

Starter Kit for Basic Implementers of the RE-DISS Best Practice Recommendations

How to put in place a simple but reliable framework for GOs and Disclosure

Version 1.3

Written by

Diane Lescot (diane.lescot@energies-renouvelables.org), Observ'ER

Content

1	Introduction.....	4
1.1	Context	4
1.2	Objectives	4
1.3	Methodology	4
1.3.1	Different stages of market maturity	5
1.3.2	Definition of Basic Implementers.....	6
1.3.3	Different dimensions of the Starter Kit	6
2	Basic requirements in legal, regulatory and operational terms regarding GOs and Disclosure systems	7
2.1	Requirements in stage 1	8
2.1.1	Priorities regarding the tracking system	8
2.1.2	Requirements in terms of GOs.....	9
2.1.3	Operational recommendations regarding GOs	10
2.1.4	Requirements in terms of disclosure.....	12
2.1.5	Operational recommendations regarding disclosure.....	13
2.2	Requirements in stage 2.....	15
2.2.1	Priorities regarding the tracking system	15
2.2.2	Requirements regarding GOs	15
2.2.3	Operational recommendations regarding GOs	15
2.2.4	Requirements regarding disclosure	16
2.2.5	Operational recommendations regarding disclosure.....	18
2.3	Outlook on further stages	18
2.3.1	Priorities and requirements in stage 3.....	18
2.3.2	Priorities and requirements in stage 4.....	19
3	Technical requirements	20
3.1	Current practices in terms of international transfers of GOs.....	20
3.1.1	Competent Authorities that are connected to the AIB Hub	20
3.1.2	Competent Authorities that are not connected to the AIB Hub	21
3.2	Lessons learned	22
3.2.1	Overview of current procedures	22
3.2.2	Risks involved in current procedures	22
3.2.3	Outlook on practices in the future	23
3.3	Implications for a registry solution	24
3.4	Outlook	24
4	References	25

5	Annexes	26
5.1	Questionnaire on current data transfer solutions (Domains connected to the AIB Hub) 26	
5.2	Questionnaire on current data transfer solutions (Domains not connected to the AIB Hub) 26	
5.3	Detailed results of the survey	26

List of Figures

Figure 1:	Different stages of market maturity	5
Figure 2:	Gradual implementation of the BPRs	8

1 Introduction

1.1 Context

In a number of countries, particularly in the new Member States (MS), it appears that the transposition of disclosure obligation and implementation of a Guarantee of Origin (GO) system is not yet finalised, for a number of different reasons: financial and economic crisis, lack of development of the electricity market (high concentration, existence of segments which are not yet open to competition...).

One of the aims of the second phase of the RE-DISS project is to help these MS to become “Directive and BPR compatible” by identifying which are the basic requirements that a country can and needs to implement in order to properly transpose Directive 2009/72 on disclosure and Directive 2009/28 GOs and create a framework that is compatible with the RE-DISS Best Practice Recommendations (BPR).

Following several contacts with Competent Authorities, several countries with less advanced markets appeared not to be fit for implementation of reliable GO and disclosure frameworks compliant to the RE-DISS BPR. The RE-DISS team committed to elaborate a more basic version of the BPR that would be tailored to these markets. In doing so, the RE-DISS team naturally went on to examine how this lighter version of the BPR could lead to the gradual implementation of a more complete framework. The BPR light should have as final goal the establishment of a complete GO and disclosure frameworks. In this context, the present document was elaborated with the aim of enabling MS to gradually reach a status where they could become not only directive -, but also BPR-compliant.

The present document should be understood as voluntary guidelines that will give practical advice on where to start and how to prioritise among the numerous actions that have to be implemented by the Competent Authorities for GOs and Disclosure in case that available resources and political backing are not sufficient to make a comprehensive system implementation in one turn. The developed approach should support Competent Authorities in the end to achieve a framework that contains the features recommended by the BPR.

1.2 Objectives

This document should serve three main objectives:

- Enable correct implementation of EU Directives on GO and disclosure by all MS.
- Enable MS to plug into the GO market without creation of disruptions, i.e. keeping the global qualities of the whole market: reliability, accuracy and fraud resistance.
- Ease and support this implementation in MS whose markets do not show a large degree of differentiation (yet).

1.3 Methodology

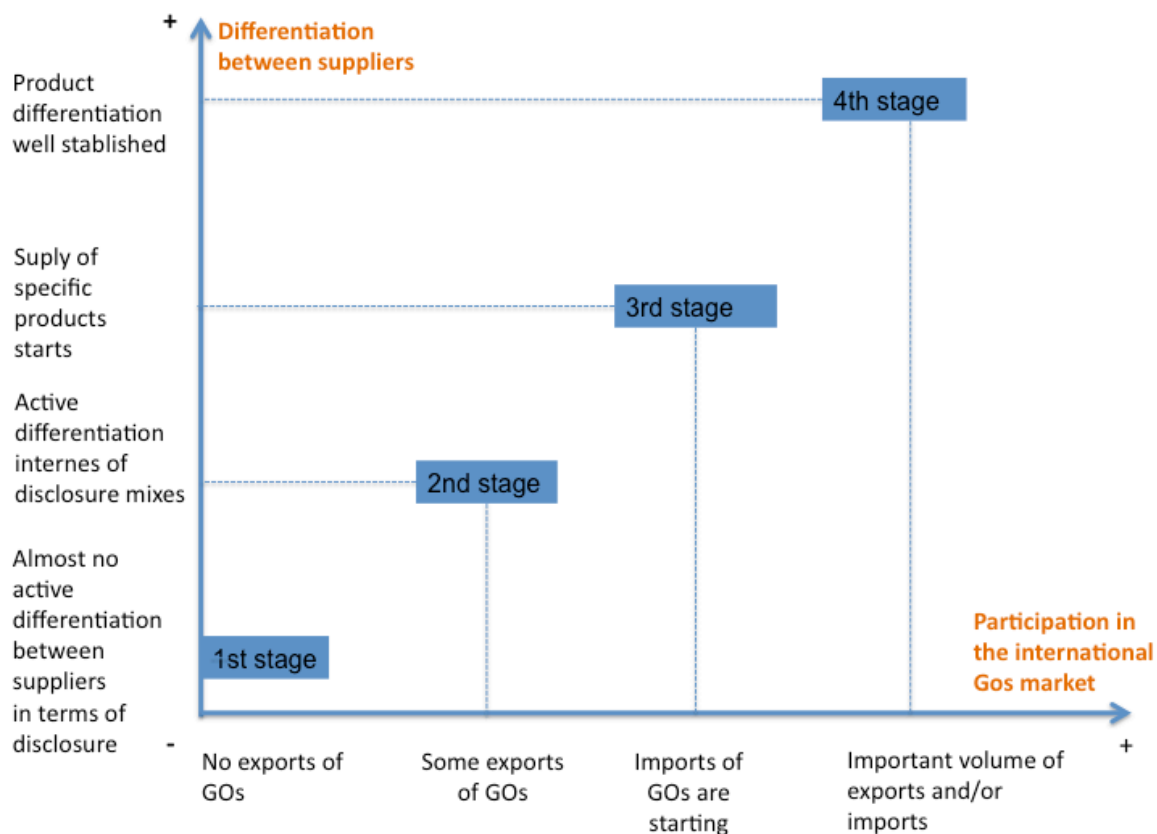
The vocation of the Starter Kit is to be a general guideline that can be followed by all Competent Authorities. It is not tailor made to the individual Domains. Stemming from that, the cases that are proposed below may seem a bit theoretical and recommendations have to be adapted to the context of each Domain.

