

## **AIB REFLECTION PAPER ON THE FORTHCOMING RES DIRECTIVE**

20 June 2015

### **INTRODUCTION**

#### **Need for a new Directive**

While Article 15 of RES Directive (2009/28/EC) commendably created GOs as the primary method for electricity disclosure, it needs to be noted that most electricity disclosure relates to non-renewable energy. Therefore, a guarantee of origin (GO) mechanism solely for renewable energy cannot deliver fully reliable or even meaningful electricity disclosure information, as most of electricity disclosure would still be based on uncorrected statistics or self-declarations. This way, renewables, which bear most of the cost of electricity tracking and disclosure systems, cannot compete on a level playing field with fossil and nuclear production.

Furthermore, as long as GOs do not carry the value of associated carbon emissions, or otherwise enable this to be accessed, a critical (if not even the most critical) piece of the puzzle is missing: a consumer will not find it meaningful to purchase a wind power product if the carbon content of the electricity purchase is according to an overall generation mix, and not of that specific product. While GOs provide the instrument that empowers customers to make an active choice for contracts that provide electricity from renewable sources, the incentive will be much stronger if carbon is included in the picture. Finally, while the European Energy Certificate System (EECS) has been successful in harmonising the rules for GOs in many European countries, the rules for electricity disclosure still differ from country to country; creating market barriers, arbitrage, loss of disclosure information and (most importantly) double-counting of renewable energy.

#### **The Role of AIB in GO and Electricity Disclosure Policy**

Throughout the world, the importance of energy and policy-related issues is rising markedly: in particular, those issues which relate to clean energy and energy efficiency. Policy instruments which support tracking of the source of energy and disclosing this information to consumers will play a key role in the transition towards a sustainable future, which is a major goal of the EU's Energy Union.

Within the European Union, unique electronic guarantees of origin issued under the various Directives have the sole function of proving to a final customer the source of the energy from which the energy they consume was produced. They can be transferred between account-holders independently of the energy to which they relate.

The mission of the AIB is to guarantee the origin of European energy, and it does that by providing the infrastructure and information to support electricity source disclosure in all EU Member States, and those states bound to the EU by treaty (EEA countries, and the Energy Community).

The development and implementation of the EECS GO system has led to several important achievements:

- The creation of an accurate, reliable and transparent tracking mechanism for GOs through standardisation. This has led to a number of international initiatives basing themselves on the European EECS standard;

- Promotion of international recognition of GOs, so providing an important contribution to the European market for renewable energy; and
- Continuous growth of the GO market, so providing consumers with efficient access to increasing volumes of renewable energy.

AIB now faces the challenge of bringing the GO system to the next level, and is working to enable:

- Disclosure of the source of all consumed electricity to consumers by means of GOs, regardless of the energy source and technology employed, and according to a set of common rules; and
- Use of GOs to provide consumers with access to evidence of the carbon emissions associated with the production of the electricity they consume.

### **This Reflection Paper**

This reflection paper gathers the collective views of the Association of Issuing Bodies, which is widely recognised as an expert organisation for GOs, on how the revision of the RES Directive could significantly improve the legislative background of GOs. With the proposed changes we believe that GOs can:

- Become an even stronger mechanism for consumer empowerment in the field of RES policies
- Have a meaningful and mutually supporting link towards the European carbon emissions market and therefore work towards decreasing carbon emissions.
- Harmonise the rules of electricity disclosure across Europe in order to pave way for the Energy Union.

First, it sets out a number of issues inherent to the current regime, and which hinder its effectiveness; and second makes some proposals for a successor regime.

Thirdly, in Appendix A, it reviews the current Directives 2009/28/EC and 2009/72/EC, discussing a number of detailed issues arising from them and in Appendix B provides a retrospective view on the development of these Directives.

## **CHALLENGES ARISING FROM THE CURRENT REGIME**

Guarantees of Origin (GOs) and Electricity Disclosure (i.e. a process whereby electricity suppliers inform their customers about the energy origin and environmental impacts of sold electricity) belong together, because Electricity Disclosure is the sole purpose of GOs (preamble 52, and articles 2(j) and 15(1) of Directive 2009/28/EC).

Hence it would be most efficient and coherent if GOs and Electricity Disclosure were set out in a single piece of legislation, rather than that the two mechanisms are set out in three different Directives (2009/28/EC, 2009/72/EC and 2012/27/EC), because in essence they are a single mechanism. It is especially unfortunate that Directive 2009/72/EC does not refer to GOs.

The division of GOs from their purpose, Electricity Disclosure, has been part of the reason for the problems experienced by today's GO and Electricity Disclosure systems<sup>1</sup>, which AIB proposes that the revised RES Directive should resolve.

The issues include:

### **1) What about Electricity Disclosure not based on cancelled GOs?**

According to AIB statistics, in 2014 GOs were cancelled for 332 TWh of electricity consumption, which represents some 15% of the total electricity consumption of AIB members (ENTSO-e). This figure is likely to be even lower in countries which are not AIB members.

The relatively small market penetration is largely due to the fact that GOs are in most countries issued only for electricity production from renewable energy sources. This leaves a large unknown in Electricity Disclosure, because suppliers have to use other means of establishing the energy origin of the remaining 85%.

