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Council of European Energy Regulators

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Guidelines of Good Practice for Trustworthy Information on Green Offers and Consumer Protection Against Misleading Marketing ("Greenwashing")

Customer Empowerment Work Stream of the Customers and Retail Markets Working Group

Ref: C23-CEM-153-01
6 September 2023

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INFORMATION PAGE

Abstract

In the context of the Renewable Energy Directive and the European Commission's legislative proposal for a Directive on "Empowering the consumer for the green transition," CEER has updated its advice on customer information on sources of electricity (published in 2015). This should enable customers to make a well-informed choice about their energy supply, based on reliable and consistent information they can trust. With these updated recommendations, CEER enables European consumers to have a powerful role in driving the decarbonisation agenda and to become increasingly deliberate in their choices about what kind of energy they consume and which proportion of their needs is sourced from renewable generation.

These updated Guidelines of Good Practice result from a public consultation held between 7 November 2022 and 31 January 2023, for which 15 stakeholder responses were received. The final recommendations are addressed to Member States (MS), national regulatory authorities (NRAs), competent authorities for energy disclosure, public bodies, customer organisations, comparison tool (CT) providers and energy suppliers.

Target Audience

NRAs, European Commission, MS, gas/electricity consumers, consumer representative groups, energy suppliers, competent authorities for energy disclosure, academics and other interested parties.

Keywords

Bills, information, customer protection and empowerment, green offers, renewable energy, disclosure of energy sources.

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Related documents

CEER Documents

- CEER Advice on Customer Information on Sources of Electricity, 4 March 2015, Ref: C14-CEM-70-08.
- CEER Guidelines of Good Practice on Future-Proof Comparison Tools in the Energy Sector, 4 August 2022, Ref: C22-CEM-147-03.

External Documents

- "Clean Energy for all Europeans," 2019, European Commission. Retrieved from: https://data.europa.eu/doi/10.2833/9937.
- "Third Energy Package," 2009, European Commission. Retrieved from: https://energy.ec.europa.eu/topics/markets-and-consumers/market-legislation/third-energy-package.
- "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on common rules for the internal markets in renewable and natural gases and in hydrogen," 2021, European Commission, Ref: COM/2021/803 final. Retrieved from: EUR-Lex - 52021PC0803 - EN - EUR-Lex (europa.eu).
- "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information," 2022, European Commission, Ref: COM/2022/143 final. Retrieved from: EUR-Lex - 52022PC0143 - EN - EUR-Lex (europa.eu).
- "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substantiation and communication of explicit environmental claims (Green Claims Directive)," 2023, European Commission, Ref: COM/2023/166 final. Retrieved from: EUR-Lex - 52023PC0166 - EN - EUR-Lex (europa.eu).

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1 Introduction

In the context of the related provisions in the revised Renewable Energy Directive 2018/2001/EU[1] and the European Commission's legislative proposal for a Directive on "Empowering consumers for the green transition,"[2] CEER has reviewed and enhanced its advice on marketing practices related to green contracts. Specifically, how customers are informed about them, both at the pre-contractual and contractual phases, and what role these contracts might play in delivering the renewable penetration goals, at least in regard to cost.

These Guidelines of Good Practice (GGP) also consider the relationship between Guarantees of Origin (GOs) and support schemes, and whether the current governance of GOs is fit to perform any new role that might be assigned to it in the future. Accordingly, these GGP provide an update to the CEER Advice on customer information on sources of electricity (published in 2015[3]). Annex 3 provides a comparison table of the previous (2015) recommendations and the updated recommendations set out in the present GGP.

Customers must be empowered to make well-informed choices about their electricity supply, based on reliable and consistent information they can trust. A disclosure system enhances competition in the energy market by providing reliable information. Thus, electricity disclosure and its main instrument - GOs - are essential for creating a voluntary, consumer-driven market for renewables.

In recent years, customers have shown a growing interest in electricity generated from renewable energy sources (RES). In this context, the disclosure of information on electricity has become increasingly important. By updating its GGP, CEER aims to enable European consumers to play an impactful role in driving the decarbonisation agenda by becoming increasingly deliberate in their choices about their energy consumption, as well as what proportion of their needs is sourced from renewable generation.

At the same time, there is increasing criticism regarding the existence of retail energy products that are described as being "greenwashed." In general, this term refers to retail offers comprising electricity purchased via exchanges or external partners, that do not have a proper electricity disclosure scheme in place to certify that the production comes from 100% RES.

[1] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast). Retrieved from: https://eur-lex.europa.eu/eli/dir/2018/2001/oj.
[2] "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information," 2022, European Commission, Ref: COM/2022/143 final. Retrieved from: EUR-Lex - 52022PC0143 - EN - EUR-Lex (europa.eu).
[3] CEER Advice on customer information on sources of electricity, 4 March 2015, Ref: C14-CEM-70-08.

The purpose of the present report is to provide an update to the aforementioned 2015 CEER Report, translated into **CEER GGP for trustworthy information on green offers and consumer protection against misleading marketing ("greenwashing")**. In the context of this report, "green offers" are retail energy products marketed as being supplied from RES and commercialised by energy suppliers to end consumers. The 2015 CEER Report included a set of 12 recommendations on how information available in the GO system could be conveyed in a clear and simple manner to consumers, and how to strengthen consumers' trust by improving the existing systems. These 2023 GGP reinforce and enhance the recommendations already issued, aiming to align them with the requirements established in recent EU legislation as well as to enable their sound development in the future as a function of market innovation, while ensuring consumers' best interests.

These GGP were developed through an iterative process, including desk research supported by an external consultant and a public consultation process. The non-confidential responses, and the accompanying evaluation of responses conducted by CEER, are available on the CEER website.

These GGP have been elaborated under the CEER-BEUC 2030 Vision for Energy Consumers: LET'S ASPIRE![4]

The CEER 2023 recommendations are as follows:

- Recommendation 1: All comparison tools (CTs) – in particular those operated, or trust marked by a public authority or body – should provide a clear indication of the product mix and supplier mix for each product listed in the CT. If offers are indicated as "green" by CTs (and/or suppliers), the justification for doing so (as a source of information) must be transparent to the consumer, regardless of whether they consume electricity and/or gas. If feasible, information should be provided to give an account of the share of energy that did not benefit from public support.

- Recommendation 2: The national regulatory authority (NRA) (or other competent body) should cooperate at European level and ensure, at least on a national level, that there is a harmonised format proposing a minimum standard for displaying information concerning the origin of energy supplied from renewable sources (and if applicable also from non-renewable sources). The standard should specify the level of detail required for this information and how such information is communicated to consumers.

- Recommendation 3: References in the energy bill on where to find additional information on GOs, such as the type of renewable energy source, the geographic origin (country or, if applicable, region), or whether or not it has received support from a renewable investment or production support scheme, should be drawn to customers' attention (e.g. on the website of the supplier and/or of the competent body for disclosure).

- Recommendation 4: Member States (MS) should have a GO system for: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling. For this purpose, national GO system convergence should be encouraged so that GOs are easily tradable across MS.

[4] CEER-BEUC 2030 Vision for Energy Consumers: LET'S ASPIRE!, October 2020.

When and where available, GOs should be used as the only instrument for tracking the characteristics of energy sources in offers within disclosure systems, in particular those marketed as "green." This includes in the framework of a power purchase agreement (PPA) or any contract with a renewable production plant (e.g. EU solar energy). In the absence of a certified GO, the offer cannot be marketed as "green."

- Recommendation 5: GOs should be used as a basis for further harmonisation of disclosure systems. An assessment of the use of GOs in electricity should be done at national and European level to identify improvements that could be made to the existing GO system in electricity, as well as best practices that can be applied to: (i) gas, including hydrogen; or (ii) heating or cooling. Good practices identified in the electricity disclosure system should be extended to other energy disclosure systems. The cooperation of competent authorities for disclosure should be enhanced irrespective of the form of energy disclosed. The use of a common platform should be investigated.

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

- Recommendation 7: In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity, including non-renewable sources. Full disclosure, meaning the cancellation of GOs for all consumption, would help to make the disclosure system more consistent and reliable, as well as to provide opportunities for marketing energy products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly designed system addressing all energy generation, from all sources (renewable and non-renewable), has the potential of reducing administrative burdens and costs. In order to avoid imposing an administrative burden and costs on energy producers, it could, as a first step, be introduced on a voluntary basis. Where full disclosure is not technically feasible or cost-efficient, a residual mix should be determined at national level. The methodology to calculate the residual mix should be harmonised across all participating countries in the interconnected energy market, per energy carrier.

- Recommendation 8: The further integration of gas and electricity markets at European level should be accompanied by actively continuing the development of the European GO market, thus increasing price transparency and competition. Price information for retail energy products that include energy from supported and non-supported installations should be shared publicly and be easily accessible.

- Recommendation 9: Consumers should be properly informed about where the energy they will consume is produced – "local or regional" GOs, i.e. issued for local energy

production close to the consumer’s consumption point. The information should be at least disclosed in pre-contractual documents and supplier websites.

- Recommendation 10: GOs and labels should be considered as two complementary mechanisms. GOs are the legal and technical mechanism used to guarantee the source of energy, whereas labels should be considered as a communication tool to facilitate consumers’ understanding of the energy market. Labels can be considered as creating added value for more demanding customers, if it can be guaranteed that the additional impact is associated with the energy supply contract (such as direct investment of funds in new renewable generation capacity or reductions of CO_2 emissions). An excessive number of labels might be confusing for consumers and potentially raise trust issues, if the information provided by these labels is inconsistent. On the supplier side, it would render it difficult for smaller suppliers to be active in every labelling system, especially when fees are charged. GOs should be used as the sole tracking mechanism by labels to ensure reliability, and electricity and gas customer trust.

- Recommendation 11: When subscribing to a retail energy product described as “green” by a supplier, and in cases where there is no competent body verifying such claims, the supplier should provide all necessary information to enable the consumer to verify the accuracy of what makes the offer green. For this purpose, a list of relevant information should be defined at national level by the competent body/authority for green claims verification. Additionally, competent bodies/authorities should cooperate at European level for converging at least on what information is required.

2 Ongoing energy market legislative evolution

The present GGP take into account the continuing technological and market evolution of the energy sector, as well as the revised Renewable Directive 2018/2001[5] and the recast Electricity Directive 2019/944,[6] which include specific provisions regarding information to be provided by suppliers on energy bills. Whilst the emergence of innovative business models and digital information tools can help empower consumers to engage with energy markets, it must be ensured that these new business models and technological developments provide an accurate, reliable and accessible service.

2.1 Updates to Renewable Energy Directive 2018/2001 with RED III

The Renewable Energy Directive 2009/28/EC, issued in 2009, was revised in 2018 by EU Directive 2018/2001 (known as RED II) and is legally binding from June 2021.

In July 2021, the European Commission proposed a further revision of the Renewable Energy Directive (known as RED III) with the aim of accelerating the deployment of renewable energy in the EU and contributing to the achievement of the 2030 energy and climate targets. In its proposal, the European Commission included an increased target of 40% as part of the package to deliver the Green Deal for Europe. In May 2022, in its communication on the REPowerEU Roadmap,[7] the Commission proposed to further increase this target to 45% by 2030.

As of April 2023, the proposed revision of the Renewable Energy Directive (RED III) was in the final stages of the legislative process. The revision of the RED III Directive is likely to be finalised under the Swedish presidency, i.e. in the first half of 2023. Given the pending adoption of the revised Directive, all recommendations in these GGP refer to EU Directive 2018/2001 (RED II), as currently in force. References in this report to the revision of the Directive mean the revision of 2009/28/EC (RED) by Directive 2018/2001 EU (RED II). Additionally, the recommendations are compatible with RED III principles known at the time of writing.

2.2 Gas decarbonisation package

Similarly, these GGP have been developed at a time when the EU gas market rules are also under revision, to ensure that they contribute to reaching the EU energy and climate objectives. On 14 July 2021, the Commission published the first set of proposals to make the EU's climate, energy, transport and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels. The package promotes the demand and production of renewable and low-carbon gases, including hydrogen. The review and revision of the Gas Directive 2009/73/EC and Gas Regulation (EC) No 715/2009 are known as the Hydrogen and gas markets decarbonisation package, published in December 2021.[8]

[5] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast).
[6] Directive (EU) 2019/944 of the European Parliament of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (recast). Retrived from: http://data.europa.eu/eli/dir/2019/944/oj.
[7] "Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: REPowerEU Plan," 18 May 2022, European Commission, Ref: COM(2022) 230 final. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2022%3A230%3AFIN.
[8] See: https://energy.ec.europa.eu/topics/markets-and-consumers/market-legislation/hydrogen-and-decarbonised-gas-market-package_en.

To be able to make sustainable energy choices, customers need sufficient information on their energy consumption and its origin, as well as efficient tools to participate in the market, be it for electricity or gas. Moreover, EU countries should take the necessary measures to protect vulnerable and energy poor consumers. The decarbonised gas market should not be developed without consumers being able to fully benefit from it. This is why the European Commission included most consumer rights aspects in the recast Electricity Directive (EU) 2019/944 and in its proposals for the Gas Directive. Such rights cover consumer information and billing principles, support for vulnerable consumers, and making it easier to switch energy providers, including through the availability of CTs.

The current EU legislation, in particular RED II, has allowed for the coexistence of two independent gas tracking systems: one through GOs and the other through sustainability criteria and greenhouse gas savings i.e. Proof of Sustainability (PoS), which is documented as a Proof of Origin, mainly used in the transport sector. The ongoing revision of the Renewable Energy Directive (RED III) seems to maintain this possibility.

Within this framework, further reflections should be conducted on how to provide consumers with a transparent and trustworthy environment.

The gas decarbonisation package is likely to be finalised by the end of 2023, therefore CEER considers that where national legislation provides for gas disclosure, these CEER GGP are also applicable to gas.