In order to determine which are the basic requirements for implementation of proper disclosure and GO frameworks, it was necessary to put oneself in the context of less advanced electricity markets. To do this, the team defined a series of generic stages of development that can be found characteristic from the less advanced countries situation as compared to those from the more advanced countries. This can be understood as a sort of chronological framework, that would follow the development of the electricity market in a given country, which would start as Basic Implementer and end as advanced implementer of the RE-DISS BPRs.

1.3.1 Different stages of market maturity

Four stages of market maturity can be depicted, as a function of the development of competition between suppliers on the electricity market and of the participation to the international GO market. Of course, in reality, countries will not follow this typical progression and will maybe progress quicker on one axis or on the other. They will maybe reach market differentiation sooner than participation in GO trade or the other way round.

Figure 1: Different stages of market maturity



- Stage 1 :
 - No or very limited market liberalisation, particularly meaning no free choice of supply by end consumers
 - No active differentiation between suppliers (in terms of disclosure information)
 - No participation in international GO market

- Stage 2 :
 - Active differentiation starting between suppliers
 - Individual consumers (e.g. multinational commercial consumers) start requesting specific products
 - Exports of GOs start
- Stage 3 :
 - Active differentiation between suppliers
 - Product differentiation starts
 - Option for domestic consumers to select specific products
 - Exports of GOs gain weight, imports may start
- Stage 4 :
 - Suppliers have differentiated products
 - Developed market for specific products which are requested by end consumers
 - Participation in GO market: exports and imports

1.3.2 Definition of Basic Implementers

Countries which correspond to situations as described by the first and second stages are considered as **Basic Implementers**, and are the target of these guidelines. In these countries, market liberalisation is not completed, with whole segments of consumers that cannot change suppliers or that benefit from regulated tariffs, which prevents effective competition to take place. Suppliers in these domains do not use disclosure as a means of differentiation. The integration in the GO international market is almost non-existent, with countries where no issuing of GOs takes place yet. Of course, definition of these stages is only indicative, as individual development of countries is more complex. For example in Portugal, no GOs are issued yet, but their framework for disclosure is such that differentiation between suppliers is high. In Spain, GOs are extensively used on the national level with strongly differentiated supplier mixes, but GOs are not exported nor imported a lot since Spain is not connected to AIB Hub, which is currently the only existing international platform for exchanging GOs reliably.

1.3.3 Different dimensions of the Starter Kit

Competent Authorities for GOs and Disclosure have to set up the systems on different levels: legal, regulatory, operational and technical. The Starter Kit aims at supporting Competent Authorities in all these dimensions. A first part of the report will be devoted to legal, regulatory and operational levels and a second part to the technical side.

In the first part, Competent Authorities will be advised what legal and regulatory dispositions are needed at which stage. Operational recommendations are proposed to support the implementation of these new dispositions. In the second part, current practices related to exchanges of GOs will be studied, lessons learned will be analysed so as to serve as a basis for future solutions to facilitate international exchanges of GOs without endangering the reliability of the already existing system.

2 Basic requirements in legal, regulatory and operational terms regarding GOs and Disclosure systems

The choice of what are the basic requirements in stage 1 and in stage 2 is the result of an acceptable compromise between what are the constraints in less advanced markets and the necessity to not jeopardise the whole international tracking system. So a general requirement will be to avoid double counting in explicit as well as in implicit tracking. At the same time, it is important to favour also the maturing of these markets and to keep in mind that on a national level, whenever possible, basic requirements should aim at enhancing market differentiation in these countries and educating consumers to increase value of green attributes.

Each stage shows specific objectives to fulfil, which are linked to the relevance and reliability of information in the national market and to the need to prevent double counting when the country starts to participate to the GO market.

