CORE THEME 3

Guarantees of Origin and Disclosure

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CA-RES CONCERTED ACTION RENEWABLE ENERGY SOURCES DIRECTIVE

1 IN A NUTSHELL

Core Theme 3 of the CA-RES3 was dedicated to Article 15 of RED I on the Guarantees of Origin (GO), and eventually its recast in Article 19 of RED II.

As the Core Theme on GO during the second phase of CA-RES had already been shifting its focus slightly from the technical implementation of the Electricity GO towards "good disclosure practices" (i.e. the purpose of the GO system), this third phase of CA-RES focused on progressing towards transparent consumer information and the avoidance of double counting of energy from renewable sources (RES). This was done in the light of the challenges surrounding an ever-growing supply of RES, increased policy discussion on sector integration, growing market opportunities for temporary energy storage and higher demand to convert energy to other vectors.

The most important strategic topic discussed over the course of the third phase of CA-RES is the effects on the system of implementing GOs beyond RES electricity (as in the earlier directive) for different types of biogas like biomethane and green hydrogen, and potentially heating and cooling as well. Participating experts clearly understood that given the free trade of energy within the EU and the fact that energy remains energy whatever form it takes (electricity, heat, biogas, etc.), the same accounting rules for all types of renewable or non-renewable energy are needed. Participants also discussed whether the most efficient way forward is building new instruments for each vector, which increases the need for coordination across sectors, or rather expanding the current scheme by integrating new applications into the current approach, including governance and supervision ("to make best use of what there is already"). Most CT3 participating experts favoured the latter solution. They also emphasized the need for consistency among the differing claims being made, now that more and more sector integration is being expected as energy conversion (and storage) becomes technically more efficient and economically more viable. This ultimately has consequences for the approach to both GOs and disclosure.

As the agreement on RED II developed further into more complex issues than the existing directive (RED I), Core Theme 3 laid some preparatory ground for national implementations. GOs are closely related to energy labels and electricity products. A Taskforce prepared a report on this topic (more details can be found in the following chapters). In order to achieve transparent and trustworthy consumer information in the energy market, GOs should be better aligned across Europe. Participating experts gave some guidance on clarifications that might be needed (or regulation that might be necessary) to improve consistency across Member States. These outcomes target experts in the field, national policy makers as well as EU Commission officers, and intend to support them in understanding best implementation practices, as well as the potential next steps.

The following chapters allow you, the reader, to gain some more insight into discussions spanning three years, involving more than 50 participating experts, and leading to over 300 pages of (confidential) documentation on GO and Disclosure (which is due to the confidential nature of CA-RES available in unabbreviated form to all participating experts and policy makers only).

2 TOPIC IN THE SPOTLIGHT

NON-ELECTRICITY GO AND CONVERSION OF ENERGY

The most strategic topic related to GOs and disclosure discussed during CA-RES3 deals with the need for a systemic and integrated approach to the GO schemes which sometimes differ due to proliferation of RES in the energy system, the emergence of non-electricity GO schemes as well as a growing requirement for sector integration (improving efficiency makes moving between energy sectors more likely, e.g. energy storage through conversion to another energy vector). This poses a challenge for the future as well and it should be recalled that this calls for more alignment, e.g. through common standards or additional regulation.

Non-Electricity GO Schemes

To start with, participating experts shared information on non-electricity GOs (like heating and cooling (H/C), cogeneration (CHP) and biogas-GO) and their differences through an in-depth look at current national implementations. The possibility of having national biomethane registries become issuing bodies for gas-GOs and having them participate in a mutual recognition system for exports of biomethane was discussed.

Participants shared the following observations:

- The growing number of interactions between different energy modalities/energy carriers in the energy system, in light of the aim of coherent disclosure among consumers, gives rise to growing concerns regarding potential double counting and double selling of RES.
- The implications for the different GO schemes (e.g. electricity and biomethane or electricity and H&C) once energy is converted from one modality into another should be assessed. This is an important topic that still needs further development and should possibly be dealt with in a consistent fashion on a European level. Furthermore, participating experts agreed that EUROSTAT should be actively involved into discussions like these, e.g. when regarding GOs used in transport.
- Participating experts clearly understood that, given the free trade of energy within the EU and the fact that energy remains energy whichever form it takes (electricity, heat, biogas, etc), the same accounting rules for all types of energy are needed. If not, there is an apparent risk of double counting.
- Participants discussed whether the most efficient solution for this issue is building new instruments which increase the need for coordination, or rather expanding the current scheme by integrating new applications into the current approach, including governance and supervision ("to make best use of what is already there"). Most participating experts favoured the latter of the two.

