

# Draft RE-DISS Disclosure Guidelines for Electricity Suppliers

Draft Version 0.4, 11<sup>th</sup> August 2014

## 1 Preamble

This document has been elaborated as a Deliverable of the RE-DISS II Project, a pan-European project which is supported by the European Commission under the Intelligent Energy Europe framework. RE-DISS II focusses, just like earlier E-TRACK projects and the first phase of RE-DISS, on systems for electricity disclosure and guarantees of origin.

These disclosure guidelines shall support electricity supply companies in order to optimise their own information behaviour towards their end-consumers in the context of electricity disclosure within the given national regulatory framework. The project team was asked by representatives of market actors to focus more on suppliers in the second phase of the RE-DISS project. This document is meant to answer this request. Corresponding Guidelines focussing on national competent bodies for electricity disclosure are provided in parallel by the RE-DISS II project.

This document builds on the “Proposal for electricity disclosure guidelines for Member States”<sup>1</sup>, which have been elaborated and published by the RE-DISS I project based on the Commission’s note “Labelling provision in Directive 2003/54/EC”<sup>2</sup>. The given recommendations are further based on the RE-DISS Best Practice Recommendations<sup>3</sup> (see also Chapter 2.2 below), and respective guidance on BPR provided by Competent Bodies particularly in the course of joint workshops organised by the RE-DISS project. A stakeholder consultation has been conducted in April and May 2014 which gained 24 formal responses (see Annex II and Annex III to this document), and further desktop research and results of previous projects of the E-TRACK/RE-DISS series have been taken into account.

These draft Disclosure Guidelines for Electricity Suppliers will further be discussed during a workshop focussing on suppliers and other electricity market parties in Split, Croatia, on 25<sup>th</sup> September 2014.

## 2 Background

### 2.1 Regulatory background and market framework

The opening of the electricity market in the European Union for retail competition has given the consumers a choice of supplier. This choice can be based on price, on quality and reliability of service, but can also relate to the generation characteristics of the electricity supplied.

The Internal Electricity Market Directive 2009/72/EC (in the following: IEM Directive) therefore contains the obligation on suppliers to specify the fuel mix and its related environmental impact of the electricity they sell to final consumers.

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<sup>1</sup> RE-DISS: Proposal for electricity disclosure guidelines for Member States, Version 4, December 2012

<sup>2</sup> Note of DG Energy & Transport on Directives 2003/54 and 2003/55 on the internal market in electricity and natural gas: Labelling provision in Directive 2003/54/EC (document non-binding to the Commission)

<sup>3</sup> RE-DISS II: Best Practice Recommendations for the implementation of Guarantees of Origin and other tracking systems for disclosure in the electricity sector in Europe, Version 2.2 (Draft 2.2.6), August 2014



The objectives of this specification are fourfold:

- increase market transparency by providing open and easy access to relevant information,
- comply with the consumers right to information regarding purchased products,
- enable consumers to make informed choices about suppliers and their electricity products based on the generation characteristics of the electricity they supply,
- educate consumers and stimulate electricity generation that contributes to a secure and sustainable electricity system.

Article 3 (9) of Directive 2009/72/EC establishes four main obligations for Member States (see also Annex I: Wording of the relevant EU Directives):

- I. Ensuring that suppliers provide fuel mix information on or with the bill and environmental information on the fuel mix at least in the form of information on reference sources, such as web-pages.
- II. Ensuring that the information provided by suppliers is presented in a comprehensible and, at a national level, clearly comparable manner.
- III. Ensuring that the information provided by suppliers is reliable.
- IV. Nominating the regulatory authority or another competent national authority to supervise the reliability and comparability of this information.

Implementation of disclosure differs strongly between EU MS, from basic implementation by straightforward adoption of the wording of the Directive to highly sophisticated and clearly specified approaches. There are also MS which have not implemented disclosure (either legally or operationally) at all so far.<sup>4</sup> These different stages of disclosure to some extent also reflects the different development of liberalised electricity markets in different European MS.

While the IEM Directive focusses on the provision of information towards end consumers, Directive 2009/28/EC on the promotion of the use of energy from renewable sources (in the following: RES Directive) defines the Guarantee of Origin (GO), which can be considered the major accounting instrument in order to create a link between electricity production (more specifically: renewable electricity) towards specific end consumers. Such tracking of electricity attributes is essential in order to define the values of a specific fuel mix which can then be disclosed towards an end consumer.

Article 15 of the RES Directive requires each Member State to provide a system for Guarantees of Origin for electricity produced from renewable energy sources which have to be issued, transferred and cancelled in an electronic registry under supervision of a single appointed national Competent Body. The only purpose of these GO is their use for electricity disclosure. Member States have to ensure that these GOs are accurate, reliable and fraud-resistant, and that double-counting is avoided.

Directive 2004/8/EC on the promotion of cogeneration (in the following: CHP Directive) has introduced also GO for high-efficient cogeneration of heat and electricity. However, it has to be stated that use of such CHP GO for disclosure purpose has only gained very limited practical relevance since then.

European countries have organised their GO systems within the European Energy Certificate System (EECS) provided by the Association of Issuing Bodies (AIB). This includes not only a common technical standard, but particularly operates a central registry communication interface for international transactions of GOs between the different registries, the "AIB Hub".

It is worth highlighting that EECS does not only facilitate handling of RES GOs and CHP GOs, but also generally allows for issuing, transfer and cancellation of GO for other fuel sources like fossil and nuclear. In the year 2013, EECS GOs representing some 246 TWh of RES production have been cancelled and therefore used as compared to an overall RES production in Europe of some 950 TWh.

The provision to specify the fuel mix and its related environmental impact obliges Member States to achieve a certain result and leaves to them the choice of form and methods.

In 2012, in its Council conclusions on Renewable Energy, the European Council has defined it as priority that "*In relation to guarantees of origin, to further empower consumers, clarifications by the Commission would be welcomed on the best way to achieve consistent application of fuel mix disclo-*

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<sup>4</sup> For an overview over the status of implementation of disclosure systems in European countries see the country profiles as published on the project website [www.reliable-disclosure.org](http://www.reliable-disclosure.org), or the summarising report published by the RE-DISS II project "Qualitative Assessment of Disclosure and GO systems" (August 2014).