2.3 Initiative on green claims and proposal on empowering consumers for the green transition

By stating that "Companies making 'green claims' should substantiate these against a standard methodology to assess their impact on the environment," the European Commission targets greenwashing issues. In this context, in December 2021, the European Commission adopted updated recommendations on the use by companies of "Product and Organisation Environmental Footprint methods" to substantiate their environmental claims.[9]

CEER shares the view of the European Commission and considers it important that claims on the environmental performance of companies and products are reliable, comparable and verifiable across the EU. Providing and having access to reliable environmental information would allow market actors, and more importantly, consumers to choose greener orientations. The European Commission aims at building a global and consistent policy framework as sustainable goods, services and business models should be the reference point for empowering consumers towards a more sustainable direction. This would be achieved by reducing the environmental footprint of products consumed in the EU, contributing to the overall policy objective of EU climate neutrality by 2050.

[9] Commission Recommendation (EU) 2021/2279 of 15 December 2021 on the use of Environmental Footprint methods to measure and communicate the life cycle environmental performance of products and organisations. Retrieved from: http://data.europa.eu/eli/reco/2021/2279/oj.

In March 2022, the European Commission published a proposal to update EU consumer protection rules to empower consumers to act in favour of the green transition.[10] The revisions to existing EU consumer protection legislation seek to strengthen consumer rights as regards environmental claims made across all types of products. Providing more specific rules on environmental claims, the European Commission published, in March 2023, a proposal for a Directive on substantiation and communication of explicit environmental claims (Green Claims Directive).[11] This proposal aims at regulating environmental labels and tackling their proliferation.

The system of GOs appears to be an appropriate system to back up "green" claims in the context of energy use (electricity, gas, heat/cooling, hydrogen). It would therefore be advisable to harmonise this system as much as possible and to use it uniformly across the EU. This would also help to provide better guidance to final consumers.

[10] "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2005/29/EC and 2011/83/EU as regards empowering consumers for the green transition through better protection against unfair practices and better information," 2022, European Commission, Ref: COM/2022/143 final. Retrieved from: EUR-Lex - 52022PC0143 - EN - EUR-Lex (europa.eu).

[11] "Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on substantiation and communication of explicit environmental claims (Green Claims Directive)," 2023, European Commission, Ref: COM/2023/166 final. Retrieved from: EUR-Lex - 52023PC0166 - EN - EUR-Lex (europa.eu).

3 What is the role of the NRA in the fuel mix disclosure?

Directive (EU) 2019/944 explicitly states in Annex I, Article 5: “The **regulatory authority** or another competent national authority shall take the necessary steps to ensure that the information provided by suppliers to final customers pursuant to this point is reliable and is provided at a national level in a clearly comparable manner.”

CEER has assessed among its member NRAs what each is doing to comply with this provision. 15 NRAs out of 30 CEER members are the competent body for disclosure. In the other countries, the competent body is either a network operator, commodities exchange platform or another public authority (complete list available in Annex 1).

NRAs that are not the appointed competent national authorities for energy disclosure (hereafter “disclosure authority”) must cooperate with the disclosure authority by providing the data that the disclosure authority needs to check before validating disclosure figures, as specified in the section below.

When undertaking their monitoring tasks, NRAs receive data from suppliers about supplied volumes in a calendar year and have access to more detailed data about the number of products (electricity and gas) being offered in the country.

Some NRAs also operate the national CT, which lists all of the electricity and gas products being offered in that country. In addition to price, disclosure figures (such as product mix and supplier mix) are an important criterion for consumers in their choice of supply contract. Many CTs already provide disclosure figures pertaining to a given product, and therefore the NRA must check that the entirety of the information related to an electricity or gas product, including its product mix, is correct.

4 What is the role of the competent national authority for energy disclosure?

A disclosure authority is responsible for energy disclosure figures, such as those referred to in Article 5, Annex I, Directive (EU) 2019/944, in particular those aspects mentioned in bold in the following extract:

"Suppliers shall specify in bills the contribution of each energy source to the electricity purchased by the final customer in accordance with the electricity supply contract (**product level disclosure**).

The following information shall be made available to final customers in, with, or signposted to within their bills and billing information:

(a) the contribution of each energy source to **the overall energy mix of the supplier** (**at national level**, namely in the Member State in which the electricity supply contract has been concluded, **as well as at the level of the supplier if the supplier is active in several Member States**) over the preceding year in a comprehensible and clearly comparable manner;
(b) information on the environmental impact, at least in terms of CO_2 emissions and the radioactive waste resulting from the electricity produced by the overall energy mix of the supplier over the preceding year."

Thus, for electricity, the disclosure framework of the Electricity Directive 2019/944 foresees that the consumer will be informed through the bill about the following disclosure figures:

- The product mix (designated in the Directive as "product level disclosure"): the sources of energy used for the generation of electricity provided to the consumer in the framework of a specific electricity product chosen by the consumer (for which the consumer has a supply contract with the supplier); and
- The supplier mix (designated in the Directive as "overall energy mix of the supplier"), namely:
  - The supplier mix at national level (hereafter national supplier mix); and
  - The supplier mix at the level of the supplier if the supplier is active in several MS (hereafter cross-border supplier mix).

In addition to the product mix and supplier mix (both variants, national level and cross-border level), in order to provide information about the supplier mix "at national level in a clearly comparable manner," according to the Directive, some disclosure authorities also compute a "national supplier mix" or "total supplier mix." This is the weighted average of all supplier mixes in its country. In this way, the consumer can compare the supplier mix of their supplier against the average supplier mix in their country, to check, for instance, whether the given supplier had a higher or lower percentage of renewable sources compared to the average supplier mix.

In particular, this extract of the Directive illustrates that if a given supplier is also active in several MS, the Directive foresees that consumers of that cross-border supplier must also be informed about the weighted average of all supplier mixes of that supplier computed in all the countries in which that supplier is active.

The supplier mix at national level is simply the weighted average of all product mixes of a given supplier in a given country.

The disclosure authority of a given country either: (i) computes itself all of the disclosure figures for all of the suppliers active in its country and publishes these on its own website; or (ii) checks the computation and publication of disclosure figures made by suppliers of that country towards their final customers and whether they are “reliable and provided at a national level in a clearly comparable manner,” as provided for by the Electricity Directive.

Additionally, the disclosure authority is responsible for ensuring that information on the environmental impact - at least in terms of CO_2 emissions and the radioactive waste resulting from the electricity produced by the overall energy mix of the supplier over the preceding year - is provided to final customers according to a harmonised methodology at national level.

Mostly, suppliers compute annually their product mixes for each product commercialised in a given year, and submit their product mixes and their supplier mix (at national level) to the disclosure authority for checks and validation. This is not the case in some MS where the national mix is published by the competent body and the suppliers have only to publish the mix in their invoices.

The product mix prepared and submitted by the supplier to the disclosure authority provides detailed information about the composition of the total supplied volumes by the supplier, in the framework of that product according to energy sources. The supplier is required to submit proof of the stated supplied volumes according to specific energy sources. Such proof includes the cancellation statements of GOs. For instance, if in the framework of a product mix, the supplier stated that 5,000 MWh came from solar, the disclosure authority will check whether the supplier did in fact cancel 5,000 GOs of solar for that specific product.

Once the product mixes and supplier mixes are validated by the disclosure authority, suppliers can publish their product mixes and supplier mix and communicate such disclosure figures to their end-customers.

The disclosure figures validated by the disclosure authority and finally published for consumers, through the bill and on the internet, summarise disclosure figures in percentages, resulting from the effectively supplied volumes per product and per energy source. Those volumes in MWh remain confidential between the disclosure authority and the supplier.

In the context of the green claims initiative, the body responsible for verifying green claims is the competent authority for disclosure.

5 Challenges of energy disclosure

To date, there have been no computations of the supplier mix at the level of the supplier if the supplier is active in several MS, as foreseen by Electricity Directive (EU) 2019/944 in Annex I, Article 5. Electricity consumers in MS do not receive such disclosure figures.

This is due to the fact that national disclosure timeframes differ from one MS to the other. The Electricity Directive does not define the disclosure timeframe to be followed by MS, and it is up to the disclosure authority to define the national disclosure timeframe valid for its country. Therefore, if in one MS the disclosure timeframe ends in June of year X+1, meaning that consumers shall receive final and validated disclosure figures about consumption year X at the latest in June of year X+1, such a deadline is not necessarily the same as in the other MS in which possible cross-border suppliers are active.

Currently, consumers in one MS may receive, for instance, in June of year X+1 their disclosure figures about consumption year X, whereas consumers in the neighbouring MS may receive their disclosure figures in September or December of year X+1.

The disclosure authority of the MS having a closer deadline to the end of the consumption year about which disclosure figures need to be reported to consumers, i.e. a deadline earlier in the year X+1, would have to wait for the computation of the supplier mixes in the other countries in which the cross-border supplier is active, in order to provide in its country the final figure of "the supplier mix at the level of the supplier if the supplier is active in several Member States." Therefore, in order to provide all disclosure figures at the same time and with a closest possible date to the end of the consumption year being assessed, the current practice is that no disclosure authority waits to receive all the supplier mixes from its corresponding disclosure authorities in the other MS in which the cross-border supplier is active.

Given that disclosure timelines differ, the computation of the cross-border supplier mix could occur only when all the supplier mixes of that cross-border supplier are ready in the different countries in which the supplier was active. This would likely result in the dissemination of the figure two years after the consumption year to which the figure relates.

Another challenge is that an official comprehensive public list of all appointed disclosure authorities within the meaning of Electricity Directive (EU) 2019/944, Annex I, Article 5 is not easily available. Such a list could, for example, be made available on the website of the Directorate General for Energy, as is already the case with the public list of appointed Alternative Dispute Resolution (ADR) bodies published by the Directorate General Justice.[12] An easily accessible list on the internet would allow consumers willing to know more about energy disclosure in a given country, to find the disclosure authority to contact. Also, authorities willing to cooperate with the exchange of information about national supplier mixes and willing to coordinate their national timelines of disclosure in order to compute the cross-border supplier mix would also easily find contact details.

The fact that energy disclosure methodology differs from one European country to another also poses a challenge. Some competent authorities for disclosure require a match of consumption year and production year to be clearly mentioned on the cancellation statement of the GO, whereas other countries do not apply such rule.

An additional challenge is that the methodology for assessing the environmental impact of the electricity supplied (and consumed by final customers) also differs from one European country

[12] See: https://ec.europa.eu/consumers/odr/main/?event=main.adr.show2.

to another. Therefore, CO_2 emission and radioactive waste values for the disclosure figures (product mix, supplier mix) currently communicated to energy consumers, are calculated on the basis of national methodologies that are not yet harmonised.

Another challenge is that the European legislation is silent on the definition and methodology of the so-called “residual mix.” A residual mix is computed and applied to all volumes supplied without certification for the origin of the energy generation. Currently, some European countries include renewable energy production (green residual mix) in the computation of their country residual mix, whereas other countries exclude renewable sources in the residual mix (fully non-renewable residual mix) in order to incentivise suppliers to make use of the certification of renewable sources though tracking mechanisms, such as GOs. If the residual mix contains a default share of renewable sources, eventually all the non-tracked volumes supplied for which the residual mix is applied (i.e. all the energy volumes supplied without proof of origin for the energy generation), will also contain default renewable sources, deriving from the “green” residual mix.

Additionally, there is no harmonised categorisation of energy sources provided in disclosure figures across MS. Some countries include, for instance, the category “non-identified sources” that others do not take into account.

Lastly, some MS issue GOs for renewable energy self-consumed on-site, whereas others do not issue GOs for self-consumed energy.

6 The updated CEER recommendations on green offers

The 2015 CEER Report included a set of recommendations on customer information on sources of electricity. Within the framework of the Electricity and RED II Directives, the present GGP update and complement those recommendations. The changes between the 2015 and 2023 recommendations are identified in **bold** formatted text in Annex 3.

6.1 Providing access to adequate and reliable information to consumers

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

Recommendation 1:

All CTs[13] – in particular those operated, or trust marked by a public authority or body - should provide a clear indication of the product mix[14] and supplier mix[15] for each product listed in the CT.

If offers are indicated as "green" by CTs (and/or suppliers), the justification for doing so (as a source of information) must be transparent to the consumer, regardless of whether they consume electricity and/or gas. If feasible, information should be provided to give an account of the share of energy that did not benefit from public support.

CTs are by far the most common source of information and comparison for consumers in a digital society. Therefore, they also play an important role in providing information on the quality of energy supply, including the source of energy.

The provision of this information should be in line with recommendation 15 in CEER's Guidelines of Good Practice on Comparison Tools[16] which states that "CT providers should ensure that all the information provided to customers is clearly written and presented. Using consistent or standardised terms and language within and across CTs can help to enable understanding. When offering information on the source of energy, CTs should enable the consumer to assess this information in an easy and trustworthy way. For this reason, CTs should focus on reliable green claims, pre-approved by NRAs or by other designated competent authorities, which should be featured in CTs." As the source of energy and the tracking system are very relevant, the CTs have to find a proper way of displaying this information, avoiding "green washing."

[13] As defined in Article 14 of Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity.
[14] As defined in Article 5 of Annex I of Directive (EU) 2019/944: product level disclosure.
[15] As defined in Article 5 of Annex I of Directive (EU) 2019/944: overall energy mix of the supplier.
[16] CEER Guidelines of Good Practice on Future-Proof Comparison Tools in the Energy Sector, August 2022, Ref: C22-CEM-147-03.

If possible, the issuing of trust marks to CTs operated by private companies should also provide guidance on considering and providing information on product mix and supplier mix by the comparison (tools).

It is also very relevant to inform the consumer that marketing information derived from cancelled GOs is based on consumption in the past and the offer is a promise in respect to future consumption. Verifying this promise is crucial for trust marks and/or public operators.