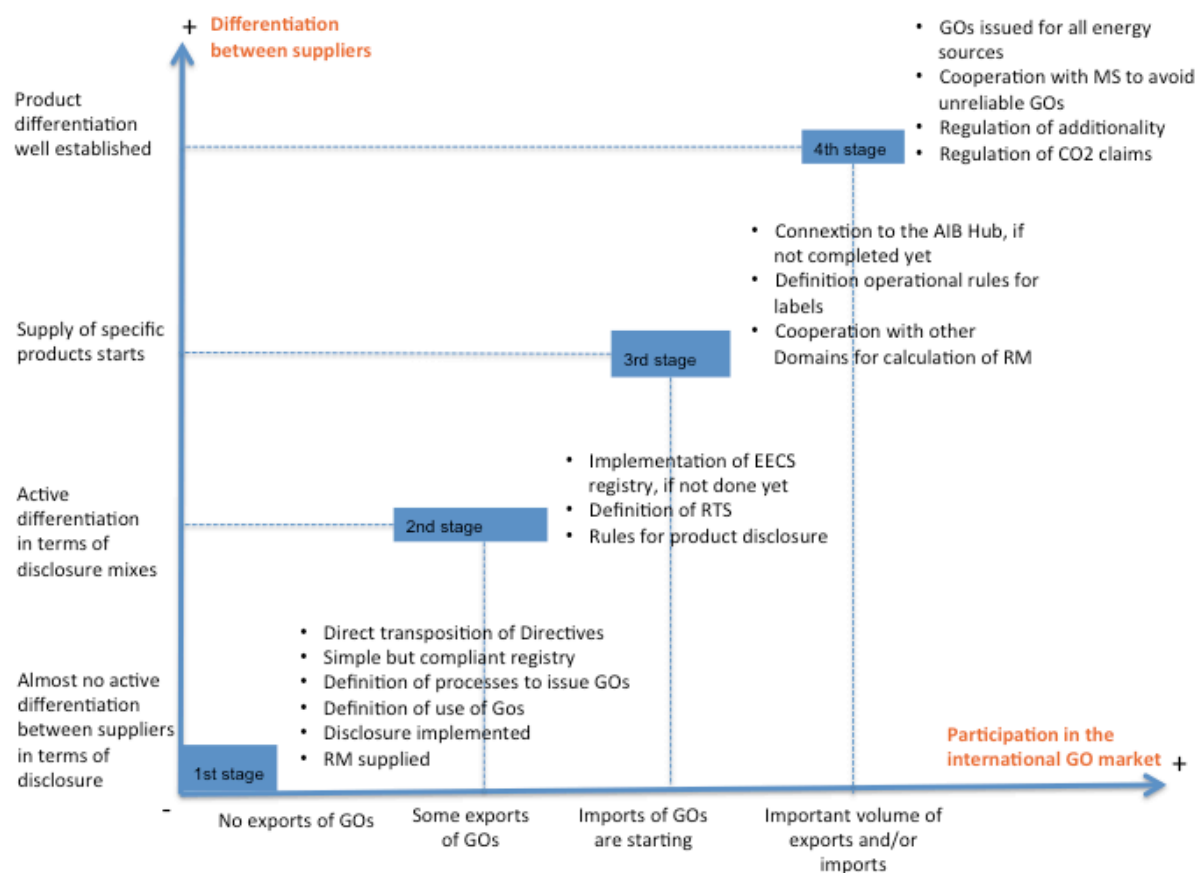
In a first exercise¹, BPRs have been prioritised according to their relevance in relation to the stage specific objectives. In a second step, they have been evaluated against their feasibility regarding the constraints of these markets. Whenever they were deemed not implementable, they have been changed or other recommendations have been included if needed to fulfil the specific objectives.

It is necessary to highlight that giving stage specific recommendations does not mean that countries should not implement in stage 1 recommendations that are given for stage 2. The sequence of recommendations does not imply that it has to be strictly followed to arrive to an advanced disclosure and GO framework. If a country qualified as Basic Implementer would like to implement at once all BPRs, this is obviously the best configuration. The sequence is only meant to be followed if it makes implementation of the BPRs less complex for some Competent Authorities in the given framework of their electricity market.

Also the sequence was elaborated so that the work to be performed in stage 2 can build on what has been achieved in stage 1. Recommendations for stage 2 do not imply to start building a new and different framework. They are linked to recommendations from stage 1. Recommendations are piling on top of the ones from former stages.

¹ Discussion paper for a prioritisation of Best Practice Recommendations with the view to define basic recommendations, Version 1.2, 18th February 2014

Figure 2: Gradual implementation of the BPRs



2.1 Requirements in stage 1

2.1.1 Priorities regarding the tracking system

Stage 1 corresponds to the lower level of market differentiation and participation in GO exchanges. Market liberalisation is very limited. Whole segments of consumers are still regulated and have no free choice of suppliers. Incumbent suppliers play a very strong role in these markets.

In terms of disclosure, there is almost no active differentiation between suppliers. Supplier mixes often correspond to the national production mix or disclosure is not always implemented in practice, even if Directive 2009/72 has been transposed.

In terms of GO system, if it is operational, most probably the level of issuing is quite low. Some export could happen, but which are closer to the testing experience than to a real demand from abroad targeting the Domain's GOs.

The priorities of the Competent Authorities at this stage of development is to be able to justify compliant implementation of article 15 of Directive 2009/28 and article 3 paragraph 9 of Directive 2009/72. The implementation can be reduced to the minimum required but needs a complete legislative and regulatory set.

The tracking system that is put in place should include reliable mechanisms to avoid double counting on the national level, since this is a condition for GOs to be accepted by other Member States. As there is no active search of differentiation of supplier mixes, imports are very unlikely to happen.

Competent authorities should ensure that disclosure is implemented in effect.

Education of the consumers on the existence and purpose of disclosure should start. This stage should be used to inform consumers on the fact that suppliers have different supply mixes and that this information should be provided to them.

The limitation of costs is also a strong priority for Basic Implementers which tend to have more limited resources to invest in the tracking system than in more advanced countries.

Finally the system put in place should be conceived so as to set appropriate basis for future developments of disclosure: the general concept of the tracking system should include tracking tools and basic rules that should correspond to the RE-DISS BPR and not require to change legislation to achieve further improvements of the system.

2.1.2 Requirements in terms of GOs

Legislation and regulatory texts

The legislation transposing article 15 of Directive 2009/28 should be in place. It should be composed of the law and of the regulatory framework implementing the law.

The law should include principle of designation of Competent Authority, in compliance with Directive 2009/28 requirements. "Member States or designated competent bodies shall supervise the issuance, transfer and cancellation of guarantees of origin. The designated competent bodies shall have non-overlapping geographical responsibilities, and be independent of production, trade and supply activities." (art.15 §4)

Registries

Electronic registries should be put in place, in which compliant GOs including all Directive information (art15, §6) can be issued, transferred nationally and cancelled.

Processes

Competent authorities should define the eligibility criteria of production devices to the GO schemes and supply market players with instructions on how to proceed with registration. They should also make it clear for the market parties how GOs shall be used.

