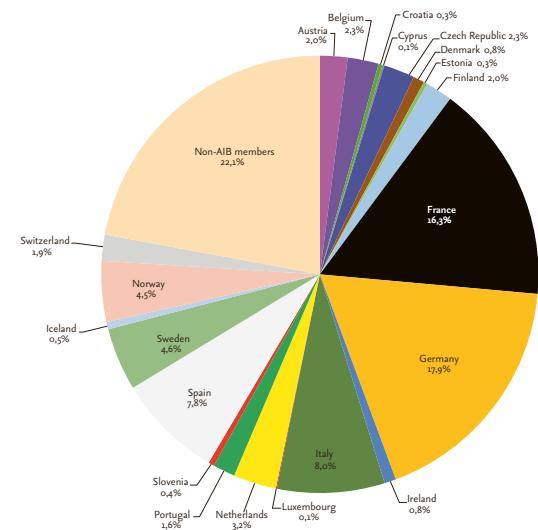
- 1 produced by a country which is not yet a member of AIB; or
- 2 produced by a member of AIB which does not yet support EECS for all forms of certificates, or which does not yet support EECS for some production (e.g. only for external trade); or
- 3 not certified, due to lack of demand; or
- 4 not certifiable, as it has received support and this electricity is included in the mix supplied to consumers

graphs 25 + 26

**European 2016 RES-E electricity production by source**



**European 2016 electricity production by source**



# 2016 ACHIEVEMENTS

The last year has been busy. During 2016 we have:

- 1 Continued our ongoing programmes of reviewing the domain protocols (DPs) of new members and those whose practices have changed, and auditing the operations of existing members
- 2 Tested and implemented the new Central Processing Hub with the assistance of Unicorn Systems, which is now supporting GO transfers across Europe
- 3 Started the review of the Clean Energy for all Europeans package
- 4 Commenced a project to consider the use of GOs to convey information about CO<sub>2</sub> and radiation waste emissions
- 5 Completed the implementation of our new website content management system and development of the associated tools, ready for go-live in 2017
- 6 Concluded the arrangements to provide insurance for all AIB members
- 7 Improved statistical information to report issuing, transfer and end-of-life of GOs for each energy source within each member country
- 8 Contributed to the CEPS report on GOs
- 9 Hosted an event at the European Union Sustainable Energy Week together with CA-RES
- 10 Commenced a project to reorganise the AIB, to ensure we are equipped for future challenges.

## Domain Protocol reviews and audits

The professional reviewers – those who offered their services as individuals rather than as members – are now organised into a formal group, which is developing improvements to review and audit practices.

During 2016, following domain protocols were reviewed and approved for:

- CertiQ (Netherlands)
- CNMC (Spain)
- HROTE (Croatia)
- TSO-CY (Cyprus)
- UBA (Germany)

Audits were conducted for:

- Energinet.dk (Denmark)
- GSE (Italy)
- HROTE (Croatia)
- Powernext (France)

Until December 2015, one AIB member – OTE (Issuing Body from Czech Republic) – had an open issue, because of the delay in implementing appropriate disclosure legislation. The Czech registry was connected to the AIB HUB on 25 April 2015; but while GOs were permitted to be imported from other EU registries into the Czech Republic registry, Czech GOs could not be exported to other EU registries due to the possibility of double-counting.

At the General Meeting in Dessau in September 2016, it was decided to re-admit OTE to membership of the EECS Electricity Scheme and to reconnect it to the HUB for import of GOs, and to only permit export of GOs issued after 30<sup>th</sup> September 2016 for electricity produced after 30<sup>th</sup> June 2016.

## Renewal of the AIB Central Processing Hub

Unicorn System has redeveloped and operates the central registry Hub application for the AIB. The European Energy Certificate System – EECS – ensures reliable and efficient cross border exchange of GOs, thereby strengthening and enlarging the market, and to further facilitate the international exchange of energy certificates, the AIB operates an inter-registry telecommunications Hub.

The enormous growth of the GOs traded meant that the old system was no longer sufficient, and it was therefore completely redesigned and rebuilt. The new solution has been developed using the Unicorn Open Energy Platform, which has delivered several other European ICT Integration Solutions in the Energy Domain, and is hosted, operated and maintained in the Unicorn Energy Cloud.

## Started the review of the EU Commission Package “Clean Energy for all Europeans” Package

This is a package of measures to reflect how the clean energy transition is changing global energy markets. The Commission wants the EU to not only adapt to the transition, but to lead it, so it has committed to cut CO<sub>2</sub> emissions by at least 40% by 2030 while modernising the EU's economy and delivering on jobs and growth for all European citizens. The proposals have three main goals: putting energy efficiency first, achieving global leadership in renewable energies, and providing a fair deal for consumers.

The legislative proposals cover energy efficiency, renewable energy, the design of the electricity market, security of

electricity supply and governance rules for the Energy Union, and include changes to the Directives which drive much of the work of the AIB: the Renewables, Internal Markets and Energy Efficiency Directives.

The AIB has already stated its vision in its Reflection Paper of 2015, which proposes provisions regarding GOs and energy source disclosure, encouraging the Commission to make provision for:

- Using GOs to disclose to consumers the source of all consumed electricity, regardless of the energy source and technology employed, according to a set of common rules; and
- Using GOs to provide consumers with evidence of the carbon emissions associated with the production of their electricity.

The Commission plans to gain the support of the Parliament and Council for the revised Directives within the next year, and we will continue to work with these bodies to champion our views, and seek appropriate legislation to support them.

#### **Commenced a project to consider the use of GO's to convey information about CO<sub>2</sub> and radiation waste emissions**

The AIB wishes to further develop its GO and disclosure system into a full disclosure system, where it would be mandatory to use GOs for the disclosure of all energy sources.

To this end, we are developing a methodology for adding carbon emission values to GOs in a harmonised way across Europe. This methodology needs to be reliable, accurate and usable, protect consumer rights, and include a fall-back should information not be available. The methodology must take into account aspects related to the disclosure obligations by producers and retailers of electricity, as well as carbon footprint requirements by consumers of electricity and GOs.

The proposed methodology will build heavily on the European Union Emissions Trading Scheme (EUETS) regulatory package as a fundamental reference for the monitoring and reporting of carbon emissions, explicitly acknowledging the complimentary and fundamental role that the EUETS has in the regulatory framework on the European Power sector, alongside the two Directives on which the GO system is based upon.

#### **Completed the implementation of our new website content management system and development of the associated tools, ready for go-live in 2017**

The earlier AIB website was based upon an outdated technology. This led to difficulties maintaining the website, and did not provide up to date facilities.

A Liferay content management system has been implemented as a replacement, and the data held on the old system was converted into the appropriate form for the new system. Porting the large number of documents and other information between the two is a major activity, and was undertaken by E-Control and its advisors. The new website went live beginning of 2017.

#### **Concluded the arrangements to provide insurance for all AIB members**

The AIB and its officers are insured under professional indemnity policies, and this cover has now been extended to members which had been unable to engage insurers themselves.

#### **Improved statistical information to report issuing, transfer and end-of-life of GO's for each energy source within each member country**

Statistical information has, since 2001, been provided to stakeholders, and offers details of the numbers of certificates for each energy source that have been issued, transferred nationally and internationally, cancelled and expired, by each member, during each month.

To date, these statistics have been provided separately by members, and by fuel sources. However, the market has now grown to the extent that statistical information has now been published which refers to both member and fuel source, as this will no longer give away the market position of individual account holders.

#### **Contributed to the CEPS report on GOs**

The Centre for European Policy Studies' Special Report considers, among other factors, the rationale and selected options in the design of forthcoming EU legislation to extend the use of guarantees of origin to verify disclosed information about sources of electricity deliveries to final consumers, and makes a number of policy recommendations.

>

### **Hosted an event at the European Union Sustainable Energy Week together with CA-RES**

Since 2002, the AIB has worked on the potential of GOs to drive the Internal Energy Market towards European policy goals and decarbonise European energy markets. This topic has also been debated within Core Theme 5 of the Concerted Action on the Renewable Sources Directive (CA-RES) over the last couple of years.

Consolidating GOs in the European policy framework and extending them to all sources of electricity will constitute a major step towards the goal of empowering the European electricity consumers to take responsibility for their choices, provide a level playing field for all electricity producers and suppliers and will turn consumer demand into a driver of sustainability.

While disclosure of all sources of electricity ('full disclosure') has gained a lot of attention and support, the practical aspects of implementing it cost-efficiently had yet to be discussed publicly. That is what the event sought to do. Questions addressed included:

- Whether full disclosure required GOs to be issued and/or cancelled for all electricity;
- Current costs and those associated with a full disclosure model, for producers, suppliers and regulators; and
- The potential effect of a more reliable and trustworthy disclosure system on consumer behaviour.

### **Commenced a project to reorganise the AIB, to ensure we are equipped for future challenges**

The AIB and its environment are developing rapidly, which has led the Board to consider the way in which the AIB is organised:

- 1 To reaffirm the AIB's license to operate by responding to its growing operational responsibilities; and
- 2 To optimise the way the AIB works, to add value to its members and the market.

Five years ago, the strategic ambition of the AIB was to become the sole standard for European energy certificates. The growth of the AIB's member base and the success of the Hub demonstrate that we have accomplished this.

Now it is time to look at the future, and assess whether we work together in the best way.

Recently, members have indicated that decision-making should improve. In-kind contributions and willingness to take on official roles have decreased, and the responsibilities of providing the Hub service to market-parties need to be professionally addressed. As the market becomes ever more international, an increasing share of GO trade depends on the availability and quality of the AIB Hub's performance. The natural monopoly of the AIB and the lack of a viable alternative mean that the AIB must do everything in its power to ensure business continuity.

As a volunteer organisation, the AIB depends upon member resources, and its growth in a rapidly changing environment means more domain protocols, more audits, more incidents, changes and testing. Also, our visibility has increased significantly, so the outside world has more influence on our agenda. The AIB relies on determined people to do its work, with oversight from different stakeholders, and needs professional advice. This means that there is more to be done and less resources to do it.

The Board has therefore instituted a study of the need and necessity for making AIB more future-proof. There are two main challenges:

- Adapting the AIB internally to provide an open interface with its environment, yet preserving its independence and staying true to its core values; and
- Structuring decision-making processes to optimise member cooperation and ensure progress.

As a result, a two-way approach is proposed:

- A practical approach to prepare for growing operational responsibilities, involving recurrent, well-defined (and time-consuming) tasks like web services, DP reviews, application management, procurement, etc. and
- A structural approach to re-engineer internal cooperation, making decision-making more agile. This requires us to investigate how we can professionalise the relationship between our mission, vision and values and our annual planning & control cycle.

The resulting project will start in 2017 with a review of member attitudes and needs, for use in a structured walkthrough of the issues associated with reorganisation, with professional assistance from experts.

# EXTERNAL LIFE

## Open Markets Committee

AIB members are not market players, but we need to be aware that what we do is vital for the companies in the energy sector. This is why the Open Markets Committee (OMC) is an important annual meeting point where AIB and its members – the competent bodies for guarantees of origin across Europe – and GO market parties and their representative association, RECS International, can develop a better understanding of each other's needs and wishes. We, both issuing bodies and market players, operate in a very dynamic environment:

- The legal framework is changing constantly, now with the Clean Energy Package
- Technological: e.g. think of Blockchain and Solarcoin
- Economical: RE100 is pushing the market forward.

This year we introduced a new format and broadened the scope of the OMC with some interesting presentations and discussions about the new RES Directive in the Clean Energy Package, Independent Criteria Schemes and Bio(natural)gas. Also the request to have carbon on the GO, but what methodology to use and the change that the market for renewable power is turning global – how should the EECS GO interact with other systems was discussed.

The AIB recognises the valuable contributions, presentations and active participation in the discussions by RECS International members, experts and representatives in the carbon topic and Independent Criteria Schemes. In 2017 this joined meeting will be held again, in September.

## Residual Mix Calculation

European residual mixes for years 2009 to 2014 were calculated by the RE-DIIS Project Phases I and II (Reliable Disclosure Systems for Europe), until its termination in September 2015. The AIB decided to take over the calculations as it considers reliable residual mix calculation, coordinated at a European level, to be crucial in its mission to guarantee the origin of European energy.

## Recruitment of new members

At the end of 2016, and thanks to successful membership applications from CNMC of Spain and UBA of Germany (which had only been a user of the AIB's Hub until then), the AIB had 23 members in 20 countries (Belgium has four competent bodies representing the three regions of Belgium and Federal Belgium).

Some issuing bodies have open legal or technical matters which they are working to resolve at the earliest opportunity. This includes the Czech Republic (OTE), which has now resolved the issues surrounding its disclosure regime, and which may export internationally once its systems have been adjusted accordingly.

Five observers will potentially become AIB members in 2017 or shortly after: Energimyndigheten of Sweden, LAGIE of Greece, Ofgem of UK, EMS of Serbia and RES Operator of Bosnia & Herzegovina.

## Stakeholder approach

Until recently, the AIB was comfortable in the role of a rather invisible technical facilitator of the European GO-market. But when the review of the Renewables Directive was announced, it was time to step out of the shadows. The AIB has been growing rapidly over the past couple of years, as the GO-market has. So a new Directive carries both potential and a threat: the potential for strengthening the GO and increase its empowering effects on energy consumers, but also the threat that the GO could be replaced by a different instrument and approach...

In order to influence the European decision making process and embed the GO more solidly in the legislative framework, AIB put its long-term vision down in the Reflection Paper and send it to the European Commission. This was the start of the 'Stakeholder strategy', aimed at raising attention to the value created by the GO and by AIB as a facilitator of the European market for green electricity and to build a coalition of organisations that shared our vision. After all, if hardly anyone knows what we do and what positive effect our actions have, why would our core instrument, the GO, be getting any support?

But acting out a stakeholder strategy was new to AIB and requires a lot of work. The learning curve was steep! And there is always more to be done. A lot of meetings were set up, we worked with the Centre for European Policy studies to set up a conference on GOs and following that, CEPS published a briefing paper on GOs. The AIB joined up with Concerted Action Renewables Core team 5 to set up a high-level policy event during the EU Sustainable Energy week in 2016. A joint communication on the need for full disclosure was

>

issued by AIB and 6 other European organisations. A lot of work! Yet, the analysis in the next paragraph inspires confidence that our efforts were not in vain. Meanwhile, we continue our efforts in 2017 to make sure that AIB's vision is even more widely known and the support for our work keeps on growing.

### Clean Energy for all Europeans

The European Commission's proposals in the Clean Energy for all Europeans Package are ambitious and will contribute to a better integrated and more decarbonised European energy market. More specifically, the instrument of the Guarantee of Origin (GO) is consolidated and reinforced, by extending issuing of GOs to all renewable energy and making them mandatory for disclosure purposes. The AIB welcomes these elements.

Beginning of 2017, the AIB reviewed the complex effects of the proposals in detail, in order to present its views on how the Clean Energy Package might be made more effective. Our concerns include the treatment of third countries, the application of the CEN standard, the variable lifespan of a GO according to its date of issuance, and the obligation to auction GOs issued to producers that receive production support. We regret that the GO is not proposed as the unique tracking instrument for all sources of electricity, including fossil and nuclear. This is a cornerstone of our vision for the European energy market, and we feel that this is the most efficient way of ensuring that electricity consumers can be held accountable for the environmental impact of their choice of electricity contract. This would put consumers truly in the driver's seat, allowing them to help steer Europe's internal energy market towards sustainability and zero carbon emissions. This vision is shared by many stakeholders.

However, the benefits of the GO and of disclosure information for consumers, the European energy market, and Europe's energy system are not yet fully understood by all stakeholders, some of whom criticise the system for not having clear 'additionality' effects, where additionality refers to a direct push for new investments in renewable production capacity.

We fully appreciate the need to continue to improve the GO-system, but we firmly believe that GOs offer the only reliable, cost effective and accurate means of reliably informing consumers and significantly driving the energy system towards sustainability, through market functioning. It is simple economics: if more companies and families care about the environment and opt for a green contract, demand for GOs will rise, thus providing a clear signal for the energy sector and for investors in particular that more energy from renewable sources is needed. Because that is where the premium paid by the consumer for a green contract should end up: in the pockets of the renewable producers. That way, investment decisions will be oriented towards more renewable production capacity. There is no reason for the rules of normal market economics to be suspended, just because we are talking about the environment. So consumers with green electricity contracts should be reassured that they are making a difference.

The AIB is fully committed to the energy transition, and therefore is working with other organisations that build an 'additionality' layer on top of the GO system. Examples are the green energy labels that exist all over Europe, the sustainability claims of which are recognised by AIB and recorded on a GO.

We should not underestimate the power of the consumer, and stop thinking about the future with the current situation as our only frame of reference. In a couple of years, much technology for producing electricity from renewable sources will be near - or at - grid parity, so it will no longer require support. That's when GOs really will make a difference...

The AIB believes in the power of consumers and their impact on markets, provided they are given the right information and the right instruments; and provided the market is structured to enable it to work effectively, reliably and efficiently. Disclosure information and GOs are crucial instruments that can not only support, but also drive European targets for a low-carbon, integrated and sustainable energy market.

The AIB can – and wants to – support these goals and we hope the Clean Energy Package will provide the best possible legislative framework for us to do so.

# INTERNAL LIFE

## AIB – Officials

The decision-making body of the AIB is the General Meeting, which meets quarterly at various locations in Europe. Meetings tend to be over a two-day period, to enable decisions to be made at working and executive level. Normally, there is a social event associated with meetings, usually a dinner, giving members the opportunity for informal discussions.

The President of the Association is Dirk van Evercooren (who is also a Director of the VREG, the electricity and gas regulator of the Flanders region of Belgium), and he was initially appointed to the role in May 2014.

The Management Board is responsible for day-to-day management of the Association, and meets broadly monthly, alternating physical meetings (normally associated with general meetings) with teleconferences. The general cycle of meetings is organised so that budgetary plans are approved at the December General Meeting. For most of 2016, Jan van der Lee (CertiQ, Netherlands) was chairperson of the Board: he was replaced by Angela Tschernutter in December 2016.