Conversion and its Consequences: From RES Electricity to Other Forms of Energy and Vice Versa

The main insights regarding this issue were:

- Prevention of double counting is important for all energy vectors.
- GOs contribute to solid statistics.
- Most Core Themes in CA-RES3 have been discussing similar topics (i.e. sector integration and interactions between energy vectors) albeit from different perspectives. Mixing those perspectives would enhance implementation of the RES Directive. Further work should be done to consider how best to coordinate discussions about this issue.
- According to participating experts, more in-depth discussion on the consistency of GOs would be welcome as it seems GOs could be the linchpin between energy sectors.

The usage of GOs across sectors, especially in transport, was discussed in more depth. The participating experts made the following main observations and conclusions:

- In some countries there is already a connection between GOs and the transport sector, e.g. for biomethane or renewable electricity at charging stations. The number of countries where a link is established is growing.
- However, differing messages and claims are being conveyed across sectors, or aim at different audiences (e.g. consumers versus business to business), and/or focus on other policy goals (e.g. consumer information and energy disclosure versus reaching national targets and compiling national statistics).
- The overall consistency of **operating rules** regarding GOs needs further analysis. Several policy goals related to different (articles of) directive(s) and/or different regulations can be involved. Therefore, the consistency of the **differing claims being made** becomes a critical issue, especially now that more and more sector integration is expected since it will eventually be economically and technically viable (or more efficient). This ultimately has consequences for the approach to both GOs and disclosure.

Multiple stakeholders and (EU) projects are currently working on topics like biogas GO at the same time, which could inadvertently complicate matters. To illustrate this, the outline and goals of the new H2020 project REGATRACE were presented during the CT3 discussions. Furthermore, participating CT3 experts learned that the work on the new EN Standard on GOs as mentioned in the RED II would begin soon. The Association of Issuing Bodies (AIB) presented its standard for biogas GO, which they developed as part of its European Energy Certificate System, as well as its first thoughts on a conversion method for GOs in case of sector integration and conversion of energy to another vector.

According to the text of the RES Directive, it is ultimately Member States' responsibility to make sure that GOs and sustainability certificates do not lead to a situation where the same batch of renewable gas can be double counted or sold twice (either domestically, or internationally through direct or indirect foreign trade). Participating experts agreed that in the coming years one of the main points for future discussion related to GO and consumer information based on GOs will be sector integration and energy conversion.

3 CHALLENGE MEETS SOLUTION

Distribution and Grid Losses in Connection to the Issuance of GOs

CT3 participants looked at current approaches regarding line and grid losses in Europe in connection to the issuance of GOs and current disclosure practices. Currently, line and grid losses are not completely accounted for in all Member States. These issues will become increasingly important as the share of RES-E grows and, consequently, the volume of issued GOs do too. Moreover, actual loss rates differ quite significantly from country to country as a result of local conditions. Participants concluded that:

- In most countries, grid losses currently remain "hidden" largely in the non-renewable figures. However, in systems with a growing renewable share on the grid (or systems heading towards full disclosure, based on GOs only), it becomes more problematic and it is therefore wise to consider solutions for the issue raised.
- How to deal with losses should preferably be decided in a coordinated way, rather than on a national level as this would not be compatible with the current goal to establish a coherent European electricity disclosure, reflecting a single European market for electricity.
- Of all the theoretical options, the best ones would be requiring either the TSO and/or DSO to account for grid losses incurred by cancelling GOs, or alternatively requiring that suppliers do so when cancelling for the electricity supplied. At first glance, the latter option would in fact take more effort to implement (including the necessity of compliance checks) and might cause a higher administrative burden.