Currently the dominant method of determining the remaining energy origin is the so-called residual mix calculation. However, this is problematic, because the residual mix is calculated at a country level, leaving the majority of electricity consumers in a country having to make do with a homogenous mix, which doesn't support consumer empowerment. Residual mix also entails more inaccuracies than a system where all Electricity Disclosure is based on GOs due to such complexities as exchange-based trades and calculating the net effect of swap contracts. It is safe to say that most electricity tracking which occurs outside of the GO system (or in some cases national support schemes) cannot be accounted for in the residual mix. This is due to lack of transparent information, and it is therefore inherently double-counted.

Furthermore, extending the issuing of GOs to all energy sources would share the administrative cost of electricity disclosure to a larger group of actors, thereby significantly lowering cost per unit. Clearly, if all Electricity Disclosure was solely based on GOs, the system would be more reliable and meaningful, and would better promote consumer choice. This would allow renewables to compete with fossil and nuclear on a more level playing field, rather than putting the burdens on the renewable energy sector exclusively. Furthermore, it is in line with the recent recommendations issued by the Council of European Energy Regulators in the Advice on Customer Information on Sources of Electricity.

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<sup>1</sup> Note that elsewhere within this Reflection Paper "GO and Electricity Disclosure systems" are referred to as "Electricity Disclosure systems". This is because AIB considers the guarantee of Origin (GO) to be an intrinsic part of any Electricity Disclosure system.

**2) Unclear relationship between GOs, carbon emissions and radioactive waste**

According to Art. 3(9) of Directive 2009/72/EC, suppliers should disclose to their customers the content of carbon emissions and radioactive waste in sold electricity, yet neither carbon emissions nor radioactive waste is included in the information content of GOs required by Directive 2009/28/EC; nor does it enable it to be derived in a simple and transparent manner.

This means that tracking of environmental values happens through reference values, and in an unregulated arena that is not at all harmonised across Europe. It would be more logical for this information to be based on GOs. The reliable tracking of electricity and therefore the associated carbon emissions are helpful in supporting consumers' ability to take responsibility and influence the environmental impacts of their electricity consumption.

**3) Electricity Disclosure rules are not harmonised across Europe**

While Art. 15 of the Directive 2009/28/EC sets out an elaborate framework for GOs (which is supported by the EECs system), the rules for electricity disclosure are far less unified across Europe. This leads to arbitrage, market barriers and, to a large extent, double-counting of renewable energy generation.<sup>2</sup>

Even if the GO is a reliable instrument which cannot be duplicated, shortcomings in electricity disclosure rules (e.g. through inclusion of cancelled GOs into an implicit disclosure mix) damage the reliability and reputation of the entire Electricity Disclosure system.

**4) Electricity Disclosure system does not prevent 'double perception' by the public**

Typically, suppliers in GO exporting countries want to downplay the effect of GOs on the origin of electricity sold and concentrate on the national production mix, which makes the GO system even harder for consumers to understand.

The awareness of Electricity Disclosure systems could be significantly improved by developing clear rules for what needs to be disclosed to consumers, and emphasising the role of GOs as the sole permitted disclosure mechanism. Furthermore, quality labels could be based on GOs and therefore become an inherent part of the GO system to support the imposition of additional criteria, such as country of production, and empower consumers to directly affect the environment with their decisions regarding electricity purchases, thus driving forward the decarbonisation of the European economy not only from the supply, but also from the demand side.

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<sup>2</sup> As discussed in the RE-DISS paper "[Report on Improvements Achieved by the Project based on the Best Practice Recommendation](http://phase1.reliable-disclosure.org/upload/268-D5_1_Report_on_the_Actual_Improvements_v4-4.pdf)" ([http://phase1.reliable-disclosure.org/upload/268-D5\\_1\\_Report\\_on\\_the\\_Actual\\_Improvements\\_v4-4.pdf](http://phase1.reliable-disclosure.org/upload/268-D5_1_Report_on_the_Actual_Improvements_v4-4.pdf)).

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## **RECOMMENDATIONS FOR A SUCCESSOR REGIME**

To address the issues presented above and to strengthen the role of the Electricity Disclosure mechanism as a primary consumer empowerment tool in the field of electricity, AIB makes the following recommendations:

**1) GOs and Electricity Disclosure should be set out in a single Directive, because GOs and Electricity Disclosure are essentially components of the same mechanism.**

Rules currently put in place within Directives 2009/28/EC, 2009/72/EC and 2012/27/EC should be reformulated into a single Directive, to provide a consistent and mutually supportive basis for an effective Electricity Disclosure system which uses GOs as an enabling mechanism.

**2) Use of GOs for electricity disclosure should be mandatory and all produced electricity should automatically receive GOs**

While Electricity Disclosure extends to all supplied electricity, GOs are currently issued voluntarily and limited to renewable energy sources. It would be a logical and efficient enhancement of transparency to use GOs to disclose the origin of all electricity to consumers, therefore adding to consumer power. Furthermore, this supports and is consistent with the recent CEER Advice on Customer Information on the Sources of Electricity<sup>3</sup> as well as with the Best Practice Recommendations<sup>4</sup> of the RE-DISS<sup>5</sup> (Reliable Disclosure Systems for Europe) Project (recommendation 11).