In order to enable the consumer to actively choose their source of energy and to support the development of renewables, the share of energy that did not benefit from public support schemes should also (if feasible) be available to the consumer. In some MS, such information is available via CTs.

This recommendation is also applicable to the gas sector at national level. Most CTs cover both electricity and gas products. Article 19 of Directive (EU) 2018/2001 establishes GOs for both electricity and gas. The gas decarbonisation package includes new provisions in the Annex of the Gas Directive on disclosure of energy sources, similar to those established in Article 5(a) of Annex I in the Electricity Directive (EU) 2019/944. However, at the time of drafting, the legislative procedure was still underway, and the EU legislation currently in force does not include an obligation on "Disclosure of energy sources" for gas.

For consumers who would like to buy energy from non-supported installations, providing/making this kind of information easily accessible would be an additional lever for the consumer's commitment.

In Annex 4, some case studies are provided to illustrate how Recommendation 1 can be applied.

Recommendation 2:

The NRA (or other competent body) should cooperate at European level and ensure, at least on a national level, that there is a harmonised format proposing a minimum standard for displaying information concerning the origin of energy supplied from renewable sources (and if applicable also from non-renewable sources). The standard should specify the level of detail required for this information and how such information is communicated to consumers.

This recommendation underlines the importance of having a harmonised system that allows consumers to have access to comparable information, no matter where they live in Europe. If the information provided is standardised, it is more reliable and can be compared more easily.

The recommendation also aims to include other types of energy (besides electricity) in the minimum information display. In 2015, only electricity was considered, but in 2023, this recommendation can also be applied to the gas sector. Article 19 of Directive (EU) 2018/2001 states that the "guarantee of origin shall specify at least: (a) the energy source from which the energy was produced and the start and end dates of production; (b) whether it relates to: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling." However, until the final adoption of the revision to the Gas Directive, rules on disclosure of energy sources for gas are not obligatory yet, as explained above.

To make information clearer, NRAs should consider how the information should be provided to consumers (e.g. a link or a reference to where the information can be found in the bill, a separate document that is sent with the bill, a document sent independently, on supplier

websites or apps, a common platform dedicated to sharing this type of information, etc.) and how consumers can be made aware of where they can find that information through different channels, such as in contracts, or on websites of responsible parties, among others.

The level of detailed information should be easy to understand and harmonised, so consumers can compare offers without having to be energy experts or being overloaded with information. Cooperation (at national or European level) should involve disclosing transparent, clear and easy-to-understand-and-find information on this subject, so that products and supplier mixes can be easily compared.

As multiple offers are increasing (electricity and gas in the same contract and, sometimes, also additional services), rendering contracts more complex, it seems increasingly relevant to have transparent information on this aspect so that consumers can easily access the information that helps them to make better choices.

In Annex 4, some case studies are provided to illustrate how Recommendation 2 can be applied.

Recommendation 3:

References in the energy bill on where to find additional information on GOs, such as the type of renewable energy source, the geographic origin (country or, if applicable, region) or whether or not it has received support from a renewable investment or production support scheme, should be drawn to customers' attention (e.g. on the website of the supplier and/or of the competent body for disclosure).

In order for customers to be fully informed, Directive 2019/944 states that suppliers should specify in energy bills the contribution of each energy source to the electricity purchased by the final customer (product mix disclosure). However, Directive 2019/944 does not require all energy origin (i.e. including non-renewable) to be disclosed through GOs. Therefore, for non-renewables, GOs may simply not have been issued. All consumers should be made aware that even if the production mix in their country or region is considered "green," selling the relevant GOs abroad (i.e. for disclosure purposes in other countries) may cause their consumption mix to become "polluted" i.e. if their consumption mix is not backed with renewable energy GOs, it cannot be reported as either green or renewable, or this could be considered as greenwashing.

In line with Directive 2019/944, the following information is compulsory and should also be made available or signposted to customers within their energy bills: supplier mix, related CO_2 emissions and radioactive waste of the supplier mix, and whether a PoS certificate exists for a given unit of energy. To make the system of GOs credible and more widely used by end-consumers, which will ultimately contribute to the further development of renewable energy in the EU, CEER believes that the methods for calculating emission savings from different renewable energy sources, and information on radioactive waste, should be harmonised at European level. In addition to the publication of the environmental impact of the supplier mix, CEER recommends publishing the environmental impact for the product mix and for any other disclosure figure provided to consumers (for instance, total supplier mix or national mix).

CEER highlights the importance of introducing an obligation to interconnect the various systems that can prove the origin of the energy produced at European level, so as to avoid double counting of renewable energy and thus greenwashing. In particular, the GO system and the Union-Database (UDB) system that allows the international transfer of PoS certificates.

"Additional information" refers to all of the information that is not listed in Directive 2019/944 but that could be useful for consumers, especially those who are already engaged but are seeking more detailed information. This additional information is already available in the GOs, which contain certain information required for tracking purposes. To improve consumer engagement, the information provided by GOs should be made easily accessible to the consumer through eligible/responsible party websites or a common platform centralising all the information. As for Recommendation 2, a link or a reference to the information's location could be included in the bill, in a separate document that is sent with the bill, in a document sent independently, on supplier websites or apps, or on a common platform dedicated to sharing this type of information. Different channels, such as the contract and websites of responsible parties, should also be used to inform consumers where they can find this additional information. Any evolution of a regulated document, for example the bill, must be anticipated in due time.

In Annex 4, some case studies are provided to illustrate how Recommendation 3 can be applied.

6.2 Strengthening consumer trust by improving the existing disclosure systems

In addition to providing adequate information to customers, further development, improvement and integration of existing disclosure systems is necessary if customer trust is to be strengthened and the EU's internal energy market further developed. Therefore, CEER has developed recommendations regarding the disclosure system and its main instrument, the GO.

Recommendation 4:

MS should have a GO system for: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling.[17] For this purpose, national GO system convergence should be encouraged so that GOs are easily tradable across MS. When and where available, GOs should be used as the only instrument for tracking the characteristics of energy sources in offers within disclosure systems, in particular those marketed as "green," including in the framework of a PPA or any contract with a renewable production plant (e.g. EU solar energy). In the absence of a certified GO, the offer cannot be marketed as "green".

As the 2015 recommendations were aimed at electricity only, the present GGP captures the broader scope established in RED II, which states that the "guarantee of origin shall specify at least:
(a) the energy source from which the energy was produced and the start and end dates of production;
(b) whether it relates to: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling;"

[17] As defined in Article 19 of Directive (EU) 2018/2001.

Article 19 of the Renewable Energy Directive states that if a producer is a recipient of public aid, it should no longer receive additional income from a GO, and gives MS various options to take this into account. Thus, some MS do not issue GOs to producers receiving public support. Therefore, if a supplier markets an offer as “green,” whether in the framework of a PPA or any contract with a renewable production plant, it should be able to provide proof of proper corresponding GO cancellation. A further step should be to reflect on how to quantify or certify energy generated by supported installation that does not receive the corresponding GOs in certain MS.

In Annex 4, some case studies are provided to illustrate how Recommendation 4 can be applied.

Recommendation 5:

GOs should be used as a basis for further harmonisation of disclosure systems. An assessment of the use of GOs in electricity should be done at national and European level to identify improvements that could be made to the existing GO system in electricity as well as best practices that can be applied for: (i) gas, including hydrogen; or (ii) heating or cooling.

Good practices identified in the electricity disclosure system should be extended to other energy disclosure systems. The cooperation of competent authorities for disclosure should be enhanced irrespective of the form of energy disclosed. The use of a common platform should be investigated.

GOs show a final consumer that energy was produced from renewable sources. For a consistent and reliable means of proving a renewable source to final customers, harmonisation and standardisation of disclosure systems is important. Cross-border trade in GOs also requires harmonisation and standardisation.

GOs are currently used in MS for renewable electricity, heating and gas. The GO system should be extended to cover other renewable energy. Good practices identified in electricity disclosure system should be extended to other energy disclosure systems.

The cooperation of competent authorities for disclosure should be enhanced irrespective of the form of energy disclosed. Conversion of different energy sources (for example, conversion from electricity to hydrogen and vice versa, or the use of electricity for heating) requires one GO system for all types of energy. This should be facilitated with the use of a common platform.

In 2015, CEER recommended that the European Committee for Standardization (CEN) / European Committee for Electrotechnical Standardization (CENELEC) and European Energy Certificate System (EECS) standards for electricity GOs should be used as a basis for further harmonisation of disclosure systems.

CEN CENELEC standardisation of the GO systems should seek a common understanding of:

- Terminology and definitions;
- Issuing concepts;
- Measurement methods; and
- Audit methods.

The content of this standard is in the process of being modified to include heating, cooling and gas (including hydrogen), as defined by Article 19(7) of Directive (EU) 2018/2001. RED II

introduced the obligation on MS to comply with the CEN standard EN16325 on GOs related to energy: Article 19(6) of Directive (EU) 2018/2001.

However, despite Directive (EU) 2018/2001 entering into force on 1 July 2021, the revision of the EN16325 standard was still under way at the time of drafting this report. In 2015, the Association of Issuing Bodies (AIB) adopted EN16235 on GOs for electricity. In 2018 the Renewable Energy Directive 2018/2001/EU obligated the MS to comply with the CEN standard. Therefore, the EN16235 standard had to be updated to facilitate the requirements of the Directive. It also had to be extended to GOs for gas, hydrogen, and heating and cooling. Since 2015, other standards have developed, especially for gas. For this reason, a revision of the norm EN16235 of CEN CENELEC was required in order to harmonise all standards within the same norm.

A revision of CEN standards normally takes at least three years. The European Commission asked the FaStGO project team to prepare a proposal for a revision and extension of the EN16325 standard on GOs. The enquiry started in December 2022, wherein CEN members could submit their vote and comments. This is the final step before the formal vote, and implementation is expected in 2024.

The new CEN standards will be applied to all EU MS. This will be a significant step towards minimising the differences in approach between AIB members and non-AIB members, and will make the European GO system more reliable and robust.

In Annex 4, some case studies are provided to illustrate how Recommendation 5 can be applied.

Recommendation 6:

Further harmonisation of the existing disclosure systems for electricity and the introduction of a harmonised system for all types of energy on a European level should make the systems more reliable and efficient. The competent bodies for disclosure should ensure that the utmost is done to make customers aware of the information that is available to them regarding the energy with which they are supplied.

To foster trust in disclosure systems, customers should easily be able to find clear information about the functioning of these systems. The publication of an annual disclosure report by the relevant competent body is a good practice that can further increase transparency in terms of the origin of supplied energy at national level.

The 2015 CEER Report highlighted that the implementation of EU Directives with regard to disclosure had led to the development of different systems in different MS. The 2015 CEER Report also highlighted that through voluntary cooperation and research programmes, such as the Reliable Disclosure Systems for Europe (RE-DISS) project,[18] there had been spontaneous harmonisation among many MS.

[18] See: http://www.reliable-disclosure.org/upload/222-RE-DISS_Best_Practice_Recommendations_v2.4_Final.pdf

In 2018, the RED II required MS to introduce GOs for gas, including hydrogen, and heat and cooling, in addition to electricity. Due to the development of renewable gas (biomethane) and hydrogen production in the EU, it is therefore important to further harmonise disclosure schemes, not only for electricity, but it is strongly recommended to focus on harmonisation at the European level for gas, including hydrogen and heating/cooling.

A key driver of further integration of different disclosure systems is the need for an efficient and reliable system at European level. Even national solutions for disclosure that are reliable on their own can lead to additional cost and inefficiency if attempts are made to integrate them with other national disclosure systems. Ensuring coherent implementation of the Renewable Energy Directive in all European countries therefore remains an important goal that should be promoted.

Although the final text of the further revision of the Renewable Energy Directive (RED III) is not yet known, it is likely that mandatory disclosure for gas suppliers will be introduced, reinforcing the importance of proceeding with harmonising disclosure at the European level.

To the extent that non-harmonised national disclosure systems remain in place, this recommendation continues to encourage the identification of differences between these systems in a transparent manner. This can then lead to the more important step of harmonisation using a common and reliable basis for disclosure systems at European level, namely the use of GOs. Gradual harmonisation of national disclosure systems is recommended to avoid discrepancies among MS.

Any reliable disclosure system depends on customer trust. As the majority of customers are not aware of the functioning of the energy system, trust in the disclosure system can overcome this lack of awareness. However, the disclosure system must be seen to be well-functioning, reliable and trustworthy. Another key attribute for guaranteeing transparency and customer empowerment is the accessibility of information for customers about how the system works. Depending on the levels of customer engagement, the more interest customers show, the more detailed information will be needed.

There are differences in the kind of information that is given. In some countries, the competent bodies only provide information about the functioning of the GO system, and do not publish an annual disclosure report. The publication of an annual disclosure report is seen as an important instrument to enhance customer knowledge and awareness concerning the disclosure system, and in particular the origin of the energy they use.

The reasons for having an annual disclosure report continue to remain valid. Such a report would put further pressure on companies to adequately disclose their information. As NRAs are obliged by Directive 2019/944 to ensure that suppliers disclose their energy mix, the development of such a report would represent little additional work and would have a great impact on improving customer knowledge. Experience has shown that in countries where such reports are already published, the report is well received, not only by NGOs, but also by consumer bodies and customers themselves (although this report is less likely to influence the process of choosing a supplier/contract directly). Therefore, the relevance of an annual disclosure report should be considered in the context of the national retail market circumstances and, if relevant, be implemented with some flexibility by the competent body.

In Annex 4, some case studies are provided to illustrate how Recommendation 6 can be applied.

Recommendation 7:

In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity, including non-renewable sources. Full disclosure, meaning the cancellation of GOs for all consumption, would help to make the disclosure system more consistent and reliable, as well as to provide opportunities for marketing energy products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly designed system addressing all energy generation, from all sources (renewable and non-renewable), has the potential of reducing administrative burdens and costs. In order to avoid imposing an administrative burden and costs on energy producers, it could, as a first step, be introduced on a voluntary basis.