RES GO and CHP GO

Main conclusions of the discussions on CHP-GO were:

- The CHP-GO has been implemented in most countries. Yet in most cases no CHP-GOs are being requested by producers and no CHP products are being offered by electricity suppliers, not least because the few who have tried to create a marketable product have not succeeded.
- A consensus emerged that both schemes should be better merged into a single "electricity GO scheme", although some practicalities might still make it challenging.

Status of GO and Disclosure Implementation and Remaining Challenges (including EU Disclosure)

During one of the CT3 sessions, the chair of the AIB Board was invited to give a presentation and discuss the use of GOs for sound European electricity disclosure and methods to solve the fact that not every MWh produced will obtain a GO to be used for the disclosure process. To highlight this issue, the representative presented the results of the most recent fuel mix and residual mix calculations for all European countries. Furthermore, the AIB representative explained how the full disclosure system (i.e.

disclosure fully based on the GOs instrument, for renewable as well as non-renewable energy sources) works, which has been implemented and is put to use (for some time now) within some countries. Apart from general questions of understanding, there was an in-depth discussion and interaction with participants as well. In general, the participating experts acknowledged that "full disclosure" (i.e. issuing a GO for all energy sources to be declared for disclosure purposes by suppliers) is an alternative to the residual mix approach that is easier to handle as well as easier to understand for consumers.

Varied Methods on Financing the GO System between Member States

The CT3 participants investigated differing approaches to financing the national GO systems in Europe in order to gain more information on the topic and share national experiences. Most countries currently apply transaction fees which are being paid by those parties that participate in the GO system (albeit there is a large variety amongst those, related to different types of transactions). Some do also apply an entrance fee or a yearly (fixed) contribution on top of the transaction fees. A minority of the GO system operators is being financed in an indirect way e.g. via taxes, surcharges or levies. Participants also shared views about the current cost level. It has been acknowledged that the initial cost of setting up a system (while usually starting with low volumes of GOs that will be issued) can be quite high. However, the general experience is that unit costs will (drastically) decrease over time as volumes rise and the national GO-market will become more connected to the European marketplace.

Usage of GO by Large Consumers/Public Procurement

In another session, a representative of RECS INTERNATIONAL[1] - was asked to specifically address the position and needs of large consumers (e.g. industrial or local/regional authorities which buy or procure RES). By now a large and rapidly rising market share (demand side) is coming from corporate buyers/public procurement. These buyers have specific needs as they operate across borders (in the case of international corporations) or because in some cases they are legally permitted to procure energy (and in some countries also GOs) directly from producers or through the wholesale market (auctions) without the involvement of a licensed supplier. Large consumers usually want to make (one or more of) the following three claims: on renewable energy use, on their carbon footprint and on "additionality". They are jointly working to promote a level playing field, e.g. through the development of voluntary standards. This is happening through a variety of associations or initiatives like: ReSource, RE100, CDP and the Greenhouse Gas Protocol. The demand from these large consumers is now an important factor that deserves more of our attention. Participants agreed that in case of unbundled purchase of GO there might be a need for regulation, for instance detailing out compliance checks (e.g. obligatory 3rd party auditing.)

1 An association of RES producers, traders and consumers, which are involved in the GO business

The Importance of Information Items on a GO

Participants also discussed in more depth the aspect of "other information items" on a GO. These are the elements listed in the current directive that should be on a GO, which do not by themselves convey that a MWh originates from renewable energy (e.g. the location of the production facility). The following conclusions can be drawn:

- Some of these information items on a GO are important within some Member States.
- This might apply to specific **regulations** (e.g. GO for supported electricity will be auctioned).
- In some countries, **electricity products** also deal with elements like the locality (country or region of production) or the exact source of electricity production (e.g. 100% wind powered).
- An additional possible topic for debate could be:
  a) Should GOs and information on **sustainability** (certificates) be thoroughly linked in the future as well, e.g. in relation to Article 25 of RED II?
  b) And in which way could this be done?

Commercial Offers and Non-Tracked Electricity (e.g. Residual Mix)

The participating experts also exchanged information on current national practices regarding disclosure and discussed the following questions:

- How can suppliers demonstrate the source of power supplied to consumers, e.g. when the commercial offer is based on non-tracked electricity (i.e. on a residual mix)?
- Which national rules or regulations do apply?
- Which options can be chosen?