The absence of mandatory GOs for all sources of electricity means that we do not have a complete picture of electricity supply across Europe, regardless of source. This makes it necessary to produce a European Attribute Mix, which is an administrative burden that ideally should not be necessary. It also makes it difficult to ensure that exports of one type of energy are balanced by imports of another (which is necessary to prevent consumers from being misinformed of the source of their electricity supply).

Furthermore, the use of a residual mix does not support supplier differentiation. This is because all suppliers have the same energy mix for the part of their electricity supply which is not tracked.

A further downside is that the full burden of administering the disclosure system is imposed upon the renewable electricity market. As this is upon a small part of the overall market, such a burden is disproportionate, and the per-unit cost of the GO system would be far less if all electricity generation were included.

The overall system cost might also decrease significantly if GOs were issued for all energy sources, as this would greatly simplify their calculation and - provided the usage of GOs became mandatory for all energies - would actually eliminate the need for residual mixes altogether.

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<sup>3</sup> [CEER Advice on Customer Information on Sources of Electricity](http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab5/C14-CEM-70-08_CustomerInfo-Sources%20of%20Electricity_Advice_March%202015_0.pdf)  
([http://www.ceer.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_PAPERS/Customers/Tab5/C14-CEM-70-08\\_CustomerInfo-Sources%20of%20Electricity\\_Advice\\_March%202015\\_0.pdf](http://www.ceer.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_PAPERS/Customers/Tab5/C14-CEM-70-08_CustomerInfo-Sources%20of%20Electricity_Advice_March%202015_0.pdf))

<sup>4</sup> [RE-DISS Best Practice Recommendations](http://www.reliable-disclosure.org/upload/125-RE-DISS_Best_Practice_Recommendations_v2_2_Final.pdf)  
([http://www.reliable-disclosure.org/upload/125-RE-DISS\\_Best\\_Practice\\_Recommendations\\_v2\\_2\\_Final.pdf](http://www.reliable-disclosure.org/upload/125-RE-DISS_Best_Practice_Recommendations_v2_2_Final.pdf))

<sup>5</sup> [RE-DISS project](http://www.reliable-disclosure.org/)  
(<http://www.reliable-disclosure.org/>)

The marginal cost of issuing GOs for nuclear and fossil sources is relatively small. This is because the GO system infrastructure is already in place, so there are no development costs: the system has been designed to support all sources of energy. Further, the quantity of production devices producing electricity from fossil and nuclear fuel is relatively small compared to those producing electricity from renewable energy, because unit size in MW is considerably larger for fossil and nuclear plants.

The AIB promotes a future Electricity Disclosure system where not only the sole purpose of a GO is Electricity Disclosure, but also where Electricity Disclosure is based solely on information from cancelled GOs. Where required, this could be supported by statistical allocation of house-hold and similar small-scale production and electricity under a support scheme, provided such a support scheme is also used in association with Electricity Disclosure<sup>6</sup>.

Contractual mechanisms, other certificate-based schemes and the use of statistical mixes (e.g. production or residual mix) for electricity disclosure should be prevented in order to protect the accuracy and reliability of the system.

### **3) Carbon and radioactive waste content of electricity should be explicitly based on information on GOs**

Currently there is no way of disclosing to consumers the emissions caused by the production of a specific unit of electricity. Consumers – particularly large ones – would like this information, so that they can calculate their carbon footprint for their Corporate Social Responsibility statements. Some companies currently use reference values for the associated fuel for this purpose, but this ignores certain aspects of carbon emission calculations, such as life cycle assessments, and should be harmonised with a common approach to linking GOs with carbon emissions.

To enable the requirements of Directive 2009/72/EC to be accurately and reliably implemented, GOs should provide the basic information that is needed to calculate the emitted carbon and generated radioactive waste arising from the underlying electricity production. The principles of calculating carbon emission values could be referred to by the Directive or added to it, either as an annex or as a set of guidelines, and reference values for carbon and radioactive waste would be useful. If GOs were the instrument for calculating carbon emissions information based on a Europe-wide set of rules, then this would enable traceable and reliable calculation of the carbon emissions that are caused by the electricity used by consumers – from households to energy intensive industries.<sup>7</sup> This would make the GO system more meaningful for consumers, and links well with the 2030 federal target on carbon emission reduction.

GOs address the consumption of energy, and therefore (in effect) responsibility for emissions of carbon, so they could be used by consumers for carbon foot-printing. The Greenhouse Gas Protocol Scope 2 Guidance<sup>8</sup>, which can be seen as an industry standard, explicitly refers to GOs as the mechanism for market-based carbon foot-printing in Europe. Currently an array of

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<sup>6</sup> Ideally, all disclosure would be based on GOs. However, this provision has been introduced to ensure that national support schemes are not affected in any way. For instance, in Germany GOs are not issued for electricity that receives the FiT – instead, FiT volumes are disclosed to consumers that paid for the FiT.