The other Board members were Angela Tschernutter (E-Control, Austria); Lukas Groebke (Swissgrid, Switzerland), who was also Treasurer for the duration of 2016; Lars Olav Fosse (Statnett, Norway) until December 2016; and Jennifer Holgate (Statnett, Norway) and Emma Kelly (SEMO, Ireland), who were both appointed to the Board in December 2016.

The General Meeting is chaired by the President, Dirk van Evercooren once every year, for the purposes of approving the financial accounts and auditor's report, and otherwise by Angela Tschernutter, the Board Chair.

The Working Groups include:

- **Working Group Internal Affairs**, chaired by Laura Plunkett (SEMO, Ireland)
- **Working Group External Affairs**, chaired by Dubravka Brkić (HROTE, Croatia)
- **Working Group Systems**, chaired by Annie Desaulniers (CWaPE, Belgium (Wallonia)).

Further, during 2016 there were three Task Forces:

- **TF Carbon**, chaired by the Secretary General (Phil Moody)
- **TF Organisation**, chaired by the Board Chair (Jan van der Lee, and then Angela Tschernutter)
- **TF Hub Development**, chaired by the WGS chair (Annie Desaulniers)

The General Meeting, Board and Working Groups are supported by the Secretariat; the Secretary General being Phil Moody (United Kingdom), assisted by:

- Andrea Effinger (Germany) regarding Working Group External Affairs, the Working Group Chair's meeting, and the Open Market Committee;
- Marika Timlin (Grexel, Finland) regarding Working Group Systems, and who is also SuperUser for the AIB Hub; and
- Liesbeth Switten (Belgium), concerning legal and regulatory advice to Working Group Internal Affairs – note that Liesbeth is a part-time employee of a member (VREG, Flanders).

Reviews of Domain Protocols, setting out how each member implements the EECS Rules, are conducted by members, assisted by the professional reviewers: Liesbeth Switten, Remco van Stein Callenfels (CertiQ, Netherlands), Diane Lescot (Observ'ER, France), Katrien Verwimp (also an employee of VREG, Flanders) and Michael Lenzen (Netherlands). Each of the professional reviewers has worked with a member, either currently or in the past, and has in-depth knowledge of EECS.

# WORKING GROUP INTERNAL AFFAIRS

Working Group  
Internal Affairs  
(internal regulation of  
the Association, and  
administration and  
development of the EECS  
standard), chaired by  
Markus Klimscheffskij  
of Grexel, Finland  
(December 2012 to June  
2016), with interim chair  
Angela Tschernutter  
(June 2016 to September  
2016) and chaired by  
Laura Plunkett of SEMO,  
Ireland (September 2016  
onwards)

The AIB Working Group Internal Affairs develops, maintains and enforces the EECS rules for a harmonised, efficient and reliable energy certificate system that is compatible with national schemes and legislation.

While stalwart members continued their invaluable contribution to WGIA, the group also welcomed some new voices to the table. Open and transparent conversations facilitated the achievement of a number of WGIA objectives during this busy year.

In preparation for the expected revision of the Renewables Directive, WGIA continued to work on a second version of the Reflection Paper in 2016, holding a dedicated two-day meeting in January 2016 to discuss some topics in more detail. The AIB set out some suggestions for provisions regarding GOs and energy source disclosure in the future Renewables Directive and Internal Energy Markets Directive. The AIB proposed disclosing the source of all electricity consumed by GOs, using GOs as a way of providing evidence of the carbon emissions associated with electricity consumed by consumers, and suggested that GOs and Electricity Disclosure should be set out in a single Directive. The intention of the Reflection Paper was to create a level playing field for renewable, nuclear and fossil power, empower consumers to affect the carbon content of their electricity consumption and foster GO market development by harmonising national rules. The paper was presented to and accepted by the Namur General Meeting in March 2016. The proposed text for the RES and IEM Directives was sent to the European Commission DG ENER as input for the Directive revision.

The AIB was asked for its view on the cost of Full Disclosure by the European Commission DG ENER. Phil Moody completed this task, with input from members of WGIA. The paper was approved at the Baden GM in December 2016.

WGIA brought and secured approval for Version 7.8 of the EECS Rules at the General Meeting in March 2016. WGIA presented and gained agreement for an amendment to the EECS Rules for Pumped Storage. Suggested amendments to Fact Sheet 5 (Type of Energy Inputs and Technologies) were briefly introduced in June 2016; however, WGIA will consider this matter further in 2017 and advise the GM.

WGIA proposed amendments to various AIB documents e.g. the Subsidiary Document (SD) 01, Domain Protocol template and qualitative data sheet for audits.

The question of GOs and carbon emissions remained important for WGIA. Early in 2016, AIB's Carbon Task Force appointed an external consultant to look at the methodology for the inclusion of CO<sub>2</sub> emission information on GOs. Pedro Faria presented a summary of the proposed methodology at the Open Markets Committee meeting in Baden, December 2016. AIB's Carbon Task Force will continue its work into 2017 to develop a methodology for calculating 80% of emissions, plus HEC.

WGIA was also responsible for management of yearly tasks, including Domain Protocol reviews and audits of both new and existing members. The thorough debate in WGIA helps to reduce the potential for roadblocks for membership decisions at GMs. During 2016, the AIB welcomed one new member, CNMC of Spain. The implementation of a Professional Reviewers Group was supported by the Dessau GM in September 2016. As a follow-up action in 2017, WGIA will propose changes to Subsidiary Documents 07 and 10.

The assessment of the impact of the new Renewables Directive on GOs will bring with it interesting and stimulating debate in WGIA. The group will also collaborate with WGS to implement a recommended code of conduct for VAT fraud and will continue interesting discussions about the GO calculation formula and PD inspections, cancellation for future use, ex-domain cancellations and the relationship between GOs and independent certification schemes (ICS). Any proposals for changes to the EECS Rules and Subsidiary Documents will be brought to the GM for approval.

WGIA bid farewell to chair Markus Klimscheffskij in June 2016. Angela Tschernutter stepped in as interim chair from June to September 2016, while Laura Plunkett took over as chair of WGIA in September 2016, both with the approval of the GM. Katrien Verwimp was approved as deputy chair from June 2016.

By the end of 2016, WGIA had organised five physical meetings and seven teleconferences. WGIA consists of GO enthusiasts from System Operators, Electricity Regulators and Market Operators all over Europe. The WGIA objectives could not have been achieved without valuable contributions from CertiQ, CWaPE, E-CONTROL, Elering, Energinet.dk, Finextra, Grexel, GSE, HROTE, ILR, OTE, Powernext, SEM-O, Statnett, Swissgrid, UBA and VREG. WGIA looks forward to interactive and fruitful teleconferences and meetings with motivated members in 2017.

# WORKING GROUP SYSTEMS

Working Group Systems  
(interfaces between  
computer systems)  
Co-chaired by  
Annie Desaulniers of  
CWaPE, Belgium-Wallonia  
and Jennifer Holgate  
of Statnett SF, Norway  
(until Dec 2016)

Working Group Systems (WGS) advises the AIB General Meeting on the AIB certificate transfer system, recommends change requests, and follows up on decisions made in this framework. The WGS' main task is on the follow-up of AIB software for certificate exchange, also referred to as the AIB Hub. In addition, WGS makes suggestions to and handles requests from the General Meeting and the Board, which can lead to new WGS projects.

Annie Desaulniers and Jennifer Holgate co-chaired the WGS during 2016, each taking the lead for two quarters. In addition, they collaborated on tasks throughout the year with Arjan van der Toorn, who was appointed vice-chair in the first General Meeting in 2016.

The WGS organized four 'in person' meetings and five teleconferences during 2016. In the meetings, views are collected and work assigned.

The year started with finalizing work to get the new AIB Hub up and running. On 8 March, the milestone was reached as the new Hub opened for transfers, and most registries were connected to the Hub and ready to import and export certificates. The hard work performed by both Unicorn Systems and the AIB before the launch paid off, and the transition went efficiently. The remaining registries successfully connected to the Hub on 9 March. The new solution is hosted, operated, and maintained by the Unicorn Energy Cloud.

Though the transition to the new Hub was successful, a lot of time was invested throughout the year to solve different bugs and issues that had been postponed to after the launch. In December, the AIB Board signed the formal approval of the AIB Hub, and by consequence, the warranty period ended. The close contact with Unicorn Systems has been fruitful for both the AIB and Unicorn Systems.

The Working Group has also been working on topics like technical audits of registries, fraud detection, a central account holder database, and to phase out mailbox registries.

The purpose of the technical audit is to ensure the quality of the registries, and transfers to and from these through the Hub. Besides increasing the quality of the registries and transfers, the goal of the audit is also to stay ahead of possible issues and to detect changes needed to the Hub.

During the year, the fraud detection specifications have been specified, and these will be implemented in the Hub in 2017. When implemented, the AIB will more easily detect any suspicious transfers.

The central account holder database has been delayed due to other necessary implementations. Nevertheless, it has been on the WGS' agenda and will be implemented in 2017.

The latest General Meeting of the AIB agreed an end date for mailbox registries: the end of June 2019, which will give the registries concerned enough time to plan and change to the web service.

In 2016, CNMC (Spain) became a member of the AIB and was connected to the hub. In addition, OTE (the Czech Republic) reconnected to the Hub after a longer period of suspension, as they put a new legislative disclosure scheme in place, enabling them to become a scheme member again. Their registry is open for imports only, but later it will also be opened for exports.

WGS consists of enthusiastic members of the AIB from all over Europe, bringing together needs, ideas and expertise. This makes it possible to increase the quality of the AIB certificate transfer system. The members strive to find the best solution for all members, and the meetings are fruitful, inspiring and inclusive.

We would like to thank all those who contributed to the work of WGS in 2016, especially the Task Force Hub. Your commitment, expertise and good spirits are a big driver and motivation for the Working Group.

# WORKING GROUP EXTERNAL AFFAIRS

Working Group  
External Affairs  
(provision of information)  
Dubravka Brkić  
of HROTE, Croatia

Working Group External Affairs (WGEA) is in charge of organizing the issuance of all types of publications, press information, newsletters, annual reports, and communicating with stakeholders essential for the promotion of the organization. The group has a significant role in the organization as a promotor of all activities within AIB.

WGEA continually works on the recruitment of new AIB members in many ways: through bilateral newcomers' meetings or giving support through a "SPOC" ("Single Point of Contact"). A SPOC is an experienced AIB member who helps newcomers during the process of joining the AIB and throughout the first year of the membership. WGEA also works with WGS and WGIA, when the need is seen and is both helpful and supportive e.g. for newcomers in connecting to the HUB.

An appreciated and fun task of WGEA is everything regarding the rewarding of active AIB members, and researching and creating motivation. This is because work in the Association is voluntary, and contributions from members/observers are more than welcome and vital for running and improving the AIB.

Besides the abovementioned Communication and Recruitment Strategies, one main task during 2016 was the most important issue WGEA worked on: supporting the AIB president, Dirk Van Evercooren in formulating and executing the stakeholder strategy, in which he takes the lead. WGEA supported this by providing data overview and information materials. It is worthwhile to underline the lobbying activities of the AIB regarding the new RED (Renewable Directive) in the field of disclosure and electricity certification in the decision-making processes.

**DUBRAVKA BRKIC** (HROTE, IB from Croatia) is the chair of WGEA. Other active members of the working group are:

- **MILADA MEHINOVIC** (Swissgrid, the issuing body of Switzerland),
- **CLAUDIA DELMIRANI** (GSE, the issuing body of Italy)
- and the AIB's assistant to the Secretariat, **ANDREA EFFINGER**.

The President of the AIB, **DIRK VAN EVERCOOREN** is WGEA's key player in Social Media issues (see LinkedIn), and he supports not only WGEA but the entire association with his dedication as AIB's ambassador.

# BUDGET / ACTUAL EXPENDITURE AND INCOME

In 2016, expenditure exceeded income by € 41 497, income being € 111 342 less than had been forecast; while expenditure was € 41 497 more than the allocated budget. This has required AIB to reduce its reserves from € 267 410 at the start of 2015 to € 223 880 on 31<sup>st</sup> December 2016.

This enabled the Association to complete its funding of the replacement and upgrade of the Communications Hub, with the exception of the final payment of € 12 500 which will be paid on completion of warranty in April 2017.

Annual costs	Budget	Expenditure	Variance
Administration	€ 355 043	€ 316 941	€ 38 102
Workgroup Internal Affairs	€ 114 423	€ 109 204	€ 5 219
Workgroup External Affairs	€ 98 683	€ 82 382	€ 16 301
Workgroup Systems	€ 222 371	€ 323 490	€ -101 119
<b>2016 expenditure</b>	<b>€ 790 520</b>	<b>€ 832 017</b>	<b>€ -41 497</b>

Budget	Budget	Expenditure	Variance
<b>2016 income</b>	<b>€ 852 831</b>	<b>€ 741 489</b>	<b>€ 111 342</b>

## Position against budget

### Income

Income was € 111 342 less than the allocated budget, due to:

- 1 Croatia, Luxembourg and Slovenia transferred less than had been expected
- 2 Cyprus joined in the summer, but has yet to link to the Hub
- 3 The Czech Republic was unable to export, due to potential double counting, meaning that its activity was less than anticipated. This has now been corrected.
- 4 Greece did not join AIB in 2016, as expected
- 5 Germany and Spain joined in spring, but Spain was less active than expected
- 6 The remaining fees for 2015 collected in 2016 were offset by a lower amount of fees for 2016 to be collected in 2017
- 7 Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Netherlands, Norway, Sweden and Switzerland all transferred more than expected, but all except Estonia, Iceland and Ireland were capped at the maximum of 11 million transfers, so this had little effect on income.

### Expenditure

In total, expenditure was € 52 493 more than the allocated budget.

Within **General Administration**, costs were € 38 102 less than expected:

- The cost of the **Secretariat** was € 2 742 higher than expected, due to additional work supporting AIB restructuring and consideration of the EU Commission package “Clean Energy for all Europeans”, and more secretarial support than expected – although this was offset by a lower workload in WGEA.
- **Banking** costs were slightly lower than expected (a variance of € 75).
- **Corporate legal advice** was € 1 739 less than expected.
- There was no expenditure on **Task Force Carbon**, leading to underspend of € 34 565.
- The **Brussels events** overspent € 1 316 due to higher video-conferencing costs than expected.
- **Residual Mix calculation** was € 3 933 less than expected.
- **Expenses** were € 1 846 less than anticipated, and can be attributed thus:
  - There was lower than expected expenditure leading to savings on **teleconferencing** (€ 68) – continued high use of this facility also reduced the cost of **meeting accommodation** (€ 1 054) and **travel and accommodation** (€ 1 027) – **sundries** (€ 785) and **insurance** (€ 259).
  - This was offset by overspending on increased audit and VAT advice (€ 1 347).

Within **Working Group Systems**, costs were in total € 101 119 more than expected.

This was mostly due to the costs of replacing the Hub, which were exacerbated by the delay into late 2016 of going live. The effect of this was that € 50 000 project costs were moved to budget year 2016 late in 2025 (and a further € 12 500 were moved to budget year 2017); further support of the testing and go live processes led to dismantling and additional management & supervision costs of € 24 999; plus Hub SuperUser/WGS Secretarial costs of € 66 100.

Fortunately, the delay in implementation meant that the planned systems changes had to be postponed until 2017, leading to cost reductions (€ 23 090). Also, good negotiation resulted in a reduction in the Hosting and Support costs during handover (€ 12 367) and lower than expected legal costs (€ 4 023).

>

**Working Group Internal Affairs** spent € 5 219 less than its allocated budget.

This year saw less use of legal advice for WGIA matters than anticipated (€ 4 023), and less work on amendment of regulations and agreements (€ 4 148). However, professional auditors and reviewers continue to be used more than anticipated (€ 2 952).

**Working Group External Affairs** expenditure was € 16 301 less than the allocated budget.

This was due mostly to the implementation of the new website having been deferred into 2017, leading to deferral of development costs (€ 20 581) and resource costs (€ 6 476) to 2017. It was also due to the costs of greening-up AIB being lower than expected (€ 1 254), along with the cost of producing and posting the annual report (€ 100).

This was offset by the slightly higher than expected cost of producing the newsletter (€ 62); and the much higher than expected cost of registering the mark and logo EECS™ in Kosovo, Serbia, Bosnia and Herzegovina, Montenegro, Norway and Switzerland (€ 12 047).

#### **Position at Jyske Bank**

2016 commenced with € 267 410 brought forward in the bank account.

Receipts for membership fees (€ 809 586) and VAT refunds (€ 41 414) were offset by expenditure of € 894 530 during the period January to December, resulting in € 223 880 being carried forward to 2017. Note that no bank interest was received for 2016, due to a zero bank rate for deposit accounts.

Invoices have now been received for all work commissioned during this period, € 60 777 having been set aside at the beginning of the year for outstanding payments relating to work commissioned in 2016.

Invoices have also been issued for the remaining membership fees relating to 2016 (€ 50 776) plus repayment of insurance premiums for some members (€ 24 624).

## REPORTS FROM MEMBERS/ FROM OBSERVERS



The following pages give details of each of the members of the AIB during 2016; and summarise the major events of 2016 and the expectations of 2017 for members and their countries.

A former observer of the AIB, the Spanish regulator (CNMC), became a member of AIB, along with an ex-Hub user, the German Environmental Protection Agency (UBA – Umweltbundesamt).

Also, the community of countries in the process of becoming a member of AIB and connecting to the Hub is growing: current observers are:

- the Greek Issuing Body (LAGIE)
- the Swedish Energy Agency (Energimyndigheten)
- the UK electricity and gas regulator (Ofgem)
- the Latvian transmission system operator (Augstsprieguma tīkls AS)
- the Lithuanian transmission system operator (Litgrid)
- the Serbian competent body for guarantees of origin (EMS)
- the Bosnia-Herzegovina Operator for Renewable Energy Sources and Efficient Cogeneration (RES Operator).

This Annual Report does not include all of these countries, but reflects on their different rates of progress along the route to membership.

The scope of national participation in EECS shows the degree to which EECS is implemented in that country, according to the best available statistics.