Principle of issuing for net generation and only for the RES part if only RES GOs are issued should be enacted at this stage. [BPR10] applies:

- 1) GOs should generally be issued only for the net generation of a power plant, i.e. gross generation minus the consumption of all auxiliaries related to the process of power production. For hydro power plants involving pumped storage this means that GOs should be issued only for the net generation which can be attributed to natural inflow into the reservoir. This should be consistent with the EECS rules which for the time being mean: net generation may include losses associated with pumping, where the efficiency of the pump is known and can be verified.

$$\text{Issuing} = \text{Generation} - \text{AuxiliaryConsumption} - \text{Pumping} * \text{PumpingEfficiency}$$

If Pumping Efficiency is unknown, 100% must be assumed.

- 2) Verification mechanisms should be implemented for ongoing control of registered data (e.g. re-audits, random checks, etc.).
- 3) Correct accounting of RES share of combustion plants should be assured by adequate measures such as those recommended by the EECS Rules (cf part N5.3.2).

Purpose and uniqueness of GOs

The following BPRs should be implemented at this stage:

- GOs shall have no function in terms of target compliance and should not be used as support instrument. The only purpose of GOs should be disclosure. [BPR13-1].
- There should be no issuing of more than one GO for the same unit of electricity. If multiple certificates are to be issued, e.g. a GO for disclosure and a support certificate for management of a support system, then these should be legally separated. [BPR14 a and b].
- This also applies to cogeneration plants which are using RES as the energy source: only one GO should be issued per unit of electricity. This GO should combine the functionalities of a RES-GO and a cogeneration GO. [BPR15 a and b]

Use of GOs

The following BPRs should be implemented at this stage:

- A GO should be considered as having been used only once it has been electronically cancelled. [BPR13-2]
- After cancellation, no further cancellation, transfer or export of the given GO should be possible. [BPR13-3]
- After expiry, no further cancellation, transfer or export of the given GO should be possible. [BPR13-4]
- An exported GO should be marked as removed from the exporting registry. [BPR13-5]
- Processes in the registry should exclude duplication of GOs. [BPR13-6]
- Cancellations of GOs which take place until a given deadline in year X+1 should be counted in disclosure for year X. Later cancellations should be counted in disclosure for year X+1. (If disclosure periods differ from the calendar year (see item 33), the deadline should be defined accordingly.) Deadline is set on 31st March X+1. [BPR5 a and b]
- The same allocation rule should apply for expired GO: The date of expiry thus determines the disclosure period for which information from expired GO will be used. [BPR6]
- The deadline for cancelling GO for purposes of disclosure in a given year X should be 31 March of year X+1 [BPR34]

2.1.3 Operational recommendations regarding GOs

It is important at this stage to prepare all rules that will have to be followed in further stages, when use of registry will become more important. The recommendations for this stage are

simple to put in place and do not require important resources neither from Competent Authorities nor from market parties.

Legislation and regulatory texts

Based on discussion with and experiences observed at competent bodies of different countries, RE-DISS recommends to implement regulation on different legislative levels. Primary legislation should include direct transposition of the principles and concepts of article 15. Details of implementation should be reserved to secondary legislation. Operational implementation should be referred to in secondary legislation but its specification should be entrusted to the Competent Authorities. In this way the whole dispositive remains flexible and can integrate further evolutions of the European legislation and of the RE-DISS recommendations.

Registries

In stage 1, a pragmatic approach to the registry could be that it is created under an excel database which will be sufficient to launch the process of issuing, transfer and cancellation. This recommendation holds true only for stage 1 where there is no international exchange. In stage 2 the registry should be operated by a database, which should be compliant with the EECS format. So it is deemed more important to get started at first hand and not to defer implementation of a GO system only because implementation of a more sophisticated EECS compatible registry² is considered too complex and costly, particularly in cases where regulatory or actual market liberalisation still is not to be expected in the near future. However, if market interest can be expected in the foreseeable future, it is obviously more efficient to directly strive for implementation of an EECS compatible registry.

Depending on the nature of registry, expiry should be automatically programmed if already a database is foreseen by the Competent Authority at this stage. If only an excel registry is put in place where expiry has to be controlled manually, then procedures have to be implemented so that expiries are done on the first day of every month and at the event of a request for transfer or cancellation. In the same manner, cancelled GOs should be removed from available GOs so that they are clearly separated from transferrable GOs.

Processes

The details of eligibility of production devices for registration into the database, the documents to supply and contracts to sign should be explained in a manual drafted by the Competent Authority and available on their website. It is important at this stage that producers requesting GOs are aware that they have to commit to some operational rules.

Procedures for issuing GOs should make clear when GOs can be issued and for which production period. At this stage, long production periods can be allowed, but they should not exceed one year and should not mix calendar years. And requests for GOs should be done right after the production period (generally the request and issuing should not take more than 1 month).

Purpose and uniqueness of GOs

² In this second phase of the RE-DISS project, it is also foreseen to support Competent Authorities to find affordable registry solutions, by elaborating a business model that will be proposed to existing registry providers. Registry providers will be invited to a registry session to present their offers to Existing Competent Authorities.

Only one GO can be issued for the same MWh. If other certificates with a different purpose are issued then all precautions should be taken so that there is no possibility to use a certificate whose purpose is not disclosure for a disclosure statement.

Use of GOs

Cancellation of a GO should be a mandatory condition for the inclusion of the information it contains in a disclosure statement. Cancellation should be allowed only until 31st March of year N+1 so as to synchronise with the RE-DISS calculation methodology of the Residual Mixes. The registry should contain a public part, which should be available on the Competent Authority website. The public part should show the name of suppliers and details of the GOs they have cancelled including the unique reference of the end consumer for which they have cancelled them.

2.1.4 Requirements in terms of disclosure

Legislation and regulatory texts

The legislation transposing article 9 of Directive 2009/72 should be in place. It should be composed of the law and of the regulatory framework implementing the law. The Competent Authority in charge of disclosure should be clearly designated and entitled to verify disclosure statements, as foreseen in Article 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. »

Contents of disclosure information

The following BPRs should be implemented at this stage:

- Electricity disclosure should be based on calendar years. [BPR33]
- Full disclosure schemes should be implemented, including the disclosure of CO2 emissions and radioactive waste. [BPR22]

Tracking mechanisms

Given the level of development of the tracking mechanisms in the countries under focus, it is very likely that the following BPR, is not really relevant. But in any case, it should be recalled here for the sake of completeness:

- In the medium to longer term, GO should be the only “tracking certificate” used. Any other tracking systems of a similar purpose and function as GO should be closely coordinated with GO and eventually converted to GO [BPR16]

The following BPRs should be implemented:

- All countries should provide a Residual Mix as a default set of data for disclosure of energy volumes for which no attributes are available based on cancelled GO or based on other Reliable Tracking Systems). The use of uncorrected generation statistics (e.g. on national or ENTSO-E, Nordel etc. levels) should not be possible [BPR25]

- All countries should clarify the relation between their support schemes for RES & cogeneration on the one side and GO and disclosure schemes on the other side. Where necessary, the support schemes should be defined as RTS [BPR36]
- If support schemes in a country are using transferable certificates, then these certificates should be separated from GO [BPR37]

Location and frequency of the disclosure information

The Competent Authorities should decide on which materials and how often disclosure information should be given to electricity consumers.

