

# VALUE



ANNUAL REPORT  
2018





## VALUE

The keyword for this Annual Report is 'Value'.

Different meanings can be attributed to this word: the AIB adds value for its members, consumers, and the market. Also growing prices, as the size of the market is growing very quickly.

The AIB logo is made out of arrows and looks like a star, but all of these arrows show that the AIB is connecting to all of Europe, and this means that it is adding value. The image on the front cover shows a satellite picture of Europe, and how the countries of Europe are connected to one another. Every country or city is a sparkle in the AIB network.

The great value of the members in our organisation enables the European GO market to be where it is today.

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# FOREWORD

## Challenges and opportunities everywhere!



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

2018 was a year that was littered with great opportunities but also challenges for the AIB.

In the course of 2018, we saw the final outcome of the legislative process regarding the Clean Energy for all Europeans Package, in which AIB has been actively involved. After all, we are a European organisation, which has a unique expertise regarding the certification of electricity from renewable sources and facilitating the European Guarantee of Origin market and disclosure system with our IT Hub. So it comes as no surprise that even though we are a neutral organisation that refrains from any policy action in a pro-active way, our expertise is often called upon by policy makers. It would be irresponsible and against the long-term interest of our members not to respond to such requests for our views and expertise.

Now that the dust on the Clean Energy Package has settled, we can say that the outcome, where GOs are concerned, is good. The instrument of the Guarantee of Origin (GO), cornerstone of our activity, is clearly being reinforced and expanded by the Clean Energy Package. We are happy about that, but we also need to realise the new challenges that are now confronting our organisation. Let's review them.

We are happy to see that soon it will be impossible to claim to supply or use electricity from renewable sources without proving this claim with Guarantees of Origin. At a time when there is so much 'buzz' created around blockchain and similar technologies, and the focus there is on using such approaches for tracking the origin of electricity, this development is reassuring. Trust in GOs is key when it comes to

ensuring that the supply and consumption of green electricity is widely embraced by electricity consumers. That trust comes from the role of the issuing bodies, not from any specific technology. Our members focus on reliability first and foremost, so we still need to be convinced that alternatives to the GO-based disclosure system are as reliable and trustworthy.

And electricity consumers agree! That is what the statistics tell us. For the first time, over 500 TWh, that is 500.000.000 kWh of electricity from renewable sources, has been actively claimed by consumers within the EECS area. This steep growth in the use of GOs illustrates that consumers trust the system, and care more and more about how the electricity they use has been produced. Just as origin matters more and more in consumer goods like food and clothing, this is also the case for electricity. Kudos to the European lawmakers who saw this development quite early and created the GO to ensure that consumers can trust the quality and source of their electricity contracts!

The challenges were to a large extent linked to the "Clean Energy for all Europeans" Package. Like the CEN-standard, fraud, expansion to other energy vectors, full disclosure, organisational change,...and this is how AIB handles these opportunities to adapt and improve:

The new Renewables Directive (RED II) introduces the need to comply with the CEN standard. In principle, this is a good thing. After all, the AIB is all about standardisation, as our EECS rules are a de facto standard of operation with which all our members comply. This leads to a trustworthy cost-efficient European GO market and a reliable disclosure system. We will need to



work with CEN, however, to ensure that the standard is properly supporting the market. After all, markets tend to evolve much quicker than standards, so a too detailed or overly rigid standard might turn out to be an obstacle, rather than an advantage. Let's make sure that such a scenario does not materialise!

Not only have the volumes of GOs being used and traded gone up significantly, prices have also risen. This attracted some attention from parties that are not so much interested in providing electricity consumers with power from renewable sources, but rather are looking for a vehicle, any vehicle, to shift money around to realise goals, which are less than legal. The AIB saw this coming, and set up the necessary instruments to detect and deter these companies as early as possible.

The RED II expands the GO to other types of energy from renewable sources: renewable gas and hydrogen. Furthermore, the possibility of issuing GOs for fossil and nuclear electricity is now also explicitly in the European framework. Seeing countries move to full disclosure, like Austria, Switzerland and soon also the Netherlands, makes this not only theory, but practice. This is a challenge for the AIB. While the EECS rules are energy-neutral and can accommodate rules for all types of energy, our organisation has been focussed solely on electricity. But from a societal point of view, it's much more efficient to administer new GOs alongside the processes and within the systems (like the AIB HUB) that have already proven their worth, rather than building parallel systems and repeating the mistakes that were already learned in the past – and especially save costs for consumers by making use of technical synergies ...

So the AIB is thinking about a new organisational model to deal with all of these challenges and keep our organisation reliable and trustworthy – especially in the future. The internal restructuring process is supported by external consultants and, thanks to the great enthusiasm of our members, a model has been developed which is a solid basis for further discussions before its implementation, which is scheduled to commence in 2020.

As the first contact with the AIB is often made via our website, the AIB decided this year to move to a new, modern web presence, which was presented in early 2019. The website covers relevant market information and statistics, information about the EECS Standard, the members, news and events as well as links to related documents, studies and legal texts.

We live in exciting times, we need to cope with a lot of uncertainties, and we need to think and act cleverly to ensure that we can take up all of the opportunities that are out there. We are proud and confident to count on all of you, inside and outside of the AIB, to make significant steps forward. We like to thank all of our members for the strong support and willingness to pull in the same direction, bringing in a lot of human power to cooperate within the AIB and jointly overcome challenges which, in the end, usually become great assets and strengths for the organisation. These experiences make us confident of achieving good developments and we are looking in the future with a big smile, knowing that these challenges are to be overcome and will result in a good outcome. Without the great value of the members in our organisation, the European GO market would not be where it is today. Congratulations and thanks to all of our members.

Angela Tschernutter, Chair of the AIB Board  
Dirk Van Evercooren, AIB President



# GO ACTIVITY FOR 2018

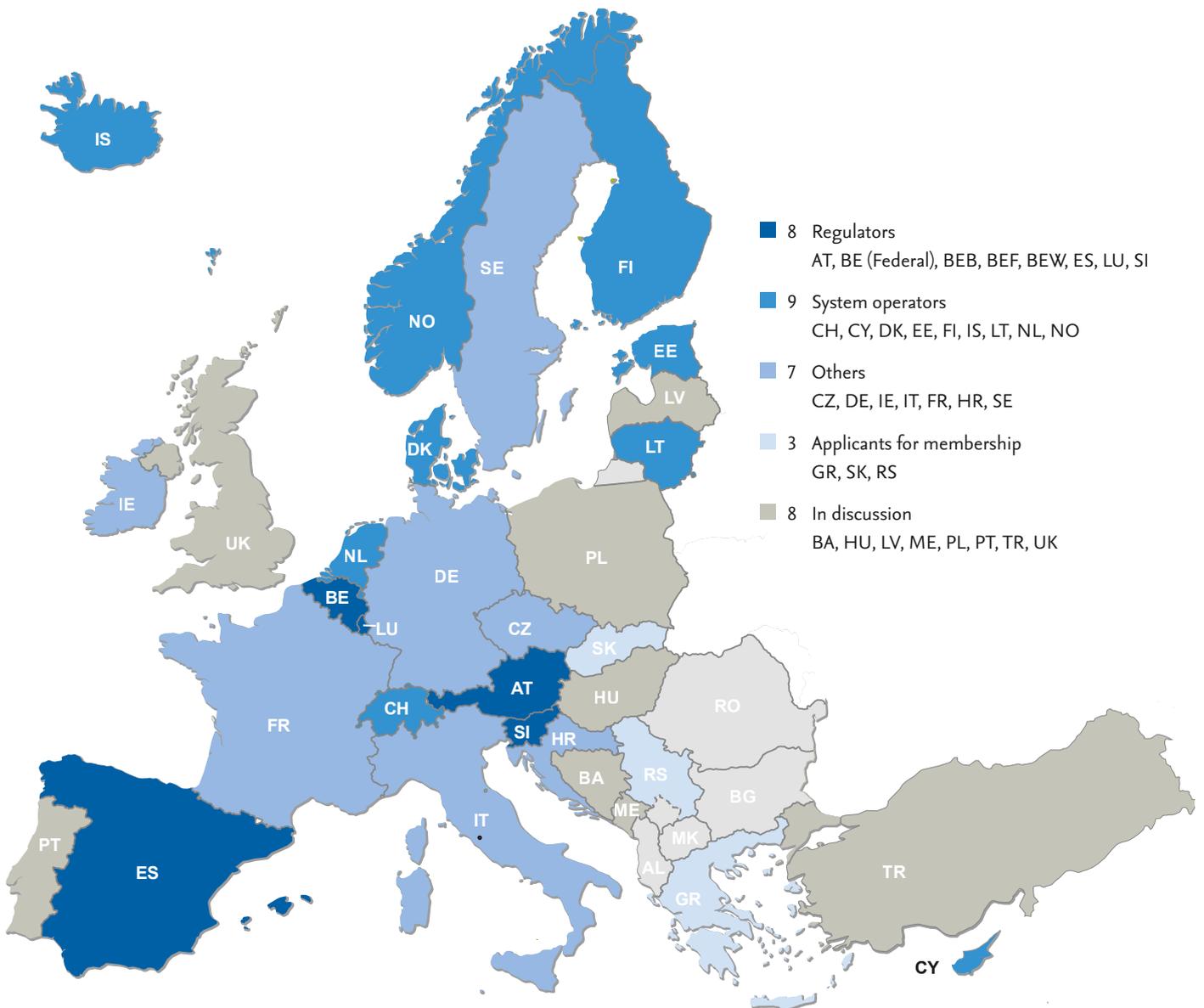
## Membership

At the end of 2018, AIB had a total of 24 members, representing 21 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).

Litgrid of Lithuania joined the Association in the summer of 2018.

The issuer of guarantees of origin (GOs) for Greece (LAGIE) continued the membership application process, while Serbia (EMS) and Slovakia (OKTE) applied for membership.

Discussions progressed with interested parties in Bosnia (REERS), Federation of Bosnia and Herzegovina (RES Operator), Hungary (MEKH), Latvia (AST), Montenegro (ERA), Poland, Portugal (DGEG, and then REN) and the UK (Ofgem).



## Market Activity

Statistics are available for: guarantee of origin (GO) activity in a month; and GO activity relating to electricity produced in a month. This means that it is possible to analyse the quantity of GOs 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 GO are still available on the market; and to review seasonal GO activity.

### Overview of activity

Market activity continues to increase, with continued strong growth in the quantity of GOs used by suppliers to prove the source of electricity – 2018 was another good year! Transfers within the same country continue to rise as the use of GOs for disclosure purposes gains further support, and there has been continued increase in international transfers and even more so in cancellations; with more and more GOs finding a value.

By the end of 2018, 79% of GOs issued for electricity produced during 2017 and 68% of GOs issued for electricity produced in 2018 were reported as having been

cancelled. 3% of GOs issued for electricity produced in 2017 have now expired, down from 7% the previous year.

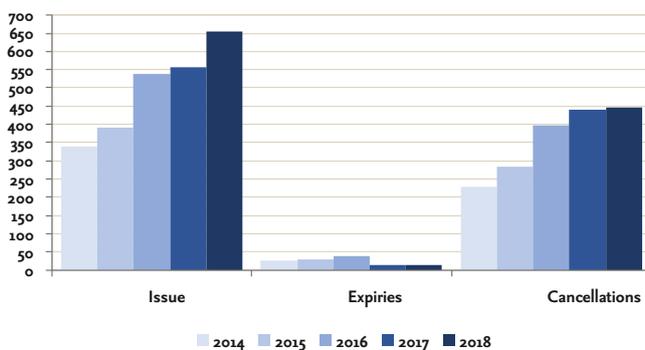
This again demonstrates that increasing numbers of competent bodies are expiring GOs, and that there are minimal stocks of GOs more than 12 months old thanks to the requirement under the EU Renewable Energy Directive (2009/28/EC) for GOs to expire within 12 months of production of the associated energy. 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 GOs for electricity produced during 2018 is close to the final figure now.

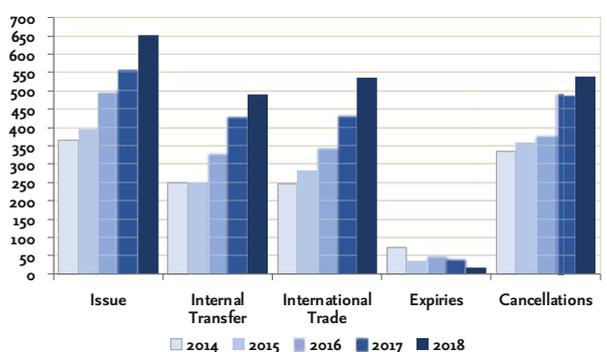
The following graphs show:

- 1 the annual quantity of GOs 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 GOs – technology / energy sources

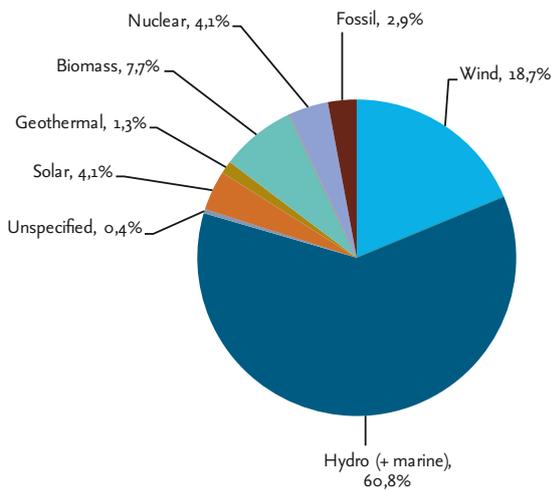
Hydropower continues to be the major source of electricity for which GOs are issued but has fallen from 63% to 61% since 2017. The proportion of GOs issued for fossil has risen by 2%, while those issued for wind and nuclear power have risen by 1%, and those issued for biomass have fallen by the same amount. Geothermal and solar are around the same. Unspecified energy source accounts for 0.5%, about the same as last year.

Over the last year, the cancellation of hydro fell 5% in 2018 to 62%, while wind by 1%.

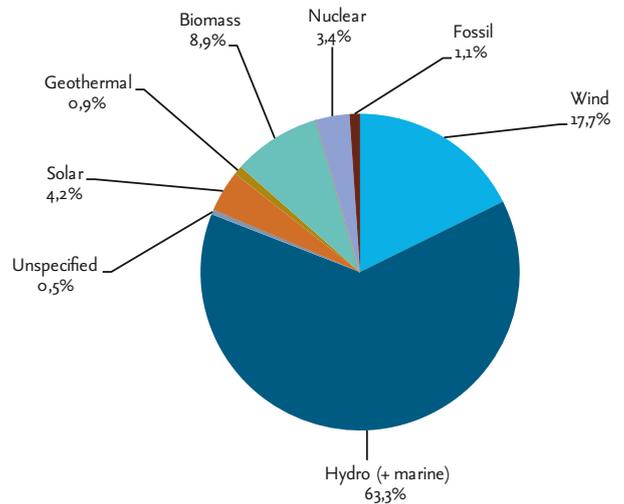
Regarding cancellation of GOs, wind has risen 2% and biomass has risen 3%, however solar PV has fallen 1%. Geothermal, nuclear, fossil and unspecified energy are about the same.

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

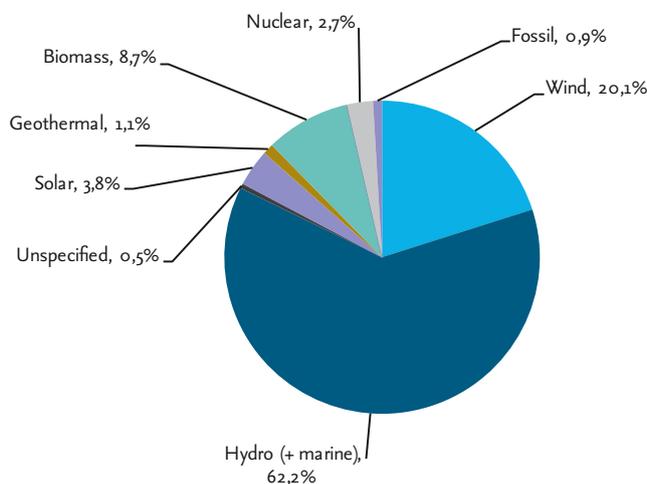
graphs 3 + 4 **EECS certificates issued per technology (2018)**



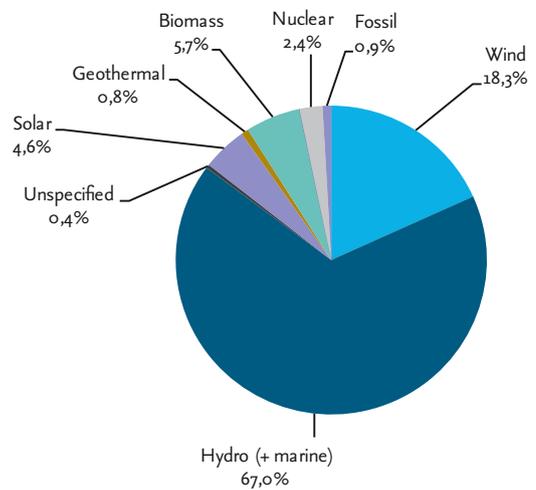
**EECS certificates issued per technology (2017)**



graphs 5 + 6 **EECS certificates cancelled per technology (2018)**



**EECS certificates cancelled per technology (2017)**



### Source of GOs – country

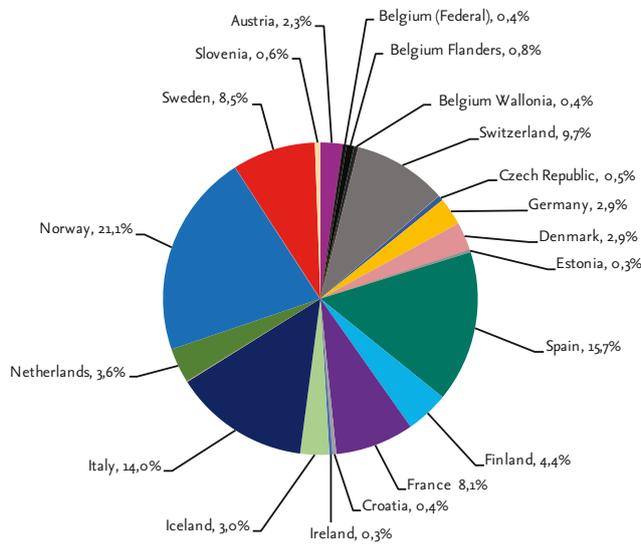
Regarding national activity, the major suppliers of GOs are Norway followed by Spain, Italy and Switzerland, supplying 61% of all GOs issued. They are followed by Finland, Sweden and France, which issued a further 21%.

