

CEER

**Council of European
Energy Regulators**



Fostering energy markets, empowering **consumers**.

**CEER Advice on
customer information on sources of
electricity**

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INFORMATION PAGE

Abstract

This document (C14-CEM-70-08) presents recommendations on how to make the system for disclosing how electricity has been produced more coherent and reliable. It also outlines how to make information on disclosure more transparent, so that customers can make decisions based on information they can trust. As we seek to put customers at the centre of CEER's work, we analysed the disclosure system from the customers' perspective. The recommendations developed in this Advice aim to empower electricity customers by providing them with adequate, reliable and consistent information and by developing a reliable, trustworthy and transparent disclosure system. Furthermore, the recommendations aim to push forward the integration of the European electricity market.

This Advice is considered timely given the current developments in the renewable sector and the growing interest of customers in electricity generated from renewable sources. But as national electricity retail market circumstances can vary greatly, the implementation of the recommendations in this CEER Advice should be done with some flexibility and should take into account the national market context.

Target Audience

NRAs, policy makers (European Commission and national authorities), consumer and environmental organisations, electricity suppliers, traders and energy sector in general.

Keywords

Bills, customer protection and empowerment, renewable energy.

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Related Documents

CEER documents

CEER has done work on the cost and financing of renewable support schemes:

- [CEER Status Review of Renewable Support Schemes in Europe](#), Ref: C12-SDE-33-03, 3 December 2012 - revised on 25 June 2013
- [CEER Report on Renewable Energy Support in Europe](#), Ref: C10-SDE-19-04a, 4-May-2011

CEER has also done work on Price Comparison Tools (PCTs):

- [CEER Guidelines of Good Practice on Price Comparison Tools](#), Ref: C12-CEM-54-03, 10 July 2012

External documents

Legislative documents:

- [Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC](#)
- [Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC](#)
- [Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC](#)
- [Directive 2004/8/EC of the European parliament and of the council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC](#)
- [Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC](#)
- [Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market](#)

Non-legislative documents:

- ECOHZ Position paper: [Strengthening the market for renewable electricity in Europe Guarantees of Origin](#), January 2013
- Concerted Action - Directive on the promotion of the use of energy from renewable sources, [Executive summary](#), 2013
- BEUC Position paper: [BEUC calls for an effective ban on misleading green claims](#), December 2011



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EXECUTIVE SUMMARY

The purpose of this Advice is to develop approaches and present recommendations on how to make electricity disclosure more transparent, resistant to fraud, reliable and consistent. This would enable customers to make a well-informed choice about their electricity supply, based on reliable and consistent information they can trust. Such a disclosure system enhances competition in the energy market by providing more reliable choices; which is why electricity disclosure and its main instrument – the Guarantee of Origin (GO) – is essential for creating a voluntary, consumer-driven market for renewables.

In recent years, throughout many European countries, customers have shown a growing interest in electricity generated from renewable energy sources (RES). In the light of this, the disclosure of information on electricity has become increasingly important. CEER places particular emphasis on customer issues. In 2012 we took the initiative to build, the “2020 vision for Europe’s energy customers” together with BEUC (the European Consumer Organisation). This vision can be characterised by the RASP principles governing the relationship between the energy sector and the customers: Reliability, Affordability, Simplicity, Protection and empowerment. As CEER puts customers at the centre of its work, we have analysed the topic of disclosure of electricity from a customer perspective.

With this Advice, CEER presents recommendations on disclosure issues, with the aim of empowering electricity customers. These recommendations originate, inter alia, from a broad discussion during a CEER workshop held in April 2013 (where stakeholders were given the opportunity to bring forward their perspective on disclosure systems and on how to present that information to customers), and from comments submitted to our public consultation (January- February 2014) by 69 stakeholders. To produce this advice, we have based our work on the expertise of different CEER groups (namely on consumer issues and on sustainable development).

Content and structure of the document

Useful and reliable information for customers on the source of their electricity relies on the ‘disclosure’ system. As detailed knowledge about disclosure systems is generally rather low, CEER’s approach when writing this Advice was not only to develop recommendations, but also to create a better understanding of the subject itself. Until now, many customers have not fully understood the issues related to disclosure, which has damaged their ability to trust the claims of their electricity suppliers. This document is therefore structured as follows:

- The first part of the document emphasises the need for the development of the “Advice on customer information regarding the sources of electricity” by providing background information.
- In chapter 2, the emphasis is placed on the explanation of disclosure systems in general, and on the need for an efficient and transparent disclosure system, in particular.
- Chapter 3 contains the recommendations developed by CEER. The final recommendations do not follow the exact structure of the draft Advice, which was put out for public consultation. The recommendations can be divided into several groups. As national electricity retail market circumstances can vary greatly, CEER wants to emphasise that the implementation of these non-binding recommendations should be done with some flexibility. The context of national markets and national legal requirements should be taken into account when implementing the recommendations. This CEER Advice aims at providing a *long-term goal* for the further harmonisation of



European disclosure systems. The recommendations should be seen as examples of good practice.

The first recommendations place an emphasis on the importance of access to adequate and reliable information for consumers and deal with “green” marketing and the need to improve pre-contractual information. It is crucial that electricity customers are provided with adequate, reliable and comprehensive information on electricity. By having access to such information, customers can be empowered to choose their electricity supplier and electricity contract not solely based on the price. Customer empowerment can be pursued in different ways:

- **Recommendation 1:** Where available, all regulated Price Comparison Tools (PCTs) should provide customers with an overview of electricity products and should provide a clear indication of whether the electricity contract guarantees that the source of electricity that will be supplied is renewable or not. Private PCTs should be encouraged to follow this practice.
- **Recommendation 2:** The National Regulatory Authority (NRA) (or other competent body) should ensure that there is a harmonised format proposing a minimum standard for displaying information concerning the origin¹ of electricity supplied from renewable sources and should specify the level of detail required for this information (i.e. on the annual statement).
- **Recommendation 3:** In order for customers to be thoroughly informed, two levels of information could be provided. Level 1 refers to the mandatory information that is already provided on the energy bill (supplier mix, related CO₂ emissions and radioactive waste) as required by European Directives. Level 2 would then provide additional information that is already available on the GO, such as the geographic origin (country or, if applicable, region), the specific renewable energy source(s) and electricity production technology(ies), as well as the product mix. This information would then be displayed to consumers, clearly separated from the mandatory disclosure statement, and could therefore be made available on the website of the supplier and/or of the competent body for disclosure. In that case, and if relevant, a reference in the annual statement should draw customers’ attention to this additional information.
- **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.

In addition to providing adequate information to customers, further development, improvement and integration of existing disclosure systems is necessary, if customer trust is

¹ When using “information concerning the origin”, CEER refers to the type of information that is available on the GO concerning the type of technology (meaning the different renewable energy source (RES) as stated in Directive 2009/72/EC: wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases) that will be used to produce the electricity and concerning the geographical origin (referring to the country and – if relevant – the region of origin).



to be strengthened and the European Union's (EU) internal energy market further developed. Therefore, CEER has developed recommendations regarding the disclosure system and its main instrument – the GO.

- **Recommendation 5:** When and where available, GOs should be used as the only instrument for tracking electricity from renewable sources within disclosure systems. The CEN/CENELEC and EECS² standards for electricity GOs should be used as a basis for further harmonisation of disclosure systems.
- **Recommendation 6:** Further harmonisation of the existing disclosure systems on a European level should make the systems more reliable and efficient. The competent body for disclosure should ensure that the utmost is done to make customers aware of the information that is provided to them regarding the electricity with which they are supplied. To foster trust in the system, customers should easily be able to find clear information about the functioning of the disclosure system. The publication of an annual disclosure report by the relevant, competent body is a good practice that can further increase transparency in the field of the origin of supplied electricity at national level.
- **Recommendation 7:** To promote the issuing of RES-GOs, all electricity suppliers should be encouraged to use GOs to prove to consumers the renewable origin of the electricity supplied under contracts that guarantee the supply of electricity produced from renewable sources.
- **Recommendation 8:** In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity. This extension would help in order to make the basis of the disclosure system more consistent and reliable, and also to provide opportunities for marketing electricity products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly-designed system addressing all electricity from all sources has the potential of reducing administrative burdens and costs. In order to avoid imposing an administrative burden and costs on electricity producers, it could, as a first step, be introduced on a voluntary basis.
- **Recommendation 9:** The further integration of electricity markets at European level should be accompanied by actively continuing the development of the European GO market, thus increasing price transparency and competition.

Recent developments in the renewables sector have led to a controversial debate about support schemes for renewables that also influences to a certain degree discussions on disclosure. In light of this, CEER has developed the following recommendations:

- **Recommendation 10:** All electricity from renewable sources should be disclosed to the customer, irrespective of whether or not it has received support from a renewable investment or production support scheme.
- **Recommendation 11:** As the GO is defined in the Directives as the only instrument for disclosure of electricity from renewable sources, it would be more consistent if all RES-GOs would be recognised for disclosure purposes, irrespective of whether the production was from supported or non-supported electricity plants. It would be recommendable that disclosure information is not influenced by renewable support schemes.

² See [Annex 2](#) for an explanation of these abbreviations and terms.



Finally, the Advice covers issues related to “green electricity labels”, which are increasingly introduced in the market due to a growing interest in RES electricity among customers.

- **Recommendation 12:** Private “green electricity” quality labels should be encouraged to use RES-GOs as their unique tracking mechanism, in order to be reliable and trusted by electricity customers. Private label models can – under certain circumstances – be considered as creating added value for more demanding customers, if it can be guaranteed that additional impact is associated with the contract (such as direct investment of funds in new renewable generation capacity or reductions of CO₂ emissions).



1 Introduction - Why CEER Advice on customer information on sources of electricity?

All electricity customers are entitled to reliable and relevant information on the source of their electricity. Customers need to be able to trust this information if it is to empower them and allow them to choose their electricity supplier on the basis of price or service performance levels, and behave in an environmental and sustainable manner.