<sup>7</sup> See [RE100: 100 big electricity customers that commit to buying electricity from renewable sources](http://there100.org/action) (<http://there100.org/action>)

<sup>8</sup> The [Greenhouse Gas Protocol Scope 2 Guidance](http://www.ghgprotocol.org/scope_2_guidance) ([http://www.ghgprotocol.org/scope\\_2\\_guidance](http://www.ghgprotocol.org/scope_2_guidance))

different rules enabling compliance with the GHG Protocol (e.g. how to do so, and which values to use) exists in Europe. The AIB feels that it is important to ensure that carbon values are tracked in a reliable and consistent manner; and seeks to ensure this by technically enabling and supporting the GHG Protocol Scope 2 Guidance.

Use of GOs for carbon accounting would reinforce the primary task of GOs in supporting RES and empowering consumers; and might conceivably lead to the setting of targets for reducing the consumption of electricity in order to further reduce the production of carbon emissions.

AIB promotes a system whereby every European consumer can take responsibility for, and so influence, the carbon content of the electricity consumed; and believes that this information can be most reliably and efficiently based on GOs.

The use of GOs to disclose to consumers the carbon emitted in the production of their supplied electricity may well lead to greater consumer acceptance of delinking GOs from the associated energy, as consumers should find it easier to accept the accounting system offered by GOs if it provides the basis for the carbon accounting associated with the purchased electricity.

#### **4) Principal rules for Electricity Disclosure should be set out in a EC Directive**

One of the main practical problems of today's Electricity Disclosure system is that legislation and regulation differ from country to country, especially in the area of Electricity Disclosure. This lack of a set of harmonised rules makes it harder to establish a European market with sufficient liquidity, and also jeopardises the reliability of the GO system.

The following paragraphs describe the primary issues, which need to be addressed if Europe is to be successful in implementing a common electricity market (where appropriate, concrete proposals are made. However, it is more important that some form of harmony is achieved, than that such harmony should be achieved in any specific way):

##### **a. Suppliers should not be able to disclose the same renewable electricity twice**

According to Art. 3(9) of Directive 2009/72/EC, electricity suppliers should disclose to consumers their overall fuel mix for the preceding year. In most countries, this information can be complemented by adding information on the specific electricity product (e.g. wind power) supplied to that consumer. This means that two different pieces of disclosure information are included in the bill: the overall supplier mix; and information about the specific product purchased by the consumer.

This is problematic, because if the consumer has not purchased an electricity product containing production satisfying specific criteria (which is often the case), then the supplier will only disclose its overall mix – which includes the energy origin of all products sold and so is likely to overstate the renewable energy components in the blend (given that components of premium products usually contain renewable energy). Hence the true nature of supply to consumers is misrepresented, because the “remainder” product need not be disclosed.

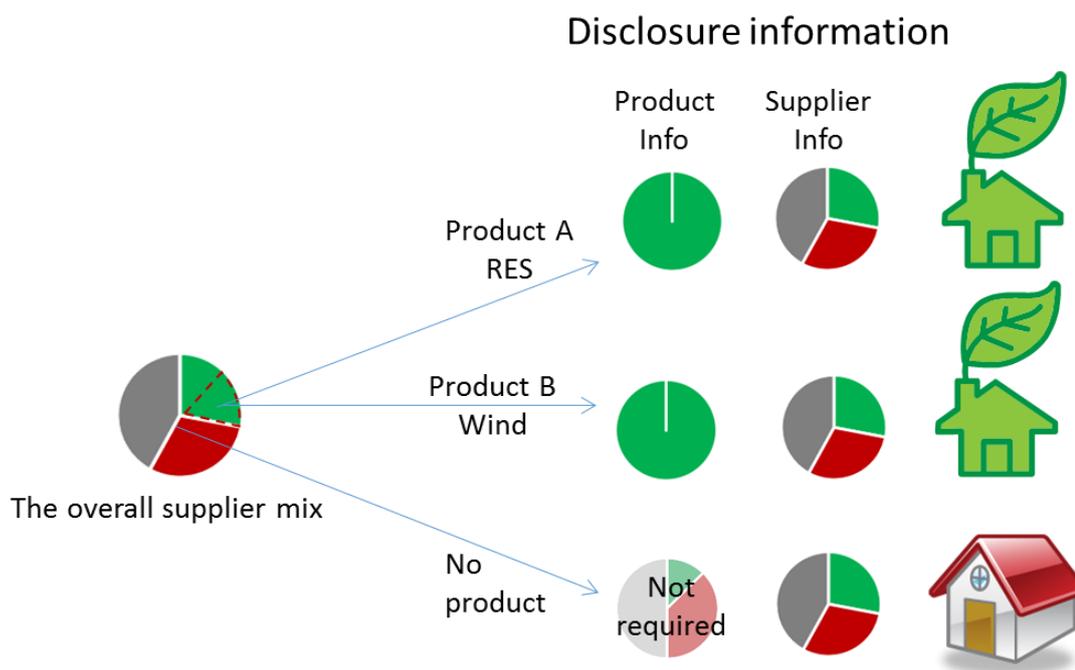


Figure 1: Product and Supplier mix

It is worth noting that although disclosure of both voluntary product mix and mandatory supplier mix occurs in many countries, some countries have explicitly ruled that only the supplier mix may be disclosed, whereas other countries have ruled that only the product mix may be disclosed.