## E-CONTROL

Name of the company  
Energie-Control Austria  
(E-Control)

Area of operation  
Austria

Address  
Rudolfsplatz 13A  
1010 Vienna  
Austria

[www.e-control.at](http://www.e-control.at)

### REPORT FROM MEMBER

#### Profile of the organisation

E-Control is the Austrian energy regulator.

#### Role

Competent authority for electricity guarantees of origin for all types of resources. Competent authority for disclosure in Austria.

#### Member of the AIB

Member of the AIB since 2001.

E-Control joined the AIB in the summer 2001 in the course of the Helsinki Meeting. Ever since, E Control has actively contributed to the development of the Association. Since 2008, Angela Tschnutter has been an active member and vice chair of the Board and, from December 2016 onwards, she is chair of the Board of AIB.

#### Activities within the AIB

Angela Tschnutter: Board Chair since December 2016, previously Board Vice Chair, and she remains a member of Working Group Internal Affairs. She was also a partner of the RE-DISS projects, and is involved in the Concerted Action RES Projects.

#### News and perspectives regarding the national IB

E-Control's day-to-day business includes dealing with up to 74 000 plants that generate electricity from renewable and fossil sources, 70 000 of which are photovoltaic plants. All of them lead to issuance of GOs. Austria implemented a full disclosure system as of 2015. Suppliers must label all the electricity they deliver to final customers with GOs for all types of sources (in practice, RES GOs and fossil GOs are used). All suppliers implemented this full disclosure requirement, resulting in full transparency for consumers in Austria. Based on this supply-side obligation, we can assume that almost 100% of Austrian electricity production is registered in the Austrian database.

GOs issued in other countries and imported to the Austrian database are automatically checked when they are used for disclosure purposes. If they are not in line with the criteria of national Labelling Ordinance (section 6 Stromkennzeichnungsverordnung 2011, amended in 2013), cancellation of these GOs is not allowed in the system. This mechanism ensures that national disclosure is exclusively based on GOs which fulfil the national requirements, i.e. which are valid. E-Control publishes on its website a list of accepted countries of origin.

The processes and database are continuously being improved, even though in 2016 no major adaptations were necessary.

## News and perspectives regarding the national framework for electricity and disclosure

The Stromkennzeichnungsverordnung (Labelling Ordinance) 2011 was amended in 2013. No adaptions were required in 2016. The Elektrizitätswirtschafts- und -organisationsgesetz (Electricity Act) 2010 was amended in 2013. As a result of this amendment, full disclosure has been in force since 2015 (for the disclosure year 2014) – see point above.

The number of suppliers and traders acting internationally by using the AIB Hub rose as a response to this new requirement.

The amendments of the RES Directive and the Electricity Directive will result in adaptions in the national law.

## Benefits to the company of AIB membership

The AIB is the major player in the international market for trading guarantees of origin (GOs) and also certificates issued by fossil and nuclear plants. The AIB assures a high standard for GOs and certificates primarily based on the European Renewables Directive. Further, AIB also deals with disclosure, the reason why GOs and certificates are issued and then used. Disclosure is the only driver for GOs, and clear rules and regulations to avoid double counting and any other kind of misuse are essential.

Being an active member of AIB enables us to participate in the development and improvement of the EECS standard. The AIB offers an excellent platform for exchange of good practices between issuing bodies, bodies responsible for disclosure and related organisations. The AIB is using its international network to lobby on GOs and disclosure, especially in 2016 when revisions of the European directives, primarily the RES and the Electricity Directives, were proposed. In 2017, AIB will continue lobbying and representing its members' interests. Having this bundled platform and power for AIB members to speak in front of the Commission is essential for E-Control's strong ambition to lead Europe into a market of full disclosure. AIB member countries can share experience and propose best practices. Working together in an international environment strengthens the power of each individual member country. The mutual learning factor and the enjoyment of working with highly qualified people greatly contribute to positive outcomes. E-Control appreciates being part of this team and is looking forward to continuing our joint work on the European GO and disclosure market.

"The AIB is the leading organisation for GOs and disclosure in Europe and brings together extensive know-how from among its members. The AIB removes possible barriers from the market of trading GOs by implementing a standard. The highly efficient connection for member countries reduces cost and administrative burden compared to bilateral solutions." Angela Tschernutter

**"The highly efficient connection for member countries reduces cost and administrative burden."**

## Scope of national participation in EECS

Number of registered scheme participants	50
--	----

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
73 611	21 340

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
PV	69 802	840
Hydro	3 282	17 787
Wind	527	2 713

Certified EECS production as compared to national RES production (GWh) \*

EECS RES production	National RES production
33 371	35 053

\* preliminary data (Dec. 2016 not complete)

# brugeloo

LE REGULATEUR BRUXELLOIS POUR L'ENERGIE  
DE BRUSSELSE REGULATOR VOOR ENERGIE

## REPORT FROM MEMBER

Name of the company  
**BRUGEL**

Area of operation  
**Brussels-Capital Region**

Address  
Avenue des Arts 46  
Brussels  
Belgium

[www.brugel.be](http://www.brugel.be)

### Profile of the organisation

Regulator

#### Role

BRUGEL, the Brussels Energy Regulator, regulates and monitors the regional energy market. BRUGEL ensures that the distribution network is effective, accessible and reliable for consumers and producers. BRUGEL is promoting the effective functioning of the energy market, the development of a smart grid and the protection of the consumer.

BRUGEL is the competent authority for the supply of guarantees of origin to green electricity production, which is defined as electricity produced from renewable energy sources and from high-efficiency cogeneration.

#### Member of the AIB

BRUGEL has been a member of the AIB since 2008.

#### Activities within the AIB

The follow-up of AIB activities and representation of BRUGEL on the General Meetings is assured by Régis Lambert. Patrice Mathot follows-up on activities performed by the Working Group Systems.

#### News and perspectives regarding the national IB

The new Decree on renewable energy support and tracking mechanisms, that came into force at the beginning of February 2016, provides for shifting the responsibility of certifying the production devices from the regulator to accredited certifying parties. It is foreseen that this provision will come into force by mid-2017.



**“It is crucial for BRUGEL to be connected to a stable and reliable exchange-platform, which enables market parties to import standardised GO’s in order to prove to Brussels consumers the origin of their electricity in a transparent and waterproof manner.”**

#### **News and perspectives regarding the national framework for electricity**

The online tool Greencheck (<https://greencheck.brugel.be>) was launched in May 2016. Through the webtool the consumers are been given the opportunity to check which part of their electricity supply has been declared green electricity by their supplier, and which part of this declaration has been formally approved by BRUGEL. This formal approval relies solely on the cancellation of the amount of GO’s concerned.

#### **Benefits to the company of AIB membership**

The AIB enables BRUGEL to be part of and to be involved in the broader European debate on Guarantees of Origin. As for now, only few transferable GO’s are issued in the Brussels Region itself, it is crucial for BRUGEL to be connected to a stable and reliable exchange-platform, which enables market parties to import standardised GO’s in order to prove to Brussels consumers the origin of their electricity in a transparent and waterproof manner.

#### **Scope of national participation in EECS**

Number of registered scheme participants	33*
--	-----

#### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1	51

#### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Municipal waste incineration	1	51

#### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
not available before printing	

\* Except for one GO-producer/importer, these 33 scheme participants are all pure GO-importers or traders

# VREG

your guide on the  
energy market

Name of the company  
VREG

Area of operation  
Belgium, Flanders

Address  
Koning Albert II-laan 20, bus 19  
1000 Brussels  
Belgium

[www.vreg.be](http://www.vreg.be)

## REPORT FROM MEMBER

### Profile of the organisation

Regulator for electricity and gas.

### Role

Competent Authority and Issuing Body for guarantees of origin, competent body for disclosure scheme and providing disclosure information.

### Member of the AIB

Member of the AIB since 2006.

### Activities within the AIB

- Dirk Van Evercooren: President
- Katrien Verwimp: Vice Chairperson WGIA
- Karolien Verhaegen: Registry Operation

### News and perspectives regarding the national IB

Updates from November 2016:

- New certificate registry in operation
- Role of the Production Registrar for solar PV shifted from VREG to the Grid Operators
- Non-Flemish HEC GOs can be imported and exported
- Updated Domain Protocol

### News and perspectives regarding the national framework for electricity

In 2016, electricity consumers who are interested in the origin of electricity were even further empowered by VREG which not only publishes an annual fuel-mix report, but also provides an interactive tool on the website. Not only does the fuel-mix report provide information on the sources of electricity supplied over the previous year at supplier and at contract/product level, since 2015 this information is also – and much more easily – available via the OriginComparator on VREG's website. With this tool, consumers can check whether a supplier provides green or fossil/nuclear electricity, and if the electricity is green, which technology (wind, hydro, solar, geothermal ...) and which geographical origin (country) originated it. This new tool proved successful and is appreciated by many consumers.

**“The connection to the AIB Hub allows huge efficiency gains.”**

There is now better use of the residual mix in fuel mix calculations as this has been aligned amongst the Belgian regional regulators for electricity and gas.

**Benefits to the company of AIB membership**

- Efficiency gain by transferring certificates in one single format over the AIB Hub, instead of over bilateral agreements with each of the other Domains.
- Quality Assurance regarding EECS GOs all over Europe.
- Joining forces with other Issuing Bodies to prevent double disclosure over Europe.
- Communication platform for aligning views with other Issuing Bodies.
- Centralised calculation of the European Attribute Mix and the National Residual Mix.

**Additional information**

Consumers do not need to stay passive, they do not have to accept the fuel mix their supplier offers them. With Guarantees of Origin, consumers can choose where their electricity should come from and become accountable for the environmental effect of their choice of electricity contracts. Let us put consumers in the driver's seat and let them steer Europe towards a sustainable energy transition.

**Scope of national participation in EECS**

Number of registered scheme participants	229 873
--	---------

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
261 003	4 569,40

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biogas – digestion of Fruit and vegetable waste	2	3,8
Biogas – agricultural	107	105,8
Biogas – other	11	18,9
Biogas – sewage	23	29,4
Biogas – landfill gas	13	15,3
Biomass – selectively collected biogenic waste	11	745,2
Biomass – biogenic municipal waste	9	108,7
Biomass – agricultural or forestry	29	375,1
Hydropower	14	5,6
Wind on shore	215	852,6
Solar photovoltaic	260 569	2 309

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
3 767 652	data not available before printing

### REPORT FROM MEMBER

Name of the company  
**CWAPE (Commission Wallonne pour l'Énergie)**

Area of operation  
**Wallonia, Belgium**

Address  
Route de Louvain-la-Neuve 4  
boîte 12  
Namur  
Wallonia, Belgium

**[www.cwape.be](http://www.cwape.be)**

### Profile of the organisation

Regulator of electricity and gas for Wallonia, Belgium. CWAPE is responsible for enforcing public service obligations and distributing regulations, tariffs, and developing renewables: support system, electricity tracking and integration into the grid.

### Role

Competent authority for renewables (EECS GO) and CHP electricity guarantees of origin, operator of the certificate database in Wallonia.

### Member of the AIB

Member of the AIB since 2007, scheme member since 2009, pending scheme membership: none (potentially CHP-GO)

### Activities within the AIB

- Workgroup System Chairwoman: Annie Desaulniers
- Representatives to the General Meeting:  
PY Cornélis & Annie Desaulniers
- Workgroup Internal Affairs, CA-RES Policy Advisory Group, Carbon Task Force: Pierre-Yves Cornélis
- Legal counsel: Sabine Keirse
- Statistics: Gauthier Libeau

### News and perspectives regarding the national IB

- CWAPE has been performing formal approval of distribution grid tariffs and monitoring of renewable technology costs.
- CWAPE handles daily up to 4 000 photovoltaic meter readings, all potentially leading to issuance of GOs. Processes and database are continuously being improved.
- CWAPE has been considering whether to transform local CHP GO into EECS CHP GO. Legal framework for issuing biogas GOs is in place and several projects on the drawing board are vying to use them for indirect support.
- CWAPE has upgraded its IT systems in 2016.

### News and perspectives regarding the national framework for electricity

#### Support

- **Context:** the support system based on green certificates (i.e. specific support certificates) has demonstrated its efficiency in developing affordable renewables and CHP by tripling generation in 10 years. This support is based on the extra costs of the technology (when compared to conventional plants) and the measured environmental performance of the individual plant (avoided greenhouse gas emissions (CO<sub>2</sub> -eq)). In the past, supplementary certificates were generously granted to solar plants. Consequently, the price of green certificates fell to the legal minimum for all technologies. Although the quota system remains formally in place, for all matters practical it behaves like a feed-in premium system.

- **Quota:** quota was 32.4% in 2016 and steadily increases up to 37.9% in 2020. Decommissioning of much capacity in 2021 causes a dip to 34% but the quota gradually rises back to 37.9% in 2024.
- **Market price of support certificate:** The oversupply of support certificates means most generators sell at guaranteed price (65 € / certificate) and price recovery should take a very long time. Financing these guaranteed purchases becomes a heavy burden.
- **Review of support level:** Every two years, the support by way of green certificates is assessed for each technology. The banding factor, number of green certificates issued for each MWh, is adapted accordingly for new plants. New PV's below 10 kW make use of another support scheme paid directly out of the electricity invoice.
- **Joint schemes within Belgium:** National burden sharing has been agreed, but support certificates remain regional.
- **New installations:** A total of 5 300 new small ( $\leq 10\text{ kW}$ ) photovoltaic plants with a cumulative capacity of 30 MW were set up in 2016. Besides, an increase in non-domestic solar plants took place for more than 12 MW. Few wind, biomass or hydro plants were commissioned, some for reasons related to financial support and most due to uncertainties in planning permissions; a new capacity of more than 39 MW of wind was added last year.
- **Sustainability criteria:** Wallonia has been applying demanding sustainability criteria since 2002, especially for solid and liquid biomass. CWAPE follows closely developments of the Sustainable Biomass Partnership (SBP).
- **Tender for biomass plant:** Wallonia has opened a tender for a large biomass plant (max 200 MW) using sustainable wood.

#### Disclosure:

- Good practices exchanged among others in CA-RES, EPED and RE-DIIS lead to improvements to our disclosure system (e.g. mandatory GO cancellation prior to fuel mix declaration). Monthly reporting to regulator of renewable products and monthly cancellation of guarantees of origin for those products remain.
- In-depth coordination over fuel mix calculations with other Belgian regulators should lead to even more coherent results i.e. achieving a Belgian residual mix.

#### Benefits to the company of AIB membership

“With AIB, we gain from the shared knowledge and experience, the collaborative work and project management experience; we improve our skills for development and improvement of tools which facilitate the market.” Annie Desaulniers, Chair of Working Group Systems

“ With AIB, we gain from the shared knowledge and experience ...”

#### Scope of national participation in EECS

Number of registered scheme participants	958
--	-----

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 268	1 244

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass (total)	63	302
Biomass (bio-CHP only)	55	178
Wind	89	713
Hydro	82	113
Solar	1 034	116
Total	1 268	1 244

Certified EECS production as compared to regional RES production (GWh)

EECS RES production	Regional RES production
3 738	4 448

# — CREG —

REPORT FROM MEMBER

Name of the company  
CREG

Area of operation  
Belgium

Address  
Nijverheidsstraat 26  
Brussels  
Belgium

[www.creg.be](http://www.creg.be)



## Profile of the organisation

Since 1999, CREG is the regulator of the Belgian electricity and gas markets. CREG is an independent body with legal responsibility accountable to the federal parliament.

## Role

In 2013, CREG was entrusted with the task of issuing guarantees of origin for renewable electricity produced in the Belgian sea area and managing the corresponding registry. Disclosure and residual mix calculation are not within CREG's legal remit.

## Member of the AIB

Member of the AIB since 2015.

## Activities within the AIB

Philip Godderis participated in General Meetings, WGIA and WGS, and was part of an assessment panel on EECS Rules compliance.

## News and perspectives regarding the national IB

The CREG registry has been fully operational since 2015 and comprises all offshore wind producers in Belgium (713 MW at the end of 2016). An additional 165 MW will come online in 2017.

**“ The AIB’s harmonised standard ensures a high level of reliability. ”**

### News and perspectives regarding the national framework for electricity

2016 saw reforms of the support system for offshore wind energy. The favourable balancing regime was ended and the sea cable subsidy was recast, with CREG assuming the calculation of future amounts. In the beginning of 2017, a new support regime was introduced, after approval by the European Commission under state aid rules. It is an LCOE-based system that grants CREG a power of proposal.

### Benefits to the company of AIB membership

For CREG, the primary benefit of the AIB membership is to facilitate the export of Belgian offshore wind GO's across Europe. The AIB's harmonised standard ensures a high level of reliability. The Association is also an ideal platform for continuously sharing experience and exchanging best practices.

### Scope of national participation in EECS

Number of registered scheme participants	4
--	---

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
4	713

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Offshore Wind	4	713

Certified EECS production as compared to regional RES production (GWh)

EECS RES production	Regional RES production
2 116 702	2 116 702

Name of the company  
**HROTE**  
(CROATIAN ENERGY  
MARKET OPERATOR)

Area of operation  
**Croatia**

Address  
Ulica grada Vukovara 284  
10 000 Zagreb  
Croatia

[www.hrote.hr](http://www.hrote.hr)



"On 28 August 1895 electricity generated at this location was transmitted to the city of Šibenik, where six power transformers supplied a large number of street lamps. This early system of power generation, transmission and distribution was one of the first complete multiphase alternating current systems in the world and it remained in operation until World War I."

## Profile of the organisation

HROTE was established in 2005 as the state-owned company which performs the activities necessary to organise the electricity and gas market as a public service under the supervision of the Croatian Energy Regulatory Agency.

HROTE controls the system of financial incentives for renewable energy sources and high efficient cogeneration under the supervision of the Ministry.

## Role

The Regulation establishing the system of Guarantees of Origin of electricity was passed in July 2013. The Regulation determines the rules of electricity Guarantees of Origin with the purpose of certification of electricity produced from plants in the Republic of Croatia, in accordance with the Energy Act.

In accordance with the Regulation HROTE performs the role of the Competent Body (in accordance with the RED) and the Issuing Body for the Domain.