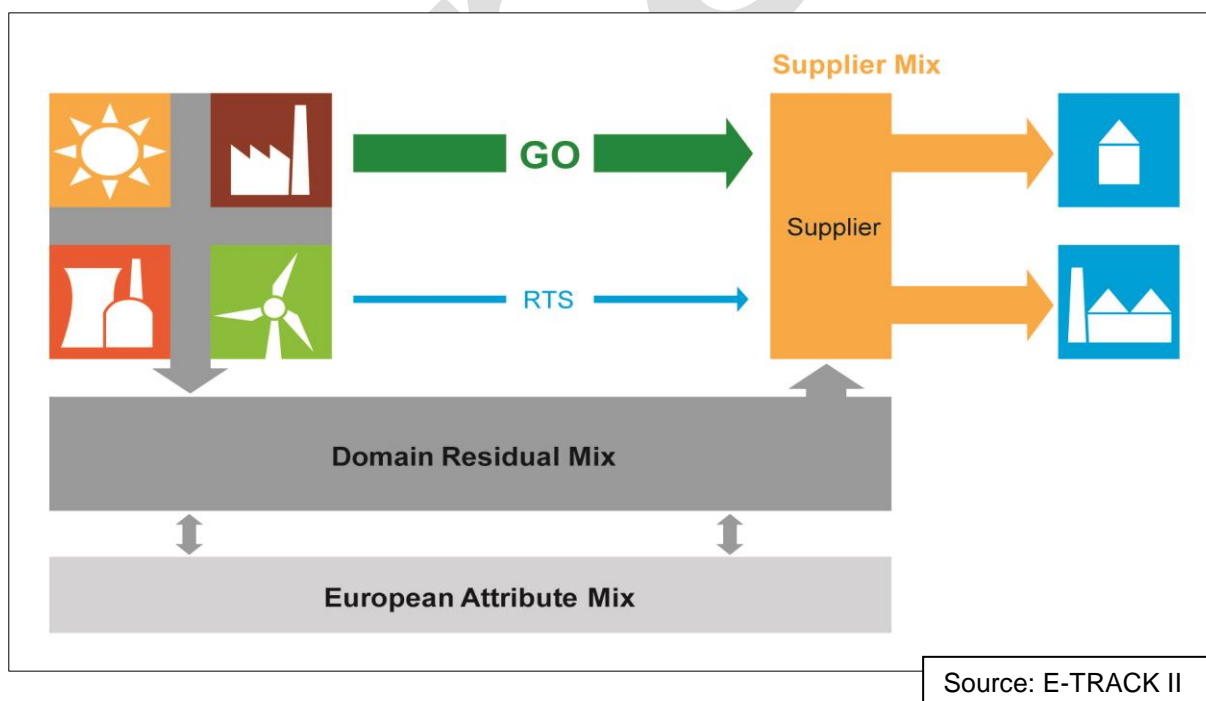
sure at EU level which ensures that consumers are provided with accurate and complete information on all fuel mix consumption within each Member State.<sup>5</sup>; However, no such clarification has been provided by the European Commission so far. CEER is currently elaborating an “Advice on “green” electricity” which will provide recommendations addressed to various target groups in the general context of green electricity offers.

## 2.2 Background provided by the RE-DISS project

Since 2004, the EU funded projects E-TRACK (Phases I and II)<sup>6</sup> and RE-DISS (Phases I and II) have worked on electricity tracking and electricity disclosure. While the E-TRACK projects have focussed on developing the systematic analysis and principles, the RE-DISS projects have been focussing on support of actual implementation of coordinated tracking systems in Europe. Therefore, the major target group have been the national competent bodies for GO and for disclosure which are in charge of the national systems.

The fundamental tracking principle which has been developed and recommended is illustrated in Figure 1. National production mix is to some extent specifically allocated by their suppliers to individual consumers or consumer groups (e.g. customers of a specific product). Means for documentation of such specific allocation should be limited to GO or potentially further “Reliable Tracking Systems” (RTS, e.g. special allocation mechanisms for supported RES volumes). In the long term, it is envisaged that the full tracking system should be based on GOs. In any case, statistical information on such allocation mechanisms should be transparently available so that they can be deducted from the national production mix, resulting in the domain-specific “Residual Mix”. International trade of GOs and of physical electricity may result in imbalances between the volume of electricity consumption and the volume of production attributes which are available for disclosure in a single country. This makes it necessary to apply an “equalising reservoir” in order to balance attributes between individual domains – the European Attribute Mix.

Figure 1: E-TRACK recommendation for tracking systems.



<sup>5</sup> Council of the European Union: Council conclusions on Renewable Energy from the 3204<sup>th</sup> Transport, Telecommunications and Energy Council meeting, Brussels, 3 December 2012

<sup>6</sup> For more information on the projects “A European Tracking System for Electricity (E-TRACK)” see <http://www.e-track-project.org/>

The international interactions which result from Europe-wide trading activities for electricity and GOs make it necessary that rules for such an accounting approach are applied in a coordinated way, in order to avoid double counting of specific attributes or loss of other attributes. These rules, which focus on the accounting approach (the so-called “tracking”) are summarised in the “RE-DISS Best Practice Recommendations” (BPR)<sup>7</sup>, which have been developed by RE-DISS in cooperation with and with support of Competent Bodies of EU Member States.

The RE-DISS project provides on an annual basis Residual Mix information for all European Countries on its website [www.reliable-disclosure.org](http://www.reliable-disclosure.org). Also after the anticipated end of the second phase of the RE-DISS project, it can be expected that similar calculations are centrally performed and published.<sup>8</sup>

Adding to these RE-DISS BPR, the RE-DISS project team also develops in parallel Advisory Guidelines for Competent Bodies for regulating the “front-side of disclosure”. While a wide variety of options to implement the fundamental provisions defined by the IEM Directive are open to Member States, it seems desirable to take into account these more detailed suggestions. These are designed to help achieve the objective of transparency for consumers, to reflect the increasing cross-border trade of electricity and of Guarantees of Origin and to make comparisons between various suppliers possible. However, as the actual details of provision of disclosure towards end-consumers are not as massively influencing the consistency of disclosure information in other countries, the absolute need for coordinated implementation in different countries is not as high as for the tracking principles which are laid out in the RE-DISS BPR.