This practice should be harmonised across Europe, for a number of reasons. For instance, many energy companies have subsidiaries operating in several countries, but supplier comparisons are often limited to comparisons of suppliers within a single country. For example, some companies market themselves as renewable in one country, despite holding a substantial amount of fossil capacity generation in another. Establishing a requirement for a single ‘supranational supplier mix’, consolidating the electricity supplied to consumers across Europe by this supplier, would allow for proper comparison.

The AIB supports the recommendations of CEER<sup>9</sup> that the overall fuel mix of the supplier should remain obligatory and, where a supplier discloses any individual product mix, then it should also be required to provide this information to customers that purchase its “default mix”, which should be the supplier mix minus any sold electricity products. This prevents double counting due to fuel being declared in both the default mix and in products (see

<sup>9</sup> **Recommendation 4:** To make the disclosure information reliable, either only the supplier mix should be disclosed, or both the supplier and the product mix should be disclosed to all customers of an electricity supplier. If the product mix is provided by the electricity supplier, this supplier should inform all of its customers of their product mix in a consistent manner, in order to minimise the risk of double disclosure within one company. Customers who signed a contract that guarantees them electricity from a specific source may get confused when they only receive information on the supplier mix. The product mix is valuable information for those customers, along with the supplier mix.

figure 1: “Product and Supplier Mix”). This is also in accordance with RE-DISS Best Practice Recommendation number 39.<sup>10</sup>

The supranational supplier mix should be made available to consumers, either on their bills or in company literature or on a webpage, but this must be done in a way which does not confuse consumers; and for that reason the national production mix should not be included in communications with consumers.

However, the AIB also considers that if a consumer purchases a product, then it is more relevant for them that the product itself is good, safe and robust, and it is only of secondary importance that the seller’s portfolio of purchased electricity has such qualities. For example, it is more important that a car is safe, than that the car manufacturer promotes safe working conditions (although that is also of lesser relevance); or it is more important that actual purchases of food are of high quality than that a supplier’s food is of high quality on average.

Due to the product mix being more relevant to the consumer than the supplier mix, AIB promotes a future Electricity Disclosure system where consumers should be provided with the product mix. This might be achieved by guaranteeing that all products provided by this supplier have the same mix; or it might be disclosed to all consumers on the bill (along with the supplier mix).

**b. Supported electricity should receive GOs. Where not, this should be publically reported and reflected in electricity source disclosure**

A provision of Art. 15(2) of Directive 2009/28/EC is that Member States may withhold support from producers for units of electricity that have received a GO. This has led to some countries issuing GOs for supported generation whilst others do not, so meaning that GOs cannot be used to account for the nature of this produced electricity.

This would represent an exception to any full disclosure scheme that uses GOs as the sole evidence of production, and hence some other form of evidence would be required.

For purposes of statistical information, electricity which has received support and has so been prevented from receiving GOs, should be reported publically.

**c. Harmonisation of timeframes and rules for the eligibility of GOs for electricity disclosure**

No timelines are laid down in the relevant directives as to when GOs for a certain year’s Electricity Disclosure should be used. This has led to the voluntary agreement of a deadline of 31<sup>st</sup> March for GO cancellations for the previous year’s Electricity Disclosure, as recommended by RE-DISS (recommendation 34<sup>11</sup>). But this has not been adopted in all countries, which acts against the interests of the Internal Market.

Furthermore, Directive 2009/28/EC provides a lifetime for GOs of 12 months after production of the associated electricity, but it does not regulate whether GOs that represent

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<sup>10</sup> “a) As required by Art. 3 (9) of the IEM Directive 2009/72/EC, annual disclosure of the supplier mix on or with the bill should be mandatory. This should also include information on environmental impacts.  
b) Suppliers offering two or more products which differ in terms of the origin of the energy should be required to give product-related disclosure information, including environmental impacts, to all their customers - including those who are buying the default “remaining” product of the supplier.”

<sup>11</sup> “The deadline for cancelling GOs for purposes of disclosure in a given year X should be 31 March of year X+1.”

generation attributes of one year should be eligible to be used for electricity disclosure of another year.

**d. Eligibility of closed distribution groups for GOs**

In some countries, GOs may be issued for generation which is consumed by closed distribution groups (e.g. a paper mill in the vicinity of a biomass plant), in which case they are usually cancelled upon issuance; whereas other countries do not issue GOs for such production.

If the intentions of the Internal Electricity Market Directive regarding consumer choice are to be realised, then ideally all consumers should have the right of choice over the source of their electricity; and not just those that are connected to the grid, but also closed distribution groups. Consumed electricity can solely be considered to have specific qualities where this is achieved by the cancellation of GOs, and will require careful and effective communication with and education of all parties involved.

**e. Issuance of GOs for electricity production from non-renewable energy sources**

Some countries already support the issuance of GOs for electricity produced from non-renewable energy sources. This gives suppliers in these countries an advantage compared with suppliers in other countries, given the greater ability that the former has to provide information on energy source and thus to differentiate its products.