Where full disclosure is not technically feasible or cost-efficient, a residual mix should be determined at national level. The methodology to calculate the residual mix should be harmonised across all participating countries in the interconnected energy market, per energy carrier.

Feedback from the last few years has shown the flaws of having different GO and disclosure systems functioning all together within a common European electricity market. Although the Electricity Directive leaves it up to MS to implement, having a full disclosure system would help guarantee the consistency and reliability of the disclosure system and should be considered as a goal to aim for.

However, as it may require major changes and time for a MS to adopt a full disclosure system, where full disclosure is technically not feasible or not cost-efficient, the MS should take into consideration the opportunity to have a residual mix defined at national level. Another positive step would be to collect the different existing methodologies used to calculate the residual mix, so that a common harmonised methodology per energy carrier could be selected or built that could be shared and used across all participating countries.

In Annex 4 some case studies are provided to illustrate how Recommendation 7 can be applied.

6.3 Supporting consumers with transparent information

To foster trust and support the consumer in their informed decision making, additional means such as labels or suppliers' websites can be of help. In light of this, CEER has developed the following recommendations:

Recommendation 8:

The further integration of gas and electricity markets at European level should be accompanied by actively continuing the development of the European GO market, thus increasing price transparency and competition. Price information for retail energy products that include energy from supported and non-supported installations should be shared publicly and be easily accessible.

In the context of engaged consumers seeking accurate and transparent information prior to making decisions, price information should be shared publicly and made easily accessible by the responsible parties. This information should be available, for example, for supported and non-supported installations, as part of the information required to facilitate comparisons and choice for consumers.

It should also be highlighted to customers that a GO (for energy produced from renewable sources) does not automatically guarantee a direct effect on investment in new renewable production (known as additionality), nor supports existing renewable producers (as in the framework of some PPAs, the producer does not directly receive the revenue from the sale of the GO issued for their renewable production).

By purchasing a GO or using a green product that is backed by a GO, the customer should be able to determine whether they want to contribute directly to the development of renewable sources or are satisfied that they are consuming renewable electricity for their needs, which has positive environmental impacts and low emissions compared to fossil fuels. If the consumer wants to directly support new investments or existing renewable production by choosing green energy products, they should be able to obtain this information from their supplier. Therefore it is recommended that suppliers publish the amount of funds given directly to renewable producers from which the supplier received GO.

Regarding the support status of the installation, although this information might be considered less important when it comes to offers considered as green, than whether the energy effectively consumed was generated from renewable energy, CEER considers that consumers should have the opportunity to be provided with this existing information if their choice is conditioned, for example, by the level of support of an installation and the added value to the overall system. This information is already available in GOs and providing them would enhance consumer engagement and contribute to further integration for energy markets.

In Annex 4, some case studies are provided to illustrate how Recommendation 8 can be applied.

Recommendation 9:

Consumers should be properly informed about where the energy they will consume is produce – "local or regional" GOs, i.e. issued for local energy production close to the consumer's consumption point. The information should be at least disclosed in pre-contractual documents and supplier websites.

This new recommendation is related to the proliferation of new ways of producing and consuming energy. As the technology continues to develop (for instance, with smart meters and smart grids that allow consumers and suppliers to know at any time the amount of energy they consume and even at what time their consumption rate increases, so that consumers can adapt their electricity consumption habits), new forms of production and consumption emerge (e.g. prosumers that produce at least a part of the energy they use, or energy communities that provide the possibility of being part of small green electricity production facilities and consume directly the electricity those produce). All this allows consumers to be able to choose, each day with more awareness, the types of energy sources they use.

With the emergence of more production points (including renewables), new options are presented to consumers, who should be provided with detailed information on what energy source they will be using or, at least, know where the energy they consume comes from and what sources are used to produce that energy.

In order to provide accurate information about where the energy they consume comes from, suppliers should disclose accessible and clear information on where the energy they trade is produced.

In addition, more and more engaged consumers are seeking local and green energy, and they would like to be informed of the origin of the physical flows they are buying through the GOs. Even if a GO is dissociated from the energy injected into the grid, it comes with information on the generation location. The "local or regional" GO criteria should be able to be combined with the type of energy sources, so consumers are clearly informed about the closer location of the production plant to the consumption place.

An effective way to disclose this information to consumers would be to include it in the pre-contractual detailed information on this subject, and also on supplier websites, so consumers can search for it at any time (or anytime they think about changing their contract or supplier). In any case, and in order not to overload consumers with information (in bills or contract information, for instance), it is crucial that the contract, at least, includes information on where consumers can find details about where the energy they consume is produced.

In Annex 4, we provide some case studies to illustrate how Recommendation 9 can be applied.

Recommendation 10:

GOs and labels should be considered as two complementary mechanisms. GOs are the legal and technical mechanism used to guarantee the source of energy, whereas labels should be considered as a communication tool to facilitate consumers' understanding of the energy market.

Labels can be considered as creating added value for more demanding customers, if it can be guaranteed that the additional impact is associated with the energy supply contract (such as direct investment of funds in new renewable generation capacity or reductions of CO_2 emissions).

An excessive number of labels might be confusing for consumers and potentially raise trust issues, if the information provided by these labels is inconsistent. On the supplier side, it would render it difficult for smaller suppliers to be active in every labelling system, especially when fees are charged.

GOs should be used as the sole tracking mechanism by labels, in order to ensure reliability, and electricity and gas customer trust.

Given the increased use of labels in the energy market, this recommendation now clarifies and distinguishes differences between GOs and labels, irrespective of whether they are private or public.

In a bid to help consumers navigate energy markets, the number of energy products marketed as "green label" has risen across Europe, which may create confusion for consumers if the information provided is inconsistent. The proposal that the European Commission published in March 2023 aims at regulating environmental labels and tackling their proliferation. CEER supports the initiative and considers that clarity, simplicity and transparency are key to fostering consumer trust and engaging them in choosing green offers. CEER considers that convergence in the methodologies used to rank offers based on identical criteria would help avoid inconsistency of information provided to consumers. Additionally, certification of labels by competent bodies, at least at national level, would be beneficial for consumers. The publication of a list of labels complying with the European Commission's requirements is recommended.

To the extent that an offer may be tagged as "green" by a label, but without a proper corresponding GO cancellation, labels do not necessarily guarantee objective information. Therefore, it should be clear that the purpose of the label is to facilitate consumers' understanding of the energy market and the offers or suppliers they are subscribing to. This would be similar to what Nutri-score does within the food industry. However, labels cannot replace GOs as the legal and technical mechanism for guaranteeing the source of energy, therefore all information provided in energy labels should be backed by GOs.

Existing information in GOs, such as time, location and energy source used for energy generation etc., could be provided in highly transparent labels, since these encourage the development of technologies at the times and in the locations where they are most needed. However, the balance between transparency and clarity should be up to consumer choice and decision.

In Annex 4, some case studies are provided to illustrate how Recommendation 10 can be applied.

Recommendation 11:

When subscribing to retail energy products described as "green" by a supplier, and in cases where there is no competent body verifying such claims, the supplier should provide all necessary information to enable the consumer to verify the accuracy of what makes the offer green. For this purpose, a list of relevant information should be defined at national level by the competent body/authority for green claims verification. Additionally, competent bodies/authorities should cooperate at European level for converging at least on what information is required.

This new recommendation highlights the importance of giving clear, transparent information to the consumer in order for them to make an informed choice about whether the offer made by a supplier to which the consumer is being asked to subscribe is truly "green."

Consumers are keen to engage with products and services that are sustainable. For example, a small core of energy consumers in Great Britain have stated their primary reason for switching energy supplier is for sustainability-related reasons.[19]

However, energy consumers are also concerned about the impact of "greenwashing," the practice of overemphasising a company's environmental credentials, typically by misinforming the public or understating potentially harmful activity. In respect of green offers made by energy suppliers, a particular point of controversy is the extent to which a consumer may be misinformed as to the "environmental benefit" of their energy choices (i.e. "by choosing a green energy product you are saving XXXkg CO_2 compared to a non-green energy product"). In addition, suppliers who market particular retail energy products as "100% renewable" without "directly" procuring renewable energy on behalf of their customers, can mislead consumers into making what they consider to be a "green" choice for their energy supply.

Consumer trust is vital, and increasing the granularity of information is a way of increasing transparency and addressing consumer confidence. Customers won't have confidence in the concrete benefits of green retail energy products without having a single trusted source of information with which to check suppliers' claims.

Consumers generally do not seek very detailed information about the "greenness" of a retail energy product. However, they do expect a simple explanation describing how choosing a particular energy product would help the environment. The most common piece of information consumers are interested in, is what percentage of their energy consumption has been matched to renewable energy generation. Green-conscious consumers (those who consider the green credentials of an energy product when choosing it) expect green products to be 100% renewable or carbon neutral.[20]

There are different examples of suppliers demonstrating misleading behaviour by offering green energy products where it is difficult for consumers to verify the accuracy of the product. This might include, for example, exaggerated claims about the positive environmental impact of the product or the use of complex or jargon-heavy language when promoting the product.

The fuel mix that a supplier is required to include on an invoice can also be very misleading and confusing to the end-consumer, if the reference to where the source of the information can be checked is missing. Additionally, as the fuel mix is set retrospectively once a year, it may not correspond at all to the period of time for which the end-customer is charged, nor to the actual fuel mix in the calendar year of supply. It is recommended that suppliers publish how much energy they are purchasing from renewable generators on a regular basis, so that consumers are also informed about suppliers' supply choices during the current calendar year of supply.

An annual disclosure statement allowing consumers to check the adequacy between the energy contract they subscribed to, and the energy they consumed, should therefore be easily accessible to the end-consumer and without any specific request. To avoid leaving the consumer with the feeling of being "greenwashed," the accuracy of energy disclosure/the information provided by suppliers on the green energy products commercialised to consumers, should also be verified by competent bodies at least at national level. In the absence of such

[19] See the Consumer Action Monitor Report 2020, Ombudsman Services. Retrieved from:https://www.ombudsman-services.org/about-us/annual-reports/consumer-action-monitor-report.
[20] See Ofgem customer research (Feb 2020) highlighted in "Designing a Framework for Transparency of Carbon Content in Energy Products," August 2021, BEIS, p.27. Retrieved from: https://www.gov.uk/government/consultations/designing-a-framework-for-transparency-of-carbon-content-in-energy-products-call-for-evidence.

competent bodies, the supplier should provide all necessary information to enable the consumer to verify the accuracy of what makes the offer “green” that they have subscribed to. As for Recommendations 2 and 3, this could be done via a link or a reference to where the information can be found in the bill, in a separate document that is sent with the bill, in a document sent independently, on supplier websites or apps, or on a common platform dedicated to sharing this type of information. Different channels, such as the contract and websites of responsible parties, should also be used to inform consumers where they can find this additional information. Any evolution of a regulated document, for example the bill, must be anticipated in due time.

CEER recommends defining a list of this information at national level by a competent body (for example details of product mix and supplier mix). Additionally, competent bodies should cooperate at European level for converging on what information is required.

In Annex 4, some case studies are provided to illustrate how Recommendation 11 can be applied.

7 Conclusions

To provide an update to the 2015 CEER Report, CEER has conducted desk research supported by an external consultant, as well as a public consultation process. The updated GGP for trustworthy information on green energy products and consumer protection against misleading marketing have introduced new recommendations and added clarification to the previous ones. The 2015 recommendations that, by 2023, have either been widely applied across MS or integrated into European legislation, were removed from the new list of recommendations. However, discussions conducted among NRAs in the drafting of this paper showed that even where great effort and improvement has been made at both national and European levels, some recommendations from 2015 are still not fully applied in every country and are therefore still valid. The updated version of existing recommendations aims at providing additional guidance and closing the gap. For this purpose, each recommendation is also backed by at least one case study illustrating implementation in a country as an example.

One of the main conclusions of this work is that most of the issues lie in the grey zone of providing the consumer with relevant and appropriate information in a clear, transparent and consumer-friendly way, so as to allow them to make their decision.

Varieties of consumers exist that differ in their levels of interest, awareness, and comprehension regarding energy topics, and additionally, their desire to make greener choices. However, all consumers are currently being addressed by suppliers in the same way. This is leading to information overload for the average consumer, whereas for more experienced or concerned consumers, more detailed information or knowledge is lacking that would enable them to make greener choices. It may be worth considering a multi-layer communication method to provide both the basic and necessary information for a consumer to be informed, and access to more detailed information for those who are eager to deepen their understanding.

CEER also identified topics going beyond the defined scope of the present paper, which could be addressed in future work:

- The introduction of granular GOs, foreseen in the RED III proposal, which are essential to develop an energy system that runs 24/7 on renewables, has been raised by some contributors to the public consultation. If this granularity might be of interest for consumers of a relevant size, in particular those who seek matching consumption and generation within a shorter timeframe than currently available, CEER considers that the use of granular GOs should rely on consumer choice and may increase incentives and transparency in the GO system. Any introduction of granular GOs should be made consistent with the legal framework and adapt the disclosure timeframe to be of effective added value for consumers. It should be noted that GO granularity and the timeframe for disclosing information to consumers are not necessarily the same thing: to avoid overloading consumers with information, the disclosure timeframe could remain once per year or be shortened to once per month on a voluntary basis.

In addition, CEER underlines further considerations related to the development of green energy products and the use of GOs:

- What lies behind the definition of "green" should be defined at European level. Having green energy products backed by GOs is a first step towards informing consumers about

green offers. However, there are additional questions regarding greenness, such as the difference between renewable energy and energy produced with lower carbon emissions, the percentage of consumed energy matched with produced renewable energy, the purity of gas, and the conversion between energy carriers especially in terms of hydrogen, etc.