Still, there are large differences in the way of implementation of disclosure and GO systems in European countries. Particularly, in some countries only very general and vague provisions are officially put in place, which leaves also a lot of flexibility to electricity suppliers in these countries on which tracking systems to use and how to present disclosure information towards electricity end-consumers.

This document aims at providing advice and guidance to such suppliers in order to optimise their own information behaviour towards their end-consumers within the given national regulatory framework.

### 3 General principles

These guidelines address electricity suppliers in order to support them with provision of disclosure information to their end-consumers. It therefore mirrors to some extent the recommendations and advice which is given from RE-DISS to competent bodies which are in charge of regulating tracking and disclosure systems, and combines elements of both. The following principles should be highlighted:

- **It is in any case recommended that suppliers act in consistency with national legislation and official regulation. The given recommendations should be followed only in case this is allowed by the national framework.**
- The Disclosure Guidelines cover both the tracking of production attributes as well as the “front-side aspects” (which sort of information is disclosed, and how this is done), focussing on the elements which are of relevance for a supplying company.
- The elements of the Disclosure Guidelines thus are developed so that a supplier can best adapt to a given regulatory framework in his country and can optimise information given to his customers under these preconditions.  
Long-term development of system principles and particularly technical infrastructure, which is beyond the powers of individual supply companies, is covered by the BPR (and to minor extent also the Advisory Disclosure Guidelines for Competent Bodies) which address the responsible Competent Bodies.
- In many cases, national framework conditions will determine which information is relevant and of interest for consumers. Therefore, the Disclosure Guidelines have to some extent the na-

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<sup>7</sup> RE-DISS II: Best Practice Recommendations for the implementation of Guarantees of Origin and other tracking systems for disclosure in the electricity sector in Europe, Version 2.2 (Draft 2.2.6), August 2014

<sup>8</sup> Reference to such follow-up activity will be probably available on the RE-DISS website [www.reliable-disclosure.org](http://www.reliable-disclosure.org) also after the end of the project.

ture of a “tool box”, from which individual elements can be used or also neglected in individual countries rather than of step-by-step guidelines. Particularly with respect to selection of different parameters to be disclosed, suppliers will have to weigh between provision of useful information and information overload. Still, it should be generally seen as good practice not to only show information in case this is probably preferred by the consumers, but particularly also to show information which may point out less preferred attributes. A suitable means of providing also detailed and complex information to end-consumers might be in some cases to offer two-levels of information: a basic set of information directly on or with the bill, and more detailed information and explanations e.g. on a website to which the bill can refer.

- The requirements as defined by Article 3 (9) of Directive 2009/72/EC of course act as an obligatory baseline for all recommendations. The same applies in principle also for the requirements as defined by Article 15 of the RES Directive 2009/28/EC (see Annex I: Wording of the relevant EU Directives
- Internal Electricity Market Directive 2009/72/EC on page 17). However, as the possibility for use of a GO system practically will strongly depend on the national implementation and the available technical infrastructure, direct reference to the Directive is probably less helpful from a supplier’s point of view.

For background information, general discussion and real-case examples with respect to the individual aspects on front-side disclosure which are outlined below, pls. see the RE-DISS II background document “Selected options for implementation of “front side” disclosure aspects”, which has been provided in the stage of public consultation for these Disclosure Guidelines in April and May 2014. This is available as a separate Annex II to these Disclosure Guidelines in order to provide illustrative examples.<sup>9</sup>

An overview over the responses which have been provided in the public consultation is given in the separate document as Annex III to these Disclosure Guidelines.<sup>10</sup>

More information on the general framework and an analysis of tracking systems can be found in the Final Report to the RE-DISS I Project<sup>11</sup>.

## **4 Recommendations with respect to tracking of information**

### **4.1 General usage of tracking instruments**

#### **4.1.1 Guarantees of Origin**

Guarantees of Origin for electricity from renewable energy sources (RES GOs) are the only tracking mechanism for electricity disclosure which is clearly governed by European legislation, and by a further comprehensive European governance structure (particularly EECS, but also including additional recommendations as provided by the RE-DISS Best Practice Recommendations). Guarantees of Origin thus allow for a transparent, reliable and cost-efficient tracking of generation attributes. While the provision of RES GOs is a mandatory requirement to EU Member States, at least in some countries also GOs for other fuel sources than renewables are available. The following recommendations are given to electricity suppliers:

- All electricity products offered by suppliers with claims regarding the origin of the energy (for example “green” or low-carbon power) should be based exclusively on cancelled GOs, if this is supported by the national framework. This does not exclude applying mechanisms required

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<sup>9</sup> RE-DISS II: Selected options for implementation of “front side” disclosure aspects Background information and consultation; Dominik Seebach, Diane Lescot, Angela Puchbauer-Schnabel, April 2014

<sup>10</sup> RE-DISS II: Consultation on options for implementation of front side disclosure aspects Summary of formal responses, August 2014

<sup>11</sup> Christof Timpe, Dominik Seebach, Markus Klimscheffskij, Marko Lehtovaara, Claudia Raimundo, Diane Lescot, Angela Puchbauer-Schnabel, Thierry Van Craenenbroeck: Reliable Disclosure Information for European Electricity Consumers - Final Report from the project “Reliable Disclosure Systems for Europe (RE-DISS)”; 2012

by law, e.g. a pro-rata allocation of generation attributes to all consumers which is related to a support scheme.<sup>12</sup>

- If suppliers have the choice, they should use EECS GO. While compliance with EECS is recommended in any case if the respective GO is imported, use of non-EECS national GO can be an alternative or be even necessary for domestic production (depending on the national implementation of GO systems).<sup>13-14</sup>
- In case of GO imports which are not technically facilitated by the AIB Hub, suppliers should try to assure that this is not possibly double counted in the country of export, e.g. by requiring an ex-domain cancellation<sup>15</sup> or possibly by another export mechanism which is agreed between the Competent Bodies of the exporting and the importing country.) Suppliers should also contact their national Contact Body and support the connection of the national system to EECS via the AIB Hub.
- Suppliers should aim to use GOs as far as available as only tracking certificate, and particularly use electricity labels which are based on GOs as tracking mechanisms.<sup>16</sup> Suppliers should be aware that a support certificate itself has a different purpose according to Art. 15 of the RES Directive and may not be used as GO.<sup>17</sup>
- GOs which are supposed to be used for disclosure of year X should be cancelled before 31st of March X+1 (or before a respective national deadline in case this is earlier).<sup>18</sup>
- Suppliers should check with their national competent body which foreign GOs are recognised according to Art. 15, (9) of the RES Directive, and whether specific GOs are explicitly not recognised. This should be ideally clarified in advance before concluding a GO contract in order to minimise risk.<sup>19</sup>