In many countries, large industrial electricity customers are turning to the green electricity market in the context of Corporate Social Responsibility (CSR), sustainability reporting and carbon accounting. At the same time, in some countries, smaller industrial and household customers are also increasingly interested in electricity generated from renewables, choosing “green” electricity contracts which guarantee the supply of electricity from renewable sources. More and more electricity customers base their choice of a supplier and an electricity product not only on the price and the service level provided, but also on whether or not the electricity supplied is from renewable energy sources (RES). Customer demand is fast becoming a driving force for promoting renewable electricity production from the demand side.

The situation is very diverse across Europe. While this market is still developing in countries such as Portugal and Great Britain (approximately 0.5% of the retail market), in Belgium, already 13.36% of electricity contracts were “green” (in 2012).

In Spain, there are now 15 supply companies with “green” offers at low voltage, while in Austria, 81 suppliers present a supply mix of 100% renewables. The number of electricity public offers in Spain is 275. The market share of “green” offers accounts for 14% of domestic low voltage public offers and 29% of business low voltage public offers.

The most developed case can be found in Luxembourg, where the number of ‘green’ contracts accounts for 100% of the retail market. All national suppliers only offer green electricity to their retail customers.

The Swedish residual mix for 2013 represents only 1.4 % of the electricity sold. This means that 98.6 % is disclosed with GOs. Of the total Swedish fuel mix, 61.84 % is from a renewable source.

In several European countries, customers are already being offered not only the choice between ‘green’ (renewable) and ‘grey’ (fossil/nuclear) electricity contracts, but also more diversified options, such as Dutch wind (HollandseWind® by Eneco) in the Netherlands. In the Netherlands, no less than 63% of all contracts are now green.

It is also important to mention the customer demand for various national labels, which has shown a steady increase over the past years:

- Germany: OK. Power. The label promotes the use of and investment in new renewable power plants. Offered by several electricity suppliers.
- Germany: EE01. Stricter focus on age criteria. Promotes the use of and investment in new renewable power. Offered by several electricity suppliers.
- Europe: EKOenergy. Pan-European. Environmental criteria, fund allocation for environmental protection initiatives and new renewable power plants.

Also, building standards refer to GO certified power:

- LEED (US-based) and BREEAM (Europe-based). Certified renewable electricity (with GO) ensures additional points in the certification score. LEED explicitly recommends the use of EKOenergy labelled electricity.



- Attributes to renewable production: GO from power producers with no link to fossil or nuclear are deemed important among some corporate customers.

The consumption of electricity tracked by GOs has shown significant development since this system was established in 2001. In 2014, trends suggest that 40% of all electricity produced from renewable sources should have been documented by GOs, accounting for some 393 TWh³. The demand for GO-tracked electricity is growing steadily in many countries.

Despite this development, the level of awareness and knowledge among domestic customers is rather low regarding issues related to the disclosure of electricity sources and offers of electricity based on renewable sources. Systems for tracking and disclosing the attributes of electricity generation and their disclosure are complex and often difficult for customers to understand.

In many European Union (EU) Member States (MSs), a broad public debate on electricity based on renewable sources has recently been taking place, drawing people's attention to developments in the renewables sector. Such a broad discussion is important as so-called "green tariffs" for electricity produced from renewables can strongly influence the development of electricity markets and can serve several purposes. They can act in the long run as a mechanism to help drive investment in new renewable capacity, and at the same time, they can be a vehicle for customers to register a societal and/or personal preference in their choice of tariff and an assurance system to ensure customers are receiving energy generated from renewable sources.

In many countries, the offer of "green" electricity contracts is regulated, e.g. by stating that a contract can only be marketed as green when the renewable origin of the electricity supplied is proven by the use of a standardised instrument, such as a GO.

Green electricity marketing also raises new issues and in some cases, attracts criticism from, amongst others, consumer associations and environmental non-governmental organisations (NGOs). There are also critical voices, as is evidenced by BEUC for example: "While green electricity offers have stimulated customers to switch energy providers, the effect on the energy mix of companies through this increased demand remains limited"⁴.

Market functioning is improved when customers are given adequate information about energy sources (energy mix) and the technology used for producing electricity. Also, there is a need to ensure customers that the information they receive is reliable and GOs are the way to achieve this objective. Reliable and clear information can make electricity markets more competitive by providing more choice to customers and can be a driver for integration of the European energy market: trading electricity across borders also needs a reliable cross-border information system.

Also at policy level, the issue of promoting electricity production based on renewable sources is a primary concern. One of the aims of the European Union's Climate and Energy Package⁵

³ For the sake of completeness, additional explanation concerning this calculation has to be provided. In many cases, a producer of RES electricity (RES-E) must choose between receiving support and requesting a GO. As the value of support is normally greater than the market value of a GO, producers of a large proportion of RES-E may favour asking for support rather than for a GO. While the Renewables Directive requires Member States to offer GOs for all renewable electricity, it allows them to withhold support if a producer of RES-E has received a GO for that unit of electricity. This means that GOs are only issued for about 40% of all RES-E, the source of the remaining 60% either being tracked by means of electricity supply contracts, or contributing to the national residual mix.

⁴ [BEUC's response to ERGEG public consultation on GGP on Retail Market Monitoring, June 2010](#)

⁵ [2020 Climate and Energy Package](#)



is to reach a 20% share of renewable energy generation in EU energy consumption by 2020, in a cost-effective and economically efficient manner. With the implementation of the Renewable Energy Directive⁶ (hereinafter “RES Directive”) and national policies set out in National Renewable Energy Action plans, most MSs have experienced significant growth in renewable energy. This market growth of electricity generated from renewable sources raises several issues that need close attention.

This is confirmed by the recent verdict of the European Court of Justice in the Essent case⁷: “As to the purpose of the guarantees of origin, recital 10 in the preamble to Directive 2001/77 states that they are necessary in order to facilitate trade in green electricity and to increase transparency for the consumer’s choice between green electricity and electricity produced from non-renewable sources, whilst the second indent of Article 5(3) of that directive states that such guarantees of origin serve to enable producers of electricity to demonstrate that the electricity they sell is produced from renewable energy sources”.

According to the Eurobarometer survey published in July 2013 on “Attitudes of Europeans towards building the single market for green products”, 80% of Europeans are concerned by the environmental impact of their purchases. The same study reveals however, that only 25% ‘regularly’ buy green products. Reasons for this low number include the lack of information and the distrust towards producers’ self-claims about the environmental performance of their products. The Eurobarometer states that more than half of Europeans would be willing to change their purchasing habits for environmental reasons as they are fully or fairly confident that products indicated as environmental-friendly cause less damage to the environment and are good value for money. However, fewer feel fully informed about these issues⁸. Only half of EU citizens generally trust producers’ claims about the environmental performance of their products. More than half of the respondents believe that labels do not provide enough information about their environmental impact. Most people would welcome additional environmental information on product labels. Although the Eurobarometer does not specifically refer to electricity products as such, it gives a general overview of consumers’ behaviour/preferences.

As such, there might be at least three possible categories of customer:

1. those that do not care about the origin of their electricity;
2. those which are looking for trustworthy information and / or a label on their energy mix and electricity product; and
3. a smaller group which is more engaged in themes such as sustainability and renewables and is interested in detailed information on the source of their electricity.

Therefore, CEER is stepping up its efforts on these issues. We believe customers should be at the centre of energy market development. It is therefore of great importance to deal with these developments from a customer perspective. In the light of this, the purpose of this paper is to develop advice on approaches to make the disclosure system more coherent and reliable and information on disclosure more transparent, so that the customer can make a decision based on reliable, trustworthy information. A reliable disclosure system enhances

⁶ Directive 2009/28/EC of the European Parliament and the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC

⁷ <http://curia.europa.eu/juris/document/document.jsf?text=&docid=157525&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=283740>

⁸ [Attitudes of Europeans Towards Building The Single Market for Green Products](#), July 2013



not only competition in the energy market, but also empowers energy customers by providing them with more choice. Electricity disclosure and its main instrument – the GO – can be essential if a voluntary, consumer-driven market for renewables is to be created. GOs can be a fundamental tool for supporting consumer awareness and choice in a European power market, as only well-informed customers are able to make a choice that is not based on electricity prices alone. This is essential, since empowered and well-informed customers can be a key driver for the successful transformation of the energy system.

While CEER realises that the recommendations in this Advice may add to the (already high) amount of information that electricity customers are provided with, we feel this is valid as the information on the origin of the electricity supplied has shown to influence electricity customers' behaviour in those countries where disclosure information is the most advanced (e.g. Austria, Switzerland, Sweden, Belgium). Therefore, the fact that additional information is provided should not be seen as negative, but it might be relevant to look at all information that electricity customers are confronted with in order to reduce the amount and ensure that information provided indeed is relevant for the customer.

This report is considered timely given the current developments in the renewables sector. With this Advice, CEER also wants to respond to the European Council Conclusions on renewable energy of 3 December 2012⁹, where a need for a consistent application of fuel mix disclosure at EU level was identified as this would ensure that customers are provided with accurate and complete information on all fuel mix consumption within each MS.

As national electricity retail market circumstances can vary greatly, the implementation of the recommendations of this CEER Advice should be done with some flexibility. The context of national markets should be taken into account when implementing the recommendations.

Please note that in this Advice, the words 'customer' and 'consumer' are used interchangeably.

⁹ http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/trans/133950.pdf



2 Why do we need an efficient disclosure system?

The electricity system can be characterised by technical terms, such as frequency, voltage and short-circuit strength. In the context of the electricity market, however, with regard to energy policy and consumer interests, other information can be relevant e.g. the fuel source from which a certain volume of electricity was generated, the technology used to produce the electricity or the associated environmental impacts. These items of information related to electricity generation are called “attributes”.