- It is important to ensure that legal provisions on energy disclosure are clarified, fully implemented and enforced by the appropriate authorities. In addition to compliance with the requirements for supplier mix disclosure on energy bills, careful oversight is needed on the issuing and trading of GOs. Enforcement questions are also relevant within the context of the EU's cross sectoral "green claims initiative," in particular with regard to the powers of the competent authority responsible for unfounded green energy claims and the accompanying monitoring of these claims.
- As mentioned in Chapter 5, energy disclosure faces a range of other challenges, mainly due to national specificities on the disclosure timeframe, on the methodologies for energy disclosure and environmental impact assessment, on the categorisation of energy sources and residual mix definition, but also due to a lack of transparency and cooperation at European level.
- The link between national tracking mechanisms, national mass balancing systems, book-and-claim GO schemes, the UDB (Union Database for biofuels and bioliquids), sustainability criteria, emissions schemes, and target schemes, should be clarified by the European legislator. Too many certification schemes on energy production and consumption in the EU can raise the risk of double counting of renewable attributes and create confusion for energy consumers; this sense of confusion can increase the feeling of greenwashing.

Annex 1 – List of abbreviations

Term	Definition
AIB	Association of Issuing Bodies
CEER	Council of European Energy Regulators
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CT	Comparison tool
EAN	European Article Numbering
EECS	European Energy Certificate System
GCs	Granular Certificates
GGP	Guidelines of Good Practice
GOs	Guarantees of Origin
GROs	Guarantees of Regional Origin
MS	Member State(s)
NGO	Non-governmental organisation
NRAs	National regulatory authorities
PoS	Proof of Sustainability
PPA	Power purchase agreement
RED	Renewable Directive, versions I, II and III
RES	Renewable energy sources
UDB	Union Database

Annex 2 – List of national competent authorities for energy disclosure

The table below lists national issuing bodies and bodies responsible for energy disclosure. In some cases, the competent body is the national energy regulatory authority.

Country	NRA	Issuing Body	National Competent Authority for Energy Disclosure
Austria	E-Control	E-Control	E-Control
Belgium	Brugel (Bruxelles) CREG (Federal) VREG (Flanders) Wallonie Energie SPW (Wallonie)	Brugel CREG VREG Wallonie Energie SPW	Brugel VREG Wallonie Energie SPW
Bulgaria	EWRC	SEDA	-
Croatia	HERA	HROTE	HROTE
Cyprus	CERA	TSO	TSO CERA
Czech Republic	ERU	OTE	ERU
Denmark	DUR	Energinet.DK	Energinet.DK
Estonia	Estonian Competition Authority	Elering AS	Elering AS
Finland	The Energy Authority	Finextra Oy	The Energy Authority
France	CRE	EEX	EEX Ministry of Ecological Transition
Germany	BNetzA	UBA	BNetzA
Greece	PAE/RAE	DAPEEP	DAPEEP
Hungary	MEKH	MEKH	MEKH
Iceland	NEA	Landsnet	NEA
Ireland	CRU	SEMO	SEMO
Italy	ARERA	GSE	GSE
Latvia	PUC	AST	PUC
Lithuania	VERT	LITGRID	LITGRID
Luxembourg	Institut Luxembourgeois de Régulation (ILR)	ILR	ILR
Malta	REWS	-	REWS
Netherlands	ACM	CERTI-Q	ACM
Norway	NVE	Statnett	NVE
Poland	URE	Polish Power Exchange	URE

Country	NRA	Issuing Body	National Competent Authority for Energy Disclosure
Portugal	ERSE	REN	ERSE
Romania	ANRE	ANRE	ANRE
Slovenia	AGEN	AGEN	AGEN
Slovakia	URSO	OKTE	Regulatory Office for Network Industries
Spain	CNMC	CNMC	CNMC
Sweden	EI	Swedish Energy	EI
United Kingdom	Ofgem	Ofgem	Ofgem

Annex 3 – Summary of changes to recommendations (2015 to present)

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
Recommendation 1 All *regulated* Price Comparison Tools (PCTs) should provide *customers with an overview of electricity products and should provide* a clear indication of *whether the electricity contract guarantees that the source of the electricity that will be supplied is renewable or not. Private PCTs should be encouraged to follow this practice*.	13 (of 21 MS responding)	Recommendation 1: updated All Comparison Tools (CTs) **– in particular those operated or trust marked by a public authority or body –** should provide a clear indication **of the product mix and supplier mix for each product listed in the CT.** **If offers are indicated as "green" by CTs (and/or suppliers), the justification for doing so (as a source of information) must be transparent to the consumer, regardless of whether they consume electricity and/or gas. If feasible, information should be provided to give an account of the share of energy that did not benefit from public support.**
Recommendation 2 The NRA (or other competent body) should ensure there is a harmonised format proposing a minimum standard for displaying information concerning the origin of *the electricity that is* supplied from renewable sources and should specify the level of detail required for this information *(i.e. on the annual statement).*	16 (of 20 MS responding)	Recommendation 2: updated The **National Regulatory Authority** (NRA) (or other competent body) should **cooperate at European level and** ensure, **at least on a national level, that** there is a harmonised format proposing a minimum standard for displaying information concerning the origin of **energy** supplied from renewable sources **(and if applicable also from non-renewable sources). The standard** should specify the level of detail required for this information **and how such information is communicated to consumers.**
Recommendation 3 *For customers to be thoroughly informed, two levels of information could be provided. Level 1 refers to the mandatory information that is already provided on the bill (supplier mix, related CO_2 emissions and radioactive waste) as required by the Directives. Level 2 would then provide* additional information *that is already available* on the GO, such as the geographic origin (country or, if applicable, region), *the specific* renewable energy source(s) *and electricity production technology(ies)*	8 (of 21 MS responding)	Recommendation 3: updated **References in the energy bill on where to find** additional information on guarantees of origin (GOs), such as **the type of renewable energy source,** the geographic origin (country or, if applicable, region) **or whether or not it has received support from a renewable investment or production support scheme, should be drawn to customers' attention (e.g.** on the website of the supplier and/or of the competent body for disclosure).

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
and the product mix. This information would then be displayed to consumers, clearly separated from the mandatory disclosure statement, and could therefore be made available on the website of the supplier and/or of the competent body for disclosure. *In that case, and if relevant, a reference on the annual statement should draw customers' attention to this additional information.*		
Recommendation 4 *To make the disclosure information reliable, either only the supplier mix should be disclosed, or both the supplier and the product mix should be disclosed to all customers of an electricity supplier. If the product mix is provided by the electricity supplier, this supplier should inform all of its customers of their product mix in a consistent manner, in order to minimise the risk of double disclosure within one company. Customers who signed a contract that guarantees them electricity from a specific source may get confused when they only receive information on the supplier mix. The product mix is valuable information for those customers, along with the supplier mix.*	15 (of 20 MS responding)	Incorporated into Recommendation 2.
Recommendation 5 When and where available, GOs should be used as the only instrument for tracking *electricity from renewable* sources within disclosure systems.	12 (of 20 MS responding)	Split into two recommendations and updated. Recommendation 4 : **Member States (MS) should have a GO system for: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling. For this purpose, national GO system convergence should be encouraged so that GOs are easily tradable across MS.** When and where available, GOs should be used as the only instrument for tracking **the characteristics of energy sources in offers** within disclosure systems, **in particular those marketed as "green," including in the framework of a power purchase agreement (PPA) or any contract with a renewable production plant (e.g. EU solar Energy). In the**

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
		absence of a certified GO, the offer cannot be marketed as "green."
The CEN/CENELEC and EECS standards for electricity GOs should be used as a basis for further harmonisation of disclosure systems.		Recommendation 5 GOs should be used as a basis for further harmonisation of disclosure systems. **An assessment of the use of GOs in electricity should be done at national and European level to identify improvements that could be made to the existing GO system in electricity as well as best practices that can be applied for: (i) gas, including hydrogen; or (ii) heating or cooling.** **Good practices identified in the electricity disclosure system should be extended to other energy disclosure systems. The cooperation of competent authorities for disclosure should be enhanced irrespective of the form of energy disclosed. The use of a common platform should be investigated.**
Recommendation 6 Further harmonisation of existing disclosure systems on a European level should make them more reliable and efficient. The competent body for disclosure should *do the utmost* to ensure that customers are aware of the information that *is provided* to them regarding the *electricity* with which they are supplied. To foster trust in the disclosure system, customers should easily be able to find clear information about the functioning of *the disclosure* systems. The publication of an annual disclosure report by the competent body *for disclosure* is a good practice that can further increase transparency in *the field* of the origin of supplied *electricity* at national level.	15 (of 20 MS responding)	Recommendation 6: updated Further harmonisation of the existing disclosure systems **for electricity and the introduction of a harmonised system for all types of energy** on a European level should make **the systems** more reliable and efficient. The competent bodies for disclosure should ensure **that the utmost is done to make** customers aware of the information **that is available** to them regarding the **energy** with which they are supplied. To foster trust in disclosure system**s**, customers should easily be able to find clear information about the functioning of **these** systems. The publication of an annual disclosure report by the **relevant** competent body is a good practice that can further increase transparency in **terms** of the origin of supplied **energy** at national level.
Recommendation 7 To promote the issuing of RES-GOs, all electricity suppliers should be encouraged to use GOs to prove the	14 (of 20 MS responding)	Incorporated into Recommendation 4.

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
renewable origin of the electricity supplied to customers under contracts that guarantee the supply of electricity produced from renewable sources.		
Recommendation 8 In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity. *This extension* would help to make the basis for the disclosure system more consistent and reliable, *and also* to provide opportunities for marketing *electricity* products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly-designed system addressing all *electricity* from all sources has the potential of reducing administrative burdens and costs. In order to avoid imposing administrative burdens and costs on *electricity* producers, it could, as a first step, be introduced on a voluntary basis.	6 (of 21 MS responding)	Recommendation 7: updated In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity, **including non-renewable sources. Full disclosure, meaning the cancellation of GOs for all consumption**, would help to make the disclosure system more consistent and reliable, **as well as** provide opportunities for marketing **energy** products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly designed system addressing all **energy** generation, from all sources **(renewable and non-renewable),** has the potential of reducing administrative burdens and costs. In order to avoid imposing an administrative burden and costs on **energy** producers, it could, as a first step, be introduced on a voluntary basis. **Where full disclosure is not technically feasible or cost-efficient, a residual mix should be determined at national level. The methodology to calculate the residual mix should be harmonised across all participating countries in the interconnected energy market, per energy carrier.**
Recommendation 9 The further integration of electricity markets at European level should be accompanied by actively continuing *to develop* the European GO market, thus increasing price transparency and competition.	12 (of 20 MS responding)	Recommendation 8: updated The further integration of **gas and** electricity markets at European level should be accompanied by actively continuing **the development** of the European GO market, thus increasing price transparency and competition. **Price information for retail energy products that include energy from supported and non-supported installations should be shared publicly and be easily accessible.**
NEW	NA	Recommendation 9: new

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
		Consumers should be properly informed about where the energy they will consume is produced - "local or regional" GOs, i.e. issued for local energy production close to the consumer's consumption point. The information should be at least disclosed in pre-contractual documents and supplier websites.
Recommendation 10 *All electricity from renewable sources should be disclosed to the customer, irrespective of whether or not it has received support from a renewable investment or production support scheme.*	19 (of 21 MS responding)	Incorporated into recommendation 8 and Renewable Energy Directive.
Recommendation 11 *As the GO is defined in the Directives as the only instrument for disclosure of electricity from renewable sources, it would be more consistent if all RES-GOs would be recognised for disclosure purposes, irrespective of whether the production was from supported or non-supported electricity plants. It would be recommendable if disclosure information would not be influenced by the renewables support scheme.*	15 (of 21 MS responding)	Incorporated into Recommendation 8 and Renewable Energy Directive.
Recommendation 12 *Private green electricity quality labels should be encouraged to use GOs as their unique* tracking mechanism, in order to be reliable and trusted by electricity customers. *Private* label *models* can – *under certain circumstances* – be considered *to create* added value for more demanding customers, if it can be guaranteed that additional impact is associated with the contract (such as direct investment of funds in new renewable generation capacity or reductions of CO_2 emissions).	6 (of 19 MS responding)	Recommendation 10: updated **GOs and labels should be considered as two complementary mechanisms. GOs are the legal and technical mechanism used to guarantee the source of energy, whereas labels should be considered as a communication tool to facilitate consumers' understanding of the energy market.** Labels can be considered **as creating** added value for more demanding customers, if it can be guaranteed that the additional impact is associated with the **energy supply** contract (such as direct investment of funds in new renewable generation capacity or reductions of CO_2 emissions). **An excessive number of labels might be confusing for consumers and potentially raise trust issues, if the**

2015 recommendation – deleted text in *italic*	Number of MS that use 2015 recommendation (as of 2021)	Updated/new recommendations – new text in **bold**
		information provided by these labels is inconsistent. On the supplier side, it would render it difficult for smaller suppliers to be active in every labelling system, especially when fees are charged. **GOs should be used as the sole** tracking mechanism by labels, in order to ensure reliability and electricity and gas customer trust.
NEW	NA	New recommendation 11 **When subscribing to retail energy products described as "green" by a supplier, and in cases where there is no competent body verifying such claims, the supplier should provide all necessary information to enable the consumer to verify the accuracy of what makes the offer green. For this purpose, a list of relevant information should be defined at national level by the competent body/authority for green claims verification. Additionally, competent bodies/authorities should cooperate at European level for converging at least on what information is required.**

Table 1 - Summary of changes to recommendations (2015 to present)

Annex 4 – Collection of case studies

Recommendation 1: All Comparison Tools (CTs) – in particular those operated or trust marked by a public authority or body – should provide a clear indication of the product mix and supplier mix for each product listed in the CT. If offers are indicated as "green" by CTs (and/or suppliers), the justification for doing so (as a source of information) must be transparent to the consumer, regardless of whether they consume electricity and/or gas. If feasible, information should be provided to give an account of the share of energy that did not benefit from public support.