Germany, Switzerland, Spain and the Netherlands are now the major consumers of GOs, cancelling 52% of

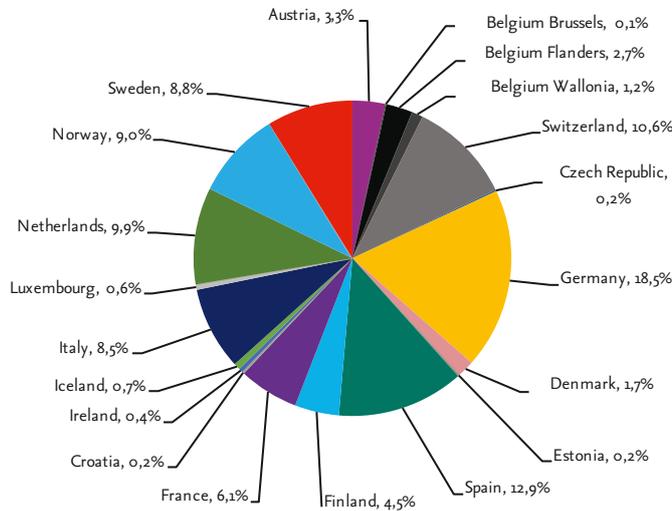
all GOs between them; while Norway, Sweden, Italy, Finland, Belgium and Austria collectively cancelled a further 38%.

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

graph 7 **EECS certificates issued per country (2018)**



graph 8 **EECS certificates cancelled per country (2018)**

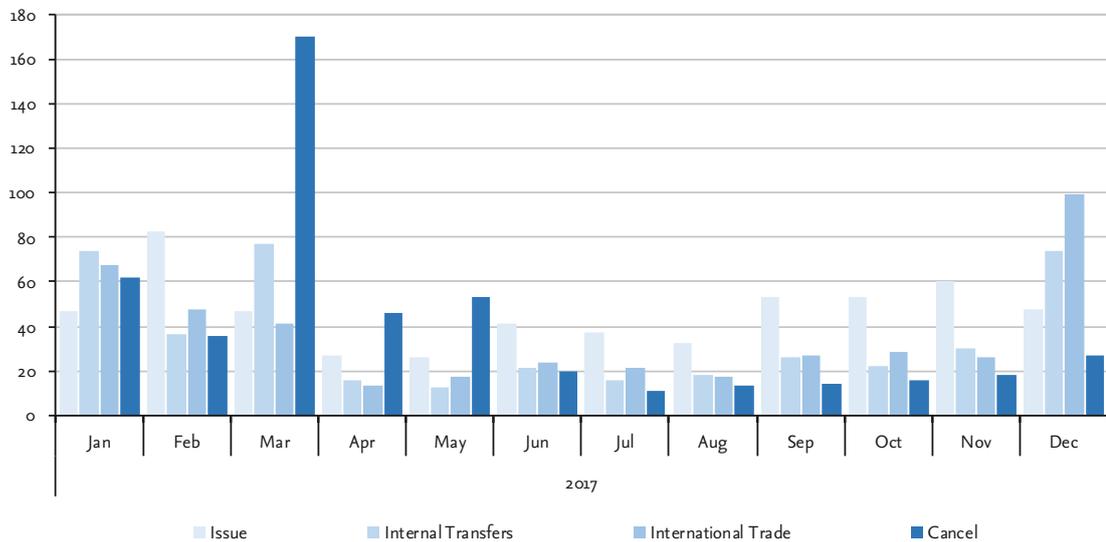


### Annual activity

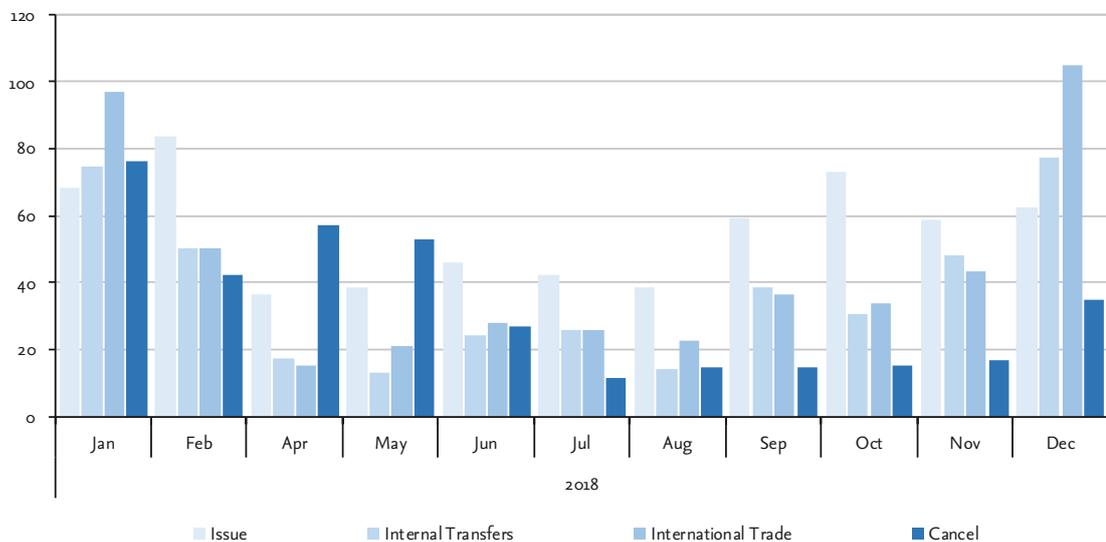
Activity has continued to increase, with most activities rising at the turn of the year to a peak for cancellation in March and declining in the middle of the year.

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

graph 9 **EECS certificate activity 2017 (TWh)**



graph 10 **EECS certificate activity 2018 (TWh)**



### Cumulative activity - national

As the following graphs demonstrate, the growth in issuing continues. The following graph shows the annual quantity of GOs issued for production in each of the last 6 years.

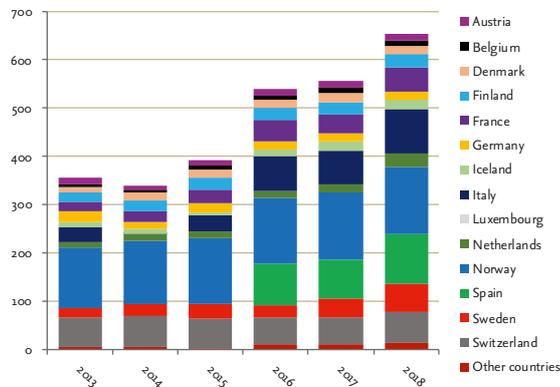
Norway is still the leading country supplying Guarantees of Origin; providing the market with 138 TWh of

Guarantees of Origin from Hydro in 2018, followed by Spain with 103 TWh. As the rest of the market keeps growing and developing, Norway's share of the total supply continues to decrease.

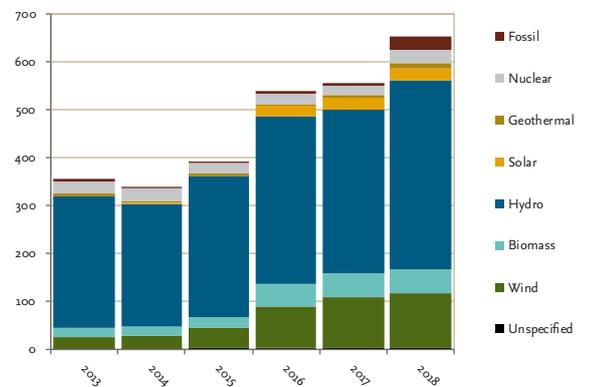
Again, hydropower predominates, but wind and biomass are growing.

graph 11 + 12

### Issued per year of production (TWh)



### Issued per technology (TWh)

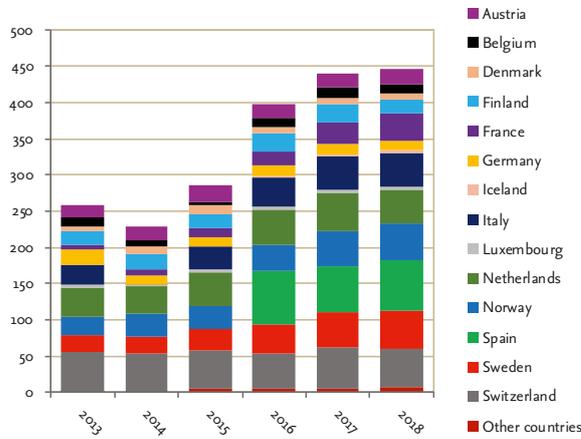


Cancellation continues to grow, reflecting strongly growing consumption in several countries during 2018. The following graphs show the annual quantity of GOs that have been cancelled for production during each of the last 6 years; along with the GOs that have been cancelled in each year for all production periods.

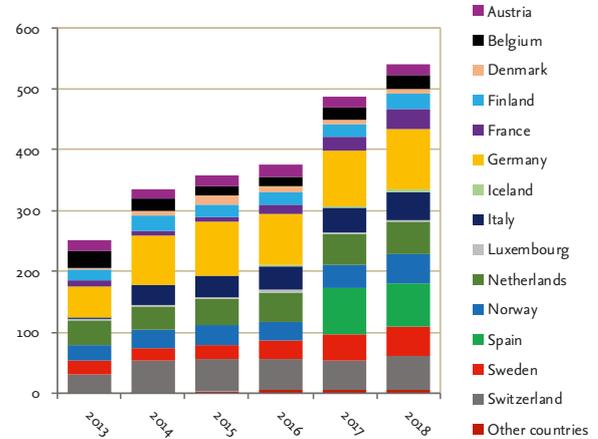
In reviewing these graphs, please note that – in line with the provisions of the RES Directive 2009/28/EC - GOs expire one year after the date of production.

GOs are often cancelled late in their life, which explains why some of the GOs for 2018 production have yet to be cancelled. Also, the GOs for all years that were cancelled during 2013 may have been due to energy suppliers using up old stocks of GOs before they expired as required by the RES Directive.

Cancelled per year of production (TWh)



Cancelled per year of transaction (TWh)



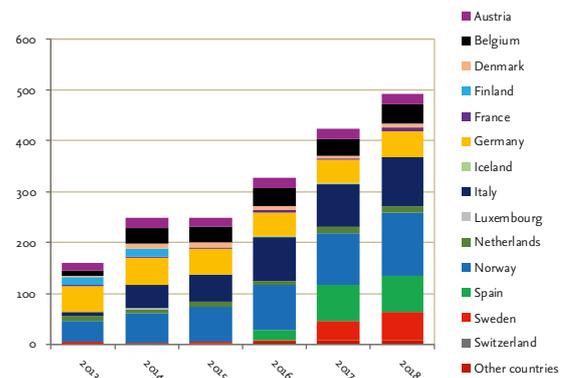
The continued rise in cancellations has led to a demand of 540 TWh, 15% of all European energy demand and 45% of all European RES electricity. The market continues to shorten.

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

Furthermore, market activity in Slovenia and non-member countries are not reported. When this is eventually added, we will see a further rise in reported market demand.

graph 15

Transferred per year (TWh)



Households, organisations and businesses all contribute to this impressive market growth, as do new forms of electricity consumer, such as the recent growth in motor vehicles and server farms; although 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.

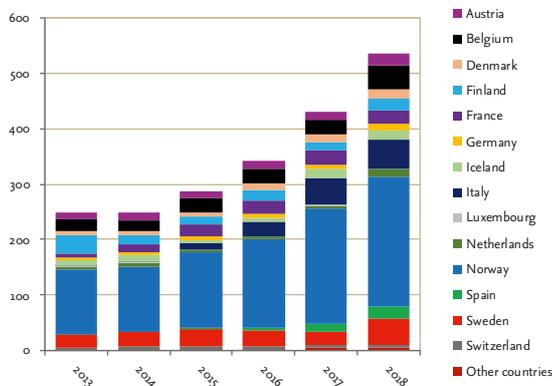
Externally, the exporting countries are predominantly Nordic plus Italy, France and Belgium.

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

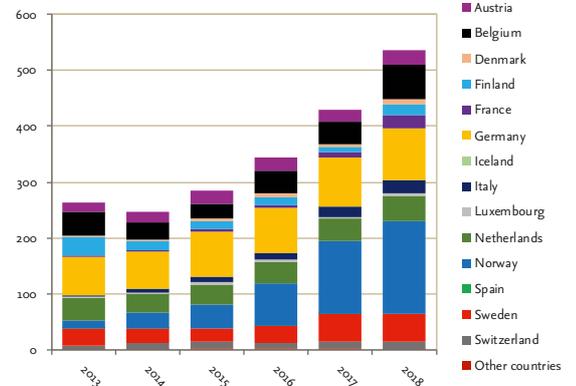
The following graphs show the annual quantity of GOs traded internationally during a period.

graphs 16 + 17

### Exported per year (TWh)



### Imported per year (TWh)



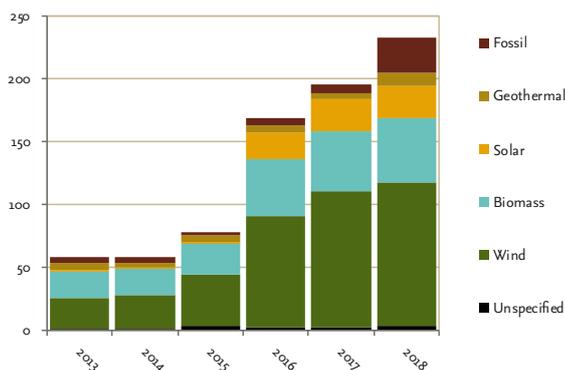
### Cumulative activity – technology

From the perspective of technology, production and transfer of electricity, hydropower remains predominant among energies, followed by wind, biomass and solar.