#### 4.1.2 Other tracking mechanisms

As described in Chapter 4.1.1, GOs are considered the preferable tracking instrument. However, depending on national framework, usage of GOs might not be possible for all electricity volumes. For example, this can include supported RES, or electricity from sources other than renewables. However, there might be different other tracking mechanisms in place which could be used in case these can be considered as Reliable Tracking Mechanisms (RTS). The following recommendation is given to electricity suppliers:

- If for specific electricity volumes no GOs are available, suppliers should contact their national competent body and explain the benefits of such GO system. For the time being, suppliers should alternatively use only such other tracking mechanisms, which are reliable and transparent. This includes particularly that the respective volumes and attributes which are covered by this tracking mechanism are notified to a central body, usually to the competent body for disclosure or the National Regulatory Authority (NRA). Only by doing so, such volumes can be taken into account for calculation of a residual mix. This is necessary to avoid double counting and to safeguard the accuracy of disclosure information also for other electricity consumers in Europe.

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<sup>12</sup> See also the respective BPR [38] for Competent Bodies, from the RE-DISS Best Practice Recommendations, version 2.2 (draft 2.2.6). This document reference applies to all further references to BPRs..

<sup>13</sup> Also some EECS Domains do not issue and handle GOs for their national production as EECS GOs, unless those are destined for international trade and transaction via the AIB Hub.

<sup>14</sup> See also the respective BPRs [7] and [16] for Competent Bodies.

<sup>15</sup> Such an ex-domain cancellation of EECS GOs would have to be reported by the Competent Body of the cancelling domain towards AIB according to EECS Rules and corresponding regulation. Therefore, this information would become available for correct accounting in Residual Mix calculations.

<sup>16</sup> See also the respective BPRs [16] and [18] for Competent Bodies.

<sup>17</sup> See also the respective BPR [37] for Competent Bodies.

<sup>18</sup> See also the respective BPR [5] for Competent Bodies.

<sup>19</sup> See also the respective BPRs [20] and [21] for Competent Bodies.

- Suppliers should assure how to disclose national supported electricity. In case there is no clear national regulation on this, suppliers should contact their national competent body in order to clarify whether an RTS is to be applied for supported electricity.
- In non-competitive market segments where (still) no choice of supplier or different products exists, RTS could also apply for homogenous disclosure mixes. It is highlighted that suppliers should also for such segments provide disclosure information as an instrument to raise consumer awareness.
- In some EU Member States there is still no national disclosure regulation in place at all. Usually, this correlates to very low status of market liberalisation and of market unbundling. As stated above, it is still recommended also in these countries that suppliers should in any case provide disclosure information towards their end-consumers as an instrument to raise consumer awareness. In absence of any defined tracking mechanism, the best available information for producer-suppliers is probably the fuel mix of own production which is delivered to the end-consumers. If such information is disclosed to end-consumers, both the national responsible body (competent body, relevant ministry or NRA) and the body performing centrally Residual Mix calculations for Europe (currently being RE-DISS) should be informed about the tracked volume and attributes so that this can be taken into account for calculation of Residual Mixes. It is obvious that such disclosure information should only be used if no GO is used or can be used for the same electricity production as this would then be the preferable approach.
- Besides GOs and possibly other tracking mechanisms which can be considered reliable and transparent, only a centrally calculated Residual Mix should be applied (see Chapter 4.1.3).

#### 4.1.3 Residual Mix

The RE-DISS project provides on annual basis Residual Mix information for all European Countries on its website [www.reliable-disclosure.org](http://www.reliable-disclosure.org). Also after the anticipated end of the second phase of the RE-DISS project, it can be expected that similar calculations are centrally performed and published.<sup>20</sup> Such default disclosure information is particularly applicable for any electricity volumes which are not explicitly tracked, but are considered electricity of unknown origin at first hand by the supplying company when compiling their own disclosure information. The following recommendation is given to electricity suppliers:

- Besides GOs and possibly other tracking mechanisms which can be considered reliable and transparent, only a centrally calculated national Residual Mix provided by the national competent body or directly by RE-DISS should be used. The use of uncorrected generation statistics for purposes of electricity disclosure should be avoided.

## 4.2 Reference Period and Frequency

The disclosed information (fuel mix and its related environmental impact) should relate to the preceding calendar year, unless national regulation clearly defines this otherwise. In case that a deviation from this is possible on national level, e.g. fiscal year, the period should be clearly stated as part of the disclosure statement.

The frequency at which the information is sent out should at least be once a year. However, it would be beneficial to send out disclosure information to end consumers more regularly than once a year, in order to raise awareness among consumers.

Timing of disclosure should be as early as possible after the end of the calendar year, i.e. after all steps for determining the disclosure figures of a supplier are made as indicated in Chapter 4.3. Usually, it can be estimated that this is the case shortly after publication of the RE-DISS Residual Mix calculations, and subsequent publication of national Residual Mixes by competent bodies. The RE-DISS Best Practice Recommendation [35] for Competent Bodies suggests the 1 July of year X+1 as deadline for disclosure by suppliers for year X.

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<sup>20</sup> Reference to such follow-up activity will be probably available on the RE-DISS website [www.reliable-disclosure.org](http://www.reliable-disclosure.org) also after the end of the project.