2.1.5 Operational recommendations regarding disclosure

Legislation and regulatory texts

Legislation should include direct transposition of the principles and concepts of article 9:

- the mandatory character of disclosure of their supply mix for suppliers in terms of energy source
- the mandatory communication of environmental impacts (in terms of CO₂ and radioactive waste) of this supply mix
- the reference period being the preceding calendar year

Details of implementation should be reserved to secondary legislation, such as which energy source should be disclosed and whether national consumption mix or product mix should be disclosed. Operational implementation, such as the methodology used to calculate disclosure figures should be referred to in secondary legislation but its specification should be entrusted to the Competent Authorities. In this way the whole dispositive remains flexible and can integrate further evolutions of the European legislation and of the RE-DISS recommendations.

The rules established should be simple but stringent, so as to establish participation of the suppliers to the system rather than incentivising them to pay fines for non-implementation.

Contents of disclosure information

In order to educate consumers, CO₂ emissions and environmental impacts should be provided with disclosure information on energy mix and not separately. In countries with low knowledge on disclosure, it seems unrealistic to think that consumers will actively look for additional information. The motivation to choose renewable energies versus fossil or nuclear energy is strongly rooted in the consciousness of the very low environmental impacts of the former versus the high environmental consequences of the latter. Enabling an uneducated consumer to make an informed choice therefore implies to supply them also with this part of the picture in materials through which he will surely be reached.

Tracking mechanisms

In order to put in place simple tracking mechanisms that can be easily used by suppliers and at the same time guarantee that there will not be any double counting with GOs that have been cancelled in reference to national production, it is necessary that the Competent

Authority provides suppliers with a Residual Mix. This Residual Mix should guarantee that attributes that are tracked through a reliable system should be deducted from the national production mix.

At this point, Competent Authorities need to decide whether they allow the issuing and trading of GOs for supported electricity or whether they allocate supported electricity to end consumers on a regulated basis. In some countries where RES electricity is supported through feed-in tariffs, no GO can be issued for supported production. This production is then allocated on a pro-rata basis to consumers who are actually supporting the cost of the development of RES electricity (Germany, Portugal). In other countries, GOs can be issued and traded for supported electricity (e.g. Spain).

In order not to burden suppliers and gain their cooperation in terms of disclosure, it is recommended that the Competent Authority itself calculates the suppliers mix based on the information stemming from the GO registry and further data sources. For countries categorised as Basic Implementers, number of active suppliers is probably very limited anyway, and therefore workload for Competent Authorities as well. With a view to spur the development of supplier differentiation, if GOs are not available for all energy sources, Competent Authorities may regulate that suppliers who have own production disclose information deriving from their production mix besides the use of GOs and the Residual Mix. This would have to be done along the following procedures, which could be referred to as “centralised contract based tracking”:

- all producers declare to the Competent Authority their production mix and their net buyers, with the corresponding volume, and all suppliers declare the volumes of the sales to end consumers. GOs which are used by suppliers for own supply to end-consumers should not be included in the reported production mix, but (if deriving from own production) be deducted from the reported mix. If the GOs are bought from other producers, they should substitute on a pro-rata basis the production mix of the supplier and therefore have no impact on the reported mix.
- The Competent Authority assigns to these net buyers the mix and volume declared by their net sellers.
- The sum of these attributes, as well as all GOs that have been cancelled for the disclosure period are communicated to the RE-DISS team, that will calculate the RE-DISS national Residual Mixes. Alternatively, the Competent Authority can calculate the RM itself along the methodology that is attached to the RE-DISS BPR document.
- The Competent Authority assigns to each supplier the share of RM that is needed to cover the unknown part of its mix.

Location and frequency of the disclosure information

In order to raise awareness among consumers, it is recommended that Competent Authorities decide that information on disclosure should be sent to consumers more than once a year, which is the minimum required by Directive 2009/72, ideally with every electricity bill. For this information to have an effect, a format for disclosure information should be imposed on suppliers, that would ensure that the information is visible to the end consumer and not hidden in some small font at the bottom of a page. For recommendations on the format of disclosure information, see RE-DISS II report 6.1 Disclosure Guidelines for Competent Authorities.

2.2 Requirements in stage 2

The requirements for stage 2 are based on the assumption that all requirements of stage 1 have been implemented, but Competent Authorities may very well decide to implement also some or all recommendations from stage 2 already in stage 1.

In stage 2, active differentiation is starting between suppliers (probably based mostly on own generation capacities).

Some more informed individual consumers (e.g. multinational commercial consumers) start requesting specific products, which triggers the need for a more advanced registry. But suppliers are not yet offering products to the wide public.

Exports of GOs are not handled by the registry but market players begin to ask for tests.

2.2.1 Priorities regarding the tracking system

At this stage, future international transactions should be prepared. Competent Authorities should take the appropriate steps to ensure that national GOs are accepted by other MS at the end of this stage. They should prepare for connection to the international market of GOs with higher volumes. At the same time, it is still crucial to limit costs of the registry so as to encourage market players to actively participate in the GO system.

Differentiation among suppliers on the basis of specific products should also be prepared. Education of consumers on the possibilities offered by disclosure should go on.

2.2.2 Requirements regarding GOs

Registry

The following BPR should be implemented at this stage:

- The implementation of GO in all countries in Europe should be based on the European Energy Certificate System (EECS) operated by the Association of Issuing Bodies (AIB). In case that national GO systems are established outside of EECS, then EECS should at least be used for transfers between registries [BPR7]
- All types of GO should be handled in one comprehensive registry system per country. (For an exception from this recommendation see the coexistence of national GO systems and EECS) [BPR12]

Processes

The processes to issue GOs should include shorter production periods (1 to 3 months) and should maintain the rule that the whole production period should be comprised within the same calendar year.