In liberalised electricity markets, customers are able to choose not only their energy supplier, but also a particular energy product. As a result, they have the possibility to choose between different offers in terms of price, company profile, the sources of energy and the technologies used for electricity production. In order to make what is happening “behind the socket” visible to customers, the European Union has introduced a requirement for electricity suppliers to disclose the origins of the energy they have delivered to their customers. The objective of this provision is to enable customers to make an informed choice about the energy they buy. This takes into account both price and criteria related to the type of electricity generation (fuel mix used, CO₂ emissions and radioactive waste production).

As customers are generally willing to consider environmental issues if they have adequate information, an efficient and reliable disclosure system is key to empowering customers. An efficient disclosure system should therefore:

- meet its objective of informing customers about the origins of the electricity they consume (and its environmental impacts, namely CO₂ emissions and nuclear waste, according to EU Directive 2009/72/EC¹⁰); and
- be effective while not being too complex or costly to the suppliers and/or the issuing bodies who have to implement it. This would enhance the trust of customers towards product information.

To meet these challenges, all EU MSs are required to establish and maintain a Renewable Energy Guarantees of Origin (RES-GO) certification scheme according to Article 3.9 of the RES Directive. The purpose of the scheme is to promote and increase RES contribution to electricity production across the EU, providing a common platform to facilitate the trade of renewable electricity between MSs. In addition, the scheme sets out to provide increased transparency to customers, allowing them the choice to purchase renewable or non-renewable electricity.

The scheme serves to enable producers, traders and suppliers to demonstrate that the electricity they sell is from renewable sources.

However, the implementation of the provisions for electricity disclosure and GOs has led to the development of different systems in different MSs. While all disclosure systems need to be based on the concept of the GO as prescribed in the Directive, the methodology for disclosure can be different in each MS. The development of an efficient and effective “green electricity” market at European level is poorly supported by this situation, which makes the cross-border trade of electricity from renewable sources more difficult and makes disclosure systems more expensive to operate.

Some countries have extended the instrument of the GO to all types of electricity generation, not only for renewable sources or from high-efficiency Combined Heat and Power (CHP) (e.g. in Austria, Switzerland).

¹⁰ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC



At the same time, there has been a spontaneous harmonisation among many MSs on disclosure and RES-GOs through initiatives such as the CEN/CENELEC standard for electricity GOs and the AIB's EECS GO standard, supported by initiatives such as RECS International, and projects such as E-TRACK and RE-DISS I, etc. CEER believes that the need for further integration of the different disclosure systems and for a common framework for disclosure supported by a harmonised tracking system is motivated by the need for an efficient and reliable system at European level. National solutions can be reliable, but integrating them into the European market can be very costly. Therefore, a harmonised solution is preferable from an efficiency perspective.

Responsibilities of electricity suppliers

CEER would also like to point to the important role of market players in the context of disclosure. The following should be considered as a call for action by electricity suppliers. CEER believes that raising this issue is important to be able to provide a complete picture of how electricity offers, and in particular "green electricity" offers, are managed and marketed.

Suppliers are market players that act in close contact with energy customers and bear a significant responsibility regarding the provision of information. It is of great importance that suppliers provide their customers with consistent and comprehensive information. In compliance with certain EU Directives, electricity suppliers are obliged to inform their customers on a range of issues. As stated in the Electricity Directive¹¹, the supplier is obliged to specify in or with the energy bill and in promotional materials made available to final customers the contribution of each energy source to the overall fuel mix of the supplier and at least referring to existing reference sources, where information on the environmental impact is publicly available. Suppliers must act particularly carefully when it comes to information about the product fuel mix and the supplier fuel mix, as customers may be confused about the environmental benefit of the different mixes.

Even more confusion may be caused when companies which are active both as electricity suppliers and as electricity producers provide information on the generation mix. As the supplier mix and the production mix of a company can be substantially different (production can be sold to other suppliers, rather than being supplied to own customers), such an approach creates further confusion. Unfortunately, this approach is still followed by many sales representatives.

In addition, it is vital that when informing customers about the origin of their energy, the information is based on facts that can be verified. Therefore, if an electricity supplier claims to supply electricity from renewable sources, this claim must be proven by facts, i.e. through the information on the GO. Everything else has to be considered as marketing, which can be about opinions, rather than facts; consequently, this should not be presented as facts. Accountability of provided information has to be ensured.

In order to facilitate the comparison of such information for customers, it is crucial that the format in which the disclosure data is displayed is consistent in the long term.

The establishment of help desks or customer care centres within a supply company would be a good way of enhancing engagement with customers. Well-qualified staff who have received special training on disclosure-related issues can provide enquiring customers with adequate and reliable information. Such customer care centres could also provide

¹¹ Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC



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personalised information on consumption. This approach may even increase customers' trust in the company, which is of course also in the interest of the supplier.



3 Recommendations

3.1 Green marketing

This section refers to issues that may concern customers when they are looking for a new electricity contract - issues that are relevant to pre-contractual information. This mainly has to do with providing reliable and complete information to customers to empower them to make an active and informed choice.

3.1.1 Improvement of marketing terminology

Green electricity marketing programmes have increased in recent years. In order to distinguish their offers from others suppliers, as well as organisations that manage “green labels”, strategies to market and sell electricity produced from renewable energy have been developed. Subjective and non-measurable attributes, such as “sustainable” and “green” are increasingly used to define electricity. This use of such potentially ambiguous attributes can result in a potential risk of “green washing”, as there is no legal definition for many of these terms in many countries.

However, a number of countries have introduced legal definitions or regulations. In Norway for example, the Consumer Ombudsman published an industrial norm for the energy industry, stating that environmental claims should not be used for the marketing of electricity. The background of this is that the environmental consequences of different forms of power production are very difficult to compare, according to the Consumer Ombudsman. Therefore, traders in Norway are not allowed to use labels like “eco-friendly”, “green” or “sustainable”. Objective claims like “wind power” or “hydro power” must be used instead.

In Great Britain, rules and regulations are already in place which provide clarity on what kind of claims suppliers can make and which discourage suppliers from using vague terms. (In this particular case, these rules apply to all products in the market – not just to electricity – in order to guarantee a harmonised approach within GB for all products¹²).

The absence of an EU-wide legal definition of “green electricity” increases the potential for green washing. Some suppliers and electricity labels make quite an effort to market their electricity products as “greener” than they actually are. Often, suppliers advertise their products as being green because of their lower CO₂ emissions in comparison to other, traditional fossil fuelled technologies: by specifying “green electricity” for example as low-carbon electricity, suppliers could even consider nuclear power as green. Efficient generation technologies such as Combined Cycle Gas Turbine (CCGT) could be also considered as green, as they produce far less CO₂ emissions than coal-fired power plants. However, in reality, both generation technologies have a significant impact on the environment and would not be considered as green by the majority of customers, nor are they in accordance with the definition of renewable generation as defined by the European Directives.

In order to avoid green washing as described above, CEER recommends the further improvement of the terminology used in green electricity marketing. When informing customers, the terminology should be based on facts, guaranteeing accountability. Therefore, CEER would welcome the use of the terminology “electricity based on renewable

¹² More detailed information can be found on the websites of the [Advertising Standards Authority](#) and the Department for Environment, Food and Rural Affairs.



sources” or “electricity originated from renewable sources”. Nevertheless, CEER does not support banning the use of attributes such as “green” and “sustainable” in marketing and customer information, but rather recommends clearly defining these attributes and legislating for their use.

As EU Directives clearly define what a renewable source is, the risk of green washing electricity by market actors can be minimised by using these definitions as a starting reference point. Such an approach would also be beneficial to competition between electricity suppliers, increasing transparency on offered products.

The provision of information to customers

Empowering customers requires providing them with adequate and reliable information. According to the aforementioned Eurobarometer survey, more than three quarters of respondents are willing to consider environmental factors when purchasing products, and would even be willing to pay more for environmentally-friendly products if they were confident that the products were truly environmentally-friendly¹³. However, only half of EU citizens feel fully or fairly informed about these issues.

This raises the question of how already available information can be best used to inform customers about their options and possibilities.

3.1.2 Consistent information on origins of electricity in price comparison tools

As a result of the liberalisation of energy markets, electricity customers are able to choose their own electricity supplier. This has led to a growing number of suppliers and electricity products on the market in recent years. EU Directives impose the publication of disclosure information on the electricity bill in the form of the supplier mix, but this still makes it difficult for customers to compare their product with other existing ones, especially as electricity offers vary in price, quality and services.

Customers are confronted with a large and complex variety of information. One tool that would not only allow a simple and comprehensive display of such information, but would also facilitate its comparison, is the Price Comparison Tool (PCT).

To empower customers, all regulated PCTs (meaning PCTs operated by National Regulatory Authorities - NRAs) should provide a complete overview of existing electricity products from all suppliers. Furthermore, they should provide a clear indication of whether the electricity contract guarantees that the electricity supplied is produced from a renewable source. PCTs should also make it possible for users to look up information on the fuel mix of the potential supplier. To guarantee neutrality, it is of great importance to display information in a neutral and clear manner.

This way, customers would be able to make a choice in the pre-contractual phase that is not based solely on price and would also be able to take into account the energy sources of the electricity supplied. Furthermore, the consistent presentation and format of each product in PCTs would minimise confusion amongst customers.

PCTs are already offered by several NRAs across Europe. Private companies, NGOs and consumer bodies have also developed PCTs, which implies that the results and the level of information of such PCTs can vary significantly, as organisations pursue their own goals and have different frames of reference. In the light of this, private PCTs should be encouraged to

¹³ [Attitudes of Europeans Towards Building the Single Market for Green Products](#), July 2013.



follow this practice. The development of certain harmonised guidelines on how these PCTs should be established could avoid the spreading of different methodologies. The Guidelines of Good Practice on Price Comparison Tools published by CEER in 2012¹⁴ should serve as a starting point. Nonetheless, PCTs should allow a certain level of flexibility, so that companies are not forced to limit their offers to standard products.