### 4.3 Steps for determining the disclosure figures of a supplier

The following process description is given in consistency with the Best Practice Recommendations which are addressed to Competent Bodies. In case national systems follow the respective RE-DISS BPRs, suppliers could apply this in the following way.<sup>21</sup>

- During the disclosure period, suppliers which aim at a certain disclosure mix should use the “explicit” tracking mechanisms which are available in the respective countries in order to acquire the desired generation attributes. In all countries this comprises GOs, but contract-based tracking and certain other Reliable Tracking Systems might also be available.
- If suppliers are offering electricity products with claims regarding the origin of the energy (for example “green” or low-carbon power) then they should acquire the related generation attributes during the disclosure period exclusively based on GOs. Besides such products, GOs can also be used for shaping the overall disclosure mix of a supplier.
- All GOs which are meant to be used for the disclosure period of calendar year X should be cancelled before the deadline of 31 March X+1.
- After this deadline, the total volume of electricity sold to final consumers and all generation attributes which have been acquired based on cancelled GOs and other Reliable Tracking Systems including contract-based tracking (if applicable) should be accounted for. This may include a pro-rata allocation of attributes of electricity supported, for example, under a feed-in tariff to all suppliers, which might have been implemented in the respective country as a Reliable Tracking System.
- Any use of contract-based tracking should strictly follow the regulations issued for the respective country. Any attributes assumed for or notified by the contractual counterpart in the electricity market may only be used if explicitly allowed by such regulations. National generation statistics and other data which is not corrected by the different tracking systems in use should not be used at all. Instead, the Residual Mix should be used.
- Suppliers should respond in time to requests by the Competent Body on statistical reporting of volumes of electricity sold to final consumers and of any “explicit” tracking mechanisms used.
- Typically the volume of electricity sold to final consumers is larger than that of the generation attributes acquired through “explicit” tracking mechanisms. In this case the missing generation attributes should be “filled up” from the Residual Mix for the respective country (see Chapter 4.1.3).
- The overall supplier disclosure mix consists of the attributes of all electricity sold to final consumers, including all products which might be differentiated.
- If electricity products which differ in terms of the origin of the energy have been offered to part of the consumers then these consumers will receive product-related disclosure information based on the GOs cancelled for this purpose. However, in this case such product-related disclosure information should also be given to those consumers who have not purchased a specific product. This means that a “remaining” product should be defined which consists of the disclosure mix of the supplier minus the attributes of all separated products. This information should be disclosed as product-specific disclosure data to the consumers who are receiving the “remaining” product.<sup>22</sup>
- CO<sub>2</sub> emissions and radioactive waste should be disclosed on the supplier and product levels in direct relation to the fuel mix which is being disclosed.<sup>23</sup>

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<sup>21</sup> This description accords to the RE-DISS BPR [44] for Competent Bodies.

<sup>22</sup> This recommendation avoids the implicit double counting of attributes which might be part of, for example, a “green” power product and which also appears in the overall disclosure mix of the supplier. See the E-TRACK final report for more details.

<sup>23</sup> For this purpose, generic technology-specific emission factors could be applied, which are defined by the domain in which the GO is used.



## 5 Recommendations with respect to provision of disclosure information

### 5.1 Presentation of information

#### 5.1.1 Standard format for disclosure statement

The IEM Directive requires Member States to assure provision of disclosure in a comparable way. Member States vary largely in the level of detail how provision of information is regulated in order to assure such comparability between different suppliers and products. Different real-case examples on how to show various comparative values are shown in section 2.1 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II). The following recommendations are given to electricity suppliers:

- Suppliers should support their national competent bodies in ensuring that the disclosure information is easily comprehensible for consumers and can be compared at least on a national level. This can be done by supporting the competent body in specifying a harmonised display format for use by suppliers. In case the competent body is not in the position to establish such central provisions, suppliers should seek to establish a branch agreement as interim solution. It is recommended that a minimum size of the disclosure statement is defined together with the format requirements.
- In order to make comparisons between suppliers easily possible and to reduce effort particularly for small suppliers, suppliers should cooperate with the competent body or within their branch organisations to provide a harmonised ready-to-use display format template.
- This display format should in any case include a graph, preferably a pie or a bar chart. It is also recommended that this is supplemented by a table.
- With respect to parameters to be disclosed, see Chapter 5.2.
- It is recommended that one or several pie charts are used to illustrate the supplier's overall mix, product-specific information and national generation averages (see also the following Chapter 5.1.2). An additional table can provide more detailed figures for the shares of the energy sources, e.g. a higher disaggregation of renewable energy sources than displayed in the pie charts, and the environmental indicators.
- Numbers in the table should be provided with no more than three valid digits.
- Some detailed parameters can be expected only to be of interest for a limited consumer group. Here it should be considered that such information is not provided directly in or with the bill in order not to reduce comprehensibility of disclosure information for the majority of consumers by information overload. In these cases, such information should be provided transparently on a website, to which the physically provided disclosure statement clearly refers.
- For an example on such a disclosure format, see Figure 2.

### 5.1.2 Distinction of supplier and of product mix, and provision of comparison values


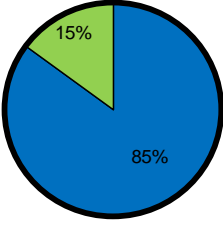
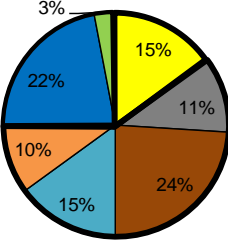
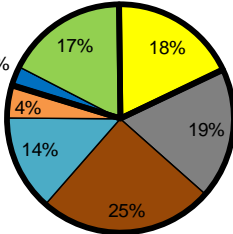
The IEM Directive requires that the contribution of each energy source to the overall fuel mix of the supplier is disclosed to end-consumers. Such information relating to the overall supplier mix can be considered relevant to consumers as an indicator of the overall company strategy. Still, suppliers often distinguish various products to their end-consumers which differ in their respective fuel mix. In that case, the electricity which is provided towards an individual end-consumer does not have the same fuel mix as the overall supplier mix. On top of that, it is not really easy to assess for end-consumers based on information of the fuel mix and the environmental indicators whether this value is a comparably good or comparably bad value, compared to branch average. Different real-case examples on how to show various comparative values are shown in section 2.2 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II). The following recommendations are given to electricity suppliers:

- The information on fuel mix and environmental impact must be provided on the supplier's overall fuel mix as a minimum information according to the IEM Directive.
- The overall fuel mix refers to all the electricity sold to final consumers in a given country, both domestic and non-domestic, by the supply company that is named on the bill. Thus it comprises all electricity products of that company, regardless whether these are differentiated in terms of energy mix or not.
- If a supplier differentiates products with regard to disclosure-related information, he should provide product specific information in addition to his overall disclosure information. In this case, the supplier should be required to give product and total supplier information to all customers, including those which are consuming a product without specific claims (e.g. a "default" product, which might be the supplier's "company residual mix"). This is crucial in order to avoid double counting inside a suppliers' disclosure portfolio through the perception of the information by consumers.
- Furthermore, a national reference mix relating to the country of the end-consumer should be provided on the disclosure statement. Ideally, it should be decided on national level whether this national reference mix refers either to the national production mix or alternatively to the national average consumption mix<sup>24</sup>. Unless national regulations require to use the national average consumption mix (and this information is centrally provided e.g. by the NRA and therefore known to the supplier), it is recommended that suppliers make a comparison with the national production mix. This is the more obvious and continuous reference parameter for consumers, and accurate information on the overall consumption mix would usually not be available to suppliers anyway.
- See also Chapter 5.2.2 with respect to environmental indicators for the different mixes, Chapter 5.1.3 for further recommendations on evaluative presentation and Chapter 5.1.1 for format of presentation of the different mixes.