2.2.3 Operational recommendations regarding GOs

Registry

Competent Authorities should put in place a registry that should be operated by a reliable database if this has not been done already earlier. This phase will prepare the exchanges that will take place in stage 3. Only the EECS system guarantees safe international transactions of GOs and most international exchanges take place under the EECS format.

So the preparation should aim at setting up a registry which is compatible to EECS, that will be able at the end of stage 2 to connect to the AIB hub.

The Competent Authorities should decide whether they want an in house registry or whether they prefer to sub-contract the technical operation and maintenance of the registry to one of the existing registry suppliers. More details on available registries and offers will be found in a separate RE-DISS document, the publication of which will be communicated to Competent Authorities by e-mail.

Processes

Changes in the processes should be explained to market players and highlight the fact that they target the implementation of a more liquid GO market in the country and prepare the connection to the international market.

2.2.4 Requirements regarding disclosure

Tracking mechanisms

The RE-DISS vision for tracking mechanisms is that in the end, GOs are used for all energy sources and the need for a Residual Mix is non existent. But in stage 2, it is very unlikely that this decision be made by Competent Authorities. So the following BPRs apply:

- Besides GO, only Reliable Tracking Systems (which may include contract based tracking) and the Residual Mix should be available for usage for disclosure. No other tracking mechanisms should be accepted [BPR17]
- Other Reliable Tracking Systems (RTS) should be defined where appropriate based on criteria of added value, reliability and transparency [BPR23]
- RTS can comprise, where applicable:
 - ✓ Homogenous disclosure mixes for regulated market segments where no choice of supplier or different products exists,
 - ✓ Support systems whose interaction with disclosure requires a certain allocation of the attributes of supported generation (e.g. a pro-rata allocation to all consumers in a country where RES electricity is supported by a feed-in tariff),
 - ✓ Contract based tracking [BPR24]
- If contract-based tracking is allowed in a country, it should be regulated clearly [BPR29]
- Such regulations should ensure that
 - ✓ The rules of the tracking system are transparent and comprehensive and are clearly understood by all participants in the system.
 - ✓ Double counting of attributes and loss of disclosure information is minimised within the contract based tracking scheme and also in the interaction of the contract based tracking scheme to GO and other RTS (if applicable). As a precondition for this, the contract based tracking scheme should be able to provide comprehensive statistics about the volumes and types of electricity attributes which are tracked through it.
 - ✓ The relevant information for disclosure purposes should be available in time to meet the timing requirements [BPR30]

International transfers

In order to launch international transfers, it is recommended that ex-domain cancellations of GOs are allowed until stage 3 when a registry interconnected with the AIB hub should be in place:

- So-called ex-domain cancellations of GO, where a GO is cancelled in one registry and a proof of cancellation is then transferred to another country in order to be used there for disclosure purposes, should only be used if there is no possibility for a secure electronic transfer and if there is an agreement on such ex-domain cancellations between the competent bodies involved. Statistical information on all ex-domain cancellations should be made available in order to support Residual Mix calculations. [BPR9]

Disclosure of products

It is mandatory already at this stage that GO is used for any ex ante claim on the contents of a specific product.

- If suppliers of electricity intend to use contract based tracking in order to fulfil claims made towards consumers regarding the origin of a certain electricity product (for example a green energy product), GO should be used in addition to the contract (see also item [38]) [BPR31]

2.2.5 Operational recommendations regarding disclosure

Tracking mechanisms

It is recommended that if GOs cannot be issued for other energy sources than RES, then Competent Authorities should allow for some differentiation between suppliers based on centralised contract-based tracking as described in stage 1. When GOs can be issued for all energy sources, contract based tracking should cease.

International transfers

Ex-domain cancellations should only be allowed if the “country of destination” explicitly agrees to such practice. Ex-Domain cancellations should be officially communicated by the exporting Competent Authority to the importing Competent Authority with information in terms of volume and attribute contents. It should also be communicated to the RE-DISS team/follow up organisation that will be calculating the European Attribute Mix and the national Residual Mixes.

Disclosure of products

Although for disclosure of RES products with an ex-ante claim, a supplier should use only GOs, it is however possible that a supplier uses contract based tracking as described in stage 1 to claim 100% renewable origin for the supplier mix ex-post.

2.3 Outlook on further stages

When they reach stages 3 and 4, it is considered that countries are not Basic Implementers anymore, which is the reason why they will not be treated here in detail.

2.3.1 Priorities and requirements in stage 3

At this stage, on the national electricity market, active differentiation is a fact between suppliers, which is more and more the results of GO trades and less based on own generation capacities. Product differentiation starts. Domestic consumers have the possibility to select specific products, not only large consumers.

As to what regards participation in the international market, exports of GOs gain weight, and imports may start since the registry should achieve connection with the AIB hub at the end of stage 2.

Priorities for this stage on the national level are that the tracking framework enables consumers to exercise an informed choice regarding their suppliers based on disclosure information. Priorities on the international level are that new participations of Member States to the international GO market is proved reliable. Enhanced coordination is to be looked for for smooth calculations of the RM.

Requirements concerning GOs deal with the establishment of procedures for assessing GOs coming from other Member States and with procedures for issuing GOs (which should now be issued directly after the end of each production period).

Regarding requirements concerning Disclosure, efforts should concentrate on the coordination with other Member States in the calculation of residual mixes, on schedule coordination, on the scope of the Residual Mix to be calculated (national / regional)...

2.3.2 Priorities and requirements in stage 4

In the last stage of development of tracking systems and frameworks, suppliers have differentiated products on top of differentiated suppliers' mix. Markets for specific products have developed and concern important volumes; these are requested by end consumers.

On the international level, a country in this stage participates in GO market with exports and imports.

Priorities for this stage should enable the establishment of a healthy product market: the framework should be worked out to enable the operation of labels with a view to develop additionality.

On the international level, cooperation with other Member States is to be sought in order to agree on how to protect national markets from unreliable GOs. In terms of disclosure, efforts should be focused on how to regulate additionality claims and claims linked to CO₂.