In this context, it should be mentioned that, although PCTs can provide a guarantee and a clear indication whether the supplied electricity is based on renewable sources, the final outcome of disclosure will not be known until after the contract period or the reporting period – which can be a year later. This fact must be kept in mind.

Recommendation 1: All regulated Price Comparison Tools (PCTs) should provide customers with an overview of electricity products and should provide a clear indication of whether the electricity contract guarantees that the source of the electricity that will be supplied is renewable or not. Private PCTs should be encouraged to follow this practice.

A list with examples of websites hosting PCTs can be found in [Annex 4](#).

3.1.3 Harmonisation of how information on origin of electricity is presented (i.e. on the annual statement)

This section relates to issues that may concern customers after they have signed the contract for a “renewable” product; the so-called post-contractual phase. After the customer has signed a contract, the information that is relevant changes and is primarily provided on the energy bill (meaning the annual statement).

NRAs must ensure that all electricity suppliers use the same methodology when providing information to their customers on the origin of their electricity. However, even then, electricity bills (and information material) include a lot of information and hence can easily become confusing for customers. Therefore, it is of great importance to display the information on the origin of electricity in a comprehensive and clear manner. Even though in many countries there are legal or regulatory imperatives regarding the content and/or the format of the bill, a sample bill developed by the NRA or another competent body could serve as guidance for suppliers on how to display information concerning the origin of electricity on the annual statement in a clear manner.

As CEER considers bills as one of the main information tools for consumers, it is essential to have minimum standards on how certain information should be displayed in order to guarantee comprehensibility. The choice of a standardised format for fuel mix information is ultimately left to MSs. In order to facilitate comparison between suppliers, MSs should develop a harmonised format based on minimum standards for presenting this information, at least on a national level. The information regarding the electricity mix should be neutral. Valuation concerning the geographic origin and/or the technology used to produce the electricity supplied should be made by the customer, based on the reliable information presented on or with the bill.

¹⁴ [CEER Guidelines of Good Practice on Price Comparison Tools](#), Ref: C12-CEM-54-03, 10 July 2012



At the same time, such minimum standards, which could be developed by NRAs, should allow enough flexibility for companies to individualise their bill, as they consider bills as the main commercial instrument.

Such an approach would not only cause less confusion among customers, but would also facilitate the comparison of suppliers' fuel mix.

Recommendation 2: The NRA (or other competent body) should ensure there is a harmonised format proposing a minimum standard for displaying information concerning the origin of the electricity that is supplied from renewable sources and should specify the level of detail required for this information (i.e. on the annual statement).

3.1.4 Providing customers with additional information on the basis of the GO

It is important to recognise the fact that electricity customers are not a homogenous group, but pursue their own interests and have different levels of knowledge on these topics. This raises the question of what is the appropriate level of detail which should be provided to customers. On the one hand, customers should have access to detailed information in order to be able to make a well-informed choice. On the other hand, the provision of too much and overly detailed information can lead to confusion and loss of interest. Therefore, a balance has to be found to ensure simplicity and comprehensibility on the one side, and reliability and consistency of information on the other. This can be done by presenting information in a tiered way; on websites, by providing different levels with increasingly detailed information.

First, the mandatory level would contain all the information that suppliers must provide to customers as required by the Directives. The Electricity Directive obliges electricity suppliers to specify in their bill and in promotional materials the contribution of each energy source to the overall fuel mix of the supplier. In addition, they are obliged to publish information on the environmental impact, at least in terms of CO₂ emissions and radioactive waste resulting from the electricity produced. This information must not interfere with the comprehensibility of the bill / annual statement.

Certain customers demand to be able to make a more diversified choice, not just between "green" or "grey" electricity. To do so, customers need adequate and reliable information that is based on facts rather than on assumptions or opinions.

Bearing this in mind, a second, voluntary level, including information of a higher level of detail – which already exists inside the GO system – could be made available to the customer. It would be useful for customers to not only receive information about whether or not the electricity they consume is generated by renewable sources. Empowered customers also show increased interest in knowing the geographic origin of electricity and the source from which it is produced. Hence, the availability of more detailed information on the geographic origin of the electricity and the technology could benefit those customers.

Consequently, it is of great importance to provide clear and easy access to this information, which could be made available in addition to the mandatory disclosure statement. In order not to overload customers with information on the bill, the provision of such detailed information on the suppliers' or the NRAs' (or other relevant public bodies') websites could be useful. This way, customers with a high demand for information and environmental commitment are able to easily access detailed information. At the same time, customers who are not interested in additional information will not be confronted with it on their bill. A



reference could be displayed on the bill, drawing the attention of customers to additional information on the website. In the light of this, it is important that the provision of additional information is implemented in a cost-effective manner.

This approach would also guarantee a certain level of flexibility for suppliers to develop their own marketing strategies.

Recommendation 3: For customers to be thoroughly informed, two levels of information could be provided. Level 1 refers to the mandatory information that is already provided on the bill (supplier mix, related CO₂ emissions and radioactive waste) as required by the Directives. Level 2 would then provide additional information that is already available on the GO, such as the geographic origin (country or, if applicable, region), the specific renewable energy source(s) and electricity production technology(ies) and the product mix. This information would then be displayed to consumers, clearly separated from the mandatory disclosure statement, and could therefore be made available on the website of the supplier and/or of the competent body for disclosure. In that case, and if relevant, a reference on the annual statement should draw customers' attention to this additional information.

3.1.5 Consistent publication of product and supplier mix¹⁵

Different information is relevant to customers at different moments. When choosing a new supplier and/or electricity contract, the suppliers' fuel mix can be relevant as it provides a general overview of the companies' strategy¹⁶. As stated in the Electricity Directive, information on the environmental impact, as well as the contribution of each energy source to the overall supplier mix, must be provided on the supplier's portfolio.

For customers, who have already chosen a contract solely based on renewables, the product mix may also be of importance. The fact that the supplier mix may differ from the product mix (depending on the different offers a company provides) creates a high risk of confusion for consumers; for instance, when a contract that guarantees 100% electricity from renewable sources is offered by a supplier which has a diversified production or sourcing portfolio.

Therefore, in some cases, the supplier mix may also be confusing for the customer. This is best explained by the following example:

Customer A has consciously chosen an electricity offer that consists of 100% electricity generated from renewable sources. In addition to this particular 100% RES tariff, the supplier also provides other offers with a different product mix. As a consequence, the supplier mix will strongly vary from the product mix of the product that customer A has chosen. The display of the supplier mix only on the bill may

¹⁵ The supplier mix indicates which energy sources have been used in generating all the electricity supplied to customers by one supplier, that is to say the sourcing portfolio for all electricity produced. The product mix provides information regarding the energy sources one individual product is composed of. As one supplier may offer several products, the supplier mix can vary from the product mix.

¹⁶ The supplier mix is an element of information that is requested by the Electricity Directive. As some companies, who are active both in supply and generation activities, unfortunately still focus on the generation mix rather than the supplier mix, particular attention is demanded. The supplier mix should not be confused with the generation mix of an electricity producer. Due to the division of generation and supply activities, the generation mix of a company can indeed be different from the supplier mix of the same company. It should no longer be used for consumer information.



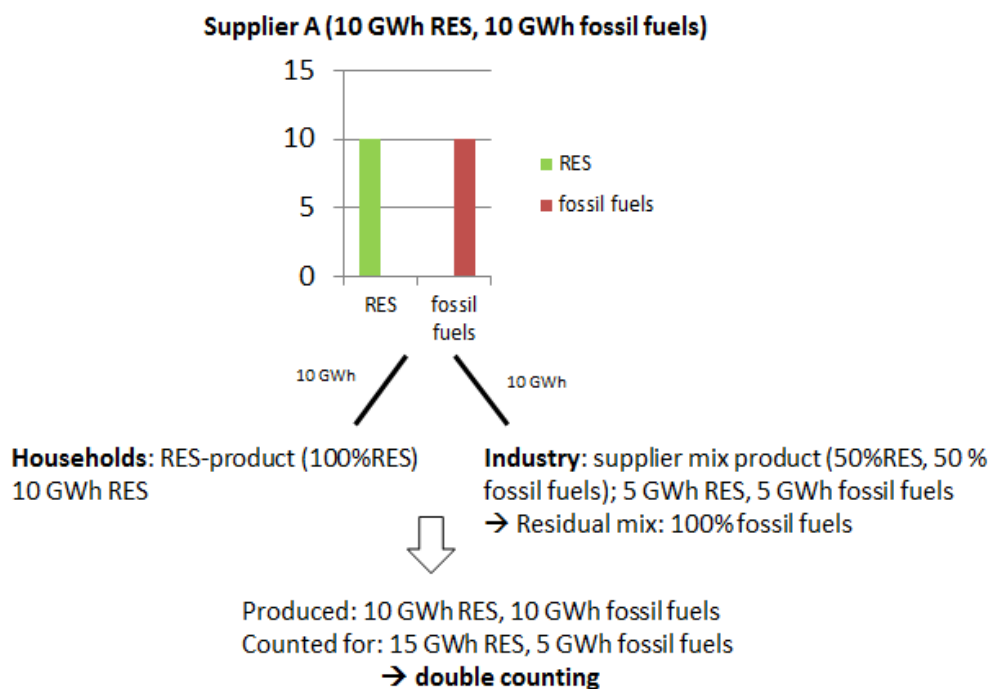
create confusion as the customer, who has chosen a renewables contract, only sees the supplier fuel mix that also includes fossil fuels and is not coherent with the customers' chosen product mix.