## Member of the AIB

Member of the AIB since 2014. HROTE became an AIB member with conditional status in May 2014. Since in the meantime all terms on disclosure rule had been fulfilled, the unconditional status of the membership was approved in November 2014.

## Activities within the AIB

- Dubravka Brkić contributes in the WGEA tasks as a chair.
- Morana Lončar contributes in the WGIA task as a member.

## News and perspectives regarding the national IB

The Rules on use of the Guarantees of Origin Registry lays down the rules of running the Registry of electricity Guarantees of Origin with the purpose of certification of electricity produced from plants in the Domain, in accordance with the Electricity Market Act. The Rules are under supervision of HROTE.

The Registry is an electronic registry based on database technology with possibility of international GOs transfer:

**“ Working meetings and communication with AIB members/observers are very useful ... ”**

### News and perspectives regarding the national framework for electricity

The competent body for disclosure is the Croatian Energy Regulatory Agency. The disclosure rule and the methodology for calculation of the residual mix are under the supervision of the Croatian Energy Regulatory Agency.

From January 2016, the regulation will make cancelled EECS-GO certificates the sole proof of the source of energy that will be eligible for disclosure approval. Additionally, the supplier claims the electricity purchased from the feed-in system to its customers.

HROTE is assigned to calculate and publish the Residual Mix. The calculation is to be done “in coordination” with other issuing/disclosure competent bodies (this interprets to using EAM). The residual mix for Croatia will be calculated according to the methodology presented in the RE-DIIS Best Practice Recommendations. Since Croatia has electricity imports/exports with third countries, ENTSO-E data will be used for determining net imports from certain countries. Report for RM calculation for 2015 is available on: <http://www.hrote.hr/reports-313>

New Act on RES and HE-CHP came into force on 1 January 2016, however, the sub-laws are still missing. The New Act is defining new support scheme for RES, which will be established in accordance with the new Guidelines on State aid for environmental protection and energy 2014–2020.

### Benefits to the company of AIB membership

Working meetings and communication with AIB members/observers are very useful to HROTE as Issuing Body for Guarantees of Origin and the national institution responsible for disclosure.

### Additional information

The Croatian domain is a “small registry” regarding the number of account holders and registered plants, and as such it was a good experience to start with the implementation of Guarantees of Origin System from the very first beginning.

### Scope of national participation in EECS

Number of registered scheme participants	7
--	---

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
2	137,29

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro power plant	2	137,29

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
537	7 566



Διαχειριστής Συστήματος Μεταφοράς  
Κύπρου  
Transmission System Operator - Cyprus

Name of the company  
Cyprus Transmission  
System Operator (TSO-Cy)

Area of operation  
Cyprus

Address  
Evangelistrias 68  
2057 Strovolos  
Cyprus

[www.dsm.org](http://www.dsm.org)

## REPORT FROM MEMBER

### Profile of the organisation

Cyprus TSO was established in 2004 as an independent legal entity for public benefit. It operates, maintains and develops Cyprus' electricity transmission system, maintaining security of supply, integrating renewable energy sources and issues connection conditions for new independent power producers. It has also been appointed the Operator of the Cyprus Electricity Market.

### Role

Cyprus TSO is responsible for issuing, transferring, cancelling and revoking Guarantees of Origin for both RES and High Efficiency CHP installations in Cyprus

### Member of the AIB

Cyprus TSO is a member of the AIB since September 2014.

### Activities within the AIB

Cyprus TSO is currently not involved in AIB activities.

### News and perspectives regarding the national IB

The new Cyprus EECS GO registry went live in September 2016 and the first Cyprus EECS RES GOs were issued for the production period July 2016, as decided by the AIB General Meeting in Oslo in June.

Due to technical reasons beyond Cyprus TSO's control, connection to the new AIB Hub has not been possible in 2016. This is expected to happen in February 2017.

### News and perspectives regarding the national framework for electricity

2016 was a landmark year regarding GOs in Cyprus. Disclosure was implemented for the first time this year. Cyprus TSO performed the Residual Mix and Suppliers' Mix calculations for calendar year 2015, applying the Regulatory Decision 1279/2015. Contribution of energy sources to the overall fuel mixture and greenhouse gases emission data is being published on consumers' bills since 1 July, 2016.

**“ GO trading through the Hub will facilitate our efforts to increase public awareness on the benefits of declaring the origin of electricity production. ”**

Following an AIB GM Decision (Oslo June 2016) the Cyprus Domain Protocol was declared fully approved, thus allowing the international transfer of Cyprus EECS GOs. The first Cyprus EECS RES GOs issued came from 7 003 MWh of Wind power produced in July 2016.

#### **Benefits to the company of AIB membership**

Cyprus TSO membership facilitates the sharing of knowledge and experience with other AIB members, and hence the communication and implementation of more efficient and widely accepted ways to harmonise with EU law regarding efficient and transparent market systems. It particularly assists Cyprus TSO in learning from the experiences of other issuing bodies and implementing best practices, aiming also at standardising local practices and rules. The use of the AIB Hub will mark the beginning of GO trading between Cyprus and other approved users.

#### **Scope of national participation in EECS**

Number of registered scheme participants	6
--	---

#### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
6	157

#### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	6	157

#### Certified EECS production as compared to national RES production (GWh)

EECS RES production <sup>*1</sup>	National GO RES production <sup>*2</sup>	National RES production
95,6	123,5	407,9

\* 1 Production Period July – December 2016

\* 2 Production Period January – June 2016



Name of the company  
OTE, a.s.

Area of operation  
Czech Republic

Address  
Sokolovská 192/79  
Prague 8  
Czech Republic

[www.ote-cr.cz](http://www.ote-cr.cz)

#### REPORT FROM MEMBER

### Profile of the organisation

OTE, a.s., the Czech electricity and gas market operator, is a joint stock company established in 2001. OTE provides comprehensive services to individual electricity and gas market players. OTE commenced organising trading in the day-ahead electricity market in 2002 and the intra-day and block electricity markets later on. OTE has been the market operator on the gas market since 2010, including operation of the day-ahead gas market and the intra-day gas market. Continuous data processing and exchange required for the accounting and settlement of the imbalance between the contractual and actual volumes of electricity and gas supplied and received are among the services offered by the OTE to players in the Czech electricity and gas markets, as well as the administrative procedures associated with change of supplier.

OTE is responsible for payments of a green bonus and feed-in tariff for electricity from renewable energy sources, secondary sources and combined heat and power, and support for decentralized electricity generation to producers. OTE also administers the National Registry of Greenhouse Gas Emissions. OTE is the holder of the license for the market operator's activities, which includes activities in the electricity and gas markets in the Czech Republic.

### Role

OTE, a.s., is a RES and high efficiency CHP GOs competent authority for the Czech Republic. Czech high-efficiency CHP GOs are not yet an EECS product.

### Member of the AIB

OTE, a.s., became member of the AIB on 28 November 2013 and scheme member on 30 September 2016.

### Activities within the AIB

In 2016, OTE, a.s. was represented in the AIB General Meetings, Work Group Systems and Work Group Internal Affairs by Martin Šandera and Andrea Stejskalová.

### News and perspectives regarding the national IB

Based on OTE, a.s.' activities, that led to the harmonization of principles of the European Commission Directive no. 2009/28/EC and the relevant Czech disclosure legislation, and following the decision of AIB for inclusion of OTE in the European Electricity Certificate Scheme (EECS) on 30 September 2016, OTE completed the technical work on its electronic system for issuing guarantees of origin in the Czech Republic and after mutual tests successfully restored the connection to the international communication portal, the AIB Hub, with import-only status on 21 December 2016. OTE is now working on updating the system to allow users also to export guarantees of origin to other members of the AIB.

**“ Restoring the possibility to import guarantees of origin is the first step to return to the European electricity certification framework ...”**

### News and perspectives regarding the national framework for electricity

The adoption of new legislative measures at EU level and consequently the implementation of these measures into OTE, a.s.' systems, and other market participants, strongly influenced the market for electricity and gas even in 2016. Harmonisation of rules and implementation of common procedures is thus a proof of the increasing interconnection of EU markets. Concrete examples are the European network codes and the Commission Regulation no. 2015/1222 establishing a framework guideline for capacity allocation and congestion management (CACM).

The business systems for intraday electricity trading and trading on the balancing market with regulating energy underwent a major technological innovation in 2016. The reason was not only to meet the new requirements and needs that traders expect from the trading platforms, but also the expected integration of the intraday electricity market. Conditions in the gas market have changed significantly with the implementation of Commission Regulation no. 312/2014 establishing a network code on balancing the gas in transmission network (NC BAL).

In the area of renewable sources, OTE devoted significant attention to the harmonization of rules for transparent issuance of guarantees of origin and their transactions on domestic and international level. Evidence of increasing importance of guarantees of origin are values indicating an increase in the number of issued guarantees of origin (by 230%) and their cancellation to final customers.

### Benefits to the company of AIB membership

"Restoring the possibility to import guarantees of origin is the first step to return to the European electricity certification framework and demonstrates the efforts made by OTE during 2016. OTE will also continue negotiations with competent legislative authorities to further develop the compliance of the Czech legislation with the relevant European directives and implementation of best-practices of neighbouring EU countries, so that market participants in the Czech Republic continue to participate to benefit from this system of proving the origin of electricity from renewable sources."

Ing. Aleš Tomec, Chairman of the Board of OTE, a.s..

### Scope of national participation in EECS

Number of registered scheme participants	201
--	-----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
276	2 049

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	12	43
Solar	60	119
Thermal	134	618
Hydro-electric head	70	1 269

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
620	7 941

Name of the company  
Energinet.dk

Area of operation  
Denmark

Address  
Tonne Kjærsvæj 65  
7000 Fredericia  
Denmark

**[www.energinet.dk](http://www.energinet.dk)**

### Profile of the organisation

Energinet.dk is the Danish transmission system operator (TSO). The enterprise was established by virtue of the Danish Act on Energinet Danmark of December 2004.

Energinet.dk is an independent public enterprise owned by the Danish State, as represented by the Ministry of Climate, Energy and Building. It has its own Supervisory Board.

As the entity, responsible for the electricity and natural gas systems, Energinet.dk owns the overall energy infrastructure, ensuring reliable energy supply and creates the framework for well-functioning energy markets and effective integration of renewable energy.

Energinet.dk is appointed by Executive orders in accordance with the Danish Electricity Law to issue Guarantees of Origin, to prepare a general declaration for the default set of disclosure information, and to lay down conditions and guidelines for individual declarations on specific electricity supply.

### Role

Energinet.dk is the Danish issuing body, issuing under EECS:

- guarantees of origin for renewable source electricity (since 2004), and
- guarantees of origin for highly efficient cogeneration (since 2010).

### Member of the AIB

Energinet.dk has been member of the AIB since 2002.

### Activities within the AIB

Energinet.dk is currently represented in the AIB GM's by Carl Morten Baggesen Hilger, taking part in the Workgroup Internal Affairs.

**“ We support a transparent certificate market, declaring the origin of electrical production, to provide an informed basis for a customer’s free choice of energy.”**

### News and perspectives regarding the national framework for electricity

A customer-centric market model was introduced in Denmark on 1 April 2016. The market model will empower the customer to choose a prime supplier, and aims for increased competition between energy traders/suppliers. Among other features, the model allows for hourly settlement, mobilises flexible consumption balancing the grid. Energy traders can after the introduction still brand their products using GOs when approaching the customers even though GOs are disclosed at an aggregated level.

### Benefits to the company of AIB membership

“Being an AIB member, sharing best practices, and taking part in developing the European AIB Hub for a controlled exchange of certificates ensures that Energinet.dk meets the requirements of the relevant EU directives in a secure and efficient way. We support a transparent certificate market, declaring the origin of electrical production, to provide an informed basis for individual customer’s free choice of energy.”

Carl Morten Baggesen Hilger at Energinet.dk

### Scope of national participation in EECS

Number of registered scheme participants	19
--	----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
106 044	6 895

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	76	686
Biogas	179	107
Wind	6 863	5 246
Hydro	42	7
Solar	98 884	851

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
16 037	17 024

Name of the company  
Elering AS

Area of operation  
Estonia

Address  
Kadaka tee 42  
12915 Tallinn  
Estonia

[www.elering.ee](http://www.elering.ee)



## Profile of the organisation

Transmission System Operator

### Role

Elering is an independent electricity and gas transmission system operator with the main task of ensuring high-quality energy supply to Estonian consumers. To do so, Elering manages, maintains and develops the internal and cross-border energy infrastructure. Elering ensures conditions allowing efficient energy market operations and economic development, which also includes being appointed as issuing body in Estonia for renewable electricity and efficient co-generation guarantees of origin.

### Member of the AIB

Elering AS has been an observer since 2011 and became a member of the AIB in September 2014.

### Activities within the AIB

River Tomera has been a member of the WGIA since autumn 2015 with Liis Kilk being the alternate member.

### News and perspectives regarding the national IB

Elering AS is continually developing and improving the Estonian registry system that facilitates the issuing, transfer and cancelling of guarantees of origin in accordance with the feedback from both international and internal market participants and also in order to meet the requirements set by the AIB Hub.

### News and perspectives regarding the national framework for electricity

The European Commission granted Estonia a state aid permission which enables changing the support scheme for electricity produced from renewable sources or in high-efficiency cogeneration mode. The changes to the Electricity Market Law regarding the afore-mentioned production support schemes are still subject to discussions in the

Estonian parliament and no planned date of enactment has been announced. The changes to the law include articles implementing the cooperation mechanisms set forth in the Renewable Energy Directive 2009/28/EC and may also be subject to change taking into account the recently published Energy Union Winter Package.

**“ Being a member of the AIB definitely has its benefits: for example, being connected to the harmonized and transparent standard platform (the AIB Hub) instead of establishing bilateral connections with individual registries.”**

#### Benefits to the company of AIB membership

“In order to fulfil the responsibilities assigned to Elering AS, that is to set up and operate a reliable and fraud-resistant system for issuing, transferring and cancelling guarantees of origin for both renewable energy sources and efficient co-generation, being a member of the AIB definitely has its benefits. For example, being connected to the harmonized and transparent standard platform (the AIB Hub) instead of establishing bilateral connections with individual registries and also the chance to share experiences and exchange best practices with other members.” River Tomera, Head of Renewable Energy Unit

#### Scope of national participation in EECS

Number of registered scheme participants	62
--	----

#### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
42	619,654

#### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	16	283,7
Hydro	11	5,472
Biogas	5	3,81
Biomass	10	326,672

#### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
1 292	1 415

# FINGRID

## Finextra

Name of the company  
Finextra Oy

Area of operation  
Finland

Address  
Läkkisepäntie 21  
Helsinki

[www.fingrid.fi](http://www.fingrid.fi)

### REPORT FROM MEMBER

#### Profile of the organisation

Finextra Oy is a wholly-owned subsidiary of Fingrid Oyj, which is the Finnish Transmission System Operator (TSO).

#### Role

Fingrid Oyj, which is the appointed Competent Authority according the Finnish legislation, has assigned this duty to its totally owned subsidiary Finextra.

#### Member of the AIB

since 2015.

#### Activities within the AIB

Kaija Niskala has been a member of the Working Group Internal Affairs since 2015.

#### News and perspectives regarding the national IB

Our registry is fully operational and our service has received high results in our customer satisfaction survey. We will continue to develop the registry and our service based on customers' needs.

#### News and perspectives regarding the national framework for electricity

The common imbalance settlement service for the Nordic electricity market run by the service company eSett Oy will start in May 2017.

Regarding GO services, the new imbalance settlement model will result in some changes of the delivery of production data.



**“Our vision is to get a well-functioning internal European market with GOs, which would create a level playing field for all actors and add transparency.”**

### Benefits to the company of AIB membership

“Our vision is to get a well-functioning internal European market with GOs, which would create a level playing field for all actors and add transparency. The AIB Central Hub is essential for the European trade in GOs.”

Asta Sihvonen-Punkka, Senior Vice President of Fingrid Oyj / Market

### Scope of national participation in EECS

Number of registered scheme participants	29
--	----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
340	8 312

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	117	1 302
Hydro	158	3 059
Solar	5	2
Thermal	60	3 949

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
25 500	29 500



Name of the company  
Powernext SA

Area of operation  
France

Address  
5 boulevard Montmartre  
Paris  
France

[www.powernext.com](http://www.powernext.com)

#### REPORT FROM MEMBER

### Profile of the organisation

Powernext SA, incorporated in 2001, is a private company aiming at delivering highly reliable services in the energy sector. Powernext is the national registry for electricity guarantees of origin in France. Via the PEGAS platform, Powernext operates an exchange for natural gas trading in spot and derivatives. Powernext is part of the EEX Group and Deutsche Börse Group.

### Role

Powernext was appointed as the French national registry for guarantees of origin as of 1 May 2013 by a decree issued on 15 January 2013 by the French Ministry for Ecology, Sustainable Development and Energy.

### Member of the AIB

Member of the AIB since July 2013.

### Activities within the AIB

The follow-up on AIB activities and representation of Powernext on the General Meeting is ensured by Aude Filippi, who is also member of the Working Group Internal Affairs and Systems, and Mathieu Morvan.

### News and perspectives regarding the national IB

Powernext operates the French National Registry for Guarantees of Origin and, as such, is responsible for the issuance, the transfer and the cancellation of GOs in France. Powernext developed in-house a whole new electronic registry for GOs and became member of the AIB in June 2013.

### News and perspectives regarding the national framework for electricity

The French legislation on guarantees of origin has been updated in July 2016 in the 'Code de l'Energie' to increase reliability and transparency. The regulation requires suppliers to inform the consumer about the origin of the electricity provided. GOs are the only mechanism to track the source of electricity from renewable sources that is recognised in France. For offering green electricity, suppliers are required to use GOs in order to prove to final consumers the quantity of energy from renewable sources being supplied. For standard offers, the residual mix is used as a basis for the calculation of the supplier mix for untracked electricity.

## Benefits to the company of AIB membership

Powernext has faith in the European guarantee of origin mechanism to provide reliable information to consumers on electricity. We are particularly proud of having been mandated to become the national registry for guarantees of origin in France and, as such, contribute to the transparency of energy markets.