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

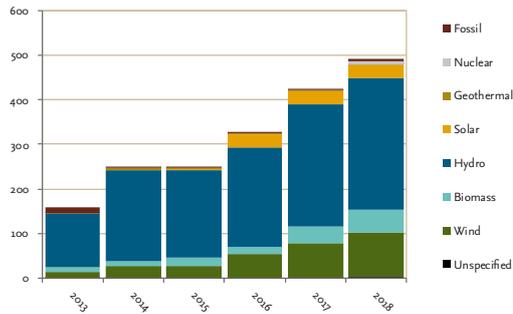
graph 18

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

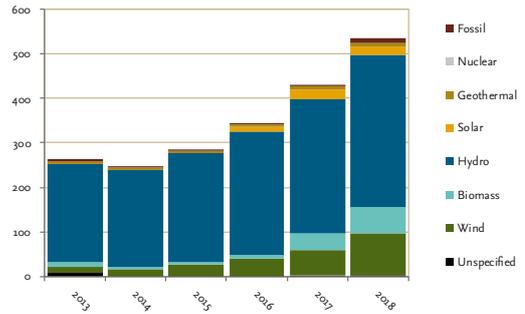


In addition, the following graphs show the volume of GOs by each energy source that have been transferred within a country, and those that have been traded internationally.

graphs 19 + 20 **Transferred per technology (TWh)**

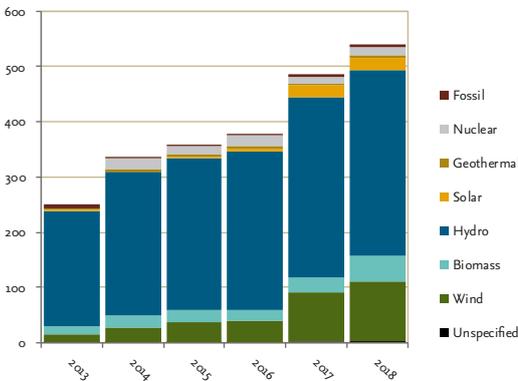


**Imported per technology (TWh)**

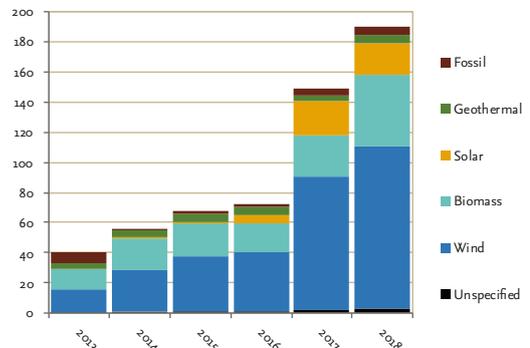


These graphs show the annual quantity of GOs cancelled during each year, analysing these in more details for energy sources other than nuclear and hydro.

graphs 21 + 22 **Cancelled per technology (TWh)**

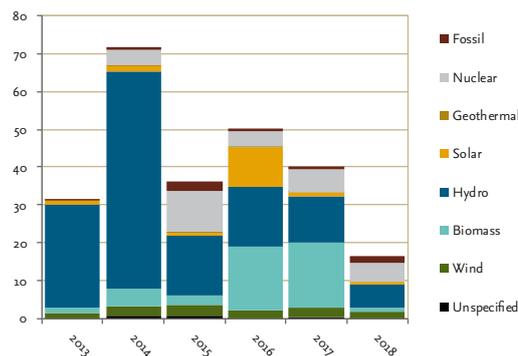


**Cancelled per technology (TWh) (except nuclear and hydro)**

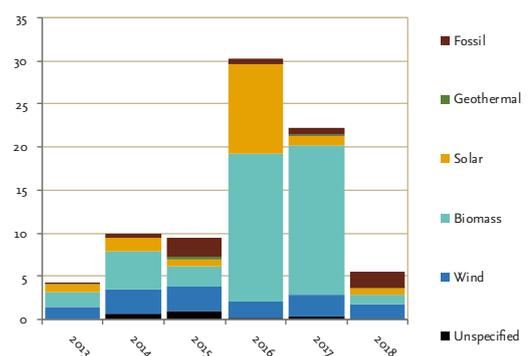


We can also see the composition of the expired GOs required by Directive 2009/28/EC, which are increasingly for biomass.

graphs 23 + 24 **Expired per technology (TWh)**



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



### EECS market penetration

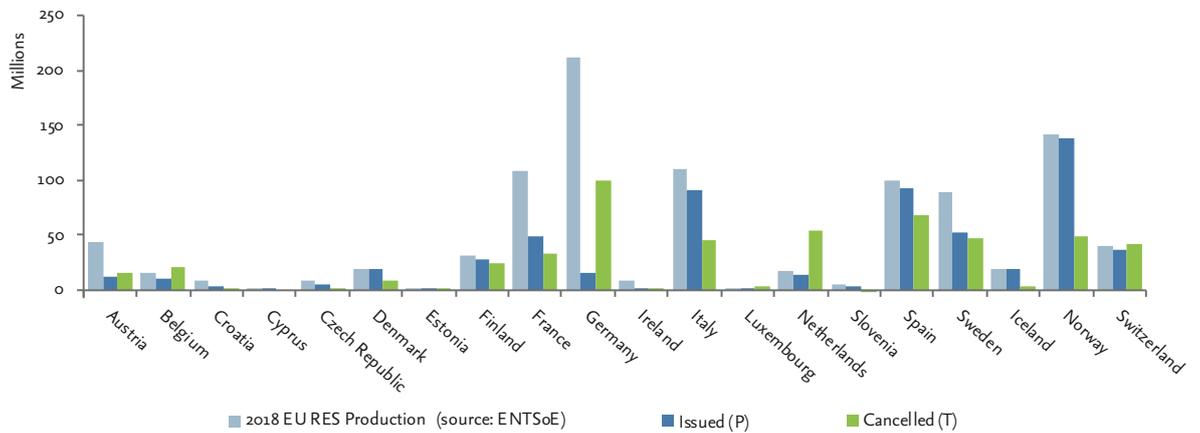
It is interesting to compare renewable electricity production in member countries with the number of EECS GOs issued.

Based on the latest available twelve months of ENTSOe statistical data (i.e. for the period January 2018 to December 2018) regarding the production of electricity, the following graphs compare electricity produced in 2018 with EECS GOs issued for this

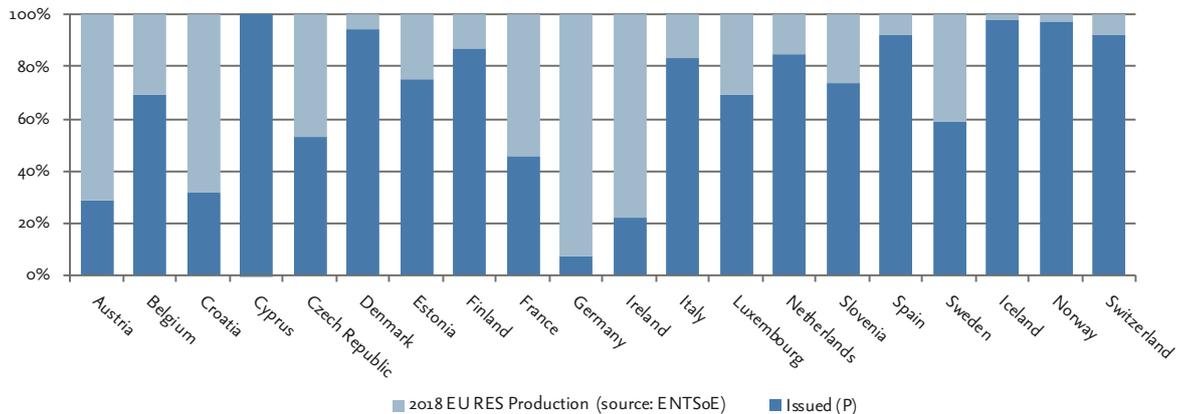
period. They show the annual RES production and the quantity of EECS GOs issued for a production period in each member country.

These show that Cyprus, Denmark, Finland, Iceland, Italy, the Netherlands, Norway, Spain and Switzerland 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 25 **EECS market penetration (Millions)**



graph 26 **EECS market penetration (%)**



The following graphs also relate to 2018 production and show clearly that AIB members cover regions which were responsible for the production of 79% of European electricity (84% of all produced renewable source electricity), 36% of which was from renewable sources.

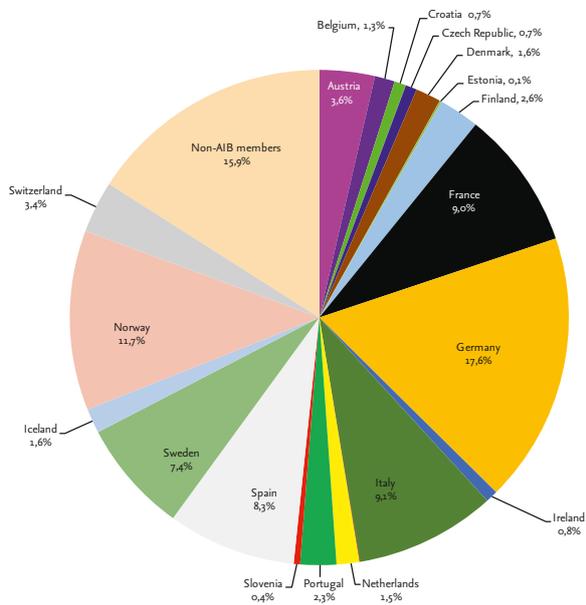
Indeed, members of the AIB issue guarantees of origin for over half of all European renewable electricity.

Electricity for which GOs are not issued is either:

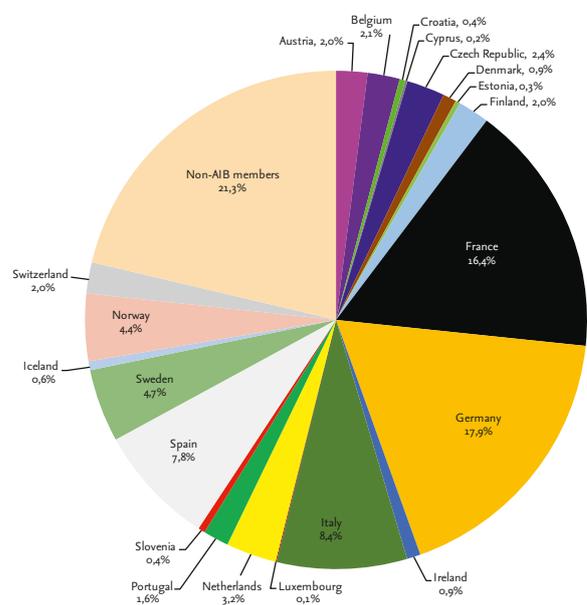
- 1 produced by a country which is not yet a member of AIB; or
- 2 produced by a member of AIB which does not yet support EECS for all forms of GOs, or which does not yet support EECS for some production (e.g. only for external trade); or
- 3 not certified, due to lack of demand; or
- 4 not certifiable,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

graphs 27 + 28

**European 2018 RES-E electricity production by source**



**European 2018 electricity production by source**



# 2018 ACHIEVEMENTS

It seems that we can write “The last year has been busy” pretty much every year. We wrote it in this part of the Annual Report 2017, and we can repeat it without any hesitation about 2018.

What did we do?

- 1 We completely overhauled the AIB’s website. A major achievement, as the website is both an instrument for external communication and information, as well as an internal tool to share valuable information, organise and structure meetings and drive the internal AIB processes with our members.
- 2 We 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 to ensure the reliability of the information provided based on EECS Guarantees of Origin.
- 3 We continued to recruit and support applicants and new members.
- 4 With the assistance of Unicorn Systems, we continued to enhance the Central Processing Hub to support cost efficient and reliable GO transfers across Europe.
- 5 We re-activated the working group on fraud prevention.
- 6 We continued our efforts to prepare for the implications of the “Clean Energy for all Europeans” legislative package for GOs.
- 7 We improved our statistical information to report on issuing, transfer and end-of-life of GOs for each energy source within each member country, including analysis of cancellations in one country for use in others.
- 8 For the fourth time in a row, we were granted the role of co-organiser of an official event at the European Union Sustainable Energy Week by the European Commission.
- 9 We further pursued our project to reorganise the AIB, to ensure that the organisation is equipped for future challenges, such as the extension of the instrument of the GO to biomethane and hydrogen from renewable sources, which necessitates rules to deal with the conversion of energy.
- 10 Together with RECS International, we organised the annual Open Markets Committee to continue our dialogue with the market participants, and
- 11 We continued to support the calculation of the European residual mix.

## Completely overhauled the Website

While 2017 marked the transition of the AIB website to the LifeRay Content Management System (CMS), and the data was converted into the appropriate form for the new system, this did not bring the expected results. As E-Control decided to cease the support of the AIB website, necessitating the AIB to seek a new host.

A decision was taken to completely overhaul the website, using yet again a new technology, Drupal. This offered a good opportunity to redesign the website, bringing it up to date with current trends in web design and making the wealth of data it holds more accessible to users. Porting the large number of documents and other information to the website was a major activity and was supported by a new web-design bureau.

The change to Drupal will allow easier maintenance of the website and provides the potential for expanded up to date facilities.

## DP reviews and audits

In order to guarantee the quality of the auditing activities, the professional reviewers – those who offered their services as individuals rather than as members – continued the efforts in the Professional Reviewers Group (PRG) for developing improvements to review and audit practices. The technical part of the audit of members was further improved.

During 2018, audits were approved for:

- |            |          |
|------------|----------|
| – Cwape    | – CertiQ |
| – OTE      | – CREG   |
| – Pronovo  | – ILR    |
| – Statnett | – UBA    |

Further, the domain protocol of Powernext was reviewed and approved.

## Recruitment of new members

At the end of 2018, the AIB had 24 members in 21 countries (Belgium has four competent bodies representing the three regions of Belgium and Federal Belgium).

The status of some AIB observers changed during 2018:  
– DGEG (the Director-General for Energy and Geology) from Portugal appointed a team for setting up the Portuguese Issuing Body for GOs (IB), a major priority

>

>

- is to start recognising imported GOs. They have now passed responsibility to REN, the Portuguese TSO;
- LAGIE from Greece will split into two entities: The Energy Exchange and DAPEEP. DAPEEP became Issuing Body for GOs and Competent Authority for Disclosure and applied for membership;
- Litgrid (TSO) from Lithuania became a member of AIB in June 2018, but import-only membership.

There are a few countries that have the observer status for a longer time, having shown interest in joining or having started the process of joining the AIB in previous years:

- EMS (TSO) from Serbia, Ofgem (Regulator) from the UK, Operator for Renewable Energy Sources and Efficient Cogeneration (Market Operator) from Bosnia and Herzegovina and the Turkish Regulator are official observers in AIB.

### The AIB Central Processing Hub

The European Energy Certificate System (EECS) ensures reliable and efficient cross border exchange of GOs, thereby strengthening and enlarging the market. To further facilitate the international exchange of energy certificates, the AIB operates a communications Hub.

Unicorn System operates the central registry Hub application for the AIB, 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.

The work started in 2017 to expand the scope of the Hub to provide a database containing details of accounts held on member registries, to improve the ability of members to validate transfer details, was finalised in 2018.

### Re-activation of the Working Group on Fraud prevention

The rising prices of GOs observed last year, have had an unwanted side effect, of attracting interest from people interested in setting up VAT-fraud schemes. The AIB brought this point to the attention of the Open Market Committee held in Madrid Spain on 20 September 2018.

This constitutes a risk for VAT carousel fraud, exploiting VAT-exempt intra-community deliveries to steal funds from member states. Large sectors are implicated, and prosecuting is not easy. The EU has taken numerous measures to fight this type of fraud. Reverse-charging can stop this, as demonstrated by its application to the EU-ETS emissions trading system in most EU countries.

However, most member states do not react until something happens. Hardly any EU countries have implemented reverse-charging for GOs.

5 years ago, the EU energy sector successfully approved a domestic reverse-charging mechanism on electricity and gas, however GOs were not explicitly mentioned. A legislative proposal for change has now been issued by the EC. The energy associations have joined forces, to seek the continued imposition of reverse-charging and the extension of it to address GOs as well as emissions credits, electricity and gas.

In the meantime, we continue to promote the Know-your-Customer (KYC) process for helping registries identify potentially fraudulent applications, and monitor trade through the Hub for unusual activity. The AIB audits its individual members, including a technical audit, providing the opportunity to identify risks and share best practices recommendations amongst members. The issue is on the General Meeting agenda regularly.

Registry users have a duty to be careful and diligent in this respect as well, as negligence by users is the main cause for fraud. When involved in transactions, market parties should be careful and cautious.

### Preparation of the Implementation of the EU's "Clean Energy for all Europeans Package"

This is a package of measures to further pursue the clean energy transition that is changing the European 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 negotiations on this legislative package covering energy efficiency, renewable energy, the design of the electricity market, security of electricity supply and governance rules for the Energy Union, were finalised right at the end of 2018 and include changes to the Directives, which drive much of the work of the AIB: the Renewables, Internal Markets and Energy Efficiency Directives.

While the vision that the AIB stated in its [Reflection Paper](#) of 2015, which encouraged 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, was not fully embraced, the Clean Energy Package can only be recognised as significant strengthening and expanding of the instrument of the GO.

We will continue our work to seek appropriate transposition of the CEP in national legislation by providing technical advice based on our unique knowledge of the certification of energy from renewable sources and on disclosure information.

### Usage of GO's to convey information about CO<sub>2</sub> and radiation waste emissions

Over the past years, the AIB has sought 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. As already mentioned, the outcome of the CEP does not fully realise this ambitious goal.

In that context, we considered whether it was possible to develop a methodology for adding carbon emission values to GOs in a harmonised way across Europe. The methodology needed to be reliable, accurate and usable, protect consumer rights, and include a fall-back should information not be available; and consider 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 AIB secured the expertise of CDP to research and test a proposed harmonised methodology.

The research and testing was inconclusive, and highlighted two outstanding challenges; the reconciliation mechanism and the validation of the emissions calculated with the EU ETS emissions. CDP also highlighted the requirement for AIB members to develop institutional relationships with the existing EU ETS authorities if the proposed methodology was to be progressed.

In September 2018, the General Meeting decided to close the research project at this point, with a formal report summarising the challenges that need to be overcome if this project is reopened at a later stage, resources permitting.

### Statistical information to report issuing, transfer and end-of-life of GOs for each energy source within each member country

Since 2001, AIB has been providing statistical information to stakeholders. This data offers details of the numbers of GOs for each energy source that have been issued, transferred nationally and internationally, cancelled and expired, by each member, during each month. It also analyses this activity according to the month in which the related electricity was produced. After also making data available on the cancellation of GOs for use in countries other than that in which they are cancelled – so called “ex-domain cancellations” (EDCs), we set out to move to a more automated data collection process.

In 2018, we started working to replace the current predominantly manual data collection and manipulation with automated data collection to a database, and subsequently the selection of software providing improved analysis. This project continues into 2019.

### Pursuing the AIB Stakeholder Strategy

The AIB is an organisation with a unique position and therefore disposes of expertise that cannot be found elsewhere. But unless we are willing to share and highlight that expertise, no one will recognise us as a truly unique centre of knowledge. What good is it to develop expertise, if nobody knows about what you do? Staying under the radar would be a threat to the continuation of our work ... So, the AIB needs to be more visible, more outgoing, in order to sustain its activities. This is one of the goals of the AIB Stakeholder Strategy (SHS).

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Establishing a presence for the AIB online was one way of establishing a presence and achieving visibility. As we are an organisation with a technical focus, the social media channels that fit best with our activities are LinkedIn, Twitter and SlideShare. A Twitter account (@AIBSEC) and [LinkedIn Company page](#) were set up as the backbone of our online presence. Since 2018, a consistent effort is being made to update the LinkedIn page every weekday. The twitter account is updated at least weekly.