In light of this, two options are possible for ensuring a reliable disclosure system; 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 a supplier that sells specific products guaranteeing electricity from a specific source provides information regarding the product mix, the supplier should provide the same degree of information about the particular product mix to all of its customers. In this case, the 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. For suppliers with only one electricity product, or without products that guarantee electricity from a certain source, this is not a requirement.

This is crucial in order to avoid deceiving customers. The graph below explains the problem that can arise due to an inconsistent publication of the product mix and the supplier mix.

Suppose supplier A sells in total 10 GWh generated from renewables and 10 GWh generated from fossil fuels. In total, all of its household customers consume 10 GWh electricity and all of its industrial customers also consume 10 GWh. All household customers have chosen a product that guarantees 100% electricity from renewable sources. Consequently, the industrial customers consume 100% electricity from fossil fuels. As the industry does not have a specific product mix, their bill only provides information on the supplier mix (50% RES, 50% fossil fuels). This way, the industrial customers are led to believe that they receive this supply mix. However, this is not the case as all electricity from renewables has already been sold to the household customers. This approach leads to a specific form of fraud, which can also be seen as double disclosure or green washing.





In light of this, the above mentioned example could be solved through two approaches:

- 1) The supplier only provides the supplier mix.
- 2) If the supplier decides to provide also information on the product mix, the supplier would have to provide information to the industrial customers on the supplier mix, but also on the (residual) product mix, which is 100% electricity from fossil fuels for industrial customers.

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.

3.2 The disclosure system and Guarantees of Origin (GOs)

In light of the following recommendations, it is important to mention that MSs have followed different approaches when implementing the RES Directive, resulting in the existence of different disclosure systems across Europe. Therefore, the legal framework of these MSs has to be taken into consideration when discussing the following recommendations. Although the legal framework of individual MSs may not be completely in line with one or more of the recommendations, CEER believes that the overall objective of this Advice is the development of a forward-looking thinking of how the disclosure system can be improved at European level. Therefore, the following long-term recommendations are presented, even if the legal framework of certain MSs may not permit to fully implement the recommendations.

3.2.1 Europe-wide harmonisation of national disclosure systems

GOs are essential for creating a consumer-driven market for renewables. They give customers confidence about the source of their electricity as they can (indirectly) provide reliable information to customers who then are able to make a well-informed decision. This also enables them to shape the transformation of the energy system. GOs constitute a change-enabling instrument complying with the customers' right for information on purchased energy products.¹⁷

The use of the GO as the main voluntary electricity disclosure mechanism underpins the fact that the GO market is already consumer-driven, market based and adherent to reliable, transparent and robust principles. As GOs are the only tracking instrument with a clear legal basis at European level, they should be used as the only instrument for tracking electricity

¹⁷ Nevertheless, it is worth mentioning that in some jurisdictions, other certificates exist besides GOs. As long as GOs are not considered as the only tracking mechanism, and as long as other tracking instruments are allowed, other tracking mechanisms should be regulated clearly with transparent and comprehensive rules to minimise the risk of double disclosure.



from renewable sources within disclosure systems. Other tracking mechanisms, such as contract-based tracking should be avoided and should not be accepted any longer. Therefore, the use of GOs on a mandatory basis for disclosure would be the logical next step, as it would support the EU's increased focus on the role of customers in changing energy behaviour.

Furthermore, it is imperative to define certain extra criteria that GOs and disclosure should fulfil. The CEN / CENELEC standard for electricity GOs and the recommendations on GOs developed by RE-DISS should be used as a basis for further harmonisation¹⁸.

As long as GOs are limited to electricity produced by renewable sources and co-generation, the residual mix should be used as a disclosure instrument for electricity of unknown origin, based on a common methodology. It should be provided as a default set of data for disclosure of energy volumes for which no attributes are available, based on cancelled GOs. The use of uncorrected generation statistics for purposes of disclosure should be avoided as this can lead to double disclosure. The methodology for calculating the residual mix developed by RE-DISS could be used as a common basis.

Furthermore, it should be highlighted that the different Directives (2009/28/EC and 2009/72/EC) regulate the GO system and the European disclosure system as two separate instruments, which are not interlinked. More emphasis must be placed on the fact that this is not the case and that the GO system and the disclosure system are strongly linked to each other.

Recommendation 5: When and where available, GOs should be used as the only instrument for tracking electricity from renewable sources within disclosure systems. The CEN / CENELEC and EECs standards for electricity GOs should be used as a basis for further harmonisation of disclosure systems

As already mentioned, the implementation of the EU Directives with regard to disclosure has led to the development of different systems in different MSs. The RES Directive clearly states that only GOs should be used for the purpose of proving to final customers that a given share or quantity of energy is produced from renewable sources.

Currently, other tracking mechanisms which are similar to GOs are also being used but do not have the same reliability, such as the soon-to-be-withdrawn RECS certificates and some green power quality labels. There is a manifest risk that energy might be associated with generation attributes twice (double disclosure) by using overlapping tracking mechanisms.

Through voluntary cooperation and research programs such as RE-DISS, there has been spontaneous harmonisation among many MSs. However, the need for further integration of the different disclosure systems is motivated by the need for an efficient and reliable system at European level. National solutions can be reliable, but integration of non-harmonised national disclosure systems into the European market would be very costly. Therefore, from an efficiency and affordability perspective, a harmonised solution is preferable. The coherent implementation of the RES Directive in all European countries should be promoted.

As a first step, the differences between existing disclosure systems of different countries must be identified and made transparent. This way, it is possible to closely compare the different systems and draw appropriate conclusions. As a second and more important step,

¹⁸ More detailed information on the RE-DISS recommendations and methodology can be found at <http://www.reliable-disclosure.org/>



the different disclosure systems should be harmonised. The objective should be to create a common and reliable basis for disclosure systems at European level; namely the use of GOs as a common basis. This is also stated in the RES Directive.

Further harmonisation should be implemented in a cost-effective way, keeping in mind that a harmonised approach will surely be more cost efficient than integrating diverging disclosure systems into a single European electricity market.

Disclosure is an abstract and therefore hard to understand topic

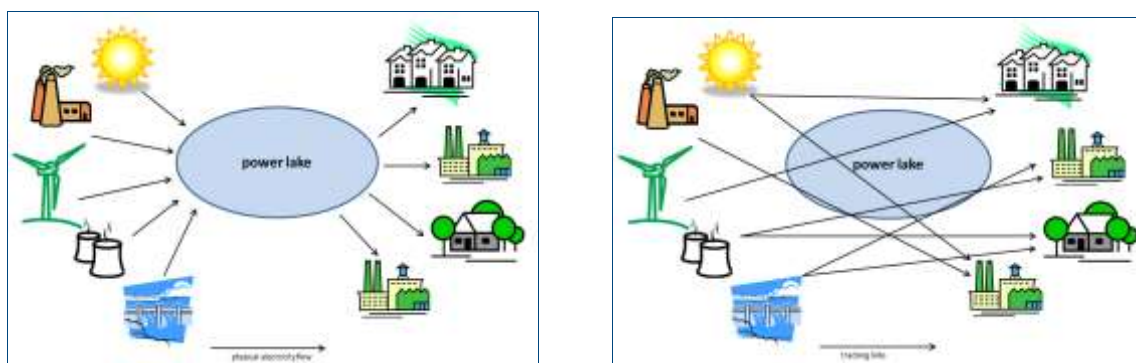
Although disclosure might appear to consumers as an abstract and complicated topic, it is important that they can trust the system. As indicated above, different groups of customers exist with different needs and interests.

A reliable disclosure system needs to be developed so that people can trust it. This is important since the majority of customers do not demonstrate great interest in the functioning of the electricity market and, in particular, of the disclosure system. For this group of customers, it is primarily important to be able to place trust in the system, without having to understand the functioning of the system as such. This can be enabled by developing a well-functioning, reliable and trustworthy electricity disclosure system.

However, information on how the system works has to be made accessible for consumers demanding this information – therefore guaranteeing transparency and empowerment. For the smaller group of customers showing more interest in the functioning of the disclosure system, access to more detailed information on how the electricity markets, the disclosure system, and the GO system work, should be made easier. They should be aware of the fact that the physical flow of electricity from generation to consumption follows physical laws, and that the flow does not directly correspond to commercial relationships in the electricity market. In other words, electrons do not flow according to contracts and the tracking of attributes does not follow the physical flow in the transmission and distribution systems. This means, that GO certificates can end up somewhere entirely different from the physical energy they represent itself.

Information should be made available explaining that by buying electricity based on renewables, it cannot be guaranteed that customers physically consume electricity produced by renewable sources. It only ensures that the same amount of electricity (which is consumed) has been generated by renewables somewhere in the electricity market.

This phenomenon may be explained to customers by the so-called “power lake” metaphor.





In this metaphor, the electricity grid is seen as a lake, into which all produced electricity flows and from which the electricity is taken to supply customers. Therefore, electricity from renewables is mixed with electricity from other sources and it is not possible to ‘source’ the electricity as it comes back out of the lake. This metaphor may serve as an explanation to customers who are unaware of the fact that when electricity is produced from renewable sources, the electrons themselves and the GO that proves the renewable origins of the electrons cannot be linked and that the GO must be traded independently.

Through such explanations doubts about the GO system from customers, who expect to get 100% renewable energy physically delivered to their houses when suppliers claim “100% renewables”, can be countered. This knowledge is crucial for interested customers in order to avoid accusations about green washing through the GO system.

At the same time it should be highlighted for consumers that a GO (for electricity produced by renewables sources) in present circumstances does not automatically guarantee a direct effect on investment in new renewable production. Although there might not be a direct positive effect on investment, an overall positive environmental benefit arises - the fact that a certain amount of electricity based on renewables sources has been consumed that otherwise would have to be produced by fossil fuels.