**“Powernext is honoured to be a member of the AIB.”**

As soon as Powernext had been designated, we decided to join the AIB. Within a very tight schedule and thanks to the AIB, Powernext has been able to allow all its market participants to easily import and export guarantees of origin throughout Europe. Powernext also wanted French GOs to become compliant with the EECS standard developed and promoted by the AIB. We are confident of the reliability of such a standard as it relies on clear and secured processes regularly audited by the AIB members themselves. Today, as a member of the AIB, Powernext is pleased to contribute to constantly improving the GO system, and therefore reinforcing consumers' confidence in renewable energy.

“As the registry for guarantees of origin in France, we are committed to respond to the consumers' demand for increasing transparency in the electricity market. Since serving our clients is our fundamental objective, we decided to join the AIB in order to corroborate the reliability of the French GO system and to enable the international transfer of certificates.”

Egbert Laege, Powernext's Chief Executive Officer.

## Scope of national participation in EECS

Number of registered scheme participants	51
--	----

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
306	15 460

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	289	15 334
Thermal	17	125

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
39 793	94 700

Name of the company  
**German Environment Agency**

Area of operation  
**Germany**

Address  
P.O. Box 1406  
06813 Dessau-Roßlau

**[www.hknr.de](http://www.hknr.de)**  
**[www.umweltbundesamt.de](http://www.umweltbundesamt.de)**

## Profile of the organisation

UBA is Germany's scientific environment authority who deals with a wide and varied range of environmental subjects. Among its manifold tasks UBA has the competence to operate the German registry and issue GOs. Besides, UBA has the regulatory power regarding the detailed provisions on GOs and the registry laid down in the GO Implementing Ordinance as well as fees. The Register of guarantees of origin is legally and technically supervised by the Federal Ministry for Economic Affairs and Energy.

## Role

UBA is the competent authority and issuing body for Guarantees of Origin in accordance with the EU Directive 2009/28/EC (RES Directive). The responsible work unit is called "Register of Guarantees of Origin for Electricity from Renewable Energy Sources" (German abbreviation "HKNR").

## Member of the AIB

Since July 2013, UBA was a Hub-user without membership of the AIB. In March 2016, the General Meeting approved UBA as a regular member which came into effect on 1st April.

## Activities within the AIB

- Friederike Domke – Member, Participant in the WGIA
- Michael Marty – Member, Head of the Register of Guarantees of Origin for Electricity from Renewable Energy Sources
- Katja Merkel – Member, Participant in the WGS
- Elke Mohrbach – Member, Participant in the WGIA and the Carbon Taskforce

## News and perspectives regarding the national IB

According to the revised Renewable Energy Sources Act (EEG 2017), UBA has been assigned to implement a regional GO scheme for market-premium supported electricity and to operate the respective register. The scheme will allow suppliers to disclose to their final customers that they have consumed supported renewable electricity produced in their region whereby the region covers an area in the vicinity of around 50 km around the consumer. The regional GOs are not RES-GOs according to the RES Directive and thus will follow special rules (to be defined by UBA in 2017). They can only be applied in Germany and will not interact with European GOs.



**“Becoming a member of the AIB entails assuming full responsibility for the future of the AIB. The UBA promotes further improvements of the GO and disclosure systems in Europe and will continue working on it in 2017.”**

### **News and perspectives regarding the national framework for electricity**

Renewables already account for 32 % of the total electricity production in Germany and the policies now being put in place mean that their share is to rise to 45 % by 2025. The 2017 Renewable Energy Sources Act adopted on 8 July 2016 heralds the beginning of a new stage of the energy transition. It will come into force on 1 January 2017.

### **Benefits to the company of AIB membership**

“Becoming a member of the AIB entails assuming full responsibility for the future of the AIB. The UBA promotes further improvements of the GO and disclosure systems in Europe and will continue working on it in 2017.” **Michael Marty**

### **Additional information**

UBA's annual Conference on GOs has become a tradition and serves as the meeting of the German GO sector. Our work benefits enormously from the fruitful exchange with market players.

### **Scope of national participation in EECS**

Number of registered scheme participants	1 834
--	-------

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
751	13 375,050

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind - onshore	346	1 018,895
Solar	48	26,931
Hydro	247	4 932,798
Biogas - other	2	0,780
Biogas - landfill	37	44,528
Biogas - sewage	3	1,406
Solid renewable fuels	34	1 033,056
unspecified renewable energy	34	6 316,656

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
12 674,998	191 400

Name of the company  
Landsnet hf

Area of operation  
Iceland

Address  
Gylfaflöt 9  
112 Reykjavík  
Iceland

[www.landsnet.is](http://www.landsnet.is)

## REPORT FROM MEMBER

### Profile of the organisation

Landsnet hf is the Icelandic Transmission System Operator (TSO) which was established on the basis of the 2003 Electricity Act.

Landsnet's role is to operate Iceland's electricity transmission system and administer its system operations (TSO). Landsnet operates under a concession arrangement. Landsnet's activities are subject to regulation by the National Energy Authority (Orkustofnun).

Landsnet owns, operates and maintains all major electricity transmission lines in Iceland. The Icelandic electricity system's highest operating voltage is 220 kV. A large part of the system operates at 132 kV, but some parts have voltages of 66 kV and 33 kV. As a preparation for the future a portion of the grid is made up of 400 kV cabable lines that are currently operated at 220 kV. In 2016 around 17.85 TWh were transmitted through the transmission system.

### Role

Landsnet is the competent authority for the issuance of GOs, renewable electricity guarantees of origin, in Iceland as stipulated in the Act on Guarantees of Origin, No. 30/2008.

### Member of the AIB

Landsnet has been an observer of the AIB since late 2009 and applied for membership in September 2011.

### Activities within the AIB

Landsnet is represented in the AIB by Svandis Hlin Karlsdottir and takes part in the AIB by participating in the General Meetings.

**“The AIB membership enables us to harmonise with the EU and establish standard procedures regarding energy certification and improve reliability.”**

### News and perspectives regarding the national framework for electricity

In 2016, Landsnet completed its work on the Transmission network development plan for 2016–2025, along with the environmental assessment of the plan. The report is quite extensive, covering the estimated system requirement over the next 10 years, as well as the effect that the plan has on the environment and society. The report has been submitted to the National Energy Authority for review and approval.

Adding to our renewable energy production Landsvirkjun, Iceland's National Power Company, will finish the first of two phases of a 90 MW geo-thermal power plant at Theistareykjum in the fall of 2017. In the spring of 2018, the second phase will be finished at the same time as the 100 MW addition to Búrfell hydro-power plant.

The power plant at Theistareykir is one option presented in the Icelandic Master Plan for Nature Protection and Energy utilization that has been put into operation.

### Benefits to the company of AIB membership

“For Landsnet, AIB membership enables us to harmonise with the EU and establish standard procedures regarding energy certification and improve reliability. Being part of the AIB also provides us with valuable opportunities to network with experts and share knowledge and experience with other AIB members.”

Svandis Hlin Karlsson, Market Development

### Scope of national participation in EECS

Number of registered scheme participants	4
--	---

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
25	2 610,4

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	17	1 940
Geothermal	8	670

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
8 810,67	17 848,18

Name of the company  
**SEMO (Single Electricity Market Operator)**

Area of operation  
**Ireland and Northern Ireland**

Address  
EirGrid plc , The Oval  
160 Shelbourne Road  
Ballsbridge, Dublin 4  
Ireland

**[www.sem-o.com](http://www.sem-o.com)**

### Profile of the organisation

The Single Electricity Market (SEM) is the wholesale electricity market operating in Ireland and Northern Ireland. The Single Electricity Market Operator (SEMO) facilitates the continuous operation and administration of the SEM. SEMO is a contractual joint venture between Eirgrid Plc., the Transmission System Operator for Ireland, and SONI Limited, the System Operator for Northern Ireland. SEMO is licensed and regulated cooperatively by the Commission for Energy Regulation (CER) in Ireland and the Utility Regulator (UREG) in Northern Ireland.

### Role

SEMO is the Issuing Body for Guarantees of Origin (GO) to generators of electricity from renewable sources in Ireland only. SEMO is responsible for the operation of the registry for issuance, transfer and cancellation of GOs. SEMO is also the competent body for Fuel Mix Disclosure for the Island of Ireland (Ireland and Northern Ireland).

### Member of the AIB

Member of the AIB since 19<sup>th</sup> May 2015.

### Activities within the AIB

- Emma Kelly - Board Member December 2016
- Laura Plunkett - Chair of Working Group Internal Affairs September 2016

### News and perspectives regarding the national IB

The Irish registry, CMO.grexel, has been fully operational since April 2015, enabling GOs to be issued, transferred or cancelled electronically. The registry required no major changes in 2016. SEMO was granted membership of AIB in May 2015, and has been connected to the AIB Hub since July 2015.



**“AIB membership means that Account Holders can efficiently trade GOs with any of the 23 AIB members through the AIB Hub.”**

GOs issued for renewable sources in other countries and imported to the Irish registry, will be accepted for Fuel Mix Disclosure (FMD) in Ireland provided they have not already been cancelled or used in FMD.

### **News and perspectives regarding the national framework for electricity**

The RES Directive (2009/28/EC) was implemented in national legislation on 28 March 2011 by Statutory Instrument No. 147 of 2011. On 28 October 2014, the European Communities (Renewable Energy) Regulations 2011 (S.I. No. 147 of 2011) was revoked through the publication of European Union (Renewable Energy) Regulations 2014 (S.I. No 483 of 2014). There were no changes to national legislation in 2016.

There were no changes to the Supervisory Framework for the Administration of Guarantees of Origin (CER/11/824) in 2016.

### **Benefits to the company of AIB membership**

AIB membership means that Account Holders can efficiently trade GOs with any of the 23 AIB members through the AIB Hub. It also provides SEMO with the opportunity to collaborate with other competent bodies throughout Europe, be involved in the broader debate on GOs and contribute to the maintenance and development of the EECS rules.

### **Additional information**

As a member of AIB, SEMO contributes to an efficient, reliable and secure Guarantees of Origin market by tracking the origin of renewable energy production and in turn enabling suppliers to provide reliable information to their customers.

### **Scope of national participation in EECS**

Number of registered scheme participants	33
--	----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
110	883,18

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	62	630,27
Hydropower	42	232,78
Landfill Gas	6	20,13

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
1 866,066	7 108,187



## REPORT FROM MEMBER

Name of the company  
Gestore dei Servizi Energetici  
GSE S.p.A.

Area of operation  
Italy

Address  
Viale Maresciallo Pilsudski 92  
Rome  
Italy

[www.gse.it](http://www.gse.it)

### Profile of the organisation

The GSE is a public company which promotes and supports renewable energy sources in Italy. The sole shareholder of GSE is the Ministry of Economy and Finance, which exercises its rights in consultation with the Ministry of Economic Development.

### Role

The GSE is the Issuing Body for Guarantees of Origin. Competent Authority for disclosure scheme and for granting support for renewable electricity production, energy efficiency and thermal energy in Italy.

### Member of the AIB

GSE was one of the founding members of the AIB from its beginning in 2001, and the CEO of GSE, Pier Luigi Parcu, became the first President of the Association.

### Activities within the AIB

The engagement of GSE within AIB activities encompasses all the working groups:

- General Meeting: Emanuele Del Buono
- WGIA: Annalisa Ciatti
- WGEA: Claudia Delmirani
- WGS: Marta Grassilli

### News and perspectives regarding the national IB

In 2016, adaptations were made to the Italian database to facilitate the connection to the AIB Hub and to improve the quality and availability of service for users.

### News and perspectives regarding the national framework for electricity

On 23 June 2016, the Ministry of Economic Development published the Ministerial Decree aimed at promoting renewable power plants through a revised set of incentives that replace the previous regime under the decree of 6 July 2012. General principles and access procedures are the same as the ones under Decree the 6 of July 2012 and do not apply to photovoltaic plants.

**“Being a member of the AIB means protecting green energy through a reliable inter-registry telecommunication Hub.”**

As in the previous regime, RES power plants may benefit from:

- All-inclusive tariff (capacity up to 500 kW); or
- Feed-in tariff (capacity in excess of 500 kW and capacity up to 500 kW for power plants which do not opt for the All-Inclusive Tariff).

Incentives are granted either to direct access, registry procedure or tender procedures.

**Benefits to the company of AIB membership**

“Being a member of the AIB means protecting green energy through a reliable inter-registry telecommunication Hub. The AIB is not only the major platform for trading Guarantees of Origin, but also the right driver to ensure a trustworthy application of the new disclosure rules contained in the forthcoming RES Directive. In the AIB it is possible to draw maximum benefit from meetings and the working groups through exchange of local experiences and synergies created by working together with members from other countries.” according to Annalisa Ciatti, member of WGIA.

“Participating in the decision process of the AIB is particularly important, but I would also stress the following: knowing the reference person of other registries and the Hub Super User is very useful in solving technical problems occurred during the exchange of data between registries”, underlines Marta Grassilli, WGS.

“The continuous growth of AIB provides, especially with the participation in General Meetings, every day more possibilities to exchange know-how and improve knowledge in energy legislation and related matters”, says Claudia Delmirani, member WGEA.

**Scope of national participation in EECS**

Number of registered scheme participants	813
--	-----

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 016	25 392

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	195	3 875
Geothermal	32	872
Hydro	570	17 137
Solar	170	610
Other	49	2 898

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
21 675,530	250 511 *

\* Provisional data 2016: 250 511

data 2015: 250 504

Name of the company

Institut Luxembourgeois  
de Régulation (ILR)

Area of operation

Luxembourg

Address

17, rue du Fossé  
1536 Luxembourg  
Luxembourg

[www.ilr.lu](http://www.ilr.lu)

#### REPORT FROM MEMBER

#### Profile of the organisation

The Institut Luxembourgeois de Régulation (ILR) is an independent authority in charge of regulation of electricity and natural gas markets, as well as of telecommunications, railways, airport taxes, postal services, and radio spectrum. Besides this, ILR is also designated as the national competent authority for issuing guarantees of origin for electricity generated from renewable energy sources.

#### Role

The ILR is the national issuing body for renewable electricity guarantees of origin (RES GOs) and for CHP GOs and it is also the national competent authority for disclosure.

#### Member of the AIB

The Luxembourg registry has been operational since 1 January 2010.

#### Activities within the AIB

Pamela Boeri and Claude Hornick participate in WGIA.

#### News and perspectives regarding the national IB

In accordance with article 3, paragraph 4 of the Luxembourg grand-ducal regulation of 1st August 2014 relating to the production of electricity from renewable energy sources, ILR issues Guarantees of Origin to certify the share of electricity produced from renewable energy sources in accordance with Article 15 of Directive 2009/28/EC.

More information for account holders is available on the following websites:

- [cmo.grexel.com](http://cmo.grexel.com), which allows access to public details of the registry; and on
- [web.ilr.lu](http://web.ilr.lu), which describes GOs and their use within Luxembourg.

According to Article 3 of the grand-ducal regulation of 22<sup>nd</sup> June 2016 relating to the production of electricity from high efficient cogeneration, implementing Directive 2012/27/UE, ILR shall issue CHP GOs upon request from an electricity producer using CHP technology.

## **News and perspectives regarding the national framework for electricity**

In July 2010, disclosure regulations came into force and define a unique form of electricity labels to be used by all suppliers in their disclosure information on the final bill to the end consumer.

Cancellations of EECS certificates represent an easy and straightforward tool for electricity suppliers to prove the renewable origin of their electricity supply. In 2015, 4 million GOs (4 TWh) were cancelled in the registry, representing more than 60% of the total electricity consumed in Luxembourg.

**“Today, 100% of the electricity supplied to low voltage consumers is disclosed as being generated from renewable energy sources, mainly through GO cancellations.”**

## **Benefits to the company of AIB membership**

In order to facilitate monitoring and to improve the reliability of the electricity disclosure system, and especially of its green attributes, the ILR decided to join the AIB in 2009 and made available a platform for registration of production devices and handling of certificates.

Generators can value their renewable generation attributes; and suppliers can improve the reliability and credibility of their electricity products. “Today, 100% of the electricity supplied to low voltage consumers is disclosed as being generated from renewable energy sources, mainly through GO cancellations” says Claude Hornick.

## **Scope of national participation in EECS**

Number of registered scheme participants	7
--	---

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
13	50,67

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Photovoltaic	6	1,32
Wind	3	4,10
Hydro	3	28,25
Municipal Waste	1	17,00

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
127	450

# certiQ

REPORT FROM MEMBER

Name of the company  
CertiQ B.V.

Area of operation  
The Netherlands

Address  
Utrechtseweg 310  
PO box 718  
Arnhem  
Netherlands

[www.certiq.nl](http://www.certiq.nl)

## Profile of the organisation

CertiQ B.V. is a subsidiary of TenneT TSO B.V.

## Role

CertiQ B.V. performs the role of national issuing body for guarantees of origin (GOs), a task for which TenneT has been issued a mandate by the Dutch Minister of Economic Affairs.

CertiQ issues guarantees of origin for renewable electricity, for electricity from high-efficient cogeneration and for renewable heat. In addition, CertiQ also issues disclosure certificates for electricity derived from other sources.

Within the Netherlands, CertiQ works closely with:

- The Ministry of Economic Affairs, which determines the legal frameworks upon which guarantees of origin are based within the Netherlands;
- The Netherlands Enterprise Agency, an agency of the Ministry charged with, amongst other things, the execution of support schemes related to the production of renewable electricity and renewable heat;
- The Authority for Consumers and Markets (regulator), which supervises the correct functioning of the Dutch electricity markets.

## Member of the AIB

Member of the AIB since 2001.

## Activities within the AIB

- Jan van der Lee, departing senior manager  
departing chair of AIB's management board
- Lian Krijger, superseding senior manager
- Remco van Stein Callenfels, assistant controller  
member of Working Group Internal Affairs
- Arjan van der Toorn, functional application manager  
vice-chair of Working Group Systems

## News and perspectives regarding the national IB

In 2016, we updated our registry to include several changes. Some of these changes allowed us to improve our efficiency, while others were specifically aimed at meeting the needs of our customers. A notable example is the introduction of cancellation statements for GOs cancelled on behalf of corporate end-users.