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<sup>24</sup> National average consumption mix here means the weighted average of all disclosure information which is provided to end consumers within a given country.

Figure 2: Example for a disclosure statement which accords to the basic recommendations as given by this document.

	Your Product "Green"	Average of your "Sample Supplier"	For comparison: [National] production mix
			
Nuclear	0,0%	15,0%	17,9%
Hard coal	0,0%	11,0%	18,6%
Lignite	0,0%	24,0%	24,9%
Natural gas	0,0%	15,0%	13,7%
Other fossil	0,0%	10,0%	4,5%
of which oil	0,0%	0,0%	1,1%
of which unspecified & other	0,0%	0,0%	3,3%
Hydro power	85,0%	22,0%	3,0%
Other renewable	15,0%	3,0%	17,4%
of which wind	5,0%	1,0%	8,1%
of which biomass	10,0%	2,0%	5,0%
of which photovoltaic	0,0%	0,0%	3,2%
of which geothermal	0,0%	0,0%	0,5%
of which unspecified & other	0,0%	0,0%	0,6%
High-efficient cogeneration of electricity and heat	5,0%	7,0%	8,5%
Additional information with respect to your product "Green"	100% of this electricity production has been documented based on Guarantees of Origin. 85% of these Guarantees of Origin represent electricity production in [Country A]. 15% of these Guarantees of Origin represent electricity production in [Country B]. 0% of this electricity production has received public support.		
CO <sub>2</sub> emissions [g/kWh]	0	494	529
Radioactive waste [µg/kWh]	0	450	537
The mark (♣) indicates the level of emissions of CO <sub>2</sub> and radioactive waste related to the fuel mix of your product and of the average fuel mix of your supplier compared to national average.			

### 5.1.3 Evaluative presentation

Particularly with respect to environmental indicators, which are provided as absolute values rather than as relative share (like it is the case for fuel mix information), it is difficult for household consumers to assess the meaning of such values and therefore the environmental quality of underlying production based on this information. Different real-case examples on how to show various comparative values are shown in section 2.3 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II), and also included in Figure 2. The following recommendations are given to electricity suppliers:

- Suppliers should therefore present information on environmental indicators in a form which easily allows consumers to understand the level of environmental indicators in the relation to reference mixes. This should not only include graphical charts comparing the supplier mix, product mix and national mix (c.f. Chapter 5.1.2), but also further instruments like intuitive colour coding.
- Such provision of information should also be taken into account in the layout of a standard disclosure format as specified in Chapter 5.1.1.

#### 5.1.4 Further measures to increase transparency and comparability of disclosure information

As already stated earlier, the IEM Directive requires Member States to assure provision of disclosure in a comparable way. Although this obligation is therefore particularly on competent bodies to centrally coordinate this between suppliers, also individual suppliers can contribute pro-actively to this goal.

One instrument in order to support such comparability is central provision of disclosure information for all available electricity products. Usually such central data collection should be in the responsibility of a national competent body, but could also be facilitated on a voluntary basis. The following recommendations are given to electricity suppliers:

- Suppliers should support provision of information for all electricity products available to consumers within a certain area, e.g. through a website. If such website is not provided by the national competent bodies, suppliers could cooperate e.g. within their branch association in order to set up such website.
  - The provided information should at least contain the fuel mix information and environmental indicators of the products offered and the overall information on the supplier portfolios.
  - If standardised means for comparison of additionality aspects of products are defined within a domain, those should also be indicated. In the absence of such definitions, indication of quality labels (which usually refer to a specific level of additionality) is recommended.
  - It is also recommended that on this platform a clear explanation of the mandatory contents of disclosure is given to consumers. If there is a mandatory graphical format, provision of an example disclosure statement with legends pointing at the different elements would be good practice.
  - Suppliers should cooperate in order to combine such comparison of products with price comparison tools on national level.
- Suppliers should ensure independent third-party verification of their disclosure information. Unless this is undertaken anyway by the national competent body, suppliers should charge on a voluntary basis an independent auditor with verification at least of sold electricity volumes, sound documentation of attributes (e.g. by GOs) which are assigned to them and the disclosure information which then is given towards end consumers.
- As required by the Directive, suppliers shall display the fuel mix information on the electricity bill sent to consumers, or on a separate insert which is sent out with the bill, and in promotional materials.
  - If an insert is chosen, there should be a clear link on the bill to the insert provided with the bill.
  - Furthermore, the fuel mix information must become part of any promotional materials made available to final customers, e.g. printed brochures, leaflets and websites. On websites, the fuel mix information must be easy to find and clearly marked, so that consumers are encouraged to view this information.

## 5.2 Parameters to be disclosed

### 5.2.1 Detailed categorisation of fuels and technologies

The IEM Directive does not make any specification on how different fuel categories should be defined for disclosure of the respective shares, and not all national regulation clearly provides guidance for this. While a common minimum approach has been the distinction between renewable, fossil and nuclear, it is also common to make a more detailed distinction. In order to support the comparability of disclosure information, it is desirable that a standard list of energy sources to be used by all suppliers is developed on national level. RE-DISS does calculate Residual Mix information for fuel categories as shown in Table 1, and recommends to Competent Bodies to define national fuel categories consistent with this list.

Table 1: Hierarchy for energy sources in the calculation of Residual Mix and European Attribute Mix by RE-DISS II as of disclosure year 2013.