Furthermore, this metaphor also serves as an explanation for the fact that electricity as such does not “have a colour” and that it is always neutral and possesses the same physical features. The only thing that differs is the source of electricity, i.e. its production. Electricity is not “green” although it has been produced by renewables, just as electricity generated by coal is never black. Consequently, the “water” of the “power lake” does not have a colour and once mixed, the different sources of electricity in the lake cannot be distinguished anymore from each other.

Therefore, it is crucial to develop instruments that facilitate the access to such information.

Publication of an annual disclosure report

One instrument that could enhance customers’ knowledge and awareness concerning the disclosure system, and in particular the origin of the electricity they use, is a yearly disclosure report published by the NRA or other competent body. Such a report should contain the results from the monitoring of disclosure activities of each supplier and would therefore provide information on the historic performance of each supplier individually. At the same time it could provide an overview on how the disclosure system works.

Such a report would put further pressure on companies to adequately disclose their information. As NRAs are obliged by the EU Directive to ensure that suppliers disclose their energy mix, the development of such a report would represent little additional work and would have a great impact on improving customers’ knowledge. Experience has shown that in countries where such reports are already published, the report is well received not only by NGOs but also by consumer bodies and customers themselves; although this report is less likely to influence the process of choosing a supplier/contract directly. Therefore, the relevance of an annual disclosure report should be considered in the context of the national retail market circumstances and if relevant, be implemented with some flexibility by the competent body.

Examples of already existing disclosure reports can be found in [Annex 5](#).



Recommendation 6: Further harmonisation of existing disclosure systems on a European level should make them more reliable and efficient. The competent body for disclosure should do the utmost to ensure that customers are aware of the information that is provided to them regarding the electricity with which they are supplied. To foster trust in the disclosure system, customers should easily be able to find clear information about the functioning of the disclosure systems. The publication of an annual disclosure report by the competent body for disclosure is a good practice that can further increase transparency in the field of the origin of supplied electricity at national level.

3.2.2 Mandatory use of RES-GOs for green electricity contracts

In the RES Directive, GOs are issued in response to a request from a producer of electricity from renewable sources. The producer has the right to request the issuing of GOs, but this means that not all electricity from renewable sources receives a GO. However, to strengthen the disclosure system and make it more reliable and transparent, the issuing of GOs should no longer be voluntary - in response to a request from a producer - but be mandatory for all electricity produced from renewable sources, irrespective of potential support schemes. Complete and correct information on how much electricity generated from renewable sources is produced requires the implementation of the mandatory issuing of RES-GOs. When implementing the mandatory issuing of RES-GOs, concerns about administrative costs have to be taken into consideration. As the GO system is recognised as being the most cost-effective way of tracking electricity, cost efficiency can be ensured through such an approach.

The mandatory issuing of RES-GO would be a straightforward means to safeguarding proper accounting of electricity from renewable sources. In order to avoid the mandatory issuing of GOs driving up costs for producers, CEER advocates, on a long-term perspective, mandating the use of GOs for suppliers' products (electricity suppliers should use GOs to prove the renewable origin of their green contracts and to distinguish their different electricity products) instead of mandating the issuing of GOs on producers. This long term objective would create higher demand for GOs without automatically imposing additional burden and costs to producers that are not interested in receiving GOs. As a first step, electricity suppliers should be actively encouraged to use GOs to prove the renewable origin of their electricity to customers.

Recommendation 7: To promote the issuing of RES-GOs, all electricity suppliers should be encouraged to use GOs to prove the renewable origin of the electricity supplied to customers under contracts that guarantee the supply of electricity produced from renewable sources.

3.2.3 Extension of GOs to all sources of electricity

Although GOs are defined in the RES Directive as an instrument solely for electricity generated from renewable sources and high-efficiency cogeneration, several arguments can be made to expand the issuing of GOs to different energy sources. By obliging electricity suppliers to disclose all their electricity with GOs (irrespective of whether electricity is produced by renewable sources or by fossil fuel plants), the problem of double disclosure can be eradicated.



Customers have the right to reliable information concerning their electricity mix, irrespective of whether or not they are supplied with electricity from renewables. The extension of GOs to all electricity would: 1) make the basis for a fuel mix disclosure system more consistent and transparent, 2) simplify the disclosure and residual mix calculation and 3) minimise the risk of double disclosure. This approach would further avoid the existence of different tracking mechanisms and would create a disclosure system that is more transparent and secure against fraud. Furthermore, it would provide opportunities for dependable and trustworthy market offers for electricity which are based on specific non-renewable sources. This, for example, is the case in Sweden, where one and the same supplier offers specific contracts which are either based on renewables or on nuclear.

The extension of GOs to all sources of electricity has already been implemented into national law in some MSs; such as Austria, Sweden, and Switzerland. Experience has shown that the expansion of GOs to energy of all sources has led to a significant rise of people's awareness towards and acceptance of disclosure.

When introducing such an approach, concerns about implementation costs have to be taken into consideration. The extension of GOs to all sources should be implemented in a cost-efficient manner and disproportionate additional bureaucratic burden should be avoided. However, as there is the obligation to disclose this information already now, using a simple and uniform system for all sources of electricity could result in a reduction of the administrative burden; compared to the current system which aims at tracking different sources using different instruments/methodologies.

Recommendation 8: In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity. This extension would help to make the basis for the disclosure system more consistent and reliable, and also to provide opportunities for marketing electricity products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly-designed system addressing all electricity from all sources has the potential of reducing administrative burdens and costs. In order to avoid imposing administrative burdens and costs on electricity producers, it could, as a first step, be introduced on a voluntary basis.

3.2.4 Integration of European energy markets through the international trading of GOs

Given the integration of electricity trading at wholesale market level, the development of the physical electricity markets and the GO-markets must go hand in hand. As cross-border transactions in the electricity sector are growing rapidly due to the completion of the internal energy market, the task of disclosure can no longer be done on a national scale only. National systems can be reliable on a national level, provided there are no international transfers but, due to growing cross-border trade, this procedure is no longer a sufficient, effective and efficient solution. As a consequence, a new approach has to be developed that takes into account growing cross-border trade.

The rapid increase in the traded volume of electricity generated from renewable energy sources should also be analysed in the context of the GO and the disclosure system. The idea of trading GOs at a European level would therefore facilitate a cost-efficient achievement of the 20/20/20 targets for each MS.



So far, the implementation of the GO system has primarily had a national focus in most countries. As CEER recommends a European wide harmonisation of the disclosure system based on GOs, CEER also sees the need for a transparent, secure and non-discriminatory European market for GOs. Until now, GOs have mostly been traded over-the-counter in a non-transparent manner.

From a long-term perspective, it is worth considering whether further introduction of market platforms would make the trading of GOs more transparent. Customers would benefit insofar as the costs of the traded GOs would be made transparent and GO-trading could be more cost-efficient. Transparency could be further enhanced by making information on GO prices available from more trading platforms. Therefore, a European RES-GO market supported by technical harmonisation of the GO system and the possibility of international electronic transfer of GOs between national registries, facilitated by a common platform (such as the AIB Hub) would be very welcome. Furthermore, such a market would provide the basis for innovation, transparency and – under the right conditions – allocate resources optimally, leading to better market functioning.

The importance of a green electricity market can no longer be denied, as in 2013 GOs for around 350 TWh of electricity based on renewable sources were issued and most of these are expected to have been used within 12 months of production.

Recommendation 9: The further integration of electricity markets at European level should be accompanied by actively continuing to develop the European GO market, thus increasing price transparency and competition.

3.2.5 Clear separation of disclosure and RES support when providing information to customers

When informing customers about the source of their energy, RES-support schemes and disclosure should be dealt with as two separate issues, each with their own instruments. While GOs are defined as the instrument for *disclosure* of the source of electricity, feed-in tariffs, green certificates, investment support, etc. are instruments for RES investment and / or production *support*. This distinction can also be found in the relevant Directives. If MS support schemes use transferable certificates, these certificates should be separated from GOs and should not be used for disclosure purposes.

The recent verdict by the European Court of Justice in the Essent case¹⁹ clearly states that “It is important to distinguish guarantees of origin clearly from exchangeable green certificates.” And “there is nothing in the wording of Articles 4 and 5 or in the recitals in the preamble to Directive 2001/77 to suggest that the EU legislature intended to establish a link between the guarantees of origin and national support schemes for the production of green energy.”

Recommendation 10: All electricity from renewable sources should be disclosed to the customer, irrespective of whether or not it has received support from a renewable investment or production support scheme.

¹⁹

<http://curia.europa.eu/juris/document/document.jsf?text=&docid=157525&pageIndex=0&doclang=EN&mode=lst&dir=&occ=first&part=1&cid=283740>



The RES Directive permits MSs to opt not to issue GOs for electricity that benefits from RES subsidies. As a result, in some countries subsidised RES production receives GOs, but not in others. While RES support is a national policy decision, disclosure is an EU-wide requirement and should, therefore, be harmonised at European level. There is a need for harmonisation in this respect as this creates difficulties for disclosure and the calculation of the residual fuel mix.

The abovementioned verdict by the European Court of Justice in the Essent case clearly states that: “It is important that all forms of electricity produced from renewable energy sources are covered by such guarantees of origin.”

The recognition of all GOs, irrespective of whether GOs are from supported or non-supported electricity, for disclosure purposes would enhance harmonisation as well as the reliability of disclosure systems across Europe. In any case, GOs include relevant information about possible support of the concerned amount of electricity in a transparent manner, so that no differentiation between GOs of non-supported and supported electricity needs to be made for disclosure. This approach clearly enhances the transparency of disclosure.

To avoid the risk of double support and over-subsidising RES production, MSs should have the liberty to take appropriate measures, such as the subtraction of the GO value from the RES support.

Recommendation 11: As the GO is defined in the Directives as the only instrument for disclosure of electricity from renewable sources, it would be more consistent if all RES-GOs would be recognised for disclosure purposes, irrespective of whether the production was from supported or non-supported electricity plants. It would be recommendable if disclosure information would not be influenced by the renewables support scheme.