**“Harmonisation of the GO system requires expertise and a common voice, and the AIB provides both.”**

### News and perspectives regarding the national framework for electricity

Upon request of the House of Representatives, the Ministry of Economic Affairs carried out a study this year to determine the costs of full disclosure. The conclusion of the Minister was that the consumer would benefit from disclosure statements to be fully corroborated by GOs, and that the costs of full disclosure will not prevent its implementation. Such implementation was not realised, however, given the Minister's opinion that harmonised rules should first be established on a European level. To that effect, he said he would urge the Commission to draft such rules. Also, he determined – with support of the Parliament – that the composition of all electricity supplied shall be equal to the trade mix, unless otherwise corroborated by the cancellation of GOs (i.e. every specific supply must be disclosed through GOs; the residual mix is only applicable for unspecified supply). This is to become effective for 2018 and onward. Also, the intention is to use the AIB calculated residual mix values from that year forward.

### Benefits to the company of AIB membership

The quality of the GO system depends on harmonisation of rules and practices across Europe. Without such harmonisation, products relating to (e.g.) energy generated from a specific plant could not be reliably supplied to consumers.

### Additional information

The last few years we see an increase in the amount of renewable electricity being produced in the Netherlands, and consequently in the numbers of GOs issued for such electricity. Large end users request suppliers to deliver specific GOs, e.g. from recently commissioned wind parks. This way, the GO contributes demonstrably to favourable investment conditions in new RES power in the Netherlands.

Also, as a result of the European GO market growing, in part thanks to the AIB, there is a noticeably broader spread of countries from which GOs are imported to meet consumer demand in the Netherlands.

### Scope of national participation in EECS

Number of registered scheme participants	106
--	-----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
13 935	8 824

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	246	4 143
Hydro	16	37
Solar	12 532	399
Wind	1 141	4 245

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
14 000 *	14 300 *

\* preliminary estimates

Name of the company  
Statnett SF

Area of operation  
Norway

Address  
Nydalen Allé 33 /  
PB 4904 Nydalen  
0423 Oslo  
Norway

**[www.statnett.no](http://www.statnett.no)**

## Profile of the organisation

Transmission System Operator - TSO

## EECS scheme membership

Statnett is the transmission system operator in the Norwegian energy system. This includes operating about 11 000 km of high-voltage power lines and 190 stations all over Norway. The operations are monitored by one national control and two regional centres, which keep the Norwegian power system in balance. Statnett is also responsible for the connections to Sweden, Finland, Russia, Denmark and the Netherlands. In addition, connections to Germany and the UK will be operational by 2020 and 2021 respectively according to plan.

Statnett is a state enterprise, established under the Act relating to state-owned enterprises and owned by the Norwegian state through the Ministry of Petroleum and Energy.

Apart from being owner of the national grid, Statnett has a 28.2% ownership of Nord Pool, which Statnett owns together with the other Nordic and Baltic TSOs.

Statnett is responsible for the Norwegian certificate registry NECS and is the issuing body of guarantees of origin and elcertificates (a technology neutral, market-based support scheme for renewable energy sources).

## Member of the AIB

Statnett has issued RECS certificates since 2001 and became member of the AIB on 1 January 2002. Statnett-issued certificates have been compliant with the EECS standard since 2011.

## Activities within the AIB

- Lars Olav Fosse: Board
- Jennifer Holgate: Workgroup Systems (WGS)

## News and perspectives regarding the national IB

Statnett is a considerable contributor of guarantees of origin to the European market, with approximately 1/3 of the total share.

To meet our customers' needs we are continuously developing our registry in close cooperation with our IT service provider. We notice that for larger customers the two-way Application Programming Interface (API) solution is appreciated.

**“ ... the collaboration with other members gives synergies and input on how to run and develop our registry.”**

### News and perspectives regarding the national framework for electricity

To ensure future power supply and good environmental solutions, Statnett has and will have a strong focus on improving the transmission grid in the years to come. More than 500 km of 420 kV grid has been finalized over the last couple of years while several projects are still under construction. E.g. the transmission capacity of the northern parts of Norway along with the western part are being strengthened. This to enhance the transfer capacity and the flow of power from an area with surplus to one with deficit, both between regions and out of the country, as well as to meet the commitments concerning production of renewable energy. As many forms of renewable sources are unstable and dependent on the weather conditions, an increase in the available transmission capacity is important for supply dependability.

There are currently two projects running that have demanded preparatory systemic changes to our registry and will be operational during 2017:

- As an effort to strengthen the integration of markets, the implementation of the Nordic Balance Settlement takes place
- A central datahub for metering values and market processes in the Norwegian electricity market will be implemented. The Elhub shall enhance competition in the electricity market by ensuring effective storage and distribution of metering values and customer information between market parties in the electricity market

### Benefits to the company of AIB membership

Being part of the AIB gives the benefit of building a European network with colleagues working within the same field, aiming towards the future by setting common rules and guidelines. By having a common, functional and secure hub for transferring guarantees of origin, certificates can change owners in a safe and efficient manner. In addition, the collaboration with other members gives synergies and input on how to run and develop our registry.

### Scope of national participation in EECS

Number of registered scheme participants	55
--	----

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 117	33 216

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	1 086	32 283
Wind	26	880
Thermal	5	53

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
136 013,5	137 600



Name of the company  
**Agencija za energijo**

Area of operation  
**Slovenia**

Address  
Strossmayerjeva ulica 30  
P.O. Box 1579  
SI-2000 Maribor  
Slovenia

**[www.agen-rs.si](http://www.agen-rs.si)**

## REPORT FROM MEMBER

### Profile of the organisation

National Regulatory Authority

### Role

The Energy Agency is the regulatory authority for electricity and gas in Slovenia and the Slovenian Issuing Body of GO for renewable electricity and electricity from high efficiency CHP. It is also the competent authority for issuing renewable and CHP production declarations that are needed by production devices to be eligible for issuing GOs for their electricity production and to enter the Slovenian support scheme. In addition to this, the Energy Agency is the Slovenian competent authority for disclosure.

### Member of the AIB

Member of the AIB since 2004.

### Activities within the AIB

- Andrej Špec – member of the WGIA
- Tomaž Lah – member of the WGS
- Gorazd Škerbnek – participating in General Meetings

### News and perspectives regarding the national IB

Energy Agency will continuously follow all the changes in the European GO standards, since it will also in the future perform the role of the Slovenian national IB. For this purpose, it intends to remain a member of the AIB and offer the producers and traders the ability to internationally trade with EECS GOs. The Energy Agency will also closely cooperate with the Slovenian stakeholders, including the ministry responsible for energy, which is responsible for the national GO legislation. Through contacts to the ministry the Agency will strive to implement all the recent developments at the AIB level to the national GO legislation.

### News and perspectives regarding the national framework for electricity

In 2016 the new Decree on support for electricity generated from renewable energy sources and high-efficiency cogeneration of heat and electricity came into force. This brings some significant changes to the Slovenian support system. The types of support remain guaranteed purchase (feed-in tariff system) and financial operational support (premium on top of the market price). The changes introduced with this new decree are mostly related to entering the support scheme. All the new entrants to the support scheme are selected through a public tender procedure. The Energy Agency is responsible for this procedure and the selection of new entrants. The procedure starts by publishing an invitation for submission of applications for the new entrants. After the deadline for submission, the Agency selects the new entrants among the candidates based on the increase in funds allowed for support and the price offered for the production of electricity.

**“Being part of the AIB enables us to offer our consumers advanced and reliable instruments for proving the origin of the electricity they consume.”**

### Benefits to the company of AIB membership

“Environmental issues are becoming increasingly important. The whole of society is becoming aware of the need for replacing electricity production from carbon emitting technologies to the use of renewables. One of the consequences of this fact is the increased awareness of electricity consumers to use electricity produced in environmentally friendly ways, using renewable energy sources. Moreover, consumers need reliable evidence that the electricity they use is actually produced in the way their suppliers claim it to be. Being part of the AIB is very valuable to the Energy Agency, since it enables us to offer our consumers advanced and reliable instruments for proving the origin of the electricity they consume.” Gorazd Škerbinek

### Additional information

The Slovenian domain was established in 2004, when the Energy Agency became an AIB member. At that time, only RECS certificates were issued and used. The GO system was introduced in the Slovenian domain in 2005, when the national system, together with the electronic registry, became operational. The Slovenian GO system was designed using most of the characteristics of the voluntary RECS certificate system. This system has been constantly upgraded until today. One of the major steps in the progress of the Slovenian domain occurred in 2009, when the Energy Agency entered the EECS RES GO scheme. This enabled the continuation of international trade for Slovenian market participants through its extension to both GOs and RECS certificates. The traded volume of the latter slowly decreased until the end of their use by the end of 2014.

The Slovenian domain currently includes national GOs for renewable electricity and high-efficiency cogeneration, and EECS GOs for renewable electricity. National and EECS GOs are the same with regard to the information disclosed with them, the only difference between them is the possibility of transactions via the AIB Hub.

### Scope of national participation in EECS

Number of registered scheme participants	4
--	---

### Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
933	1 057

### Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	152	989
Solar	781	68

### Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
4 293	5 221

Name of the company  
CNMC

Area of operation  
Spain

Address  
Alcalá, N° 47  
Madrid, 28014  
Spain

[www.cnmc.es](http://www.cnmc.es)

## Profile of the organisation

CNMC is the Spanish energy regulator.

CNMC is also regulator for telecoms, audiovisual media, transport and postal sectors, and the Spanish competition authority.

## Role

(By law): Competent authority for electricity guarantees of origin, competent authority for disclosure of electricity, competent authority for production device inspection, competent authority for support schemes clearance and payment.

## Member of the AIB

Member of the AIB since March 2016.

## Activities within the AIB

CNMC participates in AIB meetings and is represented by Jose Miguel Unson. CNMC is also part of CEER.

## News and perspectives regarding the national IB

CNMC joined the AIB in March 2016. That year, CNMC implemented changes in the legislation regarding the guarantee of origin system: adaptation of Ministerial Order ITC/1522/2007, in accordance with Energy Efficiency Directive 2012/27/UE.

**“To remove possible administrative barriers that might impair the trade of guarantees of origin across Member States.”**

### News and perspectives regarding the national framework for electricity

In 2014, a new support scheme for RES and Cogeneration in Spain was designed by the Spanish Ministry and implemented by CNMC.

As a result, in 2016, Spain has the first competitive tender for wind and biomass technologies, with the supervision of CNMC.

### Benefits to the company of AIB membership

“To enhance the management system for exports and imports of guarantees of origin, using the AIB platform or hub.”  
CNMC Director General for Energy

### Scope of national participation in EECS

Number of registered scheme participants	34 997
--	--------

116 supply companies + 34 881 production devices

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
34 880	46 561

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	61	479
Wind	1 148	21 379
Solar PV	32 211	3 181
Solar CSP (Concentrated Solar Power)	32	1 459
Small hydro (up to 50 MW)	645	1 491
Big Hydro	753	17 713
High Efficiency Cogeneration	30	859

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
83 679	99 708

Name of the company  
Grexel Systems Ltd.

Area of operation  
Sweden

Address  
Lautatarhankatu 6  
00580 Helsinki  
Finland

[www.grexel.com](http://www.grexel.com)

## Profile of the organisation

Grexel is a privately-owned company, which enables energy certification by providing market infrastructure solutions and services.

Our customers include GO issuing bodies mandated to arrange the issuing and trade of Guarantees of Origin and other certificates as well as Competent Bodies for electricity disclosure and residual mixes.

Our services include Registry As A Service (RAAS), custom registry system development, certification scheme design and rules development as well as support scheme design.

## Role

Registry operator  
EECS Issuing Body for the domain of Sweden.

## Member of the AIB

Member of the AIB since 2006.

## Activities within the AIB

- Marko Lehtovaara and Vesa Hyrskylahti, Members of WGS
- Marika Timlin, Hub Super user, WGS Secretary

Grexel was a project partner in the RE-DIIS projects I and II (Reliable Disclosure systems for Europe), where our main task was European residual mix calculation and further development of the calculation methodology as well as offering support to Competent Bodies.

Grexel will continue to calculate European residual mixes for the AIB.

## News and perspectives regarding the national IB

During 2017, the EECS Issuing Body Activity in Sweden will be taken over by the Swedish Energy Agency. Grexel will continue as the central registry service provider.

In 2016, EMS, the Serbian Transmission System Operator, started to use CMO.grexel as the central registry for guarantees of origin and plans to apply for AIB membership. Also Energinet.dk's gas division decided to use CMO.grexel as the platform for their biomethane certificates.

**“For a service provider like us, the existence of a standard creates an efficient technical and legal framework for defining our services.”**

#### Benefits to the company of AIB membership

“EECS is the only standard with critical mass for guaranteeing the origin of market implementation in Europe. For a service provider like us, the existence of a standard creates an efficient technical and legal framework for defining our services. Being a member of the AIB allows us to be part of a group of experts with the essential task of developing the system.” Marko Lehtovaara, CEO, Grexel

#### Additional information

We believe that EECS plays a critical role in defining how the energy certificates market functions in the future. We also believe that the scope of operation of the AIB will not be limited to electricity certificates, but will also cover certificates for other energy mediums.

#### Scope of national participation in EECS

Number of registered scheme participants	41
--	----

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 559	24 267,18

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind/Onshore	1 215	3 441,68
Wind/Offshore	48	110,40
Hydropower	270	13 003,67
Thermal	19	923,43
Nuclear	7	6 788

Certified EECS production as compared to national RES production (GWh)

EECS RES production	National RES production
31 400	106 500

Name of the company  
Swissgrid AG

Area of operation  
Switzerland

Address  
Dammstrasse 3  
CH-5070 Frick  
Switzerland

[www.swissgrid.ch](http://www.swissgrid.ch)

## Profile of the organisation

Swissgrid is the Transmission System Operator (TSO) of Switzerland.

## Role

Swissgrid is the sole competent Issuing Body for Guarantees of Origin in Switzerland. Swissgrid has been accredited with this task by the Swiss Accreditation Service SAS. The Swiss Federal Office of Energy is the official authority for the supervision of issuing Guarantees of Origin for electricity as well as for the supervision of electricity disclosure in Switzerland. The legal basis is given in article 5a of the Federal Energy Act as well as in the Energy Ordinance and the Ordinance on Guarantees of Origin.

## Member of the AIB

Switzerland has been an AIB member since 2002.

## Activities within the AIB

- **Lukas Groebke:** Treasurer and Member of the Board
- **Milada Mehinovic:** Member of the Working Group External Affairs
- **Sofya Matteotti:** Member of the Working Group Internal Affairs

## News and perspectives regarding the national IB

Since 2013 plant operators are legally obliged to register the whole electricity production of all supported plants and plants with an installed capacity higher than 30kW (all technologies) in the Swiss Guarantee of Origin system. Therefore, almost 100% of the Swiss electricity production is registered in the Swissgrid database. On the supply side, all available national and international Guarantees of Origin must to be cancelled for disclosure purposes in order to give maximum transparency to the end consumers.

As an improvement of the disclosure system, the Swiss parliament intends to introduce a Guarantee of Origin obligation for imported electricity as part of the proposed new energy legislation. With this measure, starting in 2018, any electricity supply in Switzerland would have to be disclosed based on Guarantees of Origin only, no matter whether it refers to domestic or foreign production.

In 2017 the competent body of Switzerland, Swissgrid, is already about to prepare major changes regarding e.g. processes, organisation, and IT tools to be ready for the new legislative framework that is supposed to come up in 2018.



**“The membership of Switzerland within AIB ... serves as a symbol and good example for a fruitful and reliable cooperation even under difficult political circumstances.”**

### News and perspectives regarding the national framework for electricity

In 2016 the Swiss Parliament decided on a new energy legislation called the “Energy Strategy 2050”. One objective of this strategy is to increase the power production from new renewable technologies gradually to 11.4 TWh per year until 2035 and to phase out nuclear power on a long-term perspective. The focus will be on small hydro power, biomass, photovoltaic and wind power.

New incentives as direct marketing, investment support for all sizes of PV plants and other improvements shall be added to the current support system. Due to very low market prices, a new financial support scheme for already existing large scale hydro power plants shall be introduced in addition.

In May 2017, the people of Switzerland will vote on the proposed legislation. If the new legislation is accepted, it will come into force in January 2018.

### Benefits to the company of AIB membership

“Switzerland is geographically located in the heart of Europe and technologically connected by 41 cross border power lines to the surrounding countries. Therefore, Swissgrid, being a TSO, is deeply embedded into the European power transmission system. A stable grid and a high security of power supply are some of the most important goods for all nations.

Since it is expected, that the negotiations between the EU and Switzerland regarding a common power market will not be completed soon, the membership of Switzerland within AIB is gaining even more importance. It serves as a symbol and good example for a fruitful and reliable cooperation even under difficult political circumstances. Our participation in the AIB is therefore one of our main goals now and in the future.”

Dr. René Burkhard, Head of Renewables & Disclosure Services,  
Swissgrid

### Scope of national participation in EECS

Number of registered scheme participants (with online accounts)	2 636
--	-------

Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
47 732	20 296

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	396	468
Hydro	1 347	14 277
Solar	45 723	1 401
Wind onshore	60	66
Nuclear	5	3 388
Crude oil	16	8
Natural gas	153	335
Waste	32	353

Certified EECS production as compared to national production (GWh)

EECS RES production	EECS non-RES production	National production
35 815	21 748	59 000



Name of the company  
**Operator za OIEiEK**  
(RESEC Operator)

Area of operation  
**Federation of Bosnia and Herzegovina**

Address  
Adema Buća 34  
88000 Mostar  
Bosnia and Herzegovina

[www.operatoroieiek.ba](http://www.operatoroieiek.ba)

## REPORT FROM OBSERVER

### Profile of the organisation

Operator za OIEiEK was established by the Government of Federation of Bosnia and Herzegovina in 2013, as the institution responsible for implementation of an operative system for incentivised production of electricity from renewable energy sources. Licenced by the Regulatory Commission for Energy in the Federation of Bosnia and Herzegovina and supervised by Federal Ministry of Energy, Mining and Industry, Operator za OIEiEK aggregates surcharges from electricity consumers and uses it for payment of RES electricity.