By sharing the current practices, participating experts concluded that this is currently being handled very differently between Member States, and even between those countries that use the figures of the EU Residual Mix. Participants emphasized that this causes a high risk of double counting of RES and stated that this calls for more immediate coordination among the competent authorities in Member States responsible for supervising proper disclosure by suppliers.

CT3 participating experts also exchanged views on possible aligned regulations on disclosure, applicable in all sectors.

The experts furthermore agreed that there is a need for:

- More transparency on assumptions for the European attribute mix.
- Harmonization of accounting for imports or exports to/from third countries.
- Harmonization of the rules and procedures and of the statistical impacts of "ex domain cancellations".
- Investigation of the "the ripple effects" of countries using regional mixes (like "the Nordic mix" or a mix calculated for a regulation zone) instead of the national residual mix.
- Potentially insufficient (possibly even the total absence of) regular compliance checks of disclosure statements was also identified as a risk for the EU-wide system and needs more coordination.

In summary, the participating experts have on numerous occasions raised concerns about the general lack of details in disclosure regulation. More guidance about disclosure practices and a more detailed framework on how to use GOs in informing energy consumers would be highly appreciated (e.g. what is the European minimum standard).

Update on the Latest RES Policies and Developments in the Field of GO/Disclosure (Recast 2009/28)

A Q&A session was dedicated to look at the provisions on Guarantees of Origin, disclosure in the RED II and other EU policy developments, and also discuss related future challenges. The following list includes the most important elements that changed and which were brought to the attention of participants and subsequently discussed (related to challenges for the practical implementation of these issues):

- The new directive requires mandatory issuance of GOs at the request of producers of RES of electricity, H&C or gas (including hydrogen).
- Members States can decide whether to issue a GO for energy benefitting from a support scheme, but when GOs are issued for supported energy there is a need to avoid double compensation.

We also discussed some (technical) questions that have been raised by participants upfront. Participants concluded that the consequences of the revised Article 19, especially the interactions between the various vectors and with other articles, would need to be looked at more closely during future plenary meetings of the CA-RES. In particular, participants identified several issues regarding implementation that should be explored in more detail, including the timeline for GOs and disclosure, sector integration (RES electricity, combined heat and power, biogas, heating and cooling) and its consequences for the GO-system(s).

Electricity Labelling: What good practices exist for labelling electricity for consumers?

CT3 participating experts examined and discussed the state of play in several Member States. Some guiding questions for the discussions included:

- How is electricity labelled?
- What good practices exist for labelling electricity for consumers?
- Should electricity be labelled in the first place?
- What purpose should electricity labelling serve?

CT3 participants looked at existing good practices for labelling electricity for consumers in participating Member States. Electricity labels provide a more explicit view of the electricity supplied and more adequate third-party-controlled information for the consumer as to which electricity they should buy (or which has been actually supplied to them). The assessment of the state-of-play in the Member States showed that in some countries electricity labelling is already used in practice, while there is currently no demand for such labels in others. In addition, participants assessed the advantages and disadvantages of labelling electricity, while also attempting to outline a definition of electricity labelling. A Taskforce prepared a more in-depth paper on the topic.

Participating experts continued the discussions on labelling issues and best practices in the Member States over several meetings. The initial discussions showed that most people had conflicting ideas about energy labels. A follow-up session was devised to hear the results of the Taskforce's research into providing a common understanding of energy labels. The Taskforce prepared an inventory on the types of labels that exist in Europe (quality labels, commercial labels, commercial brands and independent ranking), while adding guidance as to how to improve the information provided in the label. Participants then used the opportunity to discuss how energy labels, possibly based on Guarantees of Origin or on energy disclosure, could enhance the energy markets.