The effort is delivering results, with the AIB LinkedIn Company Page gaining followers every month; 501 followers on 14th November 2018 (up from 246 in June 2017). More importantly, engagement remains high.

The Twitter account @AIBSEC had 138 followers on 13th November, up from 96 followers on 13th May 2018.

As a result, the activities of the AIB now attract more attention, as set out as a goal for the organisation's exposure.

Another way of establishing visibility and receiving public recognition from the European Commission is to participate in the EU Sustainable Energy Week, where we co-organised an official policy Event in 2018.

### Co-organised an event at the European Union Sustainable Energy Week

Our proposal to co-organise a high-level policy event during the European Commission's EU Sustainable Energy Week (EUSEW) was selected out of more than 400 submissions as one of only 90 official policy events organised with direct support from the European Commission. The fact that AIB was selected as co-organiser for the fourth time in a row confirms that the AIB is recognised as a serious voice in the European policy process.

The event had over 550 attendees and took place in the huge De Gasperi Room at the Charlemagne Building in Brussels on 6 June. Please read the full debrief of the event in our [AIB Newsletter n° 29](#) featuring an article about the event.

### Progressed the project to reorganise the AIB, to ensure we are equipped for future challenges

The AIB and its environment are developing rapidly, which led the organisation to consider the way in which we should be organised to better cope with these changes and be able to seize opportunities. The project seeks:

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

It is time for the AIB to look at the future and assess how we can work together in the most efficient and effective way.

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. As within many international associations, 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. Decision-making should be improved and made more efficient, so that the organisation can react more rapidly to the many challenges that are presented by market developments, but mostly by legislative requirements as set out in the Clean Energy Package.

As our visibility has increased significantly, the outside world has higher expectations for our organisation and therefore more influence on our agenda. The AIB relies on determined people to do its work, with oversight from different stakeholders, and needs professional advice. The result is more work to be done, with less resources to do it.

The Change project started in 2017 with a review of member attitudes and needs, for use in a structured walkthrough of the issues associated with reorganisation and with professional assistance from experts and continued in 2018. A two-way approach was taken:

- A structural approach to re-engineer internal cooperation, making decision-making more agile. This requires us to redesign the relationship between our mission, vision and values and our annual planning & control cycle.
- 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.

The change project turned out to be a long, but inclusive process. Care was taken to involve all the members and to look for a firm basis that a large majority of the members can support. The AIB has a rather diverse membership, resulting in very different views of where we should go next as a starting point. It took all of 2018 and even into 2019 to build a widely shared vision of the principle that needs to underpin the change process.

### Open Markets Committee

The AIB is an organisation that plays a crucial role as facilitator of the European GO-markets, but our members are not market participants, even though what they do is vital for the companies in the energy sector. This is the reason why we are happy to work together with RECS International, the representative association of the GO-market participants and GO-users at industrial scale, to organise the yearly Open Markets Committee (OMC). The OMC is an important annual event where AIB and its members – the competent bodies for GOs across Europe – can exchange information and viewpoints with GO market participants and where both groups can develop a better understanding of each other's needs and wishes.

Both issuing bodies and market players operate in a very dynamic environment:

- Legal framework: impacted fundamentally by the Clean Energy Package;
- Technological: opportunities, but also challenges, can be brought about by emerging technologies such as blockchain;
- Economical: the GO market is growing very strongly, driven by the attention pointed towards the need for sustainability strategies involving corporate sourcing of electricity from renewable sources as advocated by organisations such as the RE100, WBCSD, CDP and the likes.

In 2018, the OMC was heavily influenced by the sharp rise in GO prices visible in the second half of the year. Other topics included the need to further eliminate barriers in European GO markets, discussions on the finalisation of the Clean Energy Package and the upcoming implementation of the new RES Directive, market trends in the light of growing demand and sharply growing price levels, fraud prevention and a panel debate on blockchain.

The AIB recognises the valuable contributions and active participation in the discussions by the RECS International members and experts.

This joint meeting will be held again in November 2019.

### Residual Mix Calculation

European residual mixes for years 2009 to 2014 were calculated by the RE-DISS Project Phases I and II (Reliable Disclosure Systems for Europe), until its termination in September 2015. The AIB took over the calculation in 2016 as it considers a reliable residual mix calculation coordinated at a European level, to be crucial in its mission to guarantee the origin of European energy, and continues to do so. The 2018y report is available on the [AIB website: https://www.aib-net.org/facts/european-residual-mix](https://www.aib-net.org/facts/european-residual-mix).

## 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 three-day period, to enable decisions to be made at working and executive level. There is always a social event associated with meetings, usually a dinner, which gives 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). He was initially appointed to the role in May 2014 and has been reappointed annually ever since.

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. Angela Tschernutter (E-Control of Austria) chaired the Board during 2018 and will continue to do so into 2019.

The other Board members were: Lukas Groebke (Pronovo, Switzerland), who was also Treasurer for the duration of 2018; Ivar Munch Clausen (Statnett, Norway), who joined the Board in September 2017, and is now vice-chair and vice-Treasurer; Lian Krijger (CertiQ, Netherlands), who joined the Board in March 2017; Martin Standera (OTE, Czech Republic), who joined the Board in December 2016; and Johan Malinen (Energimyndigheten, Sweden), who joined the Board in November 2018.

The General Meeting is chaired by Angela Tschernutter, the Board Chair, except for once a year when the financial accounts and auditor's report are approved: this meeting is chaired by the President, Dirk van Evercooren.

The Working Groups include:

- **Working Group Internal Affairs**, chaired by Laura Plunkett (SEMO, Ireland) until March, and subsequently Katrien Verwimp (VREG, Belgium);
- **Working Group External Affairs**, chaired by Dubravka Brkić (HROTE, Croatia);
- **Working Group Systems**, chaired by Annie Desaulniers (CWaPE, Belgium (Wallonia)).

Further, during 2018 there were two Task Forces:

- **TF Carbon**, chaired by Laura Plunkett; and
- **TF Organisation**, chaired by the Board Chair (Angela Tschernutter), and then by a Board member (Lian Krijger) but renamed "Project Change".

The General Meeting, Board and Working Groups are supported by the Secretariat; the Secretary General being Phil Moody (United Kingdom) – who also supports Working Group Internal Affairs – and is assisted by:

- Andrea Effinger (Germany) regarding Working Group External Affairs, the Working Group Chair's meeting, and the Open Market Committee;
- Marika Timlin-de Vicente (Grexel, Finland) regarding Working Group Systems, and who is also SuperUser for the AIB Hub – Marika took maternity leave from August 2018, and was replaced as SuperUser during this period by Joel Kauppi, and as secretary of Working Group Systems Secretary she was replaced by Marko Lehtovaara and Joel Kauppi; 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 and Katrien Verwimp (also employees of VREG, Flanders), Remco van Stein Callenfels (CertiQ, Netherlands), Diane Lescot (Observ'ER, France), Markus Klimscheffskij (Gaia Consulting, Finland), Emma Kelly (Ireland) 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  
Katrien Verwimp  
of VREG,  
Belgium, Flanders  
Since March 2018

## 2018

In March 2018, Laura Plunkett from SEMO had to leave the position of WGIA chair and was succeeded by Katrien Verwimp from VREG. Laura was thanked for her committed contributions to the strengths of EECS. Roles and responsibilities of the workgroup were defined, with a separation between the tasks/roles to be performed by a Member, and those that can be delegated to professional staff.

Taskforce Carbon, originally set up to provide values for an extra data field on the GO with information on CO<sub>2</sub> emissions, was closed in 2018 due to the difficulties in reconciling the emissions that members of the AIB can calculate with those calculated according to the EU Emissions Trading System.

The Lithuanian membership was accepted with import-only status for a period of 2 years. This was a result of WGIA discussion and incorporated the positive experiences of the similar case for the Czech Republic in the past. It is hoped that the issues can be resolved soon, and that Litgrid can be offered full membership as a result.

An investigation on whether Member Audit frequency could be lowered, resulted in a conclusion that the current 3-yearly audit frequency was a good compromise between general common audit practices and cost-efficiency. Risk categorisation of audit

findings was a positive outcome of this work track, which will be incorporated in the AIB document structure in the future.

Onsite Member audits showed the need for clarifying how far auditors should go in checking compliance with the EECS Rules related to avoidance of double disclosure of the same unit of electricity. In 2018, this need for disclosure assessment guidance led AIB to prepare an invitation towards the competent bodies for disclosure.

In 2018, the discussion continued on preparing the EECS Rules for clarification of the “Measurement of eligible energy output”. Given different practices and different national regulations, it turned out to be not desirable to harmonise the details of the definition of auxiliaries. On the other hand, it was considered appropriate to integrate the concept of Closed Distribution Systems (CDS), and injection in a CDS as eligible energy for tradeable GO issuing. Differences in national legislation on the topic of issuing tradeable GOs for energy that is consumed onsite were identified in 2018. These deserve further continuation of this work field in 2019, to decide how to handle this difference in the EECS Rules.

Close monitoring of the developments of RED II remained part of the scope of WGIA in 2018. Amongst the issues addressed was the question of how to provide for continuous alignment between the EECS Rules (a living document updating in line with the evolving reality) and the CEN-CENELEC EN16325.

As always, in 2018 WGIA updated Fact Sheets and Subsidiary documents to stay up-to-date with reality. At the year-end, WGIA was involved in the preparation of the AIB decision on an agreement-in-principle to participate as a consortium partner in CertifyIII. >

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## 2019

For 2019, WGIA will focus on the implementation of the new Directive on renewable energy sources 2018/2001/EU. Major elements: In 2021, GOs will have to be aligned with the standard EN 16325, so work will be done to align the EECS Rules with this standard. Whereas the EECS Rules have been developed to facilitate multiple energy certificate schemes, REDII calls for the implementation of a gas GO chapter, into which past drafting efforts will be incorporated. Facilitating the conversion of GOs for different energy carriers will be a subsequent area of work. The purpose of the GO in the Directive now explicitly mentions consumers, and this will be incorporated in the EECS Rules definitions structure.

Currently, EECS GOs are used for electricity disclosure. The link with the competent bodies responsible for disclosure will be strengthened in 2019, as AIB invites these organisations to a meeting in Denmark in May 2019.

The AIB publishes GO statistics, which are widely used by its stakeholders. A project will consider how these public statistics can be upgraded to contain even more relevant information, and also seek improvements to the data collection process.

In order to overcome diverging practices amongst Member Domains, a topic for elaboration in the EECS Rules will be the issuance of GOs for energy that is consumed onsite.

Continuous improvement of the AIB document structure remains in scope, as does the expansion of EECS towards a GO infrastructure for other energy carriers.

# WORKING GROUP SYSTEMS

Working Group Systems  
(interfaces between  
computer systems)

Chaired by Annie  
Desaulniers of CWaPE,  
Belgium-Wallonia, up to  
June 2018

Chaired by Martin  
Standera of OTE, Czech  
Republic, from June 2018



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.

The new Hub, hosted, operated, and maintained by the Unicorn Energy Cloud, ran smoothly during 2018; and the volume of certificates transferred increased by 21% compared to year 2017. The number of successful transfers was 22 239 which is an annual increase of 8% and the number of transfers failed was only 1205 which is 7% less compared to 2017.

The Working Group Systems organized three 'in person' meetings and nine teleconferences in 2018.

The central account holders' database was implemented in the beginning of the year 2018 as a new feature to the AIB Hub. It facilitates the sharing of account numbers between AIB Members, reducing the number of failed transfers and improving tracking of transfers. In addition to this major release, WGS saw that the most recent updates were applied to the open source libraries used by the AIB Hub.

All AIB Members implemented the v71 XSD schema into their registries before the end of the year. The v71 schema improves the previous v70 schema and allows transfer of GOs for electricity produced from renewable energy sources and with high efficiency heat and power cogeneration parameters.

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 WGS members strive to find the best solution for all members, and the meetings are fruitful, inspiring and inclusive. They also keep an eye on new development in the field and new technologies.

The AIB Hub Superuser Marika Timlin-de Vicente left for parental leave in July 2018 and was replaced by Alex Bjorn, Vesa Hyrskylähti and Joel Kauppi. Annie Desaulniers had to leave the chair position in June 2018 due to preparation of the transfer of the Issuing Body for Wallonia from CWaPE to Walloon administration. Martin Standera became vice-chair to take over the responsibility over the WGS.

We would like to thank all those who contributed to the work of WGS in 2018.

What are the coming challenges? The mailbox transfers will stop in June 2019. The security of the web server will be increased to follow current best practices regarding SSL ciphers. A new statistic-gathering tool is being developed and the WGS will work on increasing the automation of test procedure.

# WORKING GROUP EXTERNAL AFFAIRS

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

Working Group External Affairs (WGEA) has a significant role in the organisation as a promotor of all activities within AIB. It is in charge of all types of publications like the website, press information, newsletters and annual reports. The communication with stakeholders is essential for the promotion of the organisation. The President of the AIB, Dirk Van Evercooren, who is WGEA's key player in Social Media issues (see [LinkedIn](#)), also does this. In addition, he supports not only WGEA but also the entire association with his dedication as AIB's ambassador.

WGEA continually works on the recruitment of new AIB/EECS members in many ways. For example, we provide easy-to-understand documents about the [joining process](#), including information for newcomers with regard to connecting to the HUB. Another approach to support applicants and new members is the so-called "SPOC" ("Single Point of Contact"). The evaluation of the SPOC project in November 2018 concluded that the SPOC enables AIB members to provide legal and technical support to new members and applicants. WGEA takes into account the newcomers' preferences regarding choosing SPOC (similarity in electricity market, language and political situation). In the November 2018 evaluation, the observers acknowledged the added value of the SPOC project, including a better understanding of the Guarantees of Origin and disclosure system. Furthermore, they pointed out that the SPOC project provided a platform for exchanging experiences and best practices.

WGEA is on track with its strategy to approach possible new members such as Serbia, Poland, UK, Slovakia, Latvia, Turkey, Hungary, Malta, Bulgaria, Romania, Bosnia and Herzegovina and Montenegro. From the countries associated to the Energy Community, Serbia, Bosnia and Herzegovina and Montenegro have demonstrated their interest in receiving information on the AIB GO/EECS-system. Slovakia attended the GM in Namur and has now applied for membership.

One of the main tasks during 2018 was to support the AIB President in formulating and executing the stakeholder strategy during the development of a new Renewables Directive, in which he took the lead. It provides a good example of the collaborative working culture within the AIB, and the close link, in this case, between WGEA, AIB Board and the President in spreading the AIB's vision.

Social Media is very important nowadays in business. And we are proud to see more and more followers (see e.g. [LinkedIn](#)), especially those who are truly engaged in supporting the AIB's vision. This means a lot for the organisation's recognition.

The AIB is an organisation with a unique expertise in the area of Energy Certification within Europe. It would be great to share this knowledge with more people, so we started experimenting with webinars in 2018. A first internal webinar was organised, focussing on the renewal of the Finnish GO-registry. Finextra presented their project as a best practice case, because the process involved feedback from stakeholders and optimising the user experience, while maintaining the operational excellence and a focus on cost efficiency.

Some following suggestions for the future webinars are: what are current trends and market demands, situation in selected, individual countries, treatment of potential member countries that do not fully prohibit double counting, AIB initiatives to improve the functioning of the market, how to reduce the market barriers, auctions of the GOs as the trend is spreading in many AIB domains.

Between September 2018 and March 2019, the AIB website got a new structure, both in design and in navigation, and the data was migrated to a more suitable Content Management System (CMS). We aimed to get a state of the art / modern website with a new design, which is more intuitive and simple to use. Especially for the confidential Members' Area, the CMS provides an interactive website for the members. Further releases with new features will follow, and we welcome feedback to improve it even more.

Dubravka Brkić (HROTE, IB from Croatia) is the chair of WGEA.

Dirk van Evercooren's contributions in his role as AIB's President are highly appreciated by WGEA.

We thank the active members of the working group:

- **MILADA MEHINOVIC**  
(Pronovo, the issuing body of Switzerland),
- **MAX LAVEN**  
(CertiQ, the issuing body of the Netherlands),
- and the AIB's assistant to the Secretariat,  
**ANDREA EFFINGER.**

# BUDGET / ACTUAL EXPENDITURE AND INCOME

Note that the financial statement at the end of this annual report consolidates the books of account for the period 1<sup>st</sup> January to 31<sup>st</sup> December 2018, and includes all accruals for work that has been done but has yet to be billed, and repayments for work that has yet to be done.

Further, the position at Jyske Bank relates to the amount of cash actually held in the bank at the beginning and end of the year.

Finally, the position against Budget relates to the expenditure against the budget for that year, recognising that some invoices are raised, received or paid the next year, while others relate to the previous year.

These three presentations of the accounts have different purposes, and the financial amounts will therefore be different.

## Position at Jyske Bank

The final payments of membership fees for 2017 received in 2018 were € 57 038, while membership fees for 2018 received in 2018 amounted to € 982 039, and the final payment of 2018 membership fees received in 2019 amounted to € 17 866. This means that membership fee income received in 2018 was € 1 056 943, and that attributable to fees for 2018 was € 999 905. In addition, VAT refunds of € 48 777 were received during 2018, meaning that total income for 2018 was € 1 105 720.