### Role

Among the responsibilities defined by primary and secondary legislation, the RESEC Operator is an authorised body for issuing, transferring and cancellation of renewable electricity Guarantees of Origin. According to the Rule book on issuing of Guarantees of Origin, approved by Regulatory Commission for Energy in the Federation of Bosnia and Herzegovina in December 2015, the Operator za OIEiEK is an administrator of GO Registry.

### Member of the AIB

An active observer since 2016.

### Activities within the AIB

Almir Muhamedbegović, as a representative of the Operator za OIEiEK, regularly participates in the Working Group Internal Affairs meetings as well as general meetings of the AIB.

### News and perspectives regarding the national IB

Currently the Operator za OIEiEK is preparing an internal act preventing double counting by automated cancellation of GOs related to supported electricity. The institutional body responsible for Disclosure in Bosnia and Herzegovina is to be defined.

### News and perspectives regarding the national framework for electricity

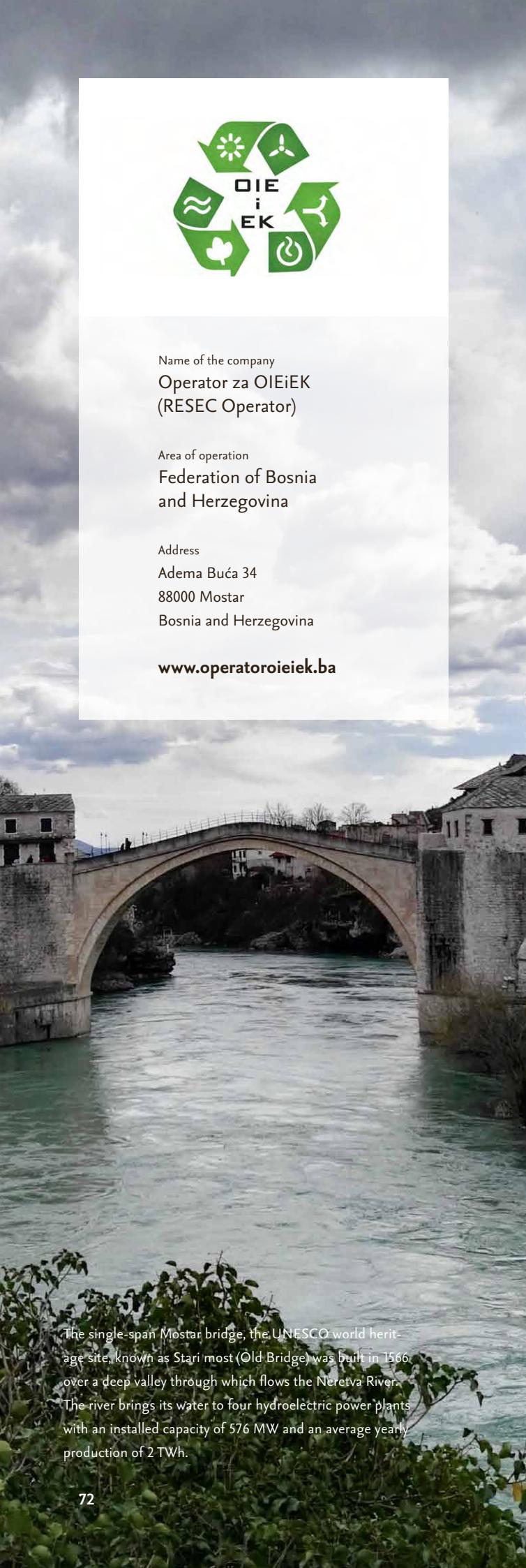
During 2017, meetings with the Energy community are to be held to establish an operational GO Registry within the whole of Bosnia and Herzegovina.

### Benefits to the company of AIB membership

Being an Observer in the AIB offers a great chance to gain a practical knowledge from the best sources with regard to the implementation of EECS across Europe by standardised solution.

### Additional information

The AIB could be a great synonym for term of the United Europe. The differences of members are homogenised and standardised by EECS rules. To identify a man, you need to see his ID. To identify green energy, you need to see its GO.



The single-span Mostar bridge, the UNESCO world heritage site, known as Stari most (Old Bridge) was built in 1566 over a deep valley through which flows the Neretva River. The river brings its water to four hydroelectric power plants with an installed capacity of 576 MW and an average yearly production of 2 TWh.

## REPORT FROM OBSERVER

### Profile of the organisation

Electricity Market Operator

#### Role

Competent authority for renewable electricity guarantees of origin.

#### Member of the AIB

An application for AIB membership was submitted in May 2015.  
Earlier LAGIE has been attending general meetings as an Observer.

#### News and perspectives regarding the national framework for electricity

Law 4414/9.8.2016 introduced in Greece the new support scheme for electricity from renewable sources, in harmonisation with the Guidelines on State Aid for environmental protection and energy 2014–2020 (2014/C 200/01).

Secondary legislation for electricity disclosure is submitted for approval by the Regulatory Authority for Energy.

#### Benefits to the company of AIB membership

The benefit of participating in the AIB is the standardization of the procedure for issuing, transferring and cancelling Guarantees of Origin, which facilitates the exchange of GOs across Europe.

The Association also provides a forum for members to address issues of common relevance and to share knowledge and experience.



Name of the company  
Joint stock company  
Elektromreža Srbije  
Belgrade

Area of operation  
Serbia

Address  
Kneza Miloša 11  
11 000 Belgrade  
Serbia

[www.ems.rs](http://www.ems.rs)

### Profile of the organisation

EMS JSC Belgrade is the Transmission System Operator (TSO) established in 2005. The company is owned by the state and it operates and maintains the transmission system network in Serbia. The Serbian transmission system network operates on 110, 220 and 400 KV voltage levels. The key business goal is safe and reliable electricity transmission, efficient control of the transmission system interconnected with power systems of other countries, optimal and sustainable development of the transmission system to meet the needs of users and society as a whole, ensuring the functioning and development of the electricity market in Serbia and its integration into the regional and pan-European electricity market.

### Role

Primary and secondary legislative designed certificate scheme in Serbia. According to primary and secondary legislation EMS JSC Belgrade is recognized as the issuing body for Guarantees of Origin from renewable sources, registry operator and responsible party for calculation of the Serbian national residual mix.

### Member of the AIB

Active observer since 2015.

### Activities within the AIB

Representatives of EMS JSC Belgrade regularly attend general meetings of the AIB as well as working group meetings.

### News and perspectives regarding the national IB

EMS JSC Belgrade procured a registry for guarantees of origin and is technically equipped to start issuing guarantees of origin after the adoption of the necessary legislation.

Employees of EMS JSC Belgrade were part of a working group consisting of representatives from the Ministry and Regulatory Agency which adopted a draft version of the necessary by-law legislation (Assize and Disclosure rules).

### News and perspectives regarding the national framework for electricity

Legal framework for the certificate scheme in Serbia is established through the Energy Law and by-law legislation for guarantees of origin. New release of Assize for guarantees of origin and Disclosure rules are in the process of approval by the Government and the Ministry. Domain protocol and other necessary legislative issues are currently being developed and it is expected to be adopted shortly after the by-law legislation for guarantees of origin.

### Benefits to the company of AIB membership

The benefits for EMS JSC Belgrade for being an observer in the AIB is to actively gather knowledge on the EECS certificate schemes with the aim of establishing a certificate scheme in Serbia under the EECS rules.

### Profile of the organisation

Ofgem is the electricity and gas markets regulator. Ofgem E-Serve is the delivery arm of Ofgem, and is responsible for the administration of the government's environmental and social schemes. We are experts in operational design and delivery excellence.

### Role

Competent authority for renewable electricity guarantees of origin

### Member of the AIB

Observer since 2015

### Activities within the AIB

Ofgem E-Serve is currently an observer within AIB.

### News and perspectives regarding the national IB

As important changes to the UK's renewable electricity schemes are under way, Ofgem E-Serve will continue to work closely with the UK government and other stakeholders to ensure the continued efficient delivery of schemes.

### News and perspectives regarding the national framework for electricity

A new process was devised to recognise Guarantees of Origin for the 2015/16 disclosure period. This will be reviewed in due course.

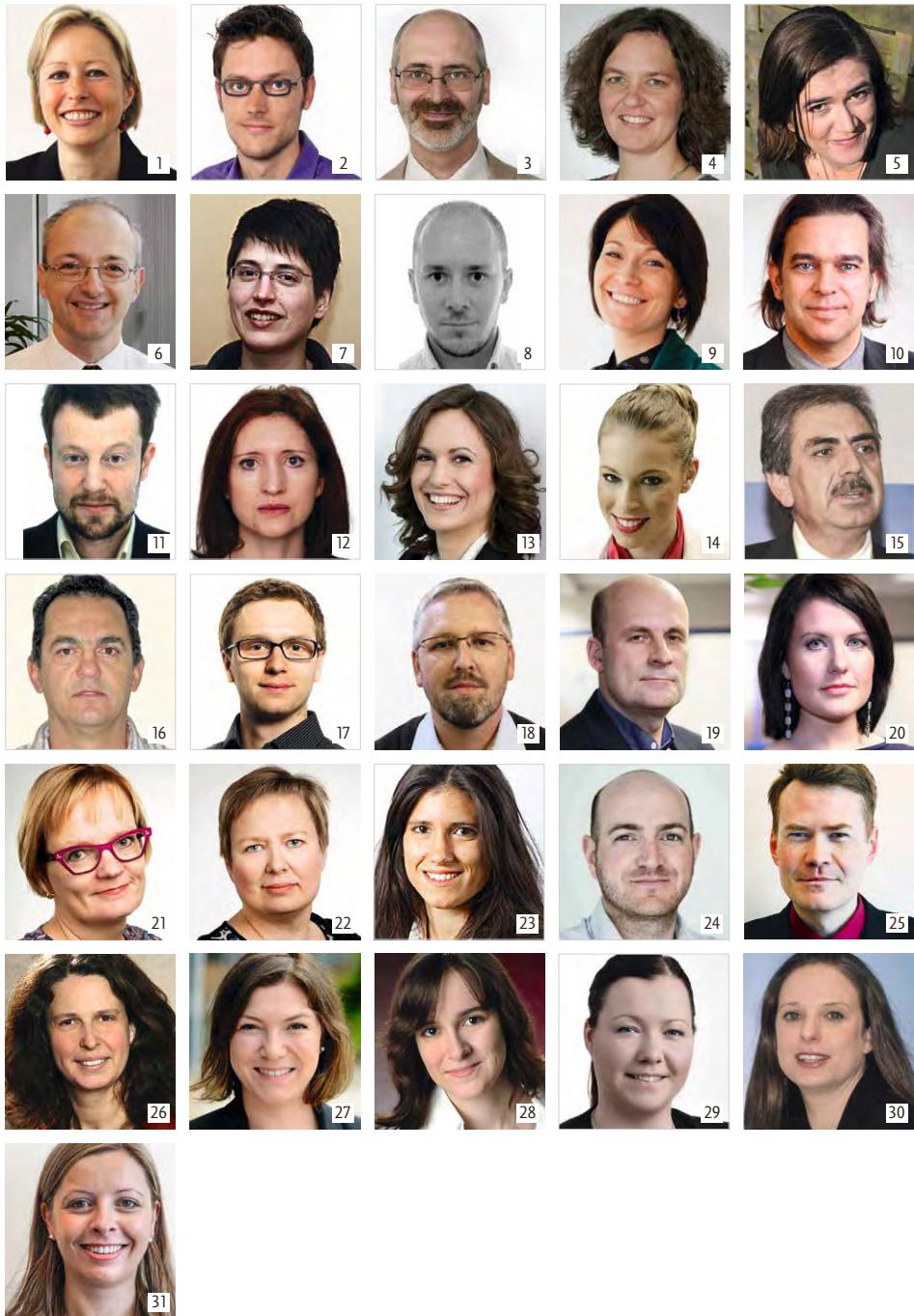
Name of the company  
Ofgem E-Serve

Area of operation  
United Kingdom

Address  
9 Millbank  
London, SW1P 3GE  
United Kingdom

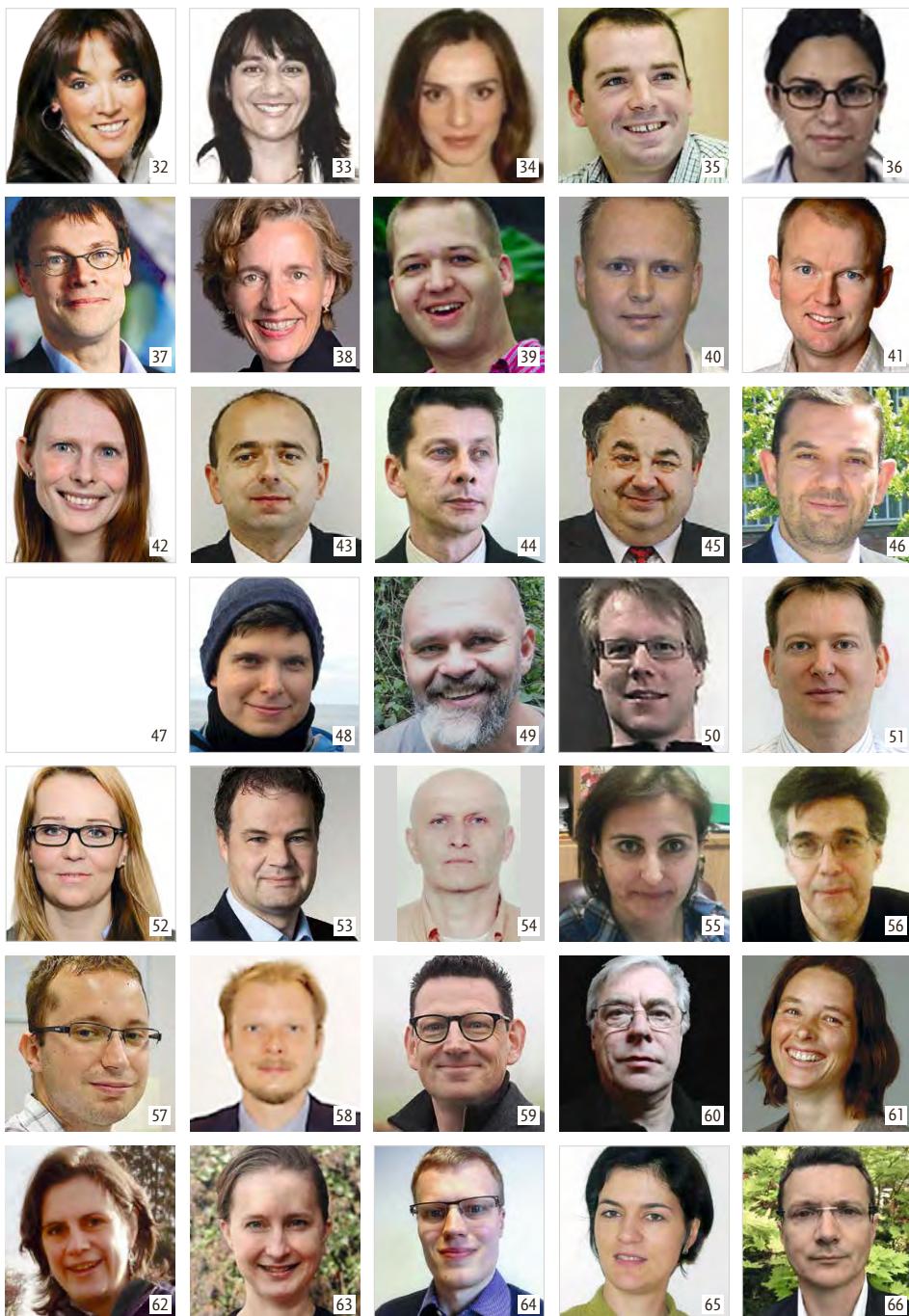
[www.ofgem.gov.uk](http://www.ofgem.gov.uk)