As previously presented, AIB promotes a future Electricity Disclosure system based solely on GOs, where GOs are issued for all electricity production, as we feel this is the best guarantee for an cost efficient, reliable and fair system that is able to empower European electricity customers.

**f. Clarification of certain terms in the Renewables, Energy Efficiency and Internal Electricity Markets Directives**

For instance, “extent of support” and the “use” of a GO need to be defined (see the Appendix A to this Reflection Paper for details of these and other shortcomings of the current regime).

**5) The GO system should be able to support quality labels and sustainability criteria**

The nature of GOs has not been made sufficiently clear to consumer organisations and environmental NGOs, which therefore have not yet understood or endorsed the possibilities that GOs offer, and much marketing with GOs has been relatively unimaginative. Unfortunately, much of the communication is still at the level of ‘green’ versus ‘grey’ electricity, whereas GOs include all of the information needed by environmental NGOs to endorse consumption of electricity from specific energy sources. Indeed, GOs are often seen as a homogenous representation of all European renewable energy production, whereas they are actually information-rich and can enable very detailed product differentiation.

Furthermore, for example, it is possible to tag certain GOs with a “gold” mark to make differentiation easier, so that consumer organisations could recommend only those GOs which have specific marks. The concept of Independent Criteria Schemes has been introduced to enable simple differentiation of electricity production that qualifies under the criteria provided by quality labels and sustainability criteria schemes. EECs offers the facility for tagging GOs to demonstrate that they qualify under the criteria set by the ICS operator (e.g. labels such as EKOenergy, Naturemade and TÜV SÜD Generation EE, and sustainability criteria such as ISCC, BONSUCRO, RTRS, RSB, 2BSVS, RBSA, Greenenergy, Ensus,

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Redtractor, SQC, Redcert and NTA8080). Ideally, such ICSs (labels and sustainability criteria) should be accredited, with quality criteria being imposed upon their operators.

Furthermore, member states, suppliers and consumer organisations should be required to make clear to consumers where their energy comes from, so that consumers can exercise choice. This is especially important in countries with a high share of renewable energy, and where consumers instinctively assume that the energy they consume is renewable, without bothering to check for evidence to the contrary on their electricity bill.

AIB promotes a future Electricity Disclosure system where consumers understand that information tracked by GOs and disclosed to them by the electricity supplier offers the only reliable and trustworthy information about the origin of their electricity. This requires the support of legislation, environmental NGOs, consumer organisations and suppliers.

It is vital that each of these parties is made fully aware of the benefits of a harmonised Electricity Disclosure system backed by guarantees of origin; and that the opinions of each of these parties are both listened to and satisfied in the preparation of the revised Directive.

## **APPENDIX A: ISSUES ARISING FROM THE CURRENT RES AND IEM DIRECTIVES**

There are a number of points where the current Renewables Directive (2009/28/EC) and Internal Electricity Market Directive (2009/72/EC) might be improved; and we would ask for the following to be taken into consideration in any successor Directive(s):

### **1) Increase transparency in the GO market**

GO markets lack transparency, and this has led to lack of consumer confidence in the GO system. As in the electricity and gas markets, improving the transparency of the European framework for the GO wholesale market would clearly help in reinforcing consumer confidence and detecting potential frauds. Once a reporting scheme has been put in place, then the prices of trades should be reported to regulators.

### **2) Clear definition of the “use” of GO, and cancellation for Future Use to be regulated**

It is unclear what the “use” of a GO (as regulated in Art. 15(3) of the Renewables Directive) actually means. This takes place no later than the point at which it is cancelled, although there is no deadline for cancellation other than that it follows “use”. Further, some suppliers wish to cancel GOs for use later in the year, and during the time when they would have otherwise remained unexpired.

The above are currently not harmonised, and it would be helpful if they were. We therefore recommend the following clarification:

*'A GO shall be used to disclose the origin and carbon emissions associated with the production of one MWh of electricity which has been supplied to an end consumer, and shall do so no later than 12 months after the end of the production period stated on the GO. A GO shall be cancelled upon use.'*

### **3) Calculation of residual mixes to be replaced by mandatory full disclosure for all MWh produced solely by means of GO**

As mentioned above, there are a number of issues relating to the need to calculate the residual mix in present disclosure systems, due to the unavailability of GOs for each MWh. These include:

- a. The calculation of the residual mix is both administratively burdensome, and fraught with potential errors;
- b. GOs are not always issued for electricity receiving support; which means that statistical information about the market is not fully informed; and
- c. While consumers are informed of the amount of renewable electricity in their mix, and potentially its energy source, they are not informed of electricity sourced by fossil and nuclear energy, of which they remain ignorant.

As an example of why this is significant, the blend received by a consumer might be a mix of 50:50 renewable electricity and high-carbon fossil, leading to a mix that has a higher carbon content than the residual mix. The consumer has purchased 50% renewable electricity, but has in effect bought electricity which is less environmentally friendly than if he had bought the standard mix.