Germany case study

The large private operated CTs, Verivox and Check24, provide in their comparisons the source of energy based on information provided by Umweltbundesamt (the German GO Authority). The information is available for the supplier as a whole, and for specific contracts, and also includes the share of "supported" and "non-supported" renewable energy. For electricity, this information is fully transparent. In the case of gas comparisons, the CT offers "eco" and "biogas." "Eco" means that the supplier will provide compensation for CO_2 emissions, however, this is not fully transparent for the consumer. "Biogas" means that the supplier only provides the consumer with gas from mainly/commonly agriculture sources.

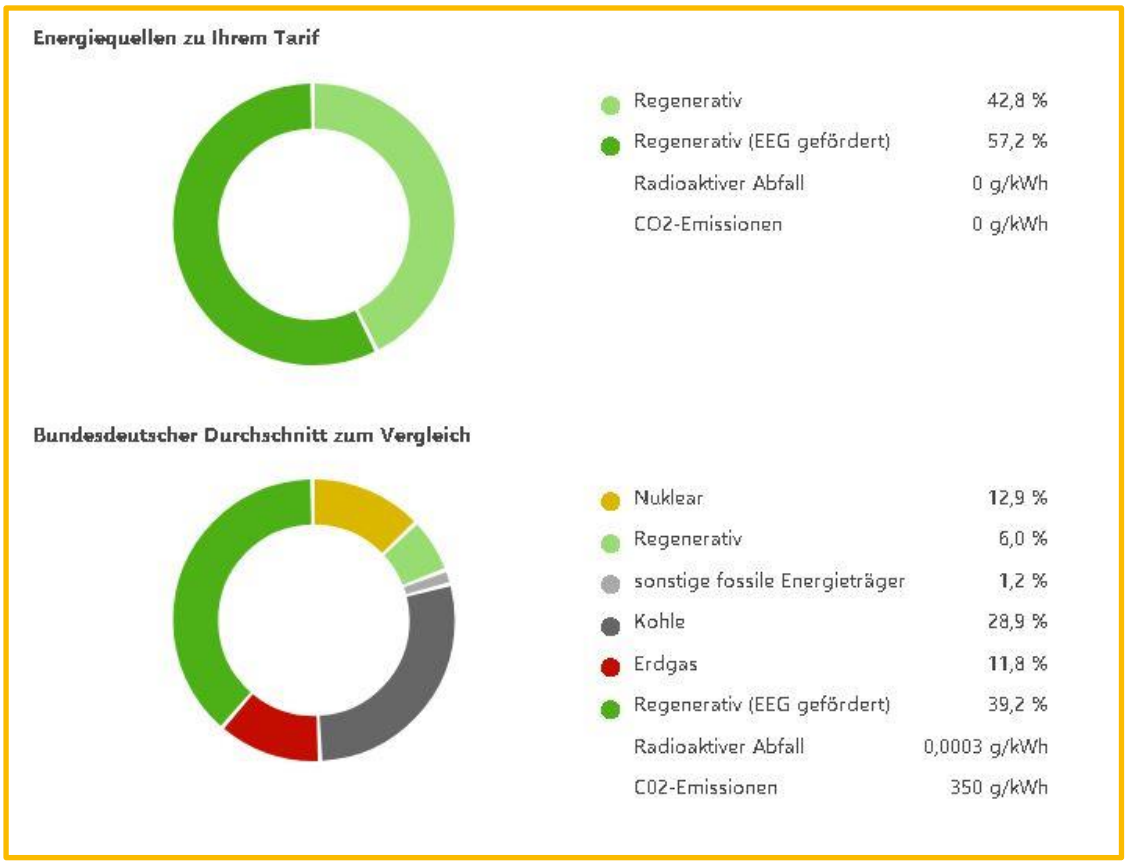


Figure 1 - Example of source of energy information for electricity (Germany)[21]

[21] Source: verivox.de

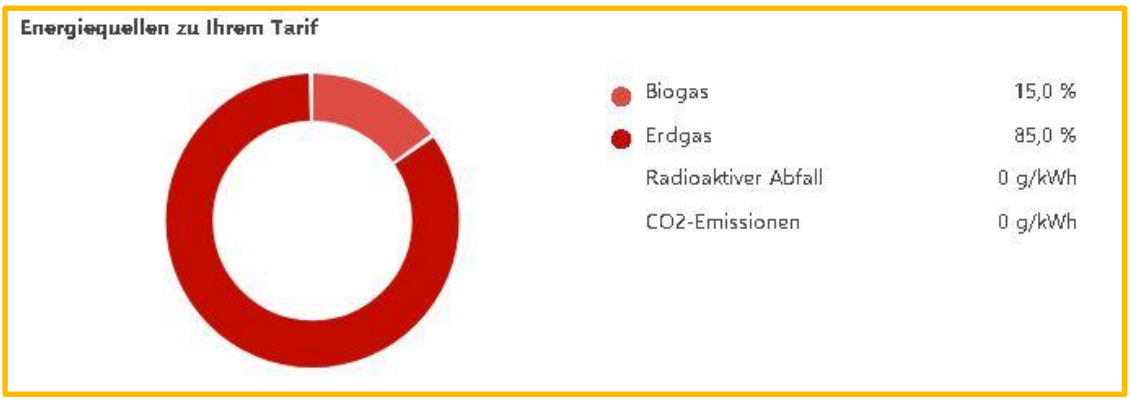


Figure 2 - Example of source of energy information for gas (Germany)[22]

Recommendation 2: The NRA (or other competent body) should cooperate at European level and ensure, at least on a national level, that there is a harmonised format proposing a minimum standard for displaying information concerning the origin of energy supplied from renewable sources (and if applicable also from non-renewable sources). The standard should specify the level of detail required for this information and how such information is communicated to consumers.

Portugal case study

Directive nº16/2018 of 13 December,[23] published by the Portuguese NRA (ERSE), establishes the terms and conditions of electricity labelling and the rules for the disclosure of information on electricity sources to consumers. All energy suppliers are obliged to inform end-consumers about the energy source and CO_2 emissions of the electricity they supply. This information is published, and updated on a quarterly basis, on the electricity bills and the websites of energy suppliers. In addition, an annual brochure is also sent to consumers.

Information should be disclosed according to the colours, categories and types of graphic diagrams established in Article 16.º of the Directive. Each category of electricity source corresponds to an established colour code: for example, light green corresponds to wind power, brown to electricity production using coal as fuel, and so on. The suppliers also mention whether the information presented corresponds to the consumption for that billing period or another reference period (annual, quarterly, or other).

Three examples below illustrate how Portuguese electricity suppliers fulfill this obligation (from three different, anonymised suppliers).

[22] Source: verivox.de
[23] https://diariodarepublica.pt/dr/detalhe/diretiva/16-2018-117376527

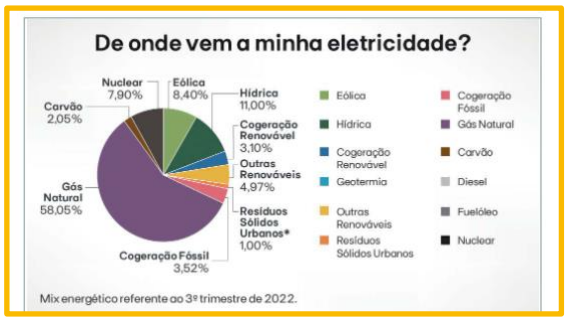
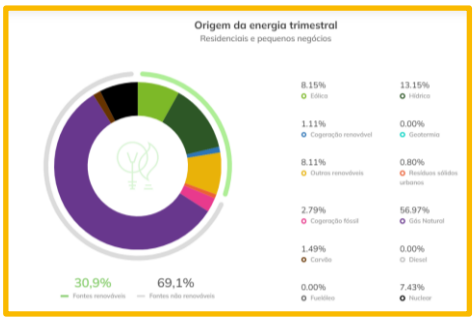
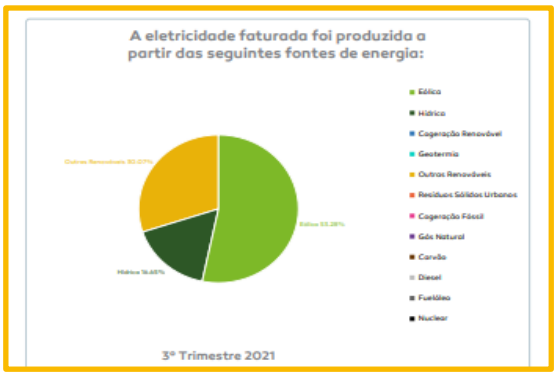
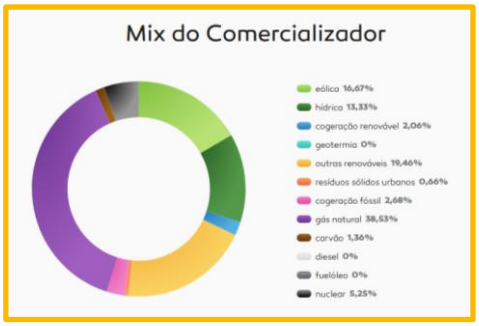
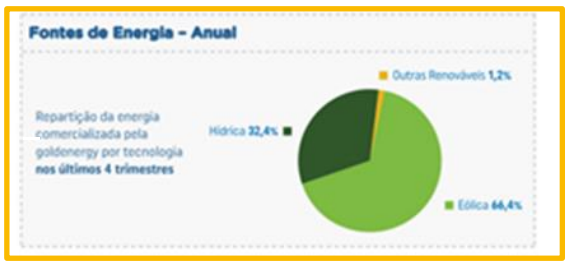
Supplier	Information on the bill	Information on the website
Supplier 1		
Supplier 2		
Supplier 3		

Table 2 - Example information on energy source and CO_2 emissions provided to electricity customers (Portugal)

Romania case study

Each electricity supplier respects the obligation imposed by the Romanian NRA, ANRE, through the Order of ANRE's President no. 189/2018.[OBJ] This places an obligation on suppliers to inform final consumers through the application of a "Comparator of type-offers of electricity supply" about the percentage of RES associated with the offer which must be displayed, meaning no additional information is required.

Recommendation 3: References in the energy bill on where to find additional information on GOs, such as the type of renewable energy source, the geographic origin (country or, if applicable, region) or whether or not it has received support from a renewable investment or production support scheme, should be drawn to customers' attention (e.g. on the website of the supplier and/or of the competent body for disclosure).

Luxembourg case study

Luxembourg's national legal framework[24] enables consumers to find in the same place, i.e. in the same document (the disclosure label) and at the same time, all disclosure information including the environmental impact in terms of CO_2 emissions and radioactive waste, as required by Article 5 of Annex I of Directive (EU) 2019/944. The disclosure label is harmonised at national level, meaning that all suppliers must use the same template. It comprises both information about product level disclosure (product mix) and supplier level disclosure (supplier mx), and for comparison purposes, the national mix (weighted average of all supplier mixes in the country). It allows consumers to compare products easily in terms of both supplier mix and product mix without having to look for different documents.

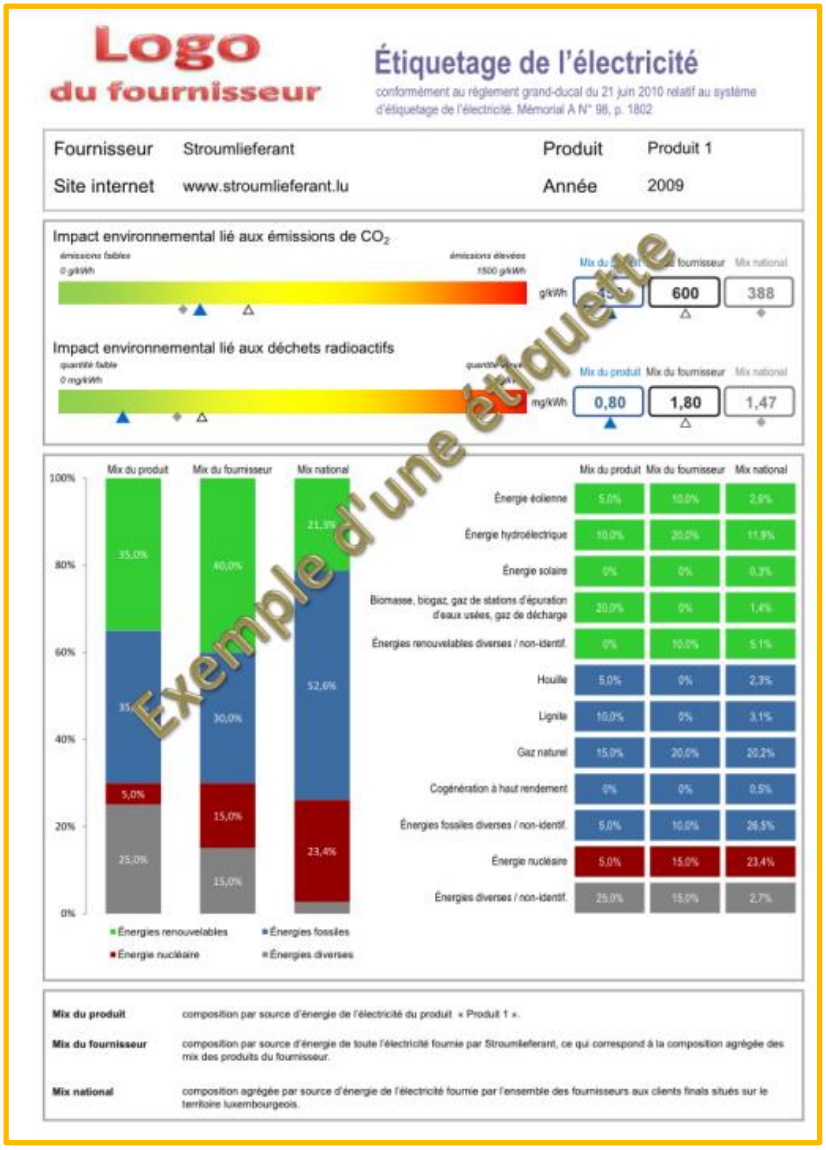


Figure 3 - Example disclosure label (Luxembourg)[25]

[24] Grand-ducal regulation of 21 June 2010 relating to the electricity labelling system. Retrieved from: https://legilux.public.lu/eli/etat/leg/rgd/2010/06/21/n2/jo.