Finding a Common Understanding for Validity and Expiry in RED II

RED II introduces the separate notions of "validity" and "expiry" for Guarantees of Origin. These concepts may potentially be welcomed and will work better across Europe if details about their implementation are shared. Two experts presented the implementation of these concepts in their Member States. The consequences on the GO market of not sharing a common understanding can be significant as e.g. a recent court case, based on RED I, demonstrates. In December 2018, a national court obliged its national issuing body to accept imported GOs even though they had a different "lifetime" due to differing regulations on validity and expiry than the local GOs (among other arguments). To comply, the national issuing body had to adopt heavier and lengthier procedures. This impacted the national system of GOs and its disclosure procedures. Practicalities like these widen the scope of the validity issue. Participants focused through discussion and debate first on the validity and expiry question, and then widened the scope to the conditions for accepting imported GOs.

Construing validity as the quality of a GO having legal force to ascertain a given MWh is renewable and construing expiry as the moment when a GO may not be traded anymore were initially considered satisfactory. Indeed, the validity of GOs ends as they expire in many countries. However, it was later found out that the lack of a common disclosure practice implies a variety of differing approaches to expiry and validity. This fact stands in the way of the joint effort across Member States to improve available information on the origins of renewable energy sources.

Improving Energy Disclosure Nationally by Working Together

Although GOs are governed by a directive, electricity disclosure is not very well covered under any legislation. Discrepancies in working methods can have an impact across borders, and eventually make the GO system less reliable.

By focusing on the requirements and impacts of current directives and the Clean Energy Package, we tried to identify opportunities for better coordination through existing frameworks. Identified options are the European Committee for Standardization (CEN), the European Committee for Electrotechnical Standardization (CENELEC) and the Association of Issuing Bodies (AIB).

3.1 Highlights from the Discussions

Differing Usages of GOs in the National Disclosure Figures and Statistics: A Matter of Good Communication towards Consumers Only?

Under RED II, consumer claims related to the consumption of RES should be backed with GOs (but for the exceptions granted). However, if we fail to use the same references (e.g. for the residual mix calculation), we jeopardise the credibility of the whole disclosure system. There would be no need for a residual mix calculation if all countries were implementing full disclosure (through GOs). Furthermore, a physical boundary for GO/Disclosure might be preferable when designing approaches for non-electricity GO (e.g. district heating). These aspects will continue to be the topic of discussion in future CA-RES meetings.

The main conclusion of the participating experts was that we should think carefully about the way we communicate towards consumers. It should be easy to understand and they should not be confronted with technical explanations: in other words, consumers should not be bothered with back-office tools like the residual mix.[2]

Key points for future discussions are:

- We need more aligned practices on disclosure in Europe. Does that mean we need more regulation?
- Is creating "a larger or smaller than national pool" desirable?
- Extra steps should be taken to prevent double counting (e.g. "to reduce leakage" in the residual mix). This should preferably be done by simplifying things (e.g. through a more aligned approach) instead of complicating matters even more by adjusting and making additional corrections.

Consumer Information: New ways to Reach Out to Consumers on Disclosure and Related Topics

Regarding consumer information, CT3 participants reached out to the still relatively new but fast-growing market of using (selling and disclosing) RES in the transport sector. A representative from Eurelectric provided more insight into the topic. The outcomes of the discussions can be summarized as follows: Information on whether the energy is renewable should be available at the point – also at public charging points – (and moment) of sale to the end consumer and this should be backed by GOs (as well) as to avoid double counting. A point for future discussion should be: The GO on its own does not guarantee additionality, but it can carry this information. Whether or not to allow for these claims through GOs (and the conditions that should apply in that case) remains a topic for future discussion.

2 It should also be duly noted that AIB is currently running a project to evaluate the Residual Mix Calculation Model.

3.2 Good Practices

In some Member States, consumers choose their supplier based on an energy label established by third parties. In other Member States, consumers make this choice based on supplier rankings also established by third parties. Both practices allow a household customer to make an informed choice of supplier based on a set of criteria drawn up by a credible third party (usually NGOs or consumer organisations). The financing is different as the rankings are free, whereas labelling is paid for by those who purchase the labelled power.

Allowing import and cancellation of GOs from other MS should have been a straightforward matter as it is explicitly required by the RES Directive. In practice, use has been made of the conditions in the Directive for refusing foreign GOs by way of exception. This is because some competent bodies have been arguing that GOs from several MS have not been made more reliable, because of disclosure practices which fail to prevent or might even cause double counting in the originating or destination MS. Indeed, slight variations in conventions for accounting for the use of GOs lead to inaccurate, misleading, or invalid consumer information. Hopefully, two complementary methods provide for continuous transparency among MS:

1. Publication of disclosing practices in a standardized format; and
2. A recurrent process of thorough auditing of disclosure practices by experts and peers, like the one set up for the European Energy Certificate System.