3 Technical requirements

3.1 Current practices in terms of international transfers of GOs

A survey has been organised among Competent Authorities for disclosure with the aim to establish an overview of how GOs are transferred between Member States. The RE-DISS team has received replies from 9 Competent Authorities, 3 from CAs connected to the AIB Hub and 6 from CAs not connected to the AIB Hub. The questionnaires were different for the two groups. They are available in Annex 1 of this report.

3.1.1 Competent Authorities that are connected to the AIB Hub

Regarding Competent Authorities that are connected to the AIB Hub, the questionnaire focused on the current practices for imports and exports of GOs, what channel used if the exporting country was not connected to the AIB HUB, what information exchanged.

Competent Authorities from Austria, Switzerland and Luxembourg were kind enough to provide an answer to the survey and did not require that answers remain confidential. The detailed results can be seen in Annex 2.

The summary of findings:

Imports:

- All 3 countries have imported GOs from another registry, but only Austria imported from registries not connected to the AIB Hub³.
- In this case, an ex-domain cancellation procedure was used. The cancellation statement was transferred directly from the Competent Authority of the exporting Domain to the Competent Authority from the importing Domain. The process was agreed upon after the importing Domain received insurance that GOs cancelled in such a way could not be further used.
- AT evaluates that importing outside the AIB HUB could generate a risk of double counting.
- Information on support and commissioning date of production device was not contained in the ex-Domain Cancellation Statement.
- Further imports without using the AIB Hub are not foreseen by any of the respondents.

Exports:

- Austria and Switzerland have already exported GOs outside of the AIB Hub and they have proceeded through ex-Domain cancellations as well.
- On the cancellation statements from Switzerland, the beneficiary is indicated and information is posted on the Swissgrid web portal.
- Both E-Control and Swissgrid provided the information on the ex-Domain Cancellation to the importing Competent Authority and to the importing market party.

³ NB: Imports outside of the AIB Hub are not possible anymore in Austria.

- Swissgrid plans to carry on with this procedure in the future for Countries not connected to the AIB Hub, whereas Austria will not reiterate and Luxembourg does not plan to start.

3.1.2 Competent Authorities that are not connected to the AIB Hub

Regarding Competent Authorities that are not connected to the AIB Hub, the questionnaire focused on the current practices for imports and exports of GOs, what communication channel was used, what information exchanged.

Competent Authorities from Answers from Spain, Ireland, Greece, The United Kingdom, Portugal and Cyprus were kind enough to provide an answer to the survey. One country required confidentiality so results will not be detailed country by country as above. The detailed results can be seen in Annex 2.

The summary of findings:

Type of database:

- No Competent Authority uses an excel database, all use registries operated by a database software (5) or custom-made web based database application developed internally (1).

Imports:

- Half of them have already imported GOs from another registry.
- Different means were used, for two Competent Authorities, it lead to manual imports of information into their registry, either from datafile or from ex-Domain cancellation statement transferred in PDF format. In this latter case, the cancellation statement is understood as a proof that GOs cannot be further traded in the exporting Domain, but as it is manually inserted into the registry of the importing Domain, it can be traded nationally afterwards.
- Information was communicated to the importing Competent Authorities of two Domains by market participants whereas in the third Domain, the Competent Authority provided the information.
- All information contents from the Directive is present except for the energy carrier (heating and cooling or electricity) for one Competent Authority and the localisation of the plant for another.
- Security measures implemented, if any, consisted in checking with the exporting Competent Authority the contents of the GOs transferred.
- The advantages attributed to the transfer procedures that were used were the fact that they did not require to have a “direct technical interface between registries” and that they did not require to be connected to the AIB Hub. One country also mentioned that it applied the same procedure to all requests.
- The cons of these procedures pertained to their time consuming aspect (all 3 importers)...

“The manual procedure in place creates greater workload than would be required with a electronic interface e.g. AIB Hub.”

“Time intensive exercise matching up GOs to Renewable LECs to support import to the UK.”

... and to the difficulty to liaise with the exporting Competent Authority (1 CA)

“We can't always receive confirmation of the validity of the GOs from the issuing body.”

- 5 Competent Authorities out of 6 plan to import GOs in the future. 4 of them will do so through the AIB Hub, 1 through the manual fulfilling of an excel file by suppliers for manual import through the database. From the 4 that intend to use the AIB Hub, one will continue to use manual imports until the connection with the AIB Hub is active.

Exports:

- 2 out of 6 CAs have already exported GOs to other CAs, through a manual export into a PDF or a datafile. This file has been transferred through simple email or encrypted email.
- 5 CAs plan to export in the future, 4 of them through the AIB Hub, 1 through exports in a datafile.
- Interest for a meeting on possible easy to implement registry solutions is unanimous.

3.2 Lessons learned

3.2.1 Overview of current procedures

Existing procedures listed among our respondents concentrate around the use of ex-Domain cancellation statements:

- The most used process is the use of ex-Domain cancellation statements as a way to import disclosure information in the country on already cancelled GOs. It is not clear the proportion of CAs who insert the information on cancelled GOs into the importing registry and that of CAs that transfer the information to be used as such by the importing supplier.
- Use of ex-Domain cancellation statements as a basis to re-issue certificates in the importing country.

In two cases, other means are used:

- Use of datafile to export data, that can be inserted in the importing registry.
- There is one specific procedure used between two countries: certificates in the exporting registry can be set to a status which marks them for use in the disclosure calculation of the importing registry. The importing registry checks the exporting registry for certificates with this status. No cancellation statement is produced and certificates are not directly imported to the importing registry.

Two of these procedures involve manual insertion of information in the importing registry, one does not require any transfer of information, another can imply one or the other. No automated process exists in any of the responding countries that does not include the AIB Hub.

3.2.2 Risks involved in current procedures

The survey carried out shows that current procedures include non-negligible risks for Competent Authorities and Account Holders. First, there is a risk that incorrect data are

entered into the registries that are manually importing GOs. If this is possible with a small risk when volumes of GOs traded are low, this practice is not sustainable in the long term when traded GO volumes increase. In the case an error occurs, Account Holders that are committed by a contract with end consumers or other traders may provide them with GOs that do not correspond to the stipulations of the contract. When this is discovered after the cancellation of the GOs, this may prove very problematic.