Actual expenditure for 2018 represents the payments of amounts outstanding for 2017, plus expenses for 2018 paid in 2018. It amounted to € 924 110.

In 2018, income exceeded expenditure by € 181 610. This increased reserves from € 198 118 at the start of 2018 to € 295 058 on 31<sup>st</sup> December 2018. Note that no bank interest was received for 2018, due to a bank rate of zero percent for deposit accounts, but that € 1 993 bank interest was paid on cash held in the bank account.

Invoices have now been received for all work commissioned during this period, € 82 564 having been set aside at the beginning of the year for outstanding payments relating to work commissioned in 2018.

## Position against budget

Annual costs	Budget	Actual	Variance
Administration	€ 350 949	€ 355 773	-€ 4 824
Working Group Systems	€ 287 852	€ 294 008	-€ 6 156
Working Group Internal Affairs	€ 148 163	€ 144 470	€ 3 693
Working Group External Affairs	€ 118 304	€ 129 859	-€ 11 555
<b>2018 total expenditure</b>	<b>€ 905 268</b>	<b>€ 924 110</b>	<b>-€ 18 842</b>

Annual income	Budget	Actual	Variance
2018 fee income	€ 1 008 920	€ 1 056 943	€ 48 023
2018 VAT refunds	€ 0	€ 48 777	€ 48 777
<b>2018 total income</b>	<b>€ 1 008 920</b>	<b>€ 1 105 720</b>	<b>€ 96 800</b>

Difference	Budget	Actual
<b>2018 income - expenditure</b>	<b>€ 103 652</b>	<b>€ 181 610</b>

## Income

Income was € 96 800 more than the allocated budget, due to:

- 1 **Croatia, Czech Republic and Estonia** transferred more than had been expected, while Ireland and Luxembourg transferred less than expected.
- 2 **Cyprus** has yet to link to the Hub, and Greece and Latvia did not join AIB in 2018 as expected.
- 3 The new fee structure increased fees across the membership.

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### Expenditure

In total, expenditure was € 18 842 more than the allocated budget.

Within **General Administration**, costs were € 4 825 more than expected:

- The cost of the **Secretariat** was € 5 478 more than expected, more secretarial support than expected relating to the new website – although this was offset by a lower workload in WGEA, as noted below.
- **Banking** costs were (€ 791) more than expected, although these will reduce now that banking facilities are moving to a new bank in Belgium.
- **Corporate advice** was (€ 7 028) more than expected – although this was offset by lower than expected work in WGIA, as noted below.
- The cost of the **CO<sub>2</sub> taskforce** was slightly more than expected (€ 393). This project has now finished
- **Residual Mix** calculation was € 5 000 more than expected.
- There were no costs associated with the **Brussels events**, at a saving of € 10 000.
- **Expenses** were € 21 012 more than anticipated, and can be attributed thus:
  - There was lower than expected expenditure on **meetings and travel** (€ 4 559)
  - There was also lower than expected costs on **insurance, teleconferencing and sundries** (€ 1 874).
  - **Audits and VAT** were (€ 2 568) more than expected due to moving financial administration to Brussels, and the associated setting-up costs.

Within **Working Group Systems**, costs were in total € 6 156 more than expected.

Systems changes were less than anticipated (€ 10 514), while the cost of perfective maintenance was deferred (€ 15 000), contract management was less than expected (€ 875) and hosting and support were also less than expected (€ 1 340).

This was offset by GDPR costing € 9 131 more than expected, and Hub SuperUser / WGS Secretarial costs also overran due to increased input into technical audits (€ 24 754).

**Working Group Internal Affairs** spent € 3 693 less than its allocated budget.

This year again saw no use of legal advice for WGIA matters (€ 4 023), and less work on Hydrogen GOs – CEN/CertifHy (€ 7 200). Much of the work on legal and regulatory support (€ 21 956) was actually recorded under Corporate advice within the heading General Administration.

However, technical support overran due to continued work on RED II (€ 6 000) and professional auditors and reviewers continue to be used more than anticipated (€ 23 486).

## REPORTS FROM MEMBERS/ FROM OBSERVERS



The following pages give details of each of the members of the AIB and summarise the major events of 2018 and the expectations of 2019 for members and their countries.

Litgrid of Lithuania joined the AIB in the summer of 2018, and applications for membership were received from OKTE of Slovakia and EMS of Serbia.

The community of countries in the process of becoming a member of AIB and connecting to the Hub is growing; current observers include:

- the Bosnia-Herzegovina Operator for Renewable Energy Sources and Efficient Cogeneration (RES Operator)
- the Greek Issuing Body (LAGIE)
- the Latvian transmission system operator (Augstsprieguma tīkls AS)
- the Montenegrin Energy Regulatory Agency (REGAGEN)
- the Serbian competent body for guarantees of origin (EMS)
- the Slovakian short-term electricity market operator (OKTE, a.s.) and
- the UK electricity and gas regulator (Ofgem).

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.

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 electricity disclosure in Austria.

### Member of the AIB

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 Tschernutter has been an active member and vice chair of the Board and, from December 2016 onwards, chair of the Board of the AIB.

### Activities within the AIB

Angela Tschernutter: Board Chair since December 2016, previously Board Vice-Chair and Member of Working Group Internal Affairs. She was also partner and work package leader in the RE-DISS projects, and she 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 88,700 plants that generate electricity from renewable and fossil sources, 84,700 of which are photovoltaic plants. All of them lead to issuance of GOs in the Austrian disclosure database with highly automated processes. Austria implemented a full disclosure system as of 2015. Suppliers must label all the electricity they deliver to final customers with GOs of 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, it can be assumed that almost 100% of the Austrian electricity production is registered in the Austrian database.

Non-Austrian GOs can be imported to the Austrian database and are automatically checked in the process of cancellation if they are fulfilling the legal requirements to be accepted for Austrian disclosure purposes (see national Labelling Ordinance, section 6 Stromkennzeichnungsverordnung 2011, amended in 2013). This mechanism ensures that the national electricity 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. In 2018, the v71 format was implemented and the Austrian registry was successfully audited and approved by the AIB.

E-Control, in its role as competent body for gas disclosure, developed a gas disclosure by-law, which was under public consultation in January 2019 and is planned to be implemented latest over the summer 2019.

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

The Stromkennzeichnungsverordnung (Labelling Ordinance) 2011 was amended in 2013. No adaptations were required in 2018.

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 amendments of the RES Directive and the Electricity Directive will result in adaptations to the national legislation in 2019; and this will extend the scope of electricity GOs and source disclosure to include gas GOs and source disclosure.

## Benefits to the company of AIB membership

The AIB is the major player in the international market for trading guarantees of origin (GOs) and certificates issued for fossil and nuclear plants. Based on the regulations in EC 2018/2001, gas GOs must be implemented in the national systems by 1.7.2021. E-Control supports the AIB in the discussions on becoming a central platform for international trade of GOs, including gas GOs – of course in accordance with specific clearly defined rules for members. Getting involved at this early stage is relevant as the market may develop in an interesting way.

The AIB unites decision makers, issuing bodies and organisations responsible for electricity source disclosure within the association. E-Control enjoys being an active member of the AIB and taking part in an excellent network of professionals. It allows us to participate in the development and improvement of the EECS standard, which is based on European legislations and national laws. E-Control's strong ambitions are to lead Europe into a market of transparent disclosure based on GOs for all types of technology including electricity and gas. The mutual learning factor and the enjoyment of working with highly qualified people from different nationalities greatly contribute to positive outcomes.

AIB's core values are its high-quality standard, the well-functioning hub and the great network of specialists in Europe. E-Control enjoys being part of the AIB. Further, E-Control appreciates that the AIB is always interested in and willing to discuss new scopes and tasks, and that the AIB is also flexible and reacting relatively quickly on market needs. Through the AIB, the European GO market is connected, and this raises the reliability of the national systems. Dr. Harald Proidl, Head of Renewables and Energy Efficiency Department

“AIB’s core values are its high-quality standard, the well-functioning hub and the great network of specialists in Europe.”

## Scope of national participation in EECS

Number of registered scheme participants	48
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
88 649	22 068

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
PV	84 653	1 115
Hydro	3 384	17 741
Wind	612	3 212

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

EECS RES production	National RES production
34 928	37 803



**brugel**

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

Name of the company

BRUGEL

Area of operation

Belgium (Brussels)

Address

Avenue des Arts 46

Brussels

Belgium

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

## REPORT FROM MEMBER

### Profile of the organisation

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.

### Role

BRUGEL's mission comprises, among other things, managing the markets for green certificates and guarantees of origin. To do so, the regulator is responsible for the calculation and issuing of green certificates and guarantees of origin. BRUGEL also ensures the management of transactions, the certification of installations as well as the control and the follow-up of the installations already established in the Brussels-Capital Region.

Regarding disclosure, BRUGEL operates an online tool, Greencheck (<https://greencheck.brugel.be>). This tool allows Brussels end-consumers to check the green percentage declared by their electricity-supplier for their specific consumption-point. Moreover, the tool shows if the electricity supplier has handed in the required number of GOs to cover the client's consumption, and allows this client to see the details of the GOs, which were used, namely the fuel source and the geographical origin.

### Member of the AIB

since 2008

### Activities within the AIB

The follow-up on AIB activities and representation of BRUGEL in the General Meetings is assured by Régis Lambert.

Attila Acs and Laurent Mignon follows the Working Group Systems.

“... it is crucial for BRUGEL to be connected to a stable and reliable exchange-platform.”

### News and perspectives regarding the national IB

During the last quarter of 2018, BRUGEL went live with a complete renewal of its database managing the production devices as well as the market for green certificates. The new application runs in a modern, dynamic and open-source framework, and it has reinforced security and offers a bunch of new functionalities to end-users as well as to back-end officers. One of the evolutions is the gathering and validation of production data for the issuing of green certificates, which is now performed by the distribution network operator instead of by BRUGEL. Go-live of phase 2 involving the handling of guarantees of origin is expected over first half of 2019.

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

The publication of REDII end of December 2018 sets a new milestone in the European energy landscape. During 2019 and 2020, the implementation process will be ongoing. Subjects of particular interest regarding GO will be the framework and interaction with GOs of collective self-consumption and (renewable) energy communities.

### 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, 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*
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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
111	180,9

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



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

Electricity and gas regulator

### 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: Chairperson WGIA, vote
- Karolien Verhaegen: Registry Operation

### News and perspectives regarding the national IB

Flanders is developing a legislative GO scheme covering gas, heating and cooling from renewable energy sources, on the fundamentals provided by the electricity GO scheme.

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

The VREG online Greencheck has been upgraded to allow each individual consumer to check, for 12 months in the past, the energy source and the country of origin mentioned on the GOs cancelled by the electricity supplier for this specific commercial product. This greencheck incorporates reporting of consumption by grid operators and completes the volume check on the suppliers' cancellation of the amount of green electricity supply agreed up on.

<https://www.vreg.be/nl/controleren-hoe-groen-uw-stroom-groencheck>

In addition, the VREG online Origin Comparator provides a consumer-friendly overview of the origin of the supplied energy of all products and of all electricity suppliers. Information on origin provides relevant orientation for customers at the point of choosing their electricity supplier. <https://www.vreg.be/nl/herkomst-stroom>

“ EECS provides for an ideal framework for extension towards GOs for multiple energy carriers.”

### Benefits to the company of AIB membership

Being able to transfer GOs to and from all AIB members just by a single connection to the AIB Hub is much more efficient than having to set up bilateral connections to all registries with whom market parties want to exchange GOs. Trusting the AIB reliability checks and audits on all connected Domains, provides an immense saving of resources. In addition, VREG highly values to exchange ideas and continuously further co-develop the EECS system with 23 other Domains.

### Additional information

EECS provides for an ideal framework for extension towards GOs for multiple energy carriers. Facilitating GOs for different energy carriers under the reliability check of EECS will provide for a robust and trustworthy handling of GOs accompanying the conversion of energy carriers.

### Scope of national participation in EECS

Number of registered scheme participants	6 255
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
7 023	3 009

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biogas	152	151
Biomass	42	624
Hydropower	12	6
Wind	266	1 117
Solar PV devices > 10kW	6 551	1 111
Solar PV devices < 10 kW (non-EECS)	354 978	1 627

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

EECS RES production	National RES production
4 275 371	data not available before printing



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

Area of operation  
Belgium (Wallonia)

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

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

## REPORT FROM MEMBER

### Profile of the organisation

Regulator of electricity and gas for Wallonia, Belgium. CWaPE is responsible for enforcing public services obligations and distribution regulations, distribution tariffs, and for developing renewables: support scheme, 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: potentially CHP-GO.

### Activities within the AIB

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

### News and perspectives regarding the national IB

- CWaPE, which performs approval of distribution system tariffs and manages the renewable electricity support, will focus on regulatory issues in the future and hand over the support and GO register to the Ministry in 2019.
- CWaPE handles up to 4,000 meter readings a day, some leading to issuance of GOs. Processes and database are continuously being improved.
- CWaPE has been consulted with regard to improving support to biomethane injection, including reviewing the legal framework for issuance of biogas GOs, which has been in place since 2010. A few biomethane projects have started and should benefit from indirect support through biomethane GOs.

### 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 mostly based on reference costs per technology and in addition, the measured environmental performance for fuel based renewable production devices is taken into account (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:** the nominal quota was 35.65% in 2018, and steadily increases up to a peak of 37.9% in 2020. Expected decommissioning of much capacity in 2021 causes a dip to 34.03% 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 the guaranteed price of 65 € / certificate. Price recovery should take a very long time, although a few transactions were made at higher prices. Financing the 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 made use of another support scheme paid directly, which ended in 2018.
- **Joint schemes within Belgium:** National burden sharing has been agreed, but support certificates remain regional.
- **New installations:** Over 13,000 new small (≤10kW) photovoltaic plants with a cumulative capacity of 76 MW were set up in 2018. Besides, an increase in non-domestic solar plants took place for more than 33 MW. Few wind, biomass or hydro plants were commissioned, some for reasons related to financial support and many due to uncertainties in permitting; new capacity for more than 56 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).

#### Disclosure:

- Good practices exchanged, among others in CA-RES, EPED and RE-DISS lead to improvements to our disclosure system (e.g. mandatory GO cancellation prior to fuel mix declaration). Monthly reporting to the regulator of renewable products and monthly cancellation of guarantees of origin for those products remain.
- 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

“Finding common solutions to our common challenges is a key selling point of the AIB.”

Pierre-Yves Cornélis, senior advisor at CWaPE

“Finding common solutions to our common challenges is a key selling point of the AIB.”

### Scope of national participation in EECS

Number of registered scheme participants	945
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 718	1 340

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass (total)	44	275
among which bio-CHP	36	163
Wind	112	858
Hydro	64	15
Solar	1 498	192
Total	1 718	1 340

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

EECS RES production	Regional RES production
4 122	5 030

# — CREG —

Name of the company  
CREG

Area of operation  
Belgium (Federal)

Address  
Nijverheidsstraat 26  
Brussels  
Belgium

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

## REPORT FROM MEMBER

### Profile of the organisation

CREG is the regulator of the Belgian electricity and gas markets since 1999. CREG is an independent body with legal responsibility accountable to the Federal Parliament.

### Role

CREG is entrusted with the task of issuing guarantees of origin for renewable electricity produced in the Belgian sea area and managing the corresponding registry. The CREG registry has been fully operational since 2015 and it comprises all offshore wind producers in Belgium. 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

In 2018, CREG was represented in the AIB General Meetings and Working Group Internal Affairs by Philip Godderis.

### News and perspectives regarding the national IB

The positive outcome of the audit performed by the AIB on the CREG registry in 2018 confirmed that the system is sound and reliable.

With the fourth wind park that came on-line in 2018, 309 MW was added to the total offshore capacity, which now amounts to 1 187 MW. Further expansion is planned for 2019.

“ ... an ideal platform for sharing experience and exchanging best practices.”

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

The regulatory framework regarding guarantees of origin is stable.

The Federal Government has designated a new offshore area for wind farm development. Tendering of the new wind farms is planned from 2020 onwards.

### Benefits to the company of AIB membership

The primary benefit of our AIB membership is to facilitate the export of Belgian offshore wind GO's across Europe. AIB's harmonized 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	6
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
5	1 186,8

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Offshore Wind	5	1 186,8

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

EECS RES production	Regional RES production
2 488 965	(2 488 965)



**HROTE** HRVATSKI OPERATOR  
TRŽIŠTA ENERGIJE d.o.o.  
CROATIAN ENERGY MARKET OPERATOR Ltd.

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**

“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.”

## REPORT FROM MEMBER

### 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. As laid down in 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

HROTE became member of the AIB with conditional status in May 2014. In the meantime, all terms on the disclosure rule have been fulfilled and the unconditional status of the membership was approved in November 2014

### Activities within the AIB

- Dubravka Brkić contributes to WGEA tasks as chair of the group
- Morana Lončar contributes to WGIA tasks as member of the group
- Ida Čandrić contributes to WGIA tasks as member of the group

### News and perspectives regarding the national IB

The Rules on use of the Guarantees of Origin Registry address the operation of the Registry for electricity Guarantees of Origin with the purpose of certification of electricity produced from plants in the Domain of Croatia, in accordance with the Electricity Market Act. The Rules are under supervision of HROTE.

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

<http://www.hrote.hr/registry>

In 2019, HROTE will start selling subsidized electricity gradually on the market with the final goal of selling all subsidized electricity on the market within a few years.