3.3 Green electricity labels

3.3.1 Use of GOs as the unique tracking instrument and basis for private green electricity labels

Customers are showing an increased interest in electricity originating from renewable sources. They have strengthened their awareness of ecological problems and issues surrounding sustainability. As an answer to this growing awareness, a number of private renewable electricity labels were introduced into the market with the aim of helping customers finding the appropriate electricity product for their own particular interest. Experience has shown that customers are willing to pay a premium for green electricity, but this willingness to pay for greater ecological value depends a great deal on how well the electricity supplier can document and market the environmental benefits of the electricity it offers.



The assessment criteria used by labels are of uneven quality, especially in respect to sustainability issues. Each label system has its own range of criteria which can significantly differ from other labels. Each label guarantees a particular set of properties and “additionalities” based on self-defined criteria, making it difficult to compare them among each other. Furthermore, the majority of labels do not apply across national borders and are only relevant within a national framework. These issues produce uncertainty among customers and have raised questions about the usefulness of labels.

In order to guarantee the credibility and trustworthiness of electricity products which claim additional criteria, a holistic approach is needed. For labels to fulfil their intended value, private labels must, above all, be trustworthy. This could be guaranteed by using GOs as the unique tracking mechanism as a basis for labels, ensuring credibility, accountability and reliability. The ability of labels to trace back the electricity to its origin is of great importance to customers. Through the use of GOs as minimum criteria for labels, this can be done in a cost-efficient way and without any additional effort from the electricity supplier.²⁰

Furthermore, many green electricity offers are under criticism from NGOs and consumer bodies for supposedly misleading customers by providing inadequate information. More frequently, consumer bodies and environmental NGOs are addressing the issue that even renewable electricity products can vary significantly in terms of environmental impact and sustainability. Statements such as “some renewable energy products are not green enough” are steadily growing louder in some MSs. “Additionality”, based on reliable and proven information, is being increasingly demanded.

The concept of additionality in the context of electricity from renewable sources, most often takes the form of reassuring the customer that by signing a green contract, there is a direct impact on new investment in renewable generation or that there is a net reduction of the emission of CO₂ related to the contract. Nevertheless, no commonly accepted definition of additionality exists, which is why additionality is often considered as a subjective concept. It can be drawn from the results of the CEER public consultation, that the concept of additionality has many different interpretations among stakeholders and is therefore not without controversy.

Despite this, CEER feels that for customers who feel that having an electricity contract based on GOs does not in itself respond fully to their expectations. Labels can be a possible solution, under certain circumstances. Labels that are based on GOs, but add value by guaranteeing that additional criteria are being met, can cater for the more demanding customers willing to actively contribute to investment in renewable production. Labels based on GOs and incorporating additionalities could allow certain consumers to become more actively involved actors in the development of renewable energy. As customers should be one of the main drivers of renewable energy, they should – if they wish - be able to push for renewable development through new investment in production capacity, where it is guaranteed that a substantial part of the premium is, for example, directly being recycled into new investments in new renewable production capacity. Incorporating additionality could, therefore, be (part of) the added value of a label.

²⁰ In contrast to labels, the GO should not incorporate any aspects of additionality; i.e. the relationship between the green electricity and e.g. new investments in renewables.



To strengthen the reliability of these private label systems, audits could be introduced. Furthermore, attention could be placed on consumer education to increase awareness of the risks of green washing.

Nevertheless, the important role that GOs play in disclosure needs to be stressed and labels should not undermine the reliability and validity of GOs.

Recommendation 12: Private green electricity quality labels should be encouraged to use GOs as their unique tracking mechanism, in order to be reliable and trusted by electricity customers. Private label models can – under certain circumstances - be considered to create added value for more demanding customers, if it can be guaranteed that additional impact is associated with the contract (such as direct investment of funds in new renewable generation capacity or reductions of CO₂ emissions).



Annex 1 – CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national regulators of electricity and gas at EU and international level. CEER's members and observers (from 33 European countries) are the statutory bodies responsible for energy regulation at national level.

One of CEER's key objectives is to facilitate the creation of a single, competitive, efficient and sustainable EU internal energy market that works in the public interest. CEER actively promotes an investment-friendly and harmonised regulatory environment, and consistent application of existing EU legislation. Moreover, CEER champions consumer issues in our belief that a competitive and secure EU single energy market is not a goal in itself, but should deliver benefits for energy consumers.

CEER, based in Brussels, deals with a broad range of energy issues including retail markets and consumers; distribution networks; smart grids; flexibility; sustainability; and international cooperation. European energy regulators are committed to a holistic approach to energy regulation in Europe. Through CEER, NRAs cooperate and develop common position papers, advice and forward-thinking recommendations to improve the electricity and gas markets for the benefit of consumers and businesses.

The work of CEER is structured according to a number of working groups and task forces, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat. This report was prepared by the Retail Market Functioning Task Force of CEER's Customer and Retail Markets Working Group.

CEER wishes to thank in particular the following regulatory experts for their work in preparing this report: Ms Vera Gusenbauer and Mr José Miguel Unsión.

More information at www.ceer.eu.



Annex 2 – List of abbreviations

Term	Definition
AIB	Association of Issuing Bodies
BEUC	European Consumers Organisation
CCGT	Combined Cycle Gas Turbine
CEER	Council of European Energy Regulators
CEN	European Committee for Standardisation
CENELEC	European Committee for Electrotechnical Standardisation
CHP	Combined Heat and Power
EECS	European Energy Certificate System
EU	European Union
GGP	Guidelines of Good Practice
GO	Guarantee of Origin
MS	Member State
NGO	Non-governmental Organisation
NRA	National (energy) Regulatory Authority
PCT	Price Comparison Tool
RE-DISS	Reliable Disclosure System for Europe
RES(-E)	Renewable Energy Sources (-electricity)
RES-GO	Renewable Energy Guarantee of Origin



Annex 3 Legal Framework and main stakeholders

European Directives

European Directives set the regulatory framework for the GO system and for disclosure of the source of the electricity. We can find useful guides (mandatory in some aspects, as Directives must be transposed by Member States - MSs) in the mentioned framework.

Guarantee of Origin

Directive 2001/77/EC introduced a duty on all MSs to develop a reliable scheme for Renewable Energy Guarantees of Origin (RES-GOs). The Directive set a broad duty for each MS to establish the scheme. As such, the structure of each MS's scheme may differ.

Eight years later, **Directive 2009/28/EC** of the European Parliament and the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC introduced changes to the RES-GO scheme (RES Directive).

This Directive clarifies the purpose of Guarantees of Origin (GO) as evidence of the origin of electricity generated from renewable energy sources and specifies the minimum information included in the GO.

Disclosure

Directive 2003/54/EC²¹ introduced a requirement which obligates all suppliers of electricity to final customers to disclose the contribution of different energy sources to the supplier's portfolio for the preceding year, to their customers. In addition, suppliers are also obliged to disclose related environmental impact indicators, such as CO₂ emissions and the production of nuclear waste.

Directive 2009/72/EC of the European Parliament and the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC noted this requirement and underlined the role of energy regulatory authorities in this task (Electricity Directive).

Electricity disclosure is an instrument that aims to provide relevant information about power generation to customers. This information should enable customers to make a choice that is not based solely on electricity prices. In a liberalised market, disclosure requires some type of tracking; in other words, a process of assigning the attributes of electricity generation to electricity consumption.

Disclosure is therefore an objective information scheme for the whole electricity market, providing customers with information upon which they can make a well-informed choice following their individual preferences.

The Electricity Directive sets obligations on supply companies in MSs in terms of information and transparency to consumers (Article 3.9):

²¹ Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC



“Article 3. Public service obligations and customer protection.

...

9.

Member States shall ensure that electricity suppliers specify in 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;

(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;

(c) information concerning their rights as regards the means of dispute settlement available to them in the event of a dispute.

Recent assessments have shown that Member States have implemented national legislation on disclosure in different ways, sometimes also allowing for disclosure of differentiated product information (e.g. a green power product and a standard product).

Definition and purpose of the GO system

Directive 2009/28/EC defines the Guarantee of Origin (article 2.j) as:

“(j) ‘guarantee of origin’ means an electronic document which has the sole function of providing proof to a final customer that a given share or quantity of energy was produced from renewable sources as required by Article 3(6) of Directive 2003/54/EC;

The purpose of GO system is also defined in 2009/28/EC (article 15):

“Article 15

Guarantees of origin of electricity, heating and cooling produced from renewable energy sources

- 1. For the purposes of proving to final customers the share or quantity of energy from renewable sources in an energy supplier’s energy mix in accordance with Article 3(6) of Directive 2003/54/EC, Member States shall ensure that the origin of electricity produced from renewable energy sources can be guaranteed as such within the meaning of this Directive, in accordance with objective, transparent and non-discriminatory criteria.”*

And also in recital 52 of the same Directive 2009/28/EC:

“(52)

Guarantees of origin issued for the purpose of this Directive have the sole function of proving to a final customer that a given share or quantity of energy was produced from renewable sources. A guarantee of origin can be transferred, independently of the energy to which it relates, from one holder to another. However, with a view to ensuring that a unit of electricity from renewable energy sources is disclosed to a customer only once, double disclosure and double disclosure of guarantees of origin should be avoided. Energy from renewable sources in relation to which the accompanying guarantee of origin has been sold separately by the producer should not be disclosed or sold to the final customer as energy from renewable sources...”



In the “*Directive 2004/8/EC of the European Parliament and the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC*”, GOs are used also for electric energy produced by high efficiency cogeneration:

“Article 5

Guarantee of origin of electricity from high-efficiency cogeneration

1. On the basis of the harmonised efficiency reference values referred to in Article 4(1), Member States shall, not later than six months after adoption of these values, ensure that the origin of electricity produced from high-efficiency cogeneration can be guaranteed according to objective, transparent and non-discriminatory criteria laid down by each Member State. They shall ensure that this guarantee of origin of the electricity enable producers to demonstrate that the electricity they sell is produced from high efficiency cogeneration and is issued to this effect in response to a request from the producer.”