The mandatory use of GOs for disclosure of all energy resources resolves these issues.

**4) Issuance of one GO for each MWh of produced electricity**

GOs are issued for both renewable and high-efficiency cogeneration electricity, meaning competent bodies for disclosure have to take care not to double count. It would be more sensible to issue one electronic document conveying both forms of GO to prevent this.

**5) Extent of support to be replaced by identification of support received**

It is often impossible to quantify support received. Investment support may have been received many years ago, and records may have been lost; and the size of production support may vary with market price. Furthermore, the amount of support allocated to a MWh will vary from minute to minute, depending upon production, market price etc.

In addition, we have yet to hear of any suppliers who wish to know the financial amount of support received by each MWh.

For this reason, if it is to be retained, we consider that it would be more sensible to require producers to identify the schemes under which support has been awarded and received, both currently and in the past, so that suppliers can calculate the likely amount received for themselves, should this matter to them.

**6) Treatment of capacity upgrades and major refurbishment when assessing operational date**

The operational date of a production device can be many years ago – the first public electricity production facilities in Europe appeared over 130 years ago, and since then such plants will have been upgraded and refurbished. Thus the date when the plant first came on stream is of less interest than the age of the production units used to produce the electricity being delivered to the consumer, and the relationship of this plant with one or more support schemes.

It would be beneficial if there were a clear definition of electricity production units such that each independently-operating component of the unit could be associated with produced energy according to its age and/or association with support schemes.

**7) Ability of member states to assign responsibility to competent bodies within their geographic domain based on other criteria than location (e.g. on/off-grid, mainland/island)**

In Greece there are three competent bodies, each of which has responsibility for one of: grid-connected electricity, mainland non-grid-connected electricity, and island non-grid-connected electricity.

Similarly, in Cyprus, separate competent bodies take responsibility for grid-connected and non-grid-connected electricity.

There may be other countries that have similar situations.

It would be useful if the current text of the Directive were to be clarified so as to either require member states to appoint one such competent body to take prime responsibility for GOs; or to permit assignment to competent bodies based on criteria other than geography.

**8) Use of High-Efficiency Cogeneration (HEC) GOs for energy efficiency purposes to be either replaced or supplemented by their use for carbon emission disclosure**

To date, HEC GOs have been used by some member states, but they have yet to be used internationally; and there is no sign that this will happen in the near-medium future.

Part of the reason for this is that HEC GOs have no prescribed use, either in the Energy Efficiency Directive (2012/27/EC) which creates them; or in any other Directive.

Were HEC GOs the instrument for calculating the related carbon emissions based on a Europe-wide set of rules, then their attractiveness to the marketplace would increase substantially; in particular given that the higher efficiency of these production devices will also lead to correspondingly greater reductions of carbon emissions.

**9) Ex-domain cancellations by multinationals**

Many multi-nationals administer GO purchases for their national subsidiaries from their head offices, and wish to have a low-cost and simple method of cancelling GOs for their subsidiaries. Currently, they have two choices: either they cancel in one member state for use in another (so-called “ex-domain cancellations”), which complicates calculation of the residual mix in each member state; or they export to each consuming member state and cancel there, which is administratively burdensome and not so cost-effective.

These ex-domain cancellations are often not accepted by regulators, as they cannot verify their accuracy.

Either ex-domain cancellations should be prohibited or, if they are permitted, then some mechanism for informing the other member state(s) involved should be put in place. See also RE-DISS Best Practice Recommendation 9b<sup>12</sup>.

**10) Mutual recognition**

The conditions under which member states accept imported GOs, and permit these to be used within their disclosure schemes should ideally be the same, and should be harmonised across Europe.

The Commission is asked to bear this in mind in drafting the proposed Directive.

**11) Energy source disclosure**

Article 3 paragraph 9 of Directive 2009/72/EC provides that:

*“Member States shall ensure that electricity suppliers specifying or with the bills and in promotional materials made available to final customers:*

- (a) **the contribution of each energy source to the overall fuel mix of the supplier over the preceding year in a comprehensible and, at a national level, clearly comparable manner;***

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<sup>12</sup> *“So-called ex-domain cancellations of GOs, where a GO is cancelled in one registry and a proof of cancellation is then transferred to another country in order to be used there for disclosure purposes, should only be used if a secure electronic transfer is not possible and if there is an agreement on such ex-domain cancellations between the competent bodies involved. Statistical information on all ex-domain cancellations relating to a disclosure year should be made available differentiated by energy source in order to support Residual Mix calculations.”*

- (b) *at least the reference to existing reference sources, such as web pages, where information on the environmental impact, in terms of at least CO2 emissions and the radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier over the preceding year is publicly available; ...”*

This Reflection Paper has already addressed the issue of whether product or supplier mix should be provided to consumers, and proposes that the former is more relevant to consumers.

However, there is another issue relating to article 3: the need to strengthen the ability of consumers to make an educated choice by disclosing sufficient information about the energy source.

For instance, a supplier simply stating that the origin of electricity is “renewable” is not sufficient: consumers need to know whether the product that they have purchased contains energy from established large hydropower plants; or whether it contains energy from new solar photovoltaic or wind power plants. The two have different value in the eyes of consumers.