[25] Source: Ministère de l'Énergie et de l'Aménagement du territoire du Luxembourg.

Recommendation 4: MS should have a GO system for: (i) electricity; (ii) gas, including hydrogen; or (iii) heating or cooling. For this purpose, national GO system convergence should be encouraged so that GOs are easily tradable across MS. When and where available, GOs should be used as the only instrument for tracking the characteristics of energy sources in offers within disclosure systems, in particular those marketed as "green," including in the framework of a power purchase agreement (PPA) or any contract with a renewable production plant (e.g. EU solar Energy). In the absence of a certified GO, the offer cannot be marketed as "green."

The Netherlands case study

The Netherlands has a GO system in place for electricity, heat, gas and hydrogen. The systems and the accounting rules are identical. In the Netherlands, CertiQ issues Guarantees and Certificates of Origin for renewable and non-renewable electricity and renewable thermal energy. Vertogas does this for green gas and hydrogen. CertiQ and Vertogas merged under the name VertiCer B.V on 1 January 2023. With the merger, the companies anticipate the integration of gases, heat and electricity in the future energy system. For example, if green hydrogen is produced using renewable electricity this requires a similar and transparent system of Certificates of Origin for all energy sources.

The only difference is the disclosure information that is given to consumers. For electricity, a disclosure label on bills and websites is obligated. For gas and heat, there is no such obligation

Recommendation 5: GOs should be used as a basis for further harmonisation of disclosure systems. An assessment of the use of GOs in electricity should be done at national and European level to identify improvements which could be made to the existing GO system in electricity as well as best practices that can be applied for: (i) gas, including hydrogen; or (ii) heating or cooling. Good practices identified in the electricity disclosure system should be extended to other energy disclosure systems. The cooperation of competent authorities for disclosure should be enhanced irrespective of the form of energy disclosed. The use of a common platform should be investigated.

The Netherlands case study

Hourly certificates could be a big step forward in understanding the GO system. One of the difficulties with the current certification is that production and consumption of green electricity can be matched over a 12-month period. FlexiDAO, in collaboration with Microsoft, Eneco (an energy supplier) and CertiQ, successfully completed two pilots to prove the viability of a granular energy certification programme. With these pilots, the parties performed the issuance and redemption of so-called Granular Certificates (GCs). This is important, because ensuring that renewable electricity is produced the very moment a consumer has need of it requires a greater level of detail than existing GO systems can provide. Figure 4 below provides more information and data on the outcomes of the pilot.

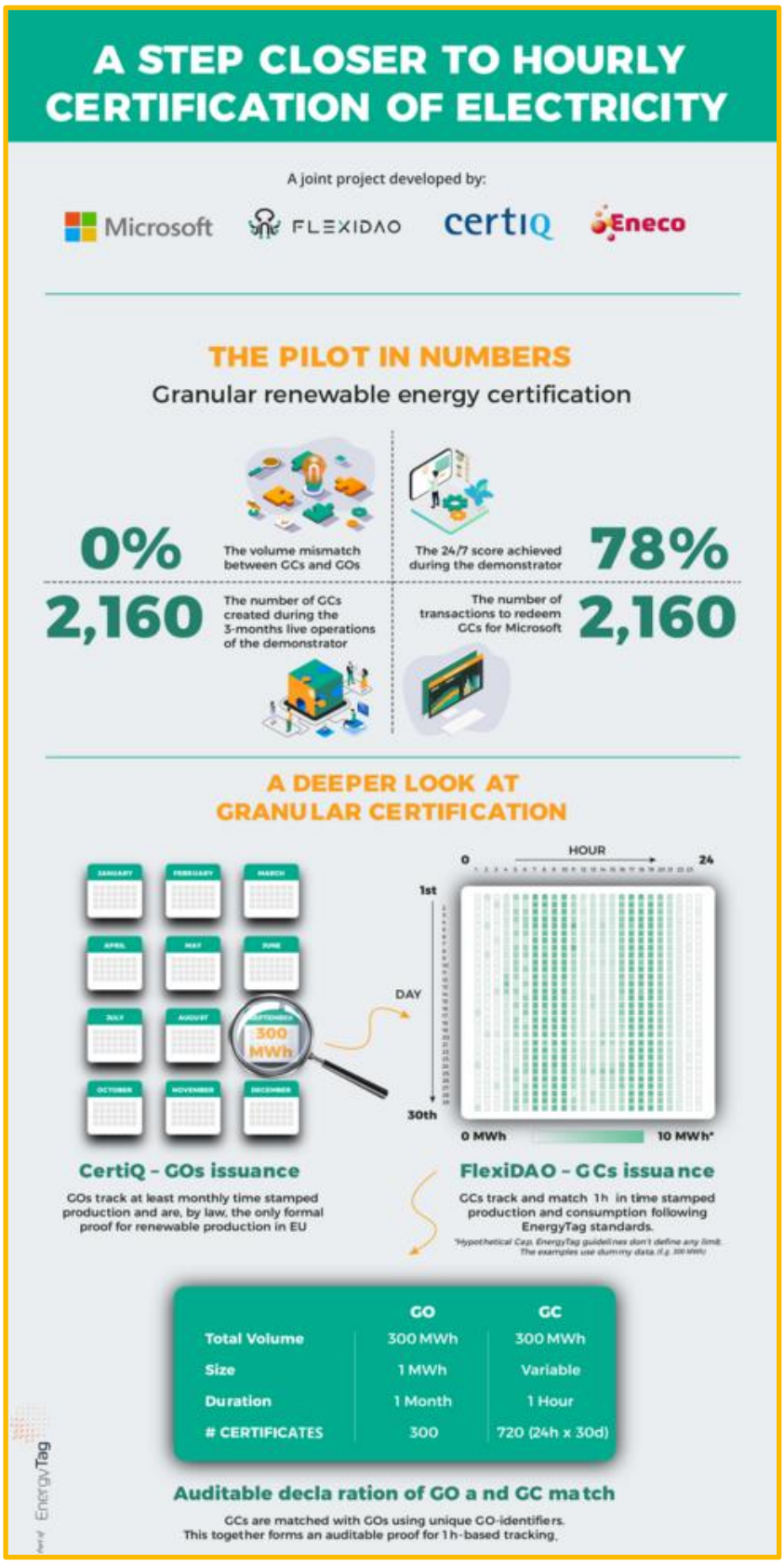


Figure 4 - Summary of granular certification pilot outcomes (the Netherlands)

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

Luxembourg case study

Suppliers are obligated to inform final customers about the shares of energy sources employed in their supplies. The obligation stems from Article 49(2) of the national electricity law.[26] The competent authority for disclosure (ILR) receives product mixes (from suppliers) with corresponding proof (such as GO cancellations) by 15 May of year X+1 for consumption in year X.[27] ILR computes the supplier mixes and the national disclosure mix, and publishes the results on the ILR website by 15 July.[28] This means that all supporting documents from suppliers must be received by 15 May of year X+1 at the latest[29] so that suppliers can provide their customers with the approved disclosure statement on year X by 1 September of year X+1.[30]

The national legal framework obliges suppliers to inform the competent authority for disclosure about their supplier mix in other countries in which they were active (received by the competent authorities for disclosure in those countries).

Unfortunately, competent disclosure authorities' timings for evaluating suppliers' mixes and publishing disclosure figures varies across MS. This makes it difficult in practice to compute the supplier mix at the level of the supplier for suppliers active in different MS, as provided for by Article 5(a) of Annex I of Directive (EU) 2019/944: "the contribution of each energy source to the overall energy mix of the supplier (**at national level**, namely in the Member State in which the electricity supply contract has been concluded, as well as **at the level of the supplier** if the supplier is active in several Member States) over the preceding year in a comprehensible and clearly comparable manner."

In fact, the computation of the supplier mix at the level of the supplier would entail that the supplier mix at the national level is computed by the same deadline in all MS in which the supplier is active. Given that deadlines for computing the supplier mix at national level vary across MS, it remains impossible to calculate the supplier mix at the level of the supplier and thus to communicate such figures to consumers.

[26] https://assets.ilr.lu/energie/Documents/ILRLU-1685561960-1117.pdf
[27] Anticipated deadline is 31 March of year X+1 for consumption year X.
[28] Anticipated deadline is 15 May of year X+1 for consumption year X.
[29] Anticipated deadline is 31 March of year X+1 for consumption year X.
[30] Anticipated deadline is 1 June of year X+1 for consumption year X.

Although the labelling form used by ILR includes the possibility to take into account supplier mixes abroad in order to calculate the supplier mix at the level of the supplier for those active in several MS, in practice not all competent authorities for disclosure terminate their calculation of the supplier mix at the national level by 15 May or earlier. This means they are unable to share their calculations with other competent authorities for disclosure for the purpose of computing a unique supplier mix for suppliers active in several MS, and hence, are unable to communicate such figures to consumers.

Germany case study

Umweltbundesamt (UBA), Germany's central/federal environmental authority, is the competent authority for electricity.[31] GOs prove the origin of renewable energy in a transparent way and provide electricity consumers the necessary reliability.

In Germany, the UBA operates (as of 1 January 2013) the GO register, known as the Herkunftsnachweisregister (HKNR). The HKNR obtains power generation data from grid operators.[32] The latest regulations regarding GOs, the Guarantees of Origin Implementing Ordinance,[33] and the Guarantees of Origin Fees Ordinance,[34] entered into force on 21 November 2018. These outline the detailed rules and regulations governing the HKNR. This includes, for example, that participants, e.g. electricity suppliers, are charged a fee for using the HKNR.

The mandatory electricity disclosure that electricity suppliers are required to carry out (in accordance with section 42 of the German Energy Industry Act (EnWG)[35]) provides customers with important information concerning their electricity consumption. Since January 2013, electricity suppliers may only disclose renewable electricity on electricity bills and advertisements if they have cancelled GOs for the delivered amount of energy, proving the renewable origin in the HKNR. This measure makes disclosure more reliable and prevents electricity suppliers from double claiming renewable energy.

[31] See: https://www.umweltbundesamt.de/themen/klima-energie/erneuerbare-energien/herkunftsnachweisregister-hknr (in German); or: https://www.umweltbundesamt.de/en/topics/climate-energy/renewable-energies/guarantees-of-origin-for-renewable-energy-sources#register-of-guarantees-of-origin-hknr (in English).
[32] The establishment of the HKNR byat the UBA is governed by Section 55(4) of the Renewable Energy Sources Act (EEG) and by Ordinance of Guarantees of Origin for Electricity from Renewable Energy Sources (Herkunftsnachweisverordnung – HkNV) of 28 November 2011, which was published in the Bundesgesetzblatt on 8 December 2011.
[33] https://www.gesetze-im-internet.de/hkrndv/
[34] https://www.gesetze-im-internet.de/hkngebv/BJNR270300012.html
[35] Energy Industry Act (EnWG), 2005. Retrieved from: https://climate-laws.org/document/energy-industry-act-enwg_863f.

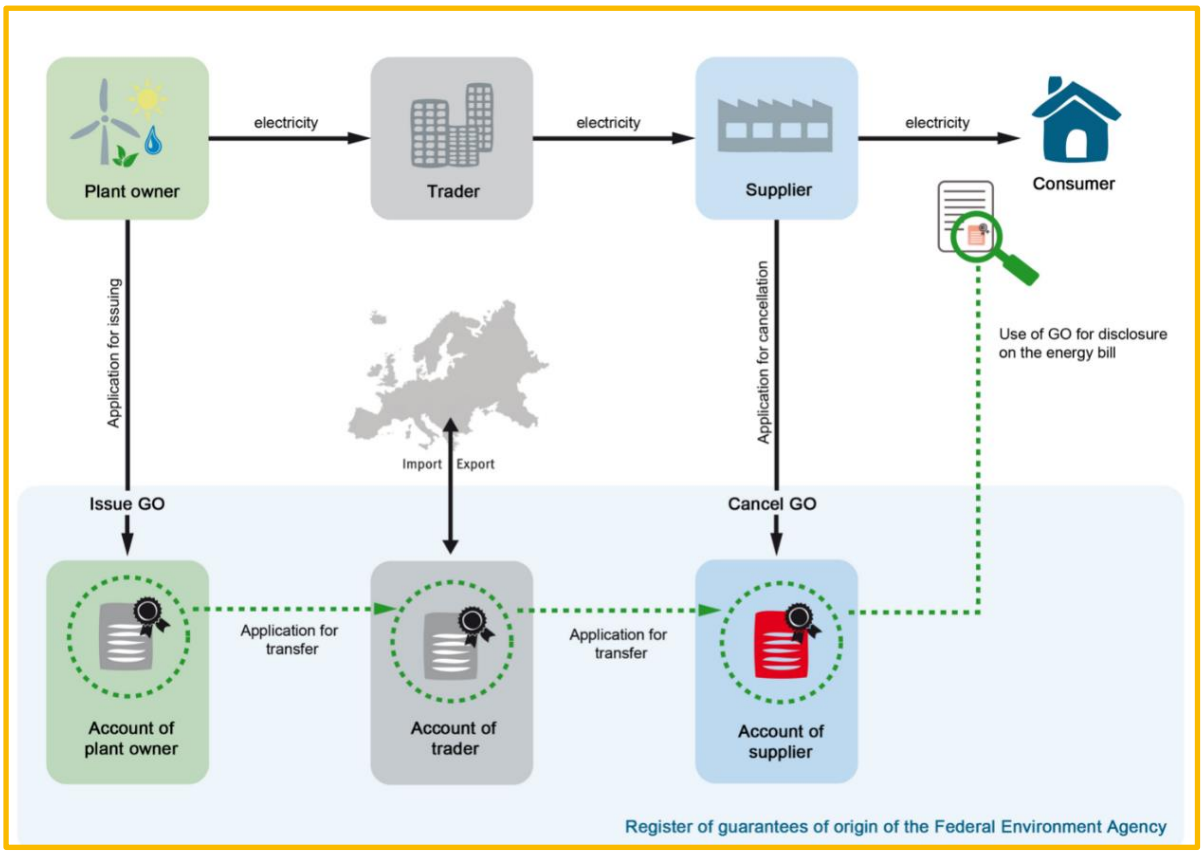


Figure 5 - Flow chart of GOs (Germany)[36]

Recommendation 7: In order to make the disclosure information for customers more coherent, efficient and reliable, it is worth considering whether the issuing of GOs should be extended to all sources of electricity, including non-renewable sources. Full disclosure, meaning the cancellation of GOs for all consumption, would help to make the disclosure system more consistent and reliable, as well as to provide opportunities for marketing energy products based on specific non-renewable sources in a trustworthy manner. A single, coherent and properly designed system addressing all energy generation, from all sources (renewable and non-renewable), has the potential of reducing administrative burdens and costs. In order to avoid imposing an administrative burden and costs on energy producers, it could, as a first step, be introduced on a voluntary basis. Where full disclosure is not technically feasible or cost-efficient, a residual mix should be determined at national level. The methodology to calculate the residual mix should be harmonised across all participating countries in the interconnected energy market, per energy carrier.