Nevertheless, participating experts agree that, given the absence of a binding framework for disclosure, only continued cooperation among MS can prove effective at making the information disclosed to final customers even remotely reliable.

4 MAIN FINDINGS AND ACHIEVEMENTS

Due to the propagation of RES as well as a growing potential for sector integration, Europe needs a systemic and integrated approach of all the (current as well as upcoming) GO schemes. This poses a challenge and it should be considered that this calls for more alignment (e.g. through common standards or possibly even new and additional regulation). The growing number of interactions between different energy modalities in the light of trustworthy and coherent information to energy consumers is increasing concerns regarding potential double counting and double selling of RES. The work is not over yet: with the implementation of the RED II we are entering into a new, more complex and potentially more rewarding phase.

To this end, most experts involved favoured building upon existing schemes and approaches instead of building new and parallel schemes (which subsequently need to be aligned anyway). In that sense, an inclusive process leading towards a CEN standard that works for all is important.

According to the text of the Directive(s), it is ultimately the responsibility of Member States to make sure that GOs and sustainability certificates do not lead to a situation where the same batch of renewable energy can be double counted or sold twice (nationally, or internationally through direct or indirect foreign trade).

Regarding grid losses and proper accounting of GOs, most experts agreed that the best method would be to require the responsible TSO (and/or the DSO) to account for grid losses incurred, by cancelling the proper amount of GOs so as to remove them from the market.

Participating experts also acknowledged that "full disclosure" (i.e. issuing a GO for all energy sources to be declared for disclosure purposes by suppliers) is an attractive alternative to the residual mix approach, as it is easier to handle as well as easier to understand by consumers. Furthermore, in line with the various directives they strongly advocated developing national systems for electricity GOs in which RES and CHP GO are implemented as one integrated scheme.

It has been acknowledged that the initial cost of setting up a system (while usually starting with low volumes of GOs that will be issued) can be relatively high as not all MS need the same information, especially to begin with. For example, some information items on a GO might apply to specific regulations (e.g. GO for supported electricity will be auctioned), or to the sale of specific electricity products. In all cases, information mandated by the RES Directive should be considered as the bare minimum. However, extra information should not be added lightly as this would result in additional costs in other national systems, which would most likely trigger debate.

Participating experts highlighted that energy disclosure is currently being handled very differently between Member States, and even between those countries that use the same figures as the EU Residual Mix. Participants emphasized that this causes a high risk of double counting of RES and called for more coordination among bodies responsible for disclosure in Member States. They also agreed that there is a strong need for:

- More transparency on the assumptions used to calculate the EU residual mix;
- Harmonisation of accounting rules for imports or exports to/from third countries; and
- Further investigation of the impacts of "ex domain cancellations" and the ripple effects of one or several Member States using regional mixes (like "the Nordic mix" or a mix for a regulation zone).

Moreover, insufficiently frequent compliance checks on disclosure statements were also identified as jeopardising the EU-wide credibility of the system. This issue requires more attention and therefore guidance about disclosure practices and procedures by the Commission would be highly appreciated (e.g. as to what the minimum standard is).

In some Member States, consumers choose their supplier based on an energy label established by third parties. In other Member States, consumers make this choice based on supplier rankings also established by third parties. Both practices allow a household customer to make an informed choice of supplier based on a set of criteria drawn up by a credible third party (usually NGOs or consumer organisations).

Participants realised that expiry and validity are implemented in various ways in Member States. Construing validity as the quality of a GO having legal force to ascertain a given MWh is renewable and construing expiry as the moment when a GO may not be traded anymore were initially considered satisfactory. Indeed, GOs stop being valid when they expire in many countries. However, it turned out that the lack of a common disclosure practice implies a variety of differing approaches to expiry and validity. This fact creates unnecessary complexity and hinders the joint effort across Member States to improve information on the origins of renewable energy sources to consumers.