Perhaps more important, there is a big difference in the attractiveness to consumers of electricity from nuclear power, and of that produced from high and low carbon fuels. Thus we would recommend that in line with the approach taken by RE-DISS (which was based on an analysis of volumes and existing fuel categories), any future legislation requires energy sources to distinguish between:

- 1) Renewable energy, and whether
  - a. Biomass, and perhaps whether
    - i. Solid (including municipal waste, Industrial & commercial waste, wood, animal fats and biomass from agriculture)
    - ii. Liquid (including municipal biodegradable waste, black liquor, pure plant oil, waste plant oil and refined vegetable oil)
    - iii. Gas (including landfill gas, sewage gas, agricultural gas, gas from organic waste digestion and process gas)
  - b. Solar
    - i. Photovoltaic
    - ii. Concentration
  - c. Geothermal
  - d. Other heat (including aerothermal, hydrothermal and process heat)
  - e. Wind power
  - f. Hydro & marine power
- 2) Fossil, and whether:
  - a. Hard coal
  - b. Brown coal
  - c. Crude oil
  - d. Petroleum products
  - e. Liquid natural gas
  - f. Natural gas
  - g. Other, and whether:
    - i. Solid (including peat, municipal solid waste and industrial & commercial waste)

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- ii. Liquid
  - iii. Gaseous (including coal-derived gas, municipal gas and process gas)
  - iv. Heat (including process heat)
- 3) Nuclear Solid Radioactive fuel.

Member States should be free to subdivide these categories should they wish.

## **APPENDIX B: RETROSPECTIVE VIEW ON EXISTING RES/IEM DIRECTIVES**

The birth of Guarantees of Origin as a de-linked tracking mechanism was a process of long political debate and a hot topic for Member States concerned with economical interest and the security of energy supply. The role and purpose of GOs has changed on several occasions, and it was not until 2009 that they were clearly appointed their current purpose of solely providing evidence for purposes of electricity disclosure.

After the approval of the first internal energy market directive in 1996, power suppliers started seeking means of differentiating their products. Certificates emerged as a preferred way to disclose electricity with a renewable energy source, which led to the birth of the voluntary certificate system RECS at the turn of the Millennium. The first legislative framework for GOs was accepted in Directive 2001/77/EC, but the nature of the Directive regarding GOs was rather vague. The Directive didn't, for example, clearly define whether GOs were intended to measure the attainment of national indicative renewable energy targets, which were set for achievement by 2010 in the same Directive. Furthermore, the electricity disclosure Directive (2003/54/EC) didn't set a direct link between GOs and mandatory electricity disclosure.

The obscurity created by Directive 2001/77/EC was enforced by the debate over an EU-wide harmonised support scheme for renewable energy. This debate revolved around feed-in tariffs and tradable green certificates. The use of GOs as a flexible method for target compliance was rationalised by the efficient use of resources and fair burden sharing. The idea was to transfer RES production between Member States through 1-MWh certificates in order to make target attainment more flexible.

Between 2003 and 2008, no clear legislative progress concerning GOs took place. Member States that had implemented a Green Certificate support mechanism mostly favoured GO trading, whereas many FIT countries saw it as a potential threat to the national support system. A trend in the debate was that GO trading was increasingly seen as a complement to national support systems and not as a stand-alone EU-wide support scheme. This signified that GO trading might conceivably affect target compliance, and renewable electricity generators could either choose to participate in the national support scheme of the Member State or sell GOs to their own or another Member State's government.

In the wake of a new proposal by the EC in January 2008, a decision was made to put in an opt-out clause that gave Member States the possibility to withdraw from GO trading. Also, only MSs with a surplus in their interim targets could export GOs. The proposal further stated that if a GO is not financially supported by any national support scheme, it can be freely transferred and used for disclosure and then counted for the target of the MS in which it was cancelled.

The parliamentary reading of the GO proposal led to an increasingly negative opinion especially concerning its triple function (support, disclosure and target accounting). An amendment to the January 2008 proposal suggested that target accounting would be fully based on energy statistics. The transfer of renewable energy would only be allowed through tradable Transfer Accounting Certificates (TACs) completely separated from GOs. This would restore GOs to their role of disclosure, and target flexibility would be carried out through TACs and other flexibility mechanisms. TACs were, however, rejected due to the feared administrative burden in the amendment proposed in June 2008.

In September 2008, the Parliament rejected the EC's January 2008 proposal and suggested that GO trading would be disallowed and that GOs would be used solely for verifying compliance with targets. Statistical transfer was proposed as the mechanism for target flexibility.

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Finally, the role of GOs in target compliance was rejected in the December 2008 Directive Proposal that set the basis for the approved Directive 2009/28/EC. Directive 2009/28/EC clearly separated GOs and target compliance, and defined that the sole function of GOs is to track electricity generation attributes for the purpose of disclosure. This was also highlighted by linking GOs to energy source disclosure by electricity suppliers as set out in 2003/54/EC and later by 2009/72/EC, Art. 3(9). However it needs to be noted that a link from 2009/72/EC, Art. 3(9) is missing.