Renewable	Unspecified & Other
	Solar
	Wind
	Hydro
	Geothermal
	Biomass
Nuclear	
Fossil	Unspecified & Other
	Hard Coal
	Lignite (or Brown Coal)
	Natural Gas
	Oil

This definition takes into account relevant differences in terms of environmental indicators, relevance in terms of electricity production volumes, expected interest from end-consumers and data availability particularly with reference to ENTSO-E production statistics and EECS statistics for use of GOs. The following recommendations are given to electricity suppliers:

- Within the respective national regulatory framework and the flexibility that may be still be given, suppliers should strive to provide information for the fuel categories as given in Table 1. This list includes the categories as defined for calculation of the RE-DISS residual mix in order to achieve international data consistency, particularly for application of residual mix information.
- For sub-categories, listing of specific categories seems only to be helpful for consumers in case those are larger than 0%.
- Additional disclosure of the shares of electricity deriving from high-efficient cogeneration and from bioliquids which fulfil the sustainability criteria of Directive 2009/28/EC, can be added to the disclosure data used by suppliers as a separate item.

## 5.2.2 Environmental Indicators

In addition to the information on the breakdown of energy sources used to generate the electricity supplied, the IEM Directive requires that suppliers provide information on the environmental impact, in terms of at least CO<sub>2</sub> emissions and radioactive waste resulting from the electricity produced by the overall fuel mix of the supplier. Real-case examples on how to show various comparative values are shown in section 1.4 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II), and is also included in Figure 2. The following recommendations are given to electricity suppliers:

- Suppliers should provide this information on CO<sub>2</sub> and radioactive waste directly on the bill and with promotional material together with the fuel mix disclosure statement (as shown in Figure 2).
- Suppliers should also strive to inform consumers about additional environmental indicators. It seems appropriate that such additional information is not necessarily to be provided with the bill due to the increase of complexity, but on an internet website. In this case, a prominent link to this website should be placed on the bill or on the separate insert and also on the promotional material.

- The provided information on environmental impact should relate to all fuel mix statements which are to be disclosed by the supplier. This should include the overall mix of the supplier, the specific product mix and also a (national) reference mix (see also Chapter 5.1.2 of this document).
- The figures on environmental indicators should relate to the same reference period as the fuel mix information.
- Information about environmental indicators for the Residual Mixes can be found in the results of RE-DISS Residual Calculations as published on the project website [www.reliable-disclosure.org](http://www.reliable-disclosure.org).<sup>25</sup> Information on environmental indicators for specific electricity generation options can be provided by specific plant or case studies related to energy source and technology as well as relevant generic databases (country and/or technology specific). For more information, including specific data references, please see the reports as provided by Work Package 5 of the RE-DISS II project.

### 5.2.3 Shares of supported electricity

RE-DISS BPR [36] recommends to competent bodies that they should clarify the relation between their support schemes for RES & cogeneration on the one side and GOs and disclosure schemes on the other side. Possibilities for such national regulation are manifold. For example, attributes of nationally supported RES production may be allocated on a pro-rata basis towards end-consumers with or without the formal usage of GOs, or the respective volumes are fully eligible for issuing of freely tradable GOs (which of course would have to indicate the received level of support).

At the same time, the received level of support is probably of interest for end consumers who might prefer requesting and financially supporting RES electricity which is not already paid for by national support schemes. The RES Directive ensures that information on received level of support is available at least for RES production volumes which are tracked by RES GOs. Different real-case examples on how to show various comparative values are shown in section 1.1 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II). The following recommendations are given to electricity suppliers:

- Suppliers should assure how to disclose national supported electricity. In case there is no clear national regulation on this, suppliers should contact their national competent body in order to clarify whether an RTS is to be applied for supported electricity (see also Chapter 4.1.2).
- In case that the domestically supported RES is allocated with a specific allocation mechanism to consumers (e.g. on a pro-rata basis), this can be done by disclosing two discrete categories (e.g. “RES-E, supported by #name of the national support system#” and “Other RES”).
- Suppliers should consider to provide information on the shares of supported electricity particularly with respect to a disclosed product mix with ex-ante claims (e.g. as specifically “green” or “RES” product). Such information on support will probably be only consistently available for volumes which are tracked by means of RES GOs, as the level of support is a mandatory information item on RES GOs according to the RES Directive. Such information could be by distinction of two different fuel categories (“supported RES” and “unsupported RES”), or by separate indication in the way of “X % of the RES volumes supplied with this product have not benefitted from public support”. It can be considered that such information on the level of support is being provided on a website to which the disclosure statement refers rather than on the disclosure statement itself. Thus, more explanations can be provided and complexity of the disclosure statement itself is reduced.

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<sup>25</sup> Also after end of the RE-DISS II project in September 2015, it is expected that such residual mix calculations will be continuously published by a central European organisation, and respective reference will be probably given on the mentioned website [www.reliable-disclosure.org](http://www.reliable-disclosure.org).

#### 5.2.4 Information on geographic origin

The RES Directive clarifies that GOs have no role in terms of target accounting on the level of EU Member States. Still, expectation of consumers often includes that supplied electricity comes from regional or at least national production, which is not in line with the pan-European markets for electricity and particularly for GOs. Information on the geographical origin of the disclosed electricity production attributes would provide transparency for an informed consumer choice. Such information is available from the information given on RES GOs (and most probably also for any other GOs which are available), but probably also for any other Reliable Tracking Instrument which may be applied (as these usually are defined on a national level only anyway). However, such information is not available for the calculated Residual Mix shares, at least for the time being. Different real-case examples on how to show various comparative values are shown in section 1.2 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II). The following recommendation is given to electricity suppliers:

- It is recommended that suppliers indicate in their disclosure information the country of origin of the underlying attributes as far as this information is available based on reliable tracking information. This should be the case at least for products with ex-ante claims, which should be tracked with GOs.<sup>26</sup> Such information might not be available e.g. for a supplier mix (unless this is fully based on explicit tracking instruments which contain such information). It can be considered that such information on the geographic origin is being provided on a website to which the disclosure statement refers rather than on the disclosure statement itself. Thus, more explanations can be provided and complexity of the disclosure statement itself is reduced.

#### 5.2.5 Additionality

It is a repeated criticism towards green electricity offers that the mere fact of being 100% RES does not necessarily correlate to any additional environmental improvement (i.e. “additionality”), but is based on allocation mechanisms in the market without actively having influence on the production mix.