HROTE may thus issue EECS Guarantees of Origin for Production Devices receiving production support. These GOs will be allocated by HROTE, via periodical auctions organised by HROTE, and subsequently transferred to Account Holders in any EECS domain according to auction results, corresponding to the part of energy sold on the market.

HROTE will not benefit in any way from the allocation of Guarantees of Origin for Production Devices receiving production support.

The revenues from these auctions will be allocated to a feed-in-system in order to decrease the share of the RES-support cost paid by the final consumer, i.e. to offset support cost.

Thus, in relation to renewable Production Devices, which receive production support, HROTE will issue on its own internal support account and transfer to the account of registry users (Account Holders) who won the periodic auctioning sessions organised by HROTE (in cooperation with CROPEX – Croatian Power Exchange), the GOs related to the corresponding RES electricity produced and injected into the grid.

### 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 calculating the residual mix are under the supervision of the Croatian Energy Regulatory Agency.

Since January 2016, the regulation has made cancelled EECS-GO certificates the sole proof of the source of energy eligible for disclosure approval. In addition, the supplier claims the electricity purchased from the feed-in system to its customers.

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

A new Act on RES and HE-CHP came into force on 1 January 2016; however, the sub-laws have yet to be agreed. The new Act defines the new support scheme for RES, which will be established according to new Guidelines on State for environmental protection and energy 2014-2020.

### Benefits to the company of AIB membership

Working meetings and communication with other AIB members are important because of the need to report the progress of (and influence on changes to) the new RED-II (Renewable Directive) to national authorities responsible for guarantees of origin and disclosure.

### Additional information

The Croatian domain is a “small registry” with regard to the number of account holders and registered plants and, as such, it was a good experience to start with the implementation of the Guarantees of Origin System from the very first beginning. By the end of 2018, there were 3 producers representing 16 power plants, and 7 electricity suppliers registered in the Croatian domain.

Although the Croatian Register remains a “small member”, GOs for 2.62 TWh were issued which makes a significant increase compared to 2017, where 1.71 TWh were issued.

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

### Scope of national participation in EECS

Number of registered scheme participants	12
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
18	1 969,74

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydropower	15	1 949,59
Wind	2	17,15
Thermal	1	3

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

EECS RES production	National RES production
2 623,85	9 066,72



Name of the company  
Transmission System  
Operator – Cyprus (TSOC)

Area of operation  
Cyprus

Address  
Evangelistrias 68  
2057 Strovolos  
Cyprus

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

## REPORT FROM MEMBER

### Profile of the organisation

TSOC 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 as the Market Operator of the Cyprus Electricity Market.

### Role

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

### Member of the AIB

TSOC has been a member of AIB since September 2014.

### Activities within the AIB

TSOC was represented in AIB General Meetings and WGIA by Dr. Michalis Syrimis.

### 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. National GOs stopped being issued, with the start of the operation of the EECS GO Registry.

Connecting the Cyprus EECS GO Registry to the AIB Hub has not been possible yet. This is expected to happen in 2019.

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

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

Disclosure was implemented in Cyprus in 2016 with the publication of the Residual Mix for the year 2015. TSOC performs the Residual Mix and Suppliers Mix calculations applying Regulatory Decision 1279/2015, which follows the Issuance-based method. Contribution of energy sources to the overall fuel mixture and greenhouse gas emission data is being published on consumers' bills since 1 July 2016.

### Benefits to the company of AIB membership

TSOC 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 legislation regarding efficient and transparent market systems. It particularly assists TSOC 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. GO trading through the Hub will facilitate our efforts to increase public awareness on the benefits of declaring the origin of electricity production.

### Scope of national participation in EECS

Number of registered scheme participants	6
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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	National RES production
219,1	452,0



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. The OTE provides comprehensive services to individual electricity and gas market players. The OTE commenced organising trading in the day-ahead electricity market in 2002 and the intra-day and block electricity markets later on. The 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.

The OTE is responsible for payments of a green bonus and feed-in tariff for electricity produced from renewable energy sources, secondary sources and combined heat and power. The OTE also administers the National Registry of Greenhouse Gas Emissions. The 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

The OTE 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

Member of the AIB since 2013.

### Activities within the AIB

The OTE was represented in the AIB General Meetings by Martin Štändera who is WGS vice-chair and since December 2017 also AIB Board member.

### News and perspectives regarding the national IB

All relevant processes regarding OTE's role as the national IB were successfully audited by the AIB during the year 2018. The final report of the audit was approved by the AIB General Meeting in November 2018.

“ We are honoured that we can offer market participants proven, transparent and internationally harmonized solutions in the area of electricity certification.”

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

One of the prerequisites for a well-functioning and continuously evolving market is to ensure transparent and non-discriminatory access for market participants and state authorities to all relevant information. The specific outcome of these endeavours is the certification for compliance with the ISO/EIC 27001: 2013 standard concerning information security management awarded to OTE in 2018.

Equally important is the successful implementation of the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation, GDPR).

Another important task is the implementation of Commission Regulation (EU) 2017/2195 establishing a guideline on electricity balancing, which lays down a mandatory transition to a 15-minute settlement period. Even though the Energy Regulatory Office published a decision in June 2018 to grant an exemption from the requirement to harmonize the imbalance settlement period beyond the 2021 timeline, OTE has already initiated technical and organizational preparations to be ready for this transition well ahead of the deadline.

### Benefits to the company of AIB membership

International cooperation of OTE does not only concern electricity and gas trade, but also administration of the issuance of guarantees of origin. We are honoured that we can offer market participants proven, transparent and internationally harmonized solutions in the area of electricity certification as well. Year-on-year growth in the number of issued guarantees of origin and their international transfers also prove that this segment is attractive enough for the market participants.

### Scope of national participation in EECS

Number of registered scheme participants	487
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 047	3 213

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	75	259
Solar	313	696
Thermal	432	852
Hydro	227	1 406

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

EECS RES production	National RES production
3 499	8 172

# ENERGINET

Name of the company

Energinet

Area of operation

Denmark

Address

Tonne Kjærsvvej 65

7000 Fredericia

Denmark

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

## REPORT FROM MEMBER

### Profile of the organisation

TSO

### Role

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

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

### Member of the AIB

Energinet has been member of the AIB since 2002.

### Activities within the AIB

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

### News and perspectives regarding the national IB

In the beginning of 2019, Denmark introduces hourly settlement, mobilising more flexible consumption based on hourly energy price signals. Yet energy suppliers can still brand their products towards final customers using GO™'s though the GO™'s are disclosed at a late aggregated monthly level. Further, plans for 15 minutes settlement are in progress with Energinet's daughter company Energinet DataHub A/S.

“Price transparency and auctions in the certificate market, declaring the origin of electrical production, is still important to provide a trusted information supply chain targeting the final customer’s free choice of energy.”

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

Energinet plans to introduce a new CO<sub>2</sub>-Signal – by the hour – to provide individuals not only the price per hour – going forward but also a CO<sub>2</sub> value. This may affect final customers’ decisions, and possibly be key for driving a change in behaviour, as the empowerment of individuals is crucial in greening the energy system. Agile behavioural changes will be a function of CO<sub>2</sub> to some and a function of price to others.

### 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 meets the requirements of the EU directives in a secure and efficient way. “Price transparency and auctions in the certificate market, declaring the origin of electrical production, is still important to provide a trusted information supply chain targeting the final customer’s free choice of energy”, says Carl Morten Baggesen Hilger, Energinet.

### Scope of national participation in EECS

Number of registered scheme participants	19
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
112 141	9 274

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	74	2 015
Biogas	191	130
Wind	6 990	6 123
Hydro	36	7
Solar	104 850	1000

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

EECS RES production	National RES production
18 773	18 930

Name of the company  
Elering AS

Area of operation  
Estonia

Address  
Kadaka tee 42  
12915 Tallinn  
Estonia

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

REPORT FROM MEMBER

### Profile of the organisation

Electricity and Gas Transmission System Operator

### Role

Elering is an independent electricity and gas transmission system operator with the primary task of connecting producers, various network operators and consumers to complete and ensure high-quality energy supply to Estonian consumers.

### Member of the AIB

Elering AS started as an observer in the AIB in 2011 and became a member 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

Based on the feedback from market participants, and in order to meet the requirements set by the AIB Hub, Elering AS is continually developing and improving the Estonian registry system that facilitates the issuing, transfer and cancelling of guarantees of origin. Currently, we are working on integrating the management of the national support (subsidy) scheme into the same system.

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

The current support scheme, which received the state aid permission by the European Commission in 2017, is expected to be phased out and the new scheme starting from 2020 will tie the support scheme to the national objective of generating electricity from renewable sources. To obtain the necessary amount of renewable electricity fulfilling that target the electricity must be purchased via public reverse auctions arranged by the government.

“Being a full member of the AIB provides us a way to better inter-communicate with other registry operators and issuing bodies, share experiences and enhance the system to match the demand on the market even better.”

### Benefits to the company of AIB membership

“Elering AS has been appointed to administer the system for guarantees of origin (for both electricity and biomethane production). Being a full member of the AIB provides us a way to better inter-communicate with other registry operators and issuing bodies, share experiences and enhance the system to match the demand on the market even better. As part of the AIB it is possible for us to fully participate in the further development and promotion of the harmonized and transparent EECS rules to ensure a reliable Europe-wide GO market.”

River Tomera, Head of Renewable Energy Unit

### Scope of national participation in EECS

Number of registered scheme participants	70
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
76	714,5

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	28	337
Hydro	17	6,2
Biogas	7	6,5
Biomass	13	363
Solar	11	1,8

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

EECS RES production	National RES production
1 181	1 665

# 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 Issuing Body for electricity GOs according to the Finnish legislation, has assigned this duty to its wholly-owned subsidiary Finextra Oy.

### Member of the AIB

Finextra Oy has been a 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 goal is to maintain high customer satisfaction in Finextra's GO Service. We develop our registry cost-effectively based on customers' needs in order to meet their expectations and requirements.

“The future green electricity system will be diverse, flexible and cost-effective. Let’s make this vision together!”

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

The regulatory framework regarding GOs is stable. National implementation of RED II has started.

Fingrid has established a wholly-owned subsidiary, Fingrid Datahub Oy, which will take care of the operational tasks of the centralised information exchange system. Datahub will speed up, simplify and improve processes in electricity information exchange to the benefit of all market parties. The centralized solution provides all parties with equal and simultaneous access to the information. Datahub will be in operation in 2022.

### Benefits to the company of AIB membership

The AIB enables a reliable central Hub for transferring GOs for its members. Co-operation in working groups gives us valuable information on GO-related practices.

Asta Sihvonen-Punkka, Executive Vice President, Fingrid Oyj

### Scope of national participation in EECS

Number of registered scheme participants	32
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
569	10 163

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	163	3 111
Wind	320	2 064
Solar	8	4
Thermal	78	4 984

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

EECS RES production	National RES production
27 600	31 700



Name of the company  
Powernext

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, incorporated in 2001, is a private company, which aims at delivering highly reliable services in the European 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 reappointed as the French national registry for guarantees of origin as of 1 January 2019 by a decree issued on 24 August 2018 by the French Ministry for an Ecological and Solidary Transition. In addition, the mandate of Powernext has been extended to include the organization of auctions for guarantees of origin, to be launched in September 2019.

### 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 Working Group Systems is represented by Mathieu Morvan and Mohammed Mohammadi.

### 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 a member of the AIB in June 2013. Powernext has also developed an auction system for GOs issued for generation facilities benefitting from state subsidies. These auctions will be launched in September 2019.

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

The French legislation on guarantees of origin was updated in 2017 and 2018 by introducing an auction mechanism for GOs issued for production devices receiving subsidies. Those GOs are issued by the French State and then auctioned. With the new auction system, almost all renewable electricity can now be tracked.

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

### 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 reappointed as the national registry for guarantees of origin in France. As such, we promote transparency on the energy markets and we participate in the energy transition towards more renewable power consumption. By promoting market-based mechanisms for green electricity, the upcoming auction system is heading in the same direction.

We decided to join the AIB the first time Powernext was designated as the operator for the national registry for GO's, in 2013. 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 have confidence in 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	69
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
357	19.957

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	298	19.142
Thermal	38	725
Solar	5	1,2
Wind	16	89,2

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

EECS RES production	National RES production
52.711	108.700

Name of the company

German Environment Agency  
(UBA)

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)

## REPORT FROM MEMBER

### Profile of the organisation

UBA is Germany's scientific environment authority dealing with a wide and varied range of environmental subjects. Among its manifold tasks, UBA is competent body for operating the German registry and issuing GOs. Besides this, 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 2016, UBA has been a member of the AIB. From 2013 until then, UBA had been a Hub user, but without membership.

### Activities within the AIB

- Friederike Domke – Member, Participant in WGIA
- Christian Herforth – Member, Participant in WGIA
- Michael Marty – Member, Head of the Register of Guarantees of Origin for Electricity from Renewable Energy Sources
- Katja Merkel – Member, Participant in WGS
- Elke Mohrbach – Member, Participant in WGIA  
and in the project team for the change process of AIB

### News and perspectives regarding the national IB

In January 2019, a new regional GO scheme, in accordance with the revised Renewable Energy Sources Act (EEG 2017), started on a national basis. It allows suppliers to disclose to their final customers that they have consumed supported renewable electricity produced in their region, which covers an area in the vicinity of around 50 km around the consumer. Regional GOs are only issued for market-premium supported electricity, they are not RES-GOs according to the RES Directive and thus they follow special rules defined in the new legislation. They are usable only inside Germany and do not interact with European GOs.

“I must state that the AIB as such is an absolutely necessary institution to guarantee a credible and faithful transfer of GOs in Europe. In this sense, it is also essential for the German Register.”

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

In 2018, more than 226 200 GWh electricity had been produced from renewables in Germany, which is more than 38% of the total electricity consumption. In November 2018, changes to the legal basis of the GO system came into force with the “Implementing Ordinance on Guarantees of Origin and Guarantees of Regional Origin”. Also, the Terms of Use had been revised in December.

### Benefits to the company of AIB membership

“Before I myself started to work with the AIB, I knew the work of AIB only from reports of colleagues involved and therefore I only had an abstract idea of the activities and the working methods of the AIB. Having participated in Working Group- and General Meetings I must state that the AIB as such is an absolutely necessary institution to guarantee a credible and faithful transfer of GOs in Europe. In this sense, it is also essential for the German Register. In view of the challenges to be expected from the implementation of the RED II, I consider further growth and professionalization of the AIB as key when taking into account the interests of all participants. With this in mind, we are looking forward to the, hopefully successful, next few years.” *Christian Herforth*

### Additional information

The year 2018 included various challenges for the German HKNR Team: Amending the legal basis and establishing the register for guarantees of regional origin while at the same time fulfilling all other duties. Further, we look back to our 5<sup>th</sup> conference on GOs in Dessau with around 130 participants. Again, we gained new knowledge about the GO market and other perspectives. At the international level, it was clearly noticeable that members of AIB have less and less time to provide the necessary input for further development. We hope that this problem can be solved by restructuring of the AIB, as we are convinced of the sense and necessity of the AIB.

### Scope of national participation in EECS

Number of registered scheme participants	1 628
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
682	13 447,672

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind - onshore	258	820,421
Solar	58	64,198
Hydro	250	4 956,411
Biogas - other	2	0,780
Biogas - landfill	36	39,560
Biogas - sewage	2	0,462
Solid renewable fuels	38	1 090,184
unspecified renewable energy	38	6 475,656

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

EECS RES production	National RES production
13 076,730	226 200

# LANDSNET

Name of the company  
Landsnet hf

Area of operation  
Iceland

Address  
Gylfaflöt 9  
112 Reykjavik  
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 based on the 2003 Electricity Act. Landsnet's role is to operate Iceland's electricity transmission system and administer its system operations. 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, some of the grid is made up of 400 kV capable lines that are currently operated at 220 kV.

### 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 Svandís Hlín Karlsdóttir and Ragnar Sigurbjörnsson who contribute to the AIB by participating in the AIB General meetings.

### News and perspectives regarding the national IB

In 2018, all power plants that are connected to the transmission grid have now been certified to issue GOs. The number of small power plants (>10MW) connected to the distribution grid has also been steadily increasing.

In addition, over the past two years energy producers have issued GO's for all their production. The issuing of GO's seems to get a more positive review and increased activity in the market, and that encourages energy producers to issue more GO's than earlier.

One of the most positive aspects has been the increase in cancellations in Iceland. They have gone from no cancellations in 2015 to over 3.6 million in 2018, which is close to 20% of the total issued GO's.

“The support and know-how obtainable within the AIB is crucial for the implementation, improvement and development of a robust and trustworthy framework for GOs.”

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

Since Landsnet became an AIB member in 2012, no major changes have been made to the structure and framework concerning GOs in Iceland. However, in light of increased activity and demand for more cancellations in Iceland the structure of the tariffs has been subject to review with focus on fairness, transparency and opportunities. This included focusing on greater opportunities for small power plants connected to the distribution grid, and ensuring that the tariffs do not prevent competition and market development.

### Benefits to the company of AIB membership

Being a part of the AIB gives us a connection, through the AIB-Hub, for our Account Holders to reliably and efficiently trade with the other AIB member states. To Iceland, being a relatively small and isolated green-energy producer, the support and know-how obtainable within the AIB is crucial for the implementation, improvement and development of a robust and trustworthy framework for GOs.