## CONTACTS



Country	No	Name	Telephone	Fax	Email	Function in AIB
AUSTRIA		Energie-Control Austria				
	1	Angela Tschnutter	+43 1 24724 720	+43 1 24724 900	angela.tschnutter@econtrol.at	Board member (since Dec 2016)
BELGIUM, BRUSSELS		Brugel – Energy Regulation Commission in the Brussels-Capital Region				
	2	Régis Lambert	+32 2 563 0208	+32 2 563 0213	rlambert@brugel.be	
	3	Pascal Misselyn	+32 2 563 0202	+32 2 563 0213	pmisselyn@brugel.be	
BELGIUM, FLANDERS		VREG - Vlaamse Regulieringsinstantie voor de Elektriciteits- en Gasmarkt				
	4	Katrien Verwimp	+32 2 553 1377	+32 2 553 1350	katrien.verwimp@vreg.be	
	5	Karolien Verhaegen	+32 2 553 7065	+32 2 553 1350	kvh@vreg.be	
BELGIUM, WALLONIA		CWaPE - Commission Wallonne pour l'Énergie				
	6	Pierre-Yves Cornelis	+32 81 33 08 41	+32 81 33 08 11	pierre-yves.cornelis@cwap.e.be	
	7	Annie Desaulniers	+32 81 32 50 12	+32 81 33 08 11	annie.desaulniers@cwap.e.be	Co-chair of WGS
	8	Gauthier Libeau	+32 81 33 08 45	+32 81 33 08 11	gauthier.libeau@cwap.e.be	
	9	Sabine Keirse	+32 81 33 08 41	+32 81 33 08 11	sabine.Keirse@cwap.e.be	
BELGIUM, FEDERAL		CREG				
	10	Koen Locquet	+32 22 897 636	+32 22 897 619	klo@creg.be	
	11	Philip Godderis	+32 22 897 688	+32 22 897 619	pgd@creg.be	
CROATIA		HROTE - Croatian Energy Market Operator				
	12	Dubravka Brkić	+385 1 6306 706	+385 1 6306 777	dubravka.brkic@hrote.hr	Chair WGEA
	13	Morana Lončar	+385 1 6306 724	+385 1 6306 777	morana.loncar@hrote.hr	
	14	Ida Žužić	+385 6306 726	+385 1 6306 777	ida.zuzic@hrote.hr	
CYPRUS		TSO-Cy - TRANSMISSION SYSTEM OPERATOR – CYPRUS				
	15	George Ashikalis	+357 22 611 611	+357 22 611 666	gashikalis@dsm.org.cy	
	16	Michalis Syrimis	+357 22 611 611	+357 22 611 666	msyrimis@dsm.org.cy	
CZECH REPUBLIC		OTE, a.s., the Czech electricity and gas market operator				
	17	Martin Štandera	+420 296 579 329	+420 296 579 180	mstandera@ote-cr.cz	
DENMARK		Energinet.dk				
	18	Carl Morten Baggesen Hilger	+45 51677936		moh@energinet.dk	
ESTONIA		Eltering AS				
	19	River Tomera	+372 715 1349	+ 372 715 1200	river.tomera@elering.ee	
	20	Liis Kilk	+372 715 1243	+ 372 715 1200	liis.kilk@elering.ee	
FINLAND		Finextra Oy				
	21	Kaija Niskala	+358 30 395 5147		kaija.niskala@fingrid.fi	
	22	Kirsi Salmivaara	+358 30 395 5227		kirsi.salmivaara@fingrid.fi	
FRANCE		Powernext				
	23	Aude Filippi	+33 1 73 03 76 87	+33 1 73 03 96 01	a.filippi@powernext.com	
	24	Mathieu Morvan			m.morvan@powernext.com	
GERMANY		Federal Environment Agency (Umweltbundesamt - UBA)				
	25	Michael Marty	+49 340 2103 2249	+49 340 2104 2249	michael.marty@uba.de	
	26	Elke Mohrbach	+49 340 2103 3017	+49 340 2104 3017	elke.mohrbach@uba.de	
	27	Friederike Domke	+49 340 2103 2540	+49 340 2104 2540	friederike.domke@uba.de	
	28	Katja Merkel	+49 340 2103 2116	+49 340 2104 2116	katja.merkel@uba.de	
ICELAND		Landsnet hf.				
	29	Svandís Hlín Karlssdóttir	+354 616 0882		svandis@landsnet.is	
IRELAND		SEMO - Single Electricity Market Operator				
	30	Laura Plunkett	+353 123 702 17		guaranteesoforigin@sem-o.com	Chair WGIA (since Sept 2016)
	31	Emma Kelly	+353 123 702 03		guaranteesoforigin@sem-o.com	Board member (since Dec 2016)

# CONTACTS



Country	No	Name	Telephone	Fax	Email	Function in AIB
ITALY   GSE - Gestore dei Servizi Energetici - GSE S.p.A.						
32	Claudia Delmirani	+39 06 8011 4370			claudia.delmirani@gse.it	
33	Marta Grassilli	+39 06 8011 4174			marta.grassilli@gse.it	
34	Annalisa Ciatti	+39 06 8011 4659			annalisa.ciatti@gse.it	
LUXEMBURG   ILR - Institut Luxembourgeois de Régulation						
35	Claude Hornick	+352 28 228 341			claude.hornick@ilr.lu	
36	Pamela Boeri	+352 28 228 349	+352 28 228 229		pamela.boeri@ilr.lu	
NETHERLANDS   CertiQ B.V.						
37	Jan van der Lee				jan.vander.lee@tennet.eu	Chair Board (until Dec 2016)
38	Lian Krijger	+31 26 373 2626			lian.krijger@certiq.nl	Board member (since March 2017)
39	Remco van Stein Callenfels	+31 26 373 1671			remco.van.steincallenfels@certiq.nl	
40	Arjan van der Toorn	+31 26 373 2624			arjan.vander.toorn@certiq.nl	
NORWAY   Statnett						
41	Lars Olav Fosse					Board member (until Dec 2016)
42	Jennifer Holgate	+47 922 91 963			jennifer.holgate@statnett.no	Co-chair of WGS (until Sept 2016), Board member (since Dec 2016)
SLOVENIA   Agencija za energijo - Slovenia Energy Agency of the Republic of Slovenia						
43	Andrej Špec	+386 2 23 40 300	+386 2 23 40 320		andrej.spec@agen-rs.si	
44	Tomaž Lah	+386 2 23 40 300	+386 2 23 40 320		tomaz.lah@agen-rs.si	
45	Gorazd Škerbincek	+386 2 23 40 300	+386 2 23 40 320		gorazd.skerbincek@agen-rs.si	
SPAIN   CNMC - National Authority for Markets and Competition						
46	José Miguel Unsión	+34 917879838			josemiguel.unsion@cnmc.es	
47	José Antonio Castro	+34 917879830			joseantonio.castro@cnmc.es	
SWEDEN   Grexel Systems Ltd.						
48	Markus Klinscheffskij					Chair WGIA (until June 2016)
49	Marko Lehtovaara	+358 9 4241 3161			marko.lehtovaara@grexel.com	
50	Vesa Hyrskylahti	+358 9 4241 3163			vesa.hyrskylahti@grexel.com	
SWITZERLAND   Swissgrid AG						
51	Lukas Groebke	+41 58 580 2138	+41 58 580 2038		lukas.groebke@swissgrid.ch	Board member, Treasurer
52	Milada Mehinovic	+41 58 580 3527	+41 58 580 3727		milada.mehinovic@swissgrid.ch	
53	René Burkhard	+41 58 580 3520	+41 58 580 3720		rene.burkhard@swissgrid.ch	
FEDERATION OF BOSNIA AND HERZEGOVINA   Operator za OIEIEK						
54	Almir Muhamedbegović	+387 36 28 10 36	+387 36 28 10 30		almir.muhamedbegovic@operatoroieiek.ba	
GREECE   LAGIE SA - Electricity Market Operator SA						
55	Maria Koulovári	+30 211 880 6910	+30 211 880 6901		mkoulovári@lagie.gr	
56	Eftimios Tsitouras	+30 211 880 6884	+30 211 880 6901		etsitouras@lagie.gr	
SERBIA   AD Elektromreža Srbije						
57	Marko Zarić	+381 11 3957 016			marko.zaric@ems.rs	
UNITED KINGDOM   Ofgem E-Serve						
58	Jeremy Brutus	+44 207 901 7165			jeremy.brutus@ofgem.gov.uk	
OTHERS	59	Dirk van Evercooren	+32 2 553 1360	+32 2 553 1350	dirk.vanevercooren@vreg.be	AIB President
	60	Phil Moody	+44 1494 681183		secgen@aib-net.org	Secretary General
	61	Andrea Effinger	+49 176 444 32 955	+49 3212 1061 071	andrea@aib-net.org	Assisting Secretary General
	62	Liesbeth Switten	+32 486 558301		Liesbeth@switten.be	Professional reviewer – legal advisor
	63	Marika Timlin	+358 9 4241 3164		hubinfo@aib-net.org	Assisting Secretary General, Superuser
	64	Alex Björkholm	+358 9 4241 3168		hubinfo@aib-net.org	Superuser
	65	Diane Lescot	+33 144 18 7353	+33 144 18 0036	diane.lescot@energies-renouvelables.org	Independent reviewer
	66	Michael Lenzen	+31 6441 60 209		michael@communicating-sustainability.eu	Independent reviewer

# AUDIT REPORT



23 Station Road  
Gerrards Cross  
Bucks SL9 8ES

Tel: (01753) 886711  
Fax: (01753) 886324

e-mail: accounts@russellphillips.co.uk  
Website: www.russellphillips.co.uk

## ASSOCIATION OF ISSUING BODIES

### Report of the Independent Auditors to the Members of the Association of Issuing Bodies.

#### 1. Introduction

We have audited the balance sheet and profit and loss account for the year ended 31 December 2016.

This report is made solely to the members of the Association and we do not accept or assume responsibility to anyone other than the Association and the members of the Association for our audit work, for this report, or for the opinions we have formed.

#### 2. Purpose of the Audit

The purpose of the audit is to:

- a) Verify the balance sheet and profit and loss account at the year end.
- b) Check that the cut off between 2016 and 2017 is correctly accounted for.
- c) Evaluate the payment routine.
- d) Check the control over invoicing is correct and complete and in accordance with the instructions of the Board.
- e) Check that the control over expenses is in accordance with existing agreements, well documented and properly authorized.
- f) Calculate the audit-trail between the system and the books.

To carry out the audit we received support from the General Secretary who provided us with board minutes, agreements, a trial balance and nominal ledger at 31 December 2016, transaction lists, invoices and vouchers. The audit was performed on a sample basis.

The AIB is registered in Belgium, but VAT registered in the UK. The audit, as in the previous year, does not include the evaluation of transaction matters.

Registered Address: As above - Company No: 5236467 - Registered in England  
Russell Phillips is the trading style of Russell Phillips Ltd.

Russell Phillips Ltd is registered by the ICAEW to carry out company audit work.  
Registered with The Chartered Institute of Taxation as a firm of Chartered Tax Advisers.  
A member of the UK200 Group, Quality Assured Accountants & Lawyers  
and the International Association of Practicing Accountants.

Directors: Jonathan Russell FCA  
Lina Pujara FCCA CTA

Executive Consultant: Stephen Cox  
Consultant: Waseem Sadique FCA



### 3. Findings and Recommendation

#### a) Membership fee.

The information on total certificates issued and transferred between domains per member is based on data from the websites (ie: necs.statnett.org). The total number of certificates transferred between domains in 2015 was the basis for the standing charge component of the membership fee in 2016.

The activity fees are linked to the total certificates transferred between domains in the year. Any certificates relating to the year 2016 and invoiced after the books have been closed for the year have been recognized as revenue in these accounts.

We have verified the annual membership fees were invoiced according to the approved membership fee calculation as set out in the invitation to tender.

#### b) Expenses

We have reviewed that expenses are supported by appropriate documents and have been correctly authorized. We have checked in particular the major costs of the consulting fees and travel expenses. We found the controls to be good and the year end cut-off seemed reasonable.

#### c) Bank

The payment routine was found to be in good order with the general secretary creating the payment instructions and the Treasurer authorizing the payment instructions.

The bank account in the nominal ledger reconciled both with the statements received from Jyske Bank and their year end certificate.

#### d) Accounts Receivable

These were checked to the invoices raised during the year.

#### e) VAT

The Association's proper place of registration continues to be in the UK.

The income is mainly from outside the UK and is zero rated to registered bodies in the EU whilst the expenses are mainly in the UK and the VAT can be deducted. Therefore, most quarters, the Association receives a VAT refund.

The rate of VAT for the year was 20%.

The VAT was found to be correctly calculated and recorded in the system for the year and the end of year balance agreed to the records.

#### f) Accounts Payable/Accruals

These were checked to the invoices raised by suppliers and found to be correctly recorded.

An accrual of 3,800 EUR due to the auditor is included in these accounts.

#### g) Audit Trial

There is a good audit trail between the original invoices for both fees and expenses and the nominal ledger system.

Registered Address: As above - Company No: 5236467 - Registered in England

Russell Phillips is the trading style of Russell Phillips Ltd.

Russell Phillips Ltd is registered by the ICAEW to carry out company audit work.

Registered With The Chartered Institute of Taxation as a firm of Chartered Tax Advisers.

A member of the UK200 Group, Quality Assured Accountants & Lawyers

and the International Association of Practicing Accountants.

Directors: Jonathan Russell FCA  
Lima Pujara FCCA CTA

Executive Consultant: Stephen Cox  
Consultant: Waseem Sadique FCA

#### 4. Conclusion

In our opinion the Financial Statement gives a true and fair view of the state of Association of Issuing Bodies as at 31 December 2016 and of its deficit for the year.

The statement has been properly prepared from information supplied.

.....  
Jonathan Russell (Statutory Auditor)  
For and on behalf of  
ReesRussell LLP  
37 Market Square  
Witney  
Oxon OX28 6RE

Date.....28-05-17.....

Registered Address: As above - Company No: 5236487 - Registered in England  
Russell Phillips is the trading style of Russell Phillips Ltd.  
Russell Phillips Ltd is registered by the ICAEW to carry out company audit work.  
Registered with The Chartered Institute of Taxation as a firm of Chartered Tax Advisers.  
A member of the UK200 Group, Quality Assured Accountants & Lawyers  
and the International Association of Practicing Accountants.

Directors: Jonathan Russell FCA  
Lina Pujara FCCA CTA

Executive Consultant: Stephen Cox  
Consultant: Waseem Sadique FCA

# FINANCIAL STATEMENT

**ASSOCIATION OF ISSUING BODIES  
FINANCIAL STATEMENTS FOR THE YEAR ENDED  
31 DECEMBER 2016**

**Profit & Loss Account**

	31/12/2015	31/12/2016
	(amount in Euro)	
Annual membership fee, small	47500	31250
Annual membership fee, large	200000	260000
Activity based membership fee	506398	438775
Other operating revenues	<u>1645</u>	<u>1031</u>
Total operating revenues	<u>755543</u>	<u>731056</u>
 <b>Operating costs</b>		
Consultancy fee & administration	634806	566189
Travelling & Hotels	35474	35996
Other operating costs	158415	146697
Depreciation	<u>-</u>	<u>90915</u>
 Total operating costs	<u>(828695)</u>	<u>839797</u>
 Net profit/loss for the year	<u>(73152)</u>	<u>(108741)</u>

**Balance Sheet**

	31/12/2015	31/12/2016
	(amount in Euro)	
<b>Assets</b>		
Plant & Machinery	272746	181831
Accounts receivable	145331	75401
Prepayment	1000	-
Net Vat refund	15425	17606
Bank	<u>267410</u>	<u>223880</u>
Total Assets	<u>701912</u>	<u>498718</u>
 <b>Liabilities</b>		
Accounts payable	171173	76720
Total Net Assets	<u>530739</u>	<u>421998</u>
 Opening Reserve	603891	530739
Profit/loss for the year	<u>73152</u>	<u>(108741)</u>
 Closing Reserve	<u>530739</u>	<u>421998</u>

  
Date ..... 16<sup>th</sup> May 2017  
Lukas Groebke

  
16<sup>th</sup> May 2017  
ANGELA TSCHERNUTTER

Registered Address: As above - Company No: 5236467 - Registered in England  
Russell Phillips is the trading style of Russell Phillips Ltd.  
Russell Phillips Ltd is registered by the ICAEW to carry out company audit work.  
Registered With The Chartered Institute of Taxation as a firm of Chartered Tax Advisers.  
A member of the UK200 Group, Quality Assured Accountants & Lawyers  
and the International Association of Practicing Accountants.

Directors: Jonathan Russell FCA      Executive Consultant: Stephen Cox  
Lina Pujara FCCA CTA      Consultant: Waseem Sadique FCA

# PRODUCTION AND GRAPHICS

**Design:** Loep ontwerp, Arnhem, NL

**Layout:** Andrea Jaschinski, Berlin, DE

**Print:** Druckerei Lokay e.K., Reinheim, DE

This report has been printed on environmentally friendly 100% postconsumer-recycled paper, printed with vegetable oil-based ink, alcohol-free. The printer, Lokay, was rewarded as 'Eco-printer of the year' in 2010 (a German award) and is EMAS-certified (as one of very few printing companies).



## Picture credits:

- p. 4 map – based on wikipedia by Alexrk2 CC BY-SA 3.0  
p. 26 © Zechal/Fotolia  
p. 28 © Ivo Brezina/Fotolia  
p. 30 © VREG  
p. 32 © 7horses/Fotolia  
p. 34 © CREG  
p. 36 © HROTE  
p. 38 © Transmission System Operator/Cyprus  
p. 40 © sborisov/Fotolia  
p. 42 © Foto: Jorgen Schytte  
p. 44 © Aleksei Volkov/Fotolia  
p. 46 © Tommi Tuomi  
p. 48 © jerome DELAHAYE/Fotolia  
p. 50 © Umweltbundesamt /Silvia Sinah
- p. 52 © Lárus Karl Ingason  
p. 54 © EirGrid  
p. 56 © chiakto/Fotolia  
p. 58 © astinus/Fotolia  
p. 60 © Fotolia XXV/Fotolia  
p. 62 © Statnett SF, Johan Wildhagen  
p. 64 © Kristan/Fotolia  
p. 66 © kasto/Fotolia  
p. 68 © Jens Klingebiel/Fotolia  
p. 70 © SwissWinds Development GmbH  
p. 72 © Almir Muhamedbegovic  
p. 73 © Artem Mykhailichenko/Fotolia  
p. 74 © Saša Stokić  
p. 75 © istock photo library

Electricity disclosure is highly relevant for electricity produced from renewable energy sources. Supporting an environmental-friendly electricity market in Europe, AIB is part of the transition to a more sustainable world.

The AIB takes responsibility for its own organisation, and seeks to make its own structures and organisation environmentally and socially friendly. The main areas where AIB is able to improve its own sustainability are communication (website, emails) and the meetings which it holds across Europe.

Since 2012, AIB took several steps to improve its sustainable impact, and will take further responsibility of its operations by means of the following steps:

- Continuing to power its servers and computers using preferably renewable energy; and to benefit from the services of Wattimpact.
- Printing its Annual Reports on the most environmentally friendly paper (FSC paper, 100% recycled), in cooperation with the printing company Lokay that has committed itself to be a sustainable printer.
- Carbon offset all travelling by attendees to AIB meetings, including the four General Meetings per year, physical Working Group meetings and the annual Strategy Meeting. In 2016, a total of 60 t CO<sub>2</sub> were compensated by SouthPole.
- Holding its quarterly General Meetings:  
Seek venues (hotels) with environmental management certification, and preferably those which engage in other activities relating to improving energy efficiency, reducing environmental impact and supporting social responsibility. One part to realize this is to prefer regional food with a good amount of vegetarian options.

## **Association of Issuing Bodies**

The AIB is a non-profit-making international association

Telephone: +44 (0)1494 681183

Website: [www.aib-net.org](http://www.aib-net.org)

Email: [info@aib-net.org](mailto:info@aib-net.org)

### **Registered offices**

Koning Albert II-laan 20 bus 19

B-1000 Brussels

Belgium

### **Administrative offices**

23 Station Road

Gerrards Cross

Buckinghamshire

SL9 8ES

United Kingdom

Registered in Belgium

Registration number

(numero d'entreprise):

0.864.645.330