In the transport sector, making claims about electric vehicles running on renewable power is in fashion. The main conclusion by our participating experts from ministries, energy agencies, regulators, TSOs, etc. was as follows: in a public charging station, information as to whether the energy is renewable or not should (a) be available at the point (and moment) of sale to the final customer and (b) be backed by GOs in order to avoid double counting of renewable energy.

It is clear that there are a number of remaining challenges that still need to be tackled. One key point for future discussions would be: the need for more aligned practices on disclosure in Europe.

The Core Theme on Guarantees of Origin and Disclosure has proven to be an important asset, comparable to its predecessors' phase 1 and 2 of the project. Whereas in the first phase of CA-RES discussions focused on practical implementation issues related to GOs, we are currently in a position where we have to acknowledge that the current (recast) RED II, as well as changing the technical and economic parameters, have impacted "the playing field for GOs".

CA-RES is very useful in this regard, because it brings together policy experts with the same concerns. Indeed, a participating expert once explained that, as policies areas are often narrow, he was the only one in his country in charge of specific topics. His colleagues might not face the same problems, but they do face the same questions and being able to meet them to discuss those questions greatly helped him to work efficiently.

Furthermore, the CA-RES project has proven that it can bring experts together from all different types of organisations working on different aspects of the same policy field. The complexity of the interplay between potentially differing GO schemes and non-aligned national implementation of disclosure, as well as challenging new developments like sector integration, create a situation in which there is not one (1) natural international forum where all aspects related to GO, disclosure and consumer information can be discussed. There are often many types of bodies that are somehow responsible for part of the chain. Sometimes these are GO issuing bodies or TSOs, oftentimes national regulators, while in other situations they are national energy agencies or intermediary organisations appointed by the government.

The participating experts in Core Theme 3 have tried, to the best of their abilities, to bridge the gap:

- between high level policy making and practical issues that derive from the need for a coherent and aligned implementation of GO-schemes between countries with a completely different legal background;
- between already existing GO-systems for (electricity) GOs and innovative thinking by competent authorities that have recently been appointed to set up new registries (e.g. for biomethane); and
- between regulators that have to focus on compliance (based on sometimes non-descript disclosure regulations) and policy makers that would like to be flexible and test new ideas when implementing the directive (or with another defined and strategic policy objective in mind).

In providing a forum that cuts across all existing forums involved in the implementation of GO and disclosure, the CT3 participants firmly believe that they have helped to bridge some of these gaps and "bring home" important insights, not only to the benefit of national institutions responsible for the implementation, but also to support the different European forums of national bodies (e.g. regulators, GO-issuing bodies, standardisation bodies) in their search for a common understanding of the concepts related to GOs and disclosure, which both have the ultimate goal of providing trustworthy information to energy consumers.

5 ABBREVIATIONS

Participating countries are referred to according to their two-letter country codes as defined by ISO 3166-1 alpha-2 standard (AT – Austria, BE – Belgium, etc.).

Abbreviation	Full Name
AIB	Association of Issuing Bodies
CA-RES	Concerted Action on the Renewable Energy Sources Directive
CDP	Carbon Disclosure Project
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CHP	Cogeneration Heat Plant
CT3	CA-RES3 Core Theme on Guarantees of Origin and Disclosure
EU	European Union
EUROSTAT	European Statistical Office, Directorate-General of the European Commission
GO	Guarantee of Origin
H&C	Heating and Cooling
MWh	Megawatt Hour
MS	Member State
RE100	Global corporate leadership initiative bringing together influential businesses committed to 100% renewable electricity
RED I	EU Directive 2009/28/EC on the promotion of the use of energy from renewable sources
RED II	2018/2001 (recast) on the promotion of the use of energy from renewable sources
RES	Renewable Energy Source
TSO	Transmission System Operator

This is a public CA-RES3 report

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The first phase of the Concerted Action to support the implementation of the RES Directive 2009/28/EC (CA-RES) was launched with the participation of the responsible authorities from 30 EU countries and supported by Intelligent Energy Europe (IEE) in July 2010 to provide a structured and confidential dialogue on how to address the cost-effective implementation of the RES Directive 2009/28/EC.
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For further information please visit **www.ca-res.eu**