### Scope of national participation in EECS

Number of registered scheme participants	5
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
31	2 811,6

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	22	2 051,6
Geothermal	9	760

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

EECS RES production	National RES production
18 317,7	19 062,6



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)

## REPORT FROM MEMBER

### Profile of the organisation

The Single Electricity Market (SEM) is the all-island wholesale electricity market operating in Ireland and Northern Ireland. The Single Electricity Market Operator (SEMO) facilitates the 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 the Regulation of Utilities (CRU) in Ireland and the Utility Regulator (UR) in Northern Ireland.

The SEM was further enhanced in 2018 with the launch of revised market arrangements from 1 October 2018. The revised market arrangements were designed to integrate further the SEM into the Internal Energy Market, helping to facilitate the objectives of the EU Target Model. The revised market arrangements allow for more efficient use of interconnection and closer coupling of prices to the wider European markets. The SEM now consists of physical day ahead, intraday and balancing market, as well as financial transmission rights, and two markets for financial instruments and a market for capacity reliability options.

### Role

SEMO is the Issuing Body for Guarantees of Origin (GO) to generators of electricity from renewable sources in Ireland only, in accordance with the Supervisory Framework established by the CRU. In this role, SEMO is responsible for the operation of the registry for issuance, transfer and cancellation of GOs.

SEMO is also the nominated competent body for Fuel Mix Disclosure for the Island of Ireland (Ireland and Northern Ireland), on behalf of the CRU in Ireland and the UR in Northern Ireland.

SEMO also conducts the verification mechanism for the regulation of green source products in the electricity retail market on behalf of the CRU, in accordance with decision paper CER/15/2015.

### Member of the AIB

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

### Activities within the AIB

– Laura Plunkett – Chair of Working Group Internal Affairs  
(Chair until March 2018)

### News and perspectives regarding the national IB

As a result of increased interest in corporate Power Purchase Agreements (PPAs) including GOs, suppliers engaged with the national regulatory authority (CRU) and SEMO, and late in 2018, it was agreed



“The continued operation of the AIB hub for efficient transfer of GOs is invaluable to SEMO and our Account Holders.”

that cancellations submitted by suppliers would be accepted if the name of the beneficiary was specified on the cancellation statement. (Previously cancellations could be completed by, and for, suppliers only.)

For the second year in a row, no Irish GOs were cancelled for use in fuel mix disclosure in the UK excluding NI (known as ex-domain cancellation). However, Irish suppliers continued to import GOs from the UK to meet their demand.

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

- The Supervisory Framework for the Administration of Guarantees of Origin (CER/11/824) remained unchanged in 2018.
- The GO scheme in Ireland continues to be open to licenced suppliers and generators only. Applications from market parties interested in trader accounts continue to be rejected.
- The annual All-Island (Ireland and Northern Ireland) Fuel Mix methodology, used in 2018 for calendar year 2017, remained unchanged from previous years.
- In 2018, the green source product verification mechanism was carried out for the 2017 period to ensure that suppliers selling green source products had sufficient green attributes (GOs or contract based tracked supported renewable energy) to cover their sale, all suppliers passed this check.
- No changes were made to the Supervisory Framework for the Administration of Guarantees of Origin (CER/11/824) in 2017.

### Benefits to the company of AIB membership

“The implementation of our online registry and connection to the AIB hub has been a significant factor in improving the administration of GOs for SEMO. The continued operation of the AIB hub for efficient transfer of GOs is invaluable to SEMO and our Account Holders.”

Laura Plunkett, Market Operations

Access to an efficient certificate trading hub is only one of the benefits of the AIB. The association itself provides SEMO with the opportunity to work with other Issuing Bodies (and Disclosure competent bodies) to improve the system and clarify rules, for the issuing, transfer and cancellation of GOs, thereby leading to greater transparency.

### Scope of national participation in EECS

Number of registered scheme participants	40
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
105	865,22

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	63	632,43
Hydropower	42	232,79

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

EECS RES production	National RES production
2 082,016	9 971,762



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

Area of operation  
Italy

Address  
Viale Maresciallo Pilsudki 92  
Rome  
Italy

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

## REPORT FROM MEMBER

### Profile of the organisation

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

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

### Member of the AIB

GSE is a member of the AIB since 2001.

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 in AIB activities encompasses following groups:

- General Meeting: Emanuele Del Buono
- WGIA: Floriana Furno

### News and perspectives regarding the national IB

In accordance with the AIB project plan, we implemented the new schema v.71 and updated the Fact Sheet 18 in 2018. Moreover, we developed the Account Holder Database to facilitate the connection to the AIB Hub.

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

### 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 replaced the previous regime under the decree of 6 July 2012. General principles and access procedures are the same as the ones under the Decree of 6 July 2012 and do not apply to photovoltaic plants.

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

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

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

### Benefits to the company of AIB membership

“Participating actively in the meetings and working groups, organised by the AIB, is a valuable opportunity to share knowledge, best practices, points of view and experiences with members from other countries. Moreover, being an AIB member gives access to the AIB platform, which allows transfers of certificates between EU countries which are members of AIB.”

Floriana Furno, member of Working Group Internal Affairs

### Scope of national participation in EECS

Number of registered scheme participants	1 812
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
2 936	32 783

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Wind	387	7 165
Geothermal	32	872
Hydro	706	18 244
Solar	1 721	2 918
Thermoelectric	90	3 583

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

EECS RES production	National RES production
67 829	114 414,7



Name of the company  
**LITGRID AB**

Area of operation  
**Lithuania**

Address  
A. Juozapavičiaus g. 13,  
LT-09311 Vilnius  
Lithuania

**[www.litgrid.eu](http://www.litgrid.eu)**

## REPORT FROM MEMBER

### Profile of the organisation

Litgrid is the Lithuanian Electricity Transmission System Operator.

### Role

Litgrid, the Lithuanian electricity transmission system operator, manages the electricity flows in Lithuania and maintains a stable operation of the national power system. The company is responsible for the implementation of the strategic energy projects, reorientation of the country's power system towards a synchronous operation with the Continental Europe. Litgrid is also appointed issuing body for the electricity guarantee of origin (GO) in Lithuania.

### Member of the AIB

Litgrid has been an observer since 2017 and became a member of the AIB in June 2018.

### Activities within the AIB

So far, Litgrid does not participate actively in any of AIB's specific activities.

### News and perspectives regarding the national IB

Litgrid operates the Lithuanian National Registry for GOs and is, as such, responsible for the issuance, transfer and cancellation of GOs in Lithuania. Since 2018, Litgrid successfully operates in the AIB HUB using Grexel's platform for the central registry electricity for GOs in Lithuania. Litgrid is endeavouring to meet the high requirements set by the AIB HUB and become capable of implementing the EU directives on free movement of the GOs to accomplish free Lithuanian EECS GO export in 2020.

“Being part of the AIB strengthens the market and makes it more transparent, in not only Lithuania but also the whole European energy market.”

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

Litgrid is constantly working on improvements, which will make Lithuanian GOs more attractive and freely available to the internal and international market participants. The next main step for Litgrid will be the improvement of the disclosure system in Lithuania, including a methodology for calculating residual mix. This would ensure maximum transparency for end users.

### Benefits to the company of AIB membership

Being part of the AIB means a big step in fulfilling the main mission of the Company. To enable a competition in an open domestic electricity market by ensuring the free movement of EECS GOs is an opportunity for us, which encourages and strengthens us not to stop, but to move further. In addition, it strengthens the market and makes it more transparent, in not only Lithuania but also the whole European energy market. And we are proud of being part of this significant change that has come to this industry so far.

### Additional information

The Lithuanian domain is not a very large registry, but it is a very big challenge and experience for us to contribute to an efficient, reliable and secure Guarantees of Origin market.

### Scope of national participation in EECS

Number of registered scheme participants	12
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
3	109,6

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro-electric head installations/ Run-of-river head installation - T030100	1	101
Thermal/Steam turbine with condensation turbine (closed cycle) - T050300	1	5
Wind - T020000	1	3,6

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

EECS RES production	National RES production
358,6	2.025,9



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. Beside 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 responsible 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 1 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 19 of Directive (EU) 2018/2001.

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

<http://cmo.grexel.com>, which allows access to public details of the registry; and on

<https://web.ilr.lu/FR/Professionnels/Electricite/Acteurs/Energie-renouvelable-et-Cogeneration-a-haut-rendement/Garanties-dorigine/Pages/default.aspx>, 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 of an electricity producer using CHP technology.

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

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

In July 2010, disclosure regulations entered into force and define a unique form of electricity labels to be used by all suppliers in their disclosure information on the final bill for 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 2018, almost 3 million GOs (3 TWh) were cancelled in the registry, representing almost half of the total electricity consumed in Luxembourg.

### 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.

Following the approval of the new Domain Protocol Luxembourg at the Edinburgh GM of 6 June 2018, ILR started in the second half of 2018 issuing GOs for electricity produced from renewable energy sources from production devices currently receiving production support in Luxembourg. Those GOs are being periodically auctioned on the ILR auctioning platform: <https://goauction.ilr.lu/>.

Auction revenues will be used to decrease the cost of the public support scheme. The auctions are open to any account holder within an EECS registry. More information on the ILR auctioning platform.

### Scope of national participation in EECS

Number of registered scheme participants	8
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
20	148,2

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Photovoltaic	5	1,30
Wind	11	101,65
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
171	688



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)

## REPORT FROM MEMBER

### Profile of the organisation

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

### Role

CertiQ, as subsidiary of TenneT TSO, is the issuing body for guarantees of origin (GOs) in The Netherlands. TenneT is mandated by the Minister of Economic Affairs and Climate Policy to perform this task.

CertiQ's mandate encompasses the GOs for renewable electricity, for electricity from highly-efficient cogeneration and for renewable heat. Additionally, CertiQ issues disclosure certificates for electricity from non-renewable sources.

CertiQ works closely together with, inter alia:

- The Ministry of Economic Affairs and Climate Policy, which is responsible for national policymaking on matters related to energy including GOs.
- The Netherlands Enterprise Agency, which is, as agency of the Ministry, responsible for executing the support schemes for the production of renewable electricity and heat.
- The Authority for Consumers and Markets, which as regulator is responsible for the correct functioning of the Dutch electricity market.

### Member of the AIB

Member of the AIB since 2001.

### Activities within the AIB

- Lian Krijger, senior manager, member of the AIB Board
- Remco van Stein Callenfels, assistant controller, member of Working Group Internal Affairs
- Arjan van der Toorn, scrum master, member of Working Group Systems
- Max Laven, policy advisor, member of Working Group External Affairs

### News and perspectives regarding the national IB

In 2018, we carried out regular changes to our registry (MyCertiQ), to keep the application running and to meet regulatory requirements while keeping an eye on the needs of our customers and focus on the overall efficiency of the application.

Most notably, our key focus was Full Disclosure. Hence, we made sure that our registry was prepared to facilitate the issuance of disclosure certificates in a user-friendly manner. The mandatory certification of grey electricity is set to 1 January 2020, but we are proud that all preparations with regard to our registry were achieved one year ahead of schedule.

Over the next few years, CertiQ will continue to make significant investments in the technical and functional quality of our E-certification system to improve its efficiency and user-friendliness.

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

2018, was an eventful year for CertiQ, in which we welcomed and successfully built on fast-moving regulatory and market developments.

In May 2018, the Dutch Parliament adopted an amendment to the regulation on electricity certification, which stipulates that all types of electricity supplied in the Netherlands – renewable and non-renewable – must be corroborated by cancelled GOs. This is called Full Disclosure, and will go a long way to providing clarity and insight on exactly where their electricity comes from. Full Disclosure will be mandatory from January 2020 onwards. In 2019, CertiQ will grant disclosure certificates for non-renewable electricity on a voluntary basis.

Another significant development, the provisional relief court of the Trade and Industry Appeals Tribunal in the Netherlands ruled that GOs from Great Britain should be eligible for use in the Netherlands. This opening up of the Dutch market to GOs from a country not affiliated to the Association of Issuing Bodies (AIB) was a first step, and injects a new dynamism into the sector.

### Benefits to the company of AIB membership

The quality and reliability of a GO depend on the well-functioning of the AIB and the AIB-hub. Now, more than ever, it has become clear to CertiQ that as many EU member states as possible should adhere to the EECS-rules, as these rules are the best guarantee that household consumers and market parties can rely on the origin of the energy they consume. It is therefore of vital importance that AIB actively promotes the benefits of membership.

### Additional information

Certification of energy has a clear added value: it provides European consumers, market parties and governments with reliable and transparent information on the origin of energy, and how the energy is generated.

Because of this added value, we decided in 2018 to investigate the certification of the green electricity generated by small-scale 'prosumers', which makes up around 10 percent of the total renewable electricity produced in the Netherlands. This type of dispersed production is not officially registered or represented in renewable electricity data. In 2018, CertiQ developed an initial proof of concept to use blockchain technology in this certification process.

“The quality and reliability of a GO depend on the well-functioning of the AIB and the AIB-hub.”

### Scope of national participation in EECS

Number of registered scheme participants	150
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
18 462	7 818

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	235	2 015
Hydro	16	37
Solar	16 946	1 523
Wind	1 265	4 243

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

EECS RES production	National RES production
15 500	16 000

# Statnett

Name of the company  
Statnett SF

Area of operation  
Norway

Address  
Nydalén Allé 33 /  
PB 4904 Nydalén  
0423 Oslo  
Norway

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

## REPORT FROM MEMBER

### Profile of the organisation

Transmission System Operator - TSO

#### Role

Statnett is the transmission system operator in the Norwegian energy system. This includes operating about 11 000 km of high-voltage power lines and 150 stations all over Norway. The operations are monitored by one national control center and two regional centers, which keep the Norwegian power system in balance. Statnett is also responsible for the interconnectors to Sweden, Finland, Russia, Denmark and the Netherlands. In addition, interconnectors 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 percent 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 a member of the AIB 1<sup>st</sup> of January 2002. Statnett-issued certificates have been compliant with the EECs standard since 2011.

#### Activities within the AIB

- Ivar Munch Clausen, Member of the Board
- Kristian Røst Hagen, Member of Working Group Systems

#### News and perspectives regarding the national IB

Statnett is a considerable contributor of guarantees of origin to the European market, with approximately 20 percent of the total share of issued Guarantees of Origin.

Statnett decided in early 2018 to invest in a new registry for Guarantees of Origin and Elcertificates. After a public tender, Unicorn Systems in the Czech Republic was awarded the contract.

The new system will be developed in 2019, and our customers will be invited into the development process. Expected go-live for the new system is mid 2020.

“Statnett decided in early 2018 to invest in a new registry for Guarantees of Origin and Elcertificates. After a public tender, Unicorn Systems in the Czech Republic was awarded the contract.”

### 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 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 parts 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.

February 18<sup>th</sup> 2019 the Norwegian datahub for the electricity markets went online – Elhub. With Elhub all market participants will have one contact point for market information, making market operations easier. As an example: The process of changing power supplier has been cut from 14 days down to 2-3 days.

### 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 origins, 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	82
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 293	34 740

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Solar	1	0,4
Thermal	7	5
Hydro power	1 080	31 265
Hydro power - Run-of-river	171	1 703
Wind power	36	1 719

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

EECS RES production	National RES production
137 996	*

\* National RES production of 2018 is not available before printing. National RES production 2017: 97,7 GWh.



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 national regulatory authority for electricity and gas in Slovenia and the Slovenian Issuing Body of GOs for renewable electricity and electricity from high efficiency CHP. The Energy Agency is also the competent authority for issuing renewable and CHP production declarations that are needed by the 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 WGIA
- Tomaž Lah – member of WGS
- Blaž Bratina – participating in the General Meetings

#### News and perspectives regarding the national IB

The Energy Agency will continuously follow the development of the European energy legislation and take over all responsibilities assigned to the Energy Agency in connection with implementing the European energy legislation into national legislation. This may include introduction of new certificate schemes. The Agency intends to remain an AIB member in order to offer producers and traders the possibility of international trade with all certificates used in Slovenia. Also, a close cooperation with the Slovenian stakeholders and the ministry responsible for energy including national GO legislation, will be maintained.

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

In accordance with the new Decree on support for electricity generated from renewable energy sources and high-efficiency cogeneration of heat and electricity, the Energy Agency prepared one tendering procedure for the selection of new entrants to the national support system in 2018. The procedure started by publishing an invitation for submission of applications for the new entrants. After the deadline for submission the Agency selected the new entrants among the candidates based on the allowed increase in funds for support and the price offered for the production of electricity. In 2018, 41 new entrants were selected among 171 candidates.

“Being an AIB member enables us to ensure all the necessary conditions for offering the market participants to benefit from the electricity market.”

### Benefits to the company of AIB membership

The Energy Agency is, as the National Regulatory Authority, responsible for promoting a competitive, secure and environmentally sustainable electricity market for all market participants, including all customers, traders and suppliers. Being an AIB member enables us to ensure all the necessary conditions for offering the market participants to benefit from the electricity market. Suppliers are able to offer their customers electricity produced in an environmentally friendly way, while traders can internationally exchange attributes of such electricity. The most important outcome of these facts is that the customers can choose between various electricity products the origin of which is guaranteed by reliable instruments – EECS Guarantees of Origin.

Membership of the AIB also gives us the opportunity to meet colleagues from other countries and to participate actively in the creation of new standards for certifying electricity and other energies regarding their source and production method.