Directive 2012/27/EC of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC” replaces Directive 2004/8/EC, and requires MSs to take measures to ensure that GOs for electricity produced from high-efficiency cogeneration (annex X):

- i)*
 - *enable producers to demonstrate that the electricity they sell is produced from high-efficiency cogeneration and are issued to this effect in response to a request from the producer*
 - *are accurate, reliable and fraud-resistant and*
 - *are issued, transferred and cancelled electronically and*

and ensure that:

- ii) the same unit of energy from high-efficiency cogeneration is taken into account only once.*

Annex X also defines the content of the GO.

Also, in the same Directive 2012/27/EC, the rules for high-efficiency cogeneration GOs are set out (CHAPTER III “EFFICIENCY IN ENERGY SUPPLY”, Article 14 “Promotion of efficiency in heating and cooling”):



10. *On the basis of the harmonised efficiency reference values referred to in point (f) of Annex II, Member States shall ensure that the origin of electricity produced from high- efficiency cogeneration can be guaranteed according to objective, transparent and non-discriminatory criteria laid down by each Member State. They shall ensure that this guarantee of origin complies with the requirements and contains at least the information specified in Annex X. Member States shall mutually recognise their guarantees of origin, exclusively as proof of the information referred to in this paragraph. Any refusal to recognise a guarantee of origin as such proof, in particular for reasons relating to the prevention of fraud, must be based on objective, transparent and non-discriminatory criteria. Member States shall notify the Commission of such refusal and its justification. In the event of refusal to recognise a guarantee of origin, the Commission may adopt a decision to compel the refusing party to recognise it, in particular with regard to objective, transparent and non-discriminatory criteria on which such recognition is based.*

Also, in recital 39 of the same Directive 2012/27/EC:

“(39) To increase transparency for the final customer to be able to choose between electricity from cogeneration and electricity produced by other techniques, the origin of high-efficiency cogeneration should be guaranteed on the basis of harmonised efficiency reference values. Guarantee of origin schemes do not by themselves imply a right to benefit from national support mechanisms. It is important that all forms of electricity produced from high-efficiency cogeneration can be covered by guarantees of origin. Guarantees of origin should be distinguished from exchangeable certificates.”

Guarantee of Origin and support schemes

In order to clarify the function of the GO system, the RES Directive (recital 52) underlines the difference between the purpose of the GO system (transparency, reliability of the information) and the purpose of support systems, such as green certificates.

“(52) Guarantees of origin issued for the purpose of this Directive have the sole function of proving to a final customer that a given share or quantity of energy was produced from renewable sources. [...] It is important to distinguish between green certificates used for support schemes and guarantees of origin.”

Import and export

The RES Directive allows transfers of GO between MSs (Article 15):

“15. 9. Member States shall recognise guarantees of origin issued by other Member States in accordance with this Directive exclusively as proof of the elements referred to in paragraph 1 and paragraph 6(a) to (f). A Member State may refuse to recognise a guarantee of origin only when it has well-founded doubts about its accuracy, reliability or veracity. The Member State shall notify the Commission of such a refusal and its justification.

15.10. If the Commission finds that a refusal to recognise a guarantee of origin is unfounded, the Commission may adopt a decision requiring the Member State in question to recognise it.”



Renewable definition

A frequent issue in discussions about these policies is the use of the words “green”, “renewable”, etc. in different countries. We can find a clear definition of “renewable” in the Directives.

The RES Directive (Article 2.a) and the Electricity Directive (Article 2.30):

“renewable energy sources’ means renewable non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases”

National Regulatory Authority (NRA)

NRAs, or other national authorities, are mentioned in the Electricity Directive (Article 3.9) as an important part of the system. This Directive sets out clear responsibilities about information provided:

“9.

The regulatory authority or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to their customers pursuant to this Article is reliable and is provided, at a national level, in a clearly comparable manner.”

Progress already achieved, main initiatives and stakeholders

CEN-CENELEC Joint Working Group on Guarantees of origin and Energy certificates

The European Committee for Standardisation (CEN), the European Committee for Electrotechnical Standardization (CENELEC) develop voluntary standards on a range of products and services across Europe. Following the conclusions of a working group on energy certificates within the CEN-CENELEC Sector Forum on Energy Management and the organisation by CEN-CENELEC of a seminar on 'guarantees of origin and energy certificate systems' on 23 April 2008, a CEN-CENELEC Joint Working Group was created in April 2010 with representatives of national standardisation bodies and the AIB. The result was a standard based on and along the lines of the EECS standard of AIB, which was approved by the CEN members at the end of the process.

European Council Conclusions on Renewable Energy, December 2012

“In relation to guarantees of origin, to further empower customers, clarifications by the Commission would be welcomed on the best way to achieve consistent application of fuel mix disclosure at EU level which ensures that customers are provided with accurate and complete information on all fuel mix consumption within each Member State”.



European Commission supported research programmes

Several research programmes have been financed and supported by the European Commission. They provide relevant conclusions on disclosure and provision of information to the customer on the origin of electricity:

- E-TRACK

The E-TRACK Project provides a detailed insight into the tracking of electricity, the requirements for the design and operation of tracking systems, which are set by market players, EU and MSs' legislation. The project covers 30 European countries and offers a blue print for a Europe-wide standard for these tracking systems.

Phase I of the project was completed in June 2007, while Phase II of the project has refined the proposed tracking standard by integrating the new GOs for cogeneration and was completed in 2009. As a result, a strategy for the further development of energy-related certification schemes was elaborated.

- RE-DISS

The RE-DISS project was co-funded by the Intelligent Energy Europe Programme of the EU and supported by the European Commission. It aimed at improving significantly the reliability and accuracy of the information given to European electricity customers regarding the origin of the electricity they are consuming.

The project sought to support European countries in properly implementing the requirements set out in the RES Directive as well as in the Cogeneration Directive and the Electricity Directive. The project established and supported a group of "Competent Bodies" which have been designated by major European countries and which are dedicated to improve the procedures for GOs and electricity disclosure in their countries.

The follow-up project RE-DISS II started in 2013. RE-DISS II hopes to facilitate the establishment of a more reliable tracking system for Europe, to further reduce double disclosure of e.g. RES electricity and improve the value of disclosure information for consumers.

- Concerted Action

The Concerted Action EPBD was launched in 2005 as a joint initiative of the EU MSs and the European Commission. It involves those representatives of national ministries or their affiliated institutions charged with preparing the technical, legal and administrative framework for the Energy Performance of Buildings Directive (2002/91/EC) in each country. The key aim is to enhance the sharing of information and experiences from national adoption and implementation of this important European legislation.



Other initiatives contributing to better disclosure and the potential for better information to customers

- AIB

The purpose of the Association of Issuing Bodies (AIB) is to develop, use and promote a standardised system: the European Energy Certificate System - "EECS", upon which the formal CEN/CENELEC standard for GOs for electricity is based. EECS is based on structures and procedures which ensure the reliable operation of international certificate schemes. In order to further facilitate the international exchange of energy certificates, the AIB operates an inter-registry telecommunications Hub.

- The European energy certificate system (EECS)

Each EECS certificate is uniquely identifiable, transferable and therefore tradable, and contains standard information on the source of the energy, and its method of production. The Principles and Rules of Operation of the EECS define a certificate as an electronic document which identifies the source and method of production of a unit of energy, and relates to a specific purpose.

- EECS and the CEN standard

The EECS Rules provided the foundation for the proposed CEN standard. This version is the latest available, and is currently being revised to incorporate Directive 2012/27/EC, prior to decision-making by CEN member organisations.

- RECS International

RECS International is a group of market participants that trade in renewable energy certificates throughout Europe. More than 250 members trade certificates in over 22 (mostly European) countries. To protect its investment in a secure, workable and efficient market, RECS cooperates with the Association of Issuing Bodies (AIB).



Annex 4 - Examples of websites hosting price comparison tools

- Le Régulateur Bruxellois pour l'énergie (BRUGEL):
<http://www.brusim.be/proc/simulation;jsessionid=D227BF257C7748B5D8C73084D26B3496?execution=e1s1>
- Belgian private Price Comparison Tool:
<http://www.monenergie.be/>
- Comisión Nacional de los Mercados y la Competencia (CNMC):
<http://www.comparador.cne.es/comparador/index.cfm?js=1&e=N>
- E-Control, Austrian Energy Regulator:
http://www.e-control.at/de/konsumenten/service-und-beratung/toolbox/tarifkalkulator/tarifkalkulator-application?sav_ref=http://www.e-control.at/de/home&js=1&sw=1680
- Energie-info:
<http://www.energie-info.fr/>
- Institut Luxembourgeois de Régulation:
<http://www.calculix.lu/web/tk/tk>
- Sweden NRA operated:
<http://www.ei.se/elpriskollen>
- Sweden private:
www.elskling.se



Annex 5 - Examples of existing disclosure reports

- CNMC, Spanish Regulator:
http://gdo.cnmc.es/CNE/resumenGdo.do?informe=garantias_etiquetado_electricidad
- E-Control, Austrian Energy Regulator:
<http://www.e-control.at/portal/page/portal/medienbibliothek/oeko-energie/dokumente/pdfs/Stromkennzeichnungsbericht2013.pdf> (German)
- Institut Luxembourgeois de Régulation:
http://www.ilr.public.lu/electricite/documents_NEW/rapport_etiquetage/rapport_biennuel_etiquetage_2011-2012.pdf
- VREG, Flemish Energy Regulator:
http://www.vreg.be/sites/default/files/rapporten/rapp-2013-04_brandstofmix_2012.pdf (Dutch)