Secondly, transfer channels mostly involve regular emails. Encryption is not common practice when GOs are transferred outside of the AIB hub. This leaves important room for fraudulent activities. And it is known that the GO market interests criminals from the VAT carousel. Whereas AIB does take this threat very seriously, it is not easy for individual Competent Authorities to act in this field. Competent Authorities, who usually have a very high aversion to legal risk, should take these considerations into account.

Finally, given the multiplicity of procedures among CAs, it is difficult to guarantee that there will not be double use of GOs because of incompatible procedures coexisting. Ex-Domain cancellation statements do not always guarantee that a GO will not be traded further. For some Domains it is even used as a guarantee that GOs will not be traded further in the exporting Domain, which is necessary to re-issue GOs in the importing Domain. This is problematic since correct accounting of the attributes is subject to a preliminary agreement between the two Competent Authorities involved. It is also not known whether sufficient checks in the importing registry have been implemented in order to ensure that the same ex-Domain cancellation statement cannot be imported twice, which would imply that it would lead to double re-issuing of the GOs on the ex-Domain cancellation statement.

Another aspect is the legal risk involved in some transactions, where in fact not all information requested on a GO according to the Directive are present on the document transferred. Localisation of the plant, information on support, commissioning date or nature of the energy medium concerned is not indicated in the PDF / ex-Domain cancellation statement / datafile used.

3.2.3 Outlook on practices in the future

Competent Authorities seem conscious of the risk component of conducting transfers outside of the AIB. Out of the 9 Competent Authorities who answered, only 3 intend to import or export outside the AIB Hub in the future, and for one, only exports are foreseen. It is to be noted however, that among the countries that gave an answer and are not connected to the AIB Hub for GOs, only the Competent Authorities from Ireland, Spain and the UK are not members or observers within the AIB. Greece and Cyprus are observers, Portugal is connected for RECS certificates.

All 6 Competent Authorities that are not connected to the AIB Hub for GOs would be interested by getting more information on easy to implement interconnected registry solutions, so there are expectations in this regard and willingness to improve current practices.

From the answers to the survey, it appears that errors and fraud seem to be avoided at the moment, thanks to a lot of bilateral contacts on specific transactions. It is not possible that such guarantee will be available when volumes of trades get larger and involve more diversified connections. At the moment, Competent Authorities visibly are used to exchanging GOs with a couple of their counterpart, not with 27 other Competent Authorities. This is an important barrier to the liquidity of the GO market.

3.3 Implications for a registry solution

It is one aim of the RE-DISS project, to help Competent Authorities develop simple and reliable solutions for their registry connections. Current practices that are highlighted by the survey show important disadvantages and risks of errors either in the GO information transferred or in the correct accounting of transferred GOs in the disclosure systems of the concerned countries. Current practices can therefore not be considered as long-term alternatives to the AIB Hub and cannot be recommended as such.

In stages 1 and 2 of the development of national tracking frameworks, in order to keep registry costs at the minimum, it is possible to resort to ex-Domain cancellation statements, provided that these cancelled GOs are closely monitored by the Competent Authorities for GOs and Disclosure and that there is a bilateral agreement that they should be accounted for not in the cancelling Domain. This solution can only be temporary and should be replaced by a reliable registry connection in stages 3 and 4.

According to the preference of the Competent Authority and its resources, it is advisable to use the services of registry providers that offer ready connections to the AIB Hub or to develop internally a registry that fits the transfer requirements of the EECS standard which are explicated in the document called SD03. If Competent Authorities do not foresee the need to establish connections with other registries because of poor national demand for international transfers, then it is nevertheless recommended to design the registry so that it supports the EECS standard. In this way, when demand appears, connection with the AIB Hub can be relatively easy. AIB indeed foresees the possibility for Competent Authorities to be users of the Hub without being a member of the AIB. This may solve legal incompatibilities for Competent Authorities (which may not be allowed to be a member of other organisations) while enabling them to proceed to secure transactions and facilitate recognition of their GOs by their counterparts in Europe⁴.

Workload / costs to get connected to the AIB Hub will be made up for in a later stage. All importing Competent Authorities mention the time consuming aspect of manually importing data. When the market develops and Competent Authorities They also mention the risk inherent to manual import. The risk to enter incorrect data can transform into a legal risk when GOs which were imported were subject to a contract with specific requirements on the GO attributes.

3.4 Outlook

The RE-DISS team will establish an overview of the available offers in terms of registries supporting the EECS standard⁵. It is working on terms of references to propose a new business model to registry providers that could bring about registry solutions that would fit the needs of Domains trying to implement reliable GO registries

⁴ In order to get acquainted to the various steps that have to be followed to become an AIB member or simply an observer, please refer to the document « How to join AIB », http://www.aib-net.org/portal/page/portal/AIB_HOME/AIB/How_to_join. It is also possible to sign a Hub user agreement which will entitle signatories to use the AIB hub without being an AIB member. For this, the AIB Secretary General should be contacted.

⁵ For an overview of the registries, see

http://www.aib-net.org/portal/page/portal/AIB_HOME/FACTS/EECS%20Registries/Service_Providers

4 References

Discussion paper for a prioritisation of Best Practice Recommendations with the view to define basic recommendations, Version 1.2, (18th February 2014)

RE-DISS Best Practice Recommendations, version 2.2.7 (11th August 2014),

website: <http://www.reliable-disclosure.org/documents>.

SD03, AIB-EECS-SD03 : EECS Registration Databases, Release 6.4 (2014), AIB, website website: <http://www.reliable-disclosure.org/documents>.

5 Annexes

5.1 Questionnaire on current data transfer solutions (Domains connected to the AIB Hub)

The questionnaire is available on the RE-DISS project website (in the document download section): www.reliable-disclosure.org

5.2 Questionnaire on current data transfer solutions (Domains not connected to the AIB Hub)

The questionnaire is available on the RE-DISS project website (in the document download section): www.reliable-disclosure.org

5.3 Detailed results of the survey

Detailed results of answers received for each questionnaire can be found on the RE-DISS project website (in the document download section): www.reliable-disclosure.org

Disclaimer:

The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EACI nor the European Commission is responsible for any use that may be made of the information contained therein.