### Scope of national participation in EECS

Number of registered scheme participants	4
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 002	1 131

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Hydro	186	1 048
Solar	805	75
Biogas	9	7
Biomass	2	1

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

EECS RES production	National RES production
3 660	5 404

Name of the company  
**CNMC**

Area of operation  
**Spain**

Address  
Alcalá, N° 47  
Madrid, 28014  
Spain

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

## REPORT FROM MEMBER

### Profile of the organisation

The CNMC is the Spanish energy regulator.

The CNMC is also regulator for telecoms, audio-visual media, transport and postal sectors, and the Spanish competition authority.

### Role

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

### Member of the AIB

Member of the AIB since March 2016.

### Activities within the AIB

The CNMC participates in the AIB meetings and is usually represented by Jose Miguel Unson.

The CNMC is also part of CEER. CNMC Director General for Energy, Fernando Hernandez Jimenez-Casquet is Chairman of the CEER Electricity Working Group

### News and perspectives regarding the national IB

Since January 2019, the CNMC has new responsibilities for electricity and gas tariffs, as well as access to new generation issues.

“Being part of the AIB is an opportunity to remove possible administrative barriers that might impair trading GOs’ across Member States”

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

New legislation about self-generation in April 2019.

### Benefits to the company of AIB membership

“Another benefit is to enhance the management system for exports and imports of guarantees of origin, using the AIB platform or hub”

CNMC Director General for Energy

### Additional information

In 2018, the number of Guarantees of origin exported from Spain increased from 10.000 GWh to almost 30.000 GWh, which is in line with the upwards interest resulting from these transactions.

### Scope of national participation in EECS

Number of registered scheme participants	66 269
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
65 871	56 421

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
CHP	1 011	5 640
Solar PV	61 366	4 694
Solar CSP	51	2 299
Wind	1 368	23 023
Small Hydro < 50 MW	1 093	2 094
Biomass	219	750
Urban Solid Waste	10	208
Big Hydro > 50 MW	753	17 713
TOTAL	65 871	56 421

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

EECS RES production	National RES production
29 549	98 122



Name of the company  
Energimyndigheten

Area of operation  
Sweden

Address  
Gredbyvägen 10  
Eskilstuna  
Sweden

[www.energimyndigheten.se](http://www.energimyndigheten.se)

## REPORT FROM MEMBER

### Profile of the organisation

Government agency

### Role

Competent body and issuing body for renewable electricity guarantees of origin.

### Member of the AIB

Member of the AIB since 2017 (June).

### Activities within the AIB

- Johan Malinen, member of the board and WGIA
- Jessica Eriksson, member of WGS

### News and perspectives regarding the national IB

The year 2018, was the first full year of AIB membership for the Swedish Energy Agency. Before June 2017, Grexel was the issuing EECS body for the domain Sweden. During 2018, we saw a substantial increase in GO prices resulting in a higher interest from the market actors. Also, the new RES directive, agreed on in December, will play an important role in the years to come.

Almost all electricity-producing devices in Sweden are registered for either EECS GO or national GO (SEGO). These make up 99 % of the generating capacity in the country.

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

Sweden has a joint support scheme together with Norway, the Electricity Certificate Scheme, which is a market-based support scheme that builds on a quota obligation for all consumers of energy. The goal is to promote the expansion of renewable electricity production. In June 2017, the parliament decided to raise the target with 18 TWh new production until 2030, and to prolong the scheme until 2045.

“This helps us to develop good practice and gain experience from lessons learned by others.”

Each year, the solar power is subject to increasing interest. Most of the new PV installations are relatively small and installed on private houses. Approximately 3000 new solar power production devices are registered in the GO system every year; however, most of them only apply for national non-exportable GOs. Also, the expansion of wind power continues, with several large wind parks being committed during the last year, and more are to follow. Most wind parks are built on shore.

As of today (February 2019), approximately 1800 production devices out of totally 13500 receive EECS GOs every month.

### Benefits to the company of AIB membership

The AIB and the AIB hub in particular, provide for an efficient and secure exchange of guarantees of origin between the members. The establishment of contacts with other EU member states facing the same challenges as we do is also an important part of our membership. This helps us to develop good practice and gain experience from lessons learned by others.

### Scope of national participation in EECS

Number of registered scheme participants	306
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
1 819	18 600

Registered production devices and total capacity

Technology	Number of production devices	Total capacity installed per technology (MW)
Thermal (excl. Nuclear)	12	882
Wind onshore	1 436,00	4 658,00
Wind offshore	51	163
Hydropower	279	14 547,00
Nuclear	1	1 450,00

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

EECS RES production	National RES production
52 500	88 000

# pronovo

Name of the company  
Pronovo AG

Area of operation  
Switzerland

Address  
Dammstrasse 3  
CH-5070 Frick  
Switzerland

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

## REPORT FROM MEMBER

### Profile of the organisation

Pronovo is a 100% subsidiary company of Swissgrid, which is the Transmission System Operator (TSO) of Switzerland. Pronovo was recently established in 2018 and is the successor of the former Swissgrid renewable energy and GO division. Pronovo is responsible for the financial support of renewable energy production and the issuing of Guarantees of Origin in Switzerland.

### Role

Pronovo is the sole competent Issuing Body for Guarantees of Origin in Switzerland. Pronovo has been mandated with this task by law and accredited 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 63 of the Federal Energy Act as well as in the Energy Ordinance, the Energy Support Ordinance and the Ordinance on Guarantees of Origin and Electricity Disclosure.

### 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

### News and perspectives regarding the national IB

With the enforcement of the revised Federal Energy Act, Swissgrid was obliged to establish a 100% subsidiary company (Pronovo) as of 1 January 2018. According to this obligation, all responsibilities regarding the support of renewable energy and the issuing of Guarantees of Origin in Switzerland had to be transferred to Pronovo, in order to unbundle the operation of the high voltage transmission grid and the renewable energy business with regard to the new energy strategy. As a result of this, Pronovo has been directly mandated by law with these tasks since 2018.

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

On 1 January 2018 in Switzerland a new energy legislation called the “Energy Strategy 2050” has come into force. One objective of the energy 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 is on small hydropower, biomass, photovoltaic and wind power.



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

New incentives as direct marketing, investment support for all sizes of PV plants and other improvements have been 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 has temporarily been established in addition. This program is limited to 5 years.

As an improvement of the disclosure system, a Guarantee of Origin obligation for imported electricity has been introduced. With this measure, starting in 2018, any electricity supply in Switzerland has to be disclosed based on Guarantees of Origin only, no matter whether it refers to domestic or foreign production. This full disclosure will lead to 100% transparency to the end consumers.

### 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, Switzerland is deeply embedded into the European power transmission system. A stable grid and a high security of power supply are one of the most important goods for all nations.

The cross border power market is increasing in both, volume and importance. Therefore, the Swiss membership of the 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.” René Burkhard, CEO, Pronovo

### Scope of national participation in EECS

Number of registered scheme participants	2 704
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Registered production devices and total capacity installed

Number of production devices	Total capacity installed (MW)
75 573	22 467

Registered production devices and total capacity installed per technology

Technology	Number of production devices	Total capacity installed per technology (MW)
Biomass	400	456
Hydro	1 424	15 978
Solar	73 480	1 871
Wind onshore	63	78
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
37 104	25 830	64 928



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. RESEC 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. RESEC Operator 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, general meetings as well as contributes to the Sounding Board's efforts to reshape the AIB.

### News and perspectives regarding the national IB

With technical support from The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, The Operator za OIEiEK completed the first version of the Domain Protocol for the Federation of Bosnia and Herzegovina in October 2018. Methodology for determination of RES electricity structure and structure of the total electricity residual mix in the Federation of Bosnia and Herzegovina was prepared.

The Operator za OIEiEK also introduced an internal act named "Guidance on Automatic transfer and cancellation of Guarantees of origin for electricity produced by privileged producers". This act stipulates that GOs for electricity generated from RES by the incentivised producers (feed-in tariff) shall be issued and cancelled immediately upon issuance and shall not be used for further trade or transfer.

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

In 2019, Operator za OIEiEK plans to submit the draft of Methodology for determination of RES electricity structure and structure of the total electricity residual mix in the Federation of Bosnia and Herzegovina to the Federal Regulatory Energy Agency for approval. Since legislation in the Federation of Bosnia and Herzegovina does not define disclosure obligation, consultations with the Federal Regulatory Energy Agency are necessary. In this regard, Operator za OIEiEK is expecting technical help from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

### Profile of the organisation

DAPEEP operates the RES and HECHP support scheme, enters into Power Purchase Agreements (PPAs) and acts as the competent operator of the Special Account that provides financing to this support scheme. DAPEEP participates in the electricity market as the aggregator of RES and HECHP stations and is nominated as the Last Resort Aggregator for the stations that have obligation to participate in the market. The company is also competent body for administrating state aid schemes in the energy and environmental sector and acts as the Auctioneer of the Hellenic State for the Greenhouse Gas Emission Allowances. DAPEEP is an authorised Issuing Body for electricity Guarantees of Origin and competent body for disclosure.

### Role

DAPEEP is the Issuing Body for renewable electricity Guarantees of Origin in the Domain of Interconnected System in Greece, by virtue of Law 3468/2006.

Since January 2018, DAPEEP is also appointed as the competent body for electricity disclosure and is assigned the responsibility of auditing the electricity suppliers regarding the proper use of GOs in proving the origin of electricity to consumers.

### Member of the AIB

DAPEEP is currently an applicant for the AIB membership.

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

On 20 June 2018, the company was renamed to “Operator for RES & Guarantees of Origin” (distinctive title DAPEEP S.A.) and its corporate business focuses on renewable electricity. The activity of Power Exchange has been detached to a new company. According to schedule, the Greek electricity market is to be coupled with the European internal market by the end of 2019.

### Benefits to the company of AIB membership

AIB's significant contribution to GO standardization and cross border trade through the electronic HUB, promotes the reliable, transparent, efficient and cost effective operation of GO systems in Europe.

Becoming an AIB member will facilitate the international trade of GOs issued for renewable electricity in Greece, enhancing their value and contributing to the cost efficient integration of RES stations in the Greek electricity market.

Moreover, being a part of AIB would mean being a part of a network that works towards a common goal, harvesting the benefits of sharing experiences, best practices and addressing issues of common relevance for the improvement of the European GO scheme.



Name of the company  
DAPEEP S.A.

Area of operation  
Greece Mainland and  
Grid Interconnected Islands

Address  
72, Kastoros street  
Pireus 18545  
Greece

[www.lagie.gr](http://www.lagie.gr)



Name of the company  
Joint stock company  
Elektromreža Srbije  
Belgrade

Area of operation  
Republic of Serbia

Address  
Kneza Miloša 11  
11 000 Belgrade  
Serbia

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

## REPORT FROM OBSERVER

### 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 the Republic of Serbia and its integration into the regional and pan-European electricity market.

### Role

There is a 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 Guaranties of Origin from renewable sources, registry operator, and measurement body for the production devices connected to the transmission grid, and responsible party for calculating the Serbian national residual mix.

### Member of the AIB

Active observer since 2015. Currently, the audit process for acquiring full AIB membership status is in the final stage.

### Activities within the AIB

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

### News and perspectives regarding the national IB

The legal framework for the certificate scheme in Serbia is based on the provisions laid down in the Energy Law and by-law legislation for guaranties of origin in 2017. All the technical requirements and legal framework have been implemented in accordance with the EECS rules and best practice recommendations from the AIB. In 2018, an official Letter of intention for joining the AIB was submitted and the ongoing revision process is in the final stage.

### Benefits to the company of AIB membership

The benefits for EMS JSC Belgrade of being part of the AIB are that it enables us to actively gather knowledge of the EECS certificate schemes with the aim to establish a certificate scheme in Serbia fully under the EECS rules, in compliance with the quality standards set up by the AIB and to become a full member of the AIB.

Being part of the AIB allows EMS JSC Belgrade to develop new ideas and gather experience from other AIB members and observers.

## Profile of the organisation

Short-term electricity Market Operator - OKTE, a.s.

## Role

Short-term electricity Market Operator - OKTE, a.s. started its activities on 1 January 2011. OKTE, a.s. was established as a subsidiary of Transmission System Operator (Slovenská elektrizačná prenosová sústava, a.s.) which owns 100% of the shares. According to the Energy Act of the electricity market in the Slovak Republic, OKTE, a.s. is subject to regulation by the Regulatory Office for Network Industries (RONI), and is authorized to perform activities as Short-term electricity Market Operator in the Slovak Republic.

## Member of the AIB

Observer since 2018.

## Activities within the AIB

OKTE is currently an observer in the AIB.

## News and perspectives regarding the national IB

The formal application to join the AIB was submitted in 2018. OKTE expects that the company will become member of the AIB organization in 2019. OKTE has been mandated as The Competent Authority for Guarantees of Origin in the Slovak Republic. Its role was defined by legislation in the Act No. 309/2009 Coll., as amended by Act No. 309/2018 Coll. on the support for renewable energy sources and high efficiency combined heat and power generation (Act RES), to be responsible for organizing and managing the system of Guarantees of Origin in the Slovak Republic.

## News and perspectives regarding the national framework for electricity

New competence in OKTE's portfolio, will consist of the registration of guarantees of origin of RES & CHP-based electricity. This agenda is to be transferred from the Regulatory Office for Network Industries (RONI) onto OKTE, a.s. with effect from 1 January 2020, but the oversight of the registration, transfer and cancellation of guarantees of origin will continue to be performed by RONI. OKTE, a. s., will perform this function via a new information system for registration of guarantees of origin, that will provide the environment for comprehensive management of guarantees of origin from setting up and maintaining the accounts for electricity producers, registering issued guarantees of origin and their transfers, through to the recording of their application, cancellation or recognition of guarantees issued by other EU Member States.



Name of the company  
OKTE, a.s.

Area of operation  
Slovakia

Address  
Mlynské nivy 48  
821 09 Bratislava

<https://www.okte.sk>

# AUDIT REPORT



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Gerrards Cross  
Bucks SL9 8ES

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Fax: (01753) 886324

e-mail: [accounts@russellphillips.co.uk](mailto:accounts@russellphillips.co.uk)  
Website: [www.russellphillips.co.uk](http://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 2018.

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 2018 and 2019 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 2018, 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.



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and the International Association of Practising Accountants.

Directors: Jonathan Russell FCA      Executive Consultant: Stephen Cox  
Lina Pujara FCCA CTA              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 2017 was the basis for the standing charge component of the membership fee in 2018.

The activity fees are linked to the total certificates transferred between domains in the year.

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 Trail

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

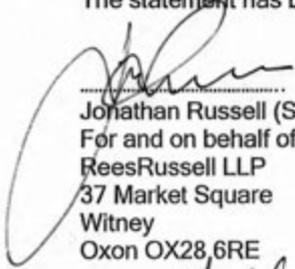
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Directors: Jonathan Russell FCA Executive Consultant: Stephen Cox  
Lisa Pajars FCCA CTA Consultant: Waseem Sadique FCA

#### 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 2018 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... 18 April 2019

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

# FINANCIAL STATEMENT

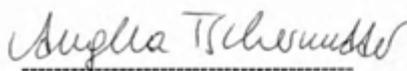
## ASSOCIATION OF ISSUING BODIES FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2018

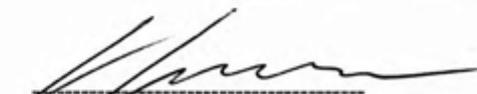
### Profit & Loss Account

	31/12/2017	31/12/2018
	<i>(amount in Euro)</i>	
Annual membership fee, small	40000	82500
Annual membership fee, medium	-	40000
Annual membership fee, large plus	240000	845000
Activity based membership fee	<u>512332</u>	<u>-----</u>
<b>Total operating revenues</b>	<b>792332</b>	<b>967500</b>
<b>Operating costs</b>		
Consultancy fee & administration	639583	606675
Travelling & Hotels	42974	29580
HUB Costs	93139	144526
Website maintenance	20527	36383
Other operating costs	44248	74171
Depreciation	<u>90915</u>	<u>90915</u>
<b>Total operating costs</b>	<b>(931386)</b>	<b>(982250)</b>
<b>Net profit/loss for the year</b>	<b><u>(139054)</u></b>	<b><u>(14750)</u></b>

### Balance Sheet

	31/12/2017	31/12/2018
	<i>(amount in Euro)</i>	
<b>Assets</b>		
Computer Hardware & Software	90916	1
Accounts receivable	58799	20000
Prepayment	-----	23703
Net Vat refund	16884	20726
Bank	<u>198118</u>	<u>295058</u>
<b>Total Assets</b>	<b>364717</b>	<b>359488</b>
<b>Liabilities</b>		
Accounts payable	<u>81773</u>	<u>91294</u>
<b>Total Net Assets</b>	<b><u>282944</u></b>	<b><u>268194</u></b>
Opening Reserve	421998	282944
<b>Profit/loss for the year</b>	<b><u>(139054)</u></b>	<b><u>(14750)</u></b>
<b>Closing Reserve</b>	<b><u>282944</u></b>	<b><u>268194</u></b>

  
ANGELA TSCHERNUTTER  
Date 9/4/2019

  
Lukas Groebke  
15/4/2019

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Lina Pujara FCCA CTA Consultant: Wassern 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-certificated (as one of very few printing companies).



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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 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 2018, a total of 54t 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

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SL9 8ES

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Registered in Belgium

Registration number

(numero d'entreprise):

0.864.645.330