Attempts to provide transparency on the level of additionality usually strive to measure the influence for increasing RES production shares, e.g. by special monetary funds or by minimum shares of RES supply from explicitly new plants. In most cases, such information is defined and verified by voluntary premium labels. In UK, NRA Ofgem has implemented a voluntary scheme and is currently considering to implement application of this on mandatory level. Such approach is also recommended by the RE-DISS Best Practice Recommendation [40] which asks for clear rules how the “additionality” of products can be measured in order to provide transparency to end consumers as basis for informed consumer choices.

- In case there is any nationally agreed definition of additionality, suppliers should provide information on the level of additionality for all products which include specific claims (e.g. “100% RES”, “low carbon power” or “green electricity”).
- If this is not available, such information based on neutral explanations could be given by suppliers on voluntary basis, ideally backed by an independent label or at least third-party verification.
- It is recommended that such reference is given together with the bill in order to provide clarity particularly to those consumers who are not actively aware of the distinction between additionality and fuel mix disclosure. In case comprehensive information on the level of additionality is provided, this can be given on a website to which the disclosure statement refers rather than on the disclosure statement itself. Thus, more explanations can be provided and complexity of the disclosure statement itself is reduced.

### 5.2.6 Tracking Mechanism

As has been described already further above, different (explicit and implicit) tracking mechanisms are possibly to be applied by electricity suppliers. Amongst others, actual usage of the individual instruments depends on whether the supplier is actively managing his disclosure portfolio thus creating specific demand, or whether he is passively using attributes which are assigned to him, particularly by relying on Residual Mix information. In order to distinguish between different suppliers, one option to accentuate actual market behaviour would be to distinguish which part of a disclosed fuel share derives from the actual active market behaviour and which part is just passively "inherited" from a residual mix. Furthermore, at least in some countries NGOs have expressed their clear preference for tracking along the electricity contracts rather than by using GOs which are not linked to the electricity contract. This raises the question about the relevance of disclosing not only the fuel shares, but also indicating the respective means of tracking. Different real-case examples on how to show various comparative values are shown in section 1.6 of the background document to the RE-DISS consultations on disclosure guidelines (see Annex II). The following recommendation is given to electricity suppliers:

- Suppliers should consider the level of knowledge of their end consumers before deciding on this issue. Such information could come once end consumers are quite familiar with the principles of disclosure, or the role of individual tracking instruments is under public debate.
- It is recommended that disclosure of such details at least takes place on a website, to which a clear reference on the bill or the disclosure statement in promotional material is given.
- Options to disclose tracking mechanisms can for example include the following elements:
  - Indication of share of residual mix information, either as separate additional information, or disclosure of each fuel category distinguished between "explicitly tracked" and "residual mix".
  - Indication of share of GOs, possibly distinguished between "GOs which correspond to the electricity production from plants which is contractually provided via the grid" and "Other GOs".
  - Indication of own production.



## **Annex I: Wording of the relevant EU Directives**

### **Internal Electricity Market Directive 2009/72/EC (IEM Directive)**

#### **Recital 45**

*Member States should ensure that household customers and, where Member States deem it appropriate, small enterprises, enjoy the right to be supplied with electricity of a specified quality at clearly comparable, transparent and reasonable prices.*

#### **Article 3 (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 CO<sub>2</sub> 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.*

### **Directive 2009/28/EC on the promotion of the use of energy from renewable sources (RES Directive)**

#### **Recital 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 counting 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. It is important to distinguish between green certificates used for support schemes and guarantees of origin.

#### **Recital 53**

It is appropriate to allow the emerging consumer market for electricity from renewable energy sources to contribute to the construction of new installations for energy from renewable sources. Member States should therefore be able to require electricity suppliers who disclose their energy mix to final customers in accordance with Article 3(6) of Directive 2003/54/EC, to include a minimum percentage of guarantees of origin from recently constructed installations producing energy from renewable sources, provided that such a requirement is in conformity with Community law.

#### **Article 2 (Definitions)**

- (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;*

**Provisions by Article 15 with direct relevance for electricity suppliers in the context of provision of fuel mix disclosure**

[...]

3. Any use of a guarantee of origin shall take place within 12 months of production of the corresponding energy unit. A guarantee of origin shall be cancelled once it has been used.

[...]

6. A guarantee of origin shall specify at least:

(a) the energy source from which the energy was produced and the start and end dates of production;

(b) whether it relates to:

(i) electricity; or

(ii) heating or cooling;

(c) the identity, location, type and capacity of the installation where the energy was produced;

(d) whether and to what extent the installation has benefited from investment support, whether and to what extent the unit of energy has benefited in any other way from a national support scheme, and the type of support scheme;

(e) the date on which the installation became operational; and

(f) the date and country of issue and a unique identification number.

7. Where an electricity supplier is required to prove the share or quantity of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC, it may do so by using its guarantees of origin.

8. The amount of energy from renewable sources corresponding to guarantees of origin transferred by an electricity supplier to a third party shall be deducted from the share of energy from renewable sources in its energy mix for the purposes of Article 3(6) of Directive 2003/54/EC.

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.

[...]

11. A Member State may introduce, in conformity with Community law, objective, transparent and non-discriminatory criteria for the use of guarantees of origin in complying with the obligations laid down in Article 3(6) of Directive 2003/54/EC.

12. Where energy suppliers market energy from renewable sources to consumers with a reference to environmental or other benefits of energy from renewable sources, Member States may require those energy suppliers to make available, in summary form, information on the amount or share of energy from renewable sources that comes from installations or increased capacity that became operational after 25 June 2009.

## **Annex II: Consultation Background Document**

The RE-DISS II document "Selected options for implementation of "front side" disclosure aspects - Background information and consultation" (April 2014) had been provided for the stakeholder consultation on disclosure guidelines which has been conducted in April and May 2014 in order to provide background information to the questions raised. It is available as separate document on the project website [www.reliable-disclosure.org](http://www.reliable-disclosure.org).

## **Annex III: Summary of Responses to Consultation**

The RE-DISS II document "Consultation on options for implementation of front side disclosure aspects Summary of formal responses" (August 2014) gives an overview over the formal responses which have been received during the stakeholder consultation on disclosure guidelines which has been conducted in April and May 2014. It is available as separate document on the project website [www.reliable-disclosure.org](http://www.reliable-disclosure.org).

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