The Netherlands case study - full disclosure

Since 2020, Dutch energy suppliers have also been required to substantiate the sources of grey power (as well as green power), using certificates, so as to provide more information on the sources of grey power. Prior to this, the grey part of the disclosure label was based on the national energy trade mix. The first power disclosure labels with full disclosure were published in May

[36] Source: Michael Marty, Magdalena Weimeister / UBA

2021. The Dutch NRA, ACM, is responsible for checking the green and grey component of the power disclosure label.

Since May 1, 2021, all energy suppliers, for the first time ever, have been required to explain the origins of all of the energy supplied in the previous year. Energy companies can do so by substantiating the origins of all of the supplied energy by presenting cancellations of GOs (for green power) or Certificates of Origin (for grey power). This is also called full disclosure. Previously, only the origin of green power (wind, water, solar or biomass) had to be substantiated on the power disclosure label.

As a result of full disclosure, the total supply of all suppliers together should be substantiated by Guarantees and Certificates of Origin. If the system works perfectly, the residual mix is zero. For almost all of the energy consumed in 2020 (96%), this appeared to be the case. One of the reasons for the minor discrepancy may be that large business customers can also be supplied electricity by non-Dutch suppliers that do not have a registered office in the Netherlands, and thus do not fall under ACM's regulatory regime, or because of the incomplete substantiation of power that is generated and consumed by private individuals.

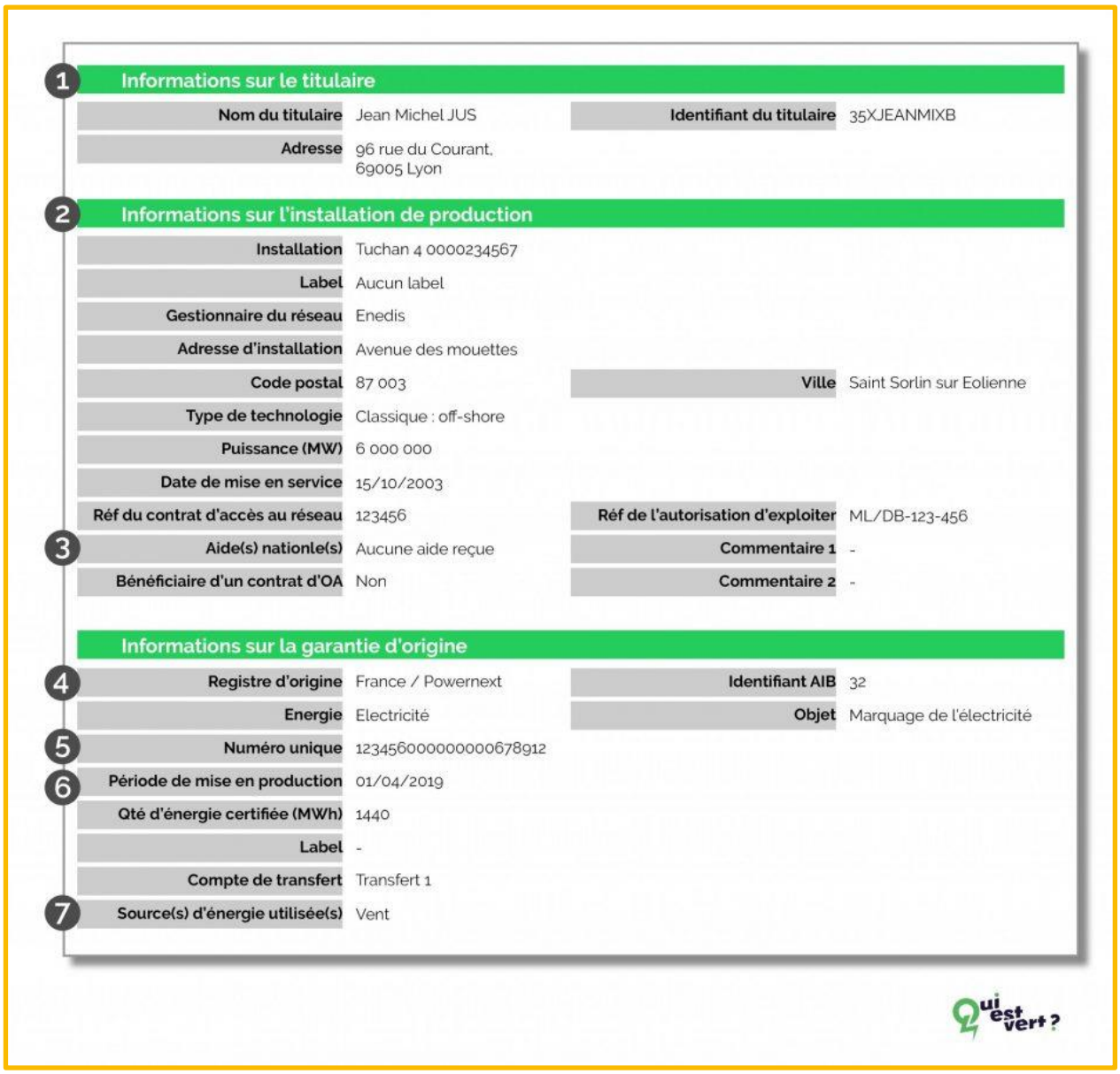
Recommendation 8: The further integration of gas and electricity markets at European level should be accompanied by actively continuing the development of the European GO market, thus increasing price transparency and competition. Price information for retail energy products that include energy from supported and non-supported installations should be shared publicly and be easily accessible.

Belgium (Flemish regulator) case study

There is an extra data field on the GO that provides information on the support (investment support, production support or both) that was granted to the production device. There is no different treatment for GOs that gained support.

France case study

Figure 6 below outlines an example of GO fields. Item (3) includes information on support status.



1 Informations sur le titulaire

Nom du titulaire	Jean Michel JUS	Identifiant du titulaire	35XJEANMIXB
Adresse	96 rue du Courant, 69005 Lyon		

2 Informations sur l'installation de production

Installation	Tuchan 4 0000234567		
Label	Aucun label		
Gestionnaire du réseau	Enedis		
Adresse d'installation	Avenue des mouettes		
Code postal	87 003	Ville	Saint Sorlin sur Eolienne
Type de technologie	Classique : off-shore		
Puissance (MW)	6 000 000		
Date de mise en service	15/10/2003		
Réf du contrat d'accès au réseau	123456	Réf de l'autorisation d'exploiter	ML/DB-123-456
3 Aide(s) nationle(s)	Aucune aide reçue	Commentaire 1	-
Bénéficiaire d'un contrat d'OA	Non	Commentaire 2	-

Informations sur la garantie d'origine

4 Registre d'origine	France / Powernext	Identifiant AIB	32
Energie	Electricité	Objet	Marquage de l'électricité
5 Numéro unique	123456000000000678912		
6 Période de mise en production	01/04/2019		
Qté d'énergie certifiée (MWh)	1440		
Label	-		
Compte de transfert	Transfert 1		
7 Source(s) d'énergie utilisée(s)	Vent		

Qui est vert ?

Figure 6 - Example of support information in GOs (France)

Recommendation 9: Consumers should be properly informed about where the energy they will consume is produced – "local or regional" GOs, i.e. issued for local energy production close to the consumer's consumption point. The information should be at least disclosed in pre-contractual documents and supplier websites.

Germany case study – Guarantee of Regional Origin (GRO)

The GRO system has been in existence since 2019 and uses an electronic document, similar to GOs. It verifies the regional origin of electricity from renewable energies. It is a step further than traditional GOs that simply guarantee that the energy comes from renewable sources and is clean. In addition to this, the document certifies the location where the renewable energy was produced.

The regional criteria is defined by a radius of 50 km from the respective production plant. The postcode area where the consumption point exists is the starting point of the region. The area is drawn up using a radius of 50 km from the edges of the postcode area. Postal code areas that are touched belong to the consumer's region. If that is the case, the supplier can guarantee that the energy provided to that installation is covered by the GRO.

France case study

In France, there are at least two examples of suppliers that provide information to their customers about where the energy they consume is produced. The websites also include information about how the “local” or “regional” energy origin concept is reliable: the certifications for the local production criteria are given by the state body, ADEME (Agence de la transition écologique française) and certify that the energy is 100% green and produced in France.

Example 1: The supplier guarantees/claims that the electricity is 100% green (solar, wind, hydric and biogas) and also bought from French producers.

Figure 7 – Example of communication campaign for local production (1) (France)

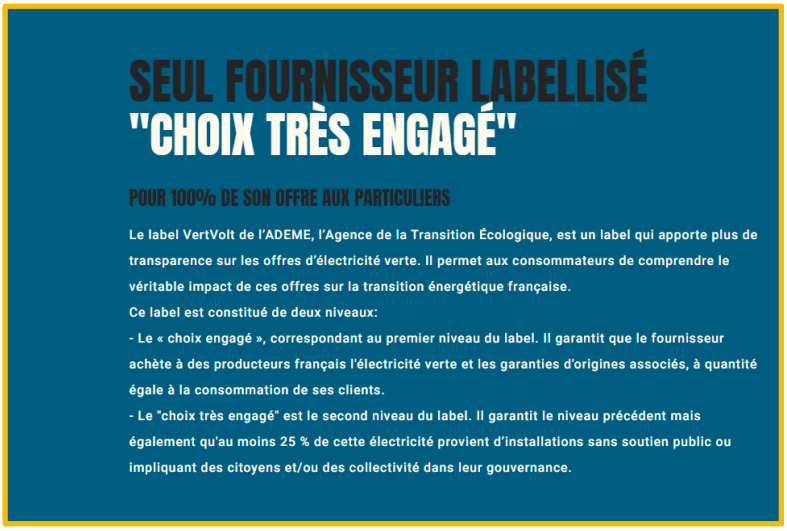


Figure 8 – Example of supplier green claiming based on label (2) (France)

Although there is no information about the “local” or “regional” GO in the general contract terms presented on the internet, this type of information can be explored on the website.

Example 2: The supplier website has a map that shows where the energy (electricity and/or gas) they sell is produced, separated by source types (solar, hydric, wind, biogas).

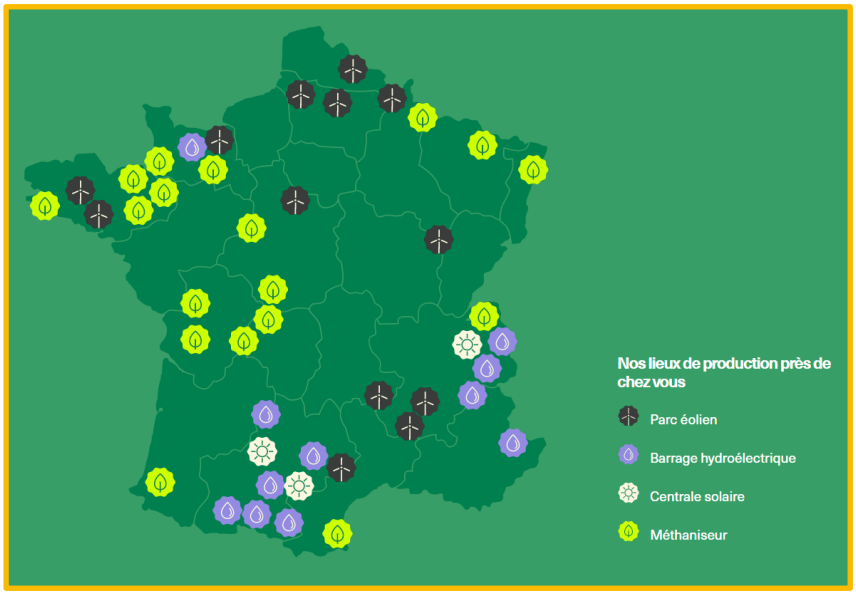


Figure 9 – Example of supplier energy source map (France)

The website also has a link to an interactive map, where customers can click on each production plant/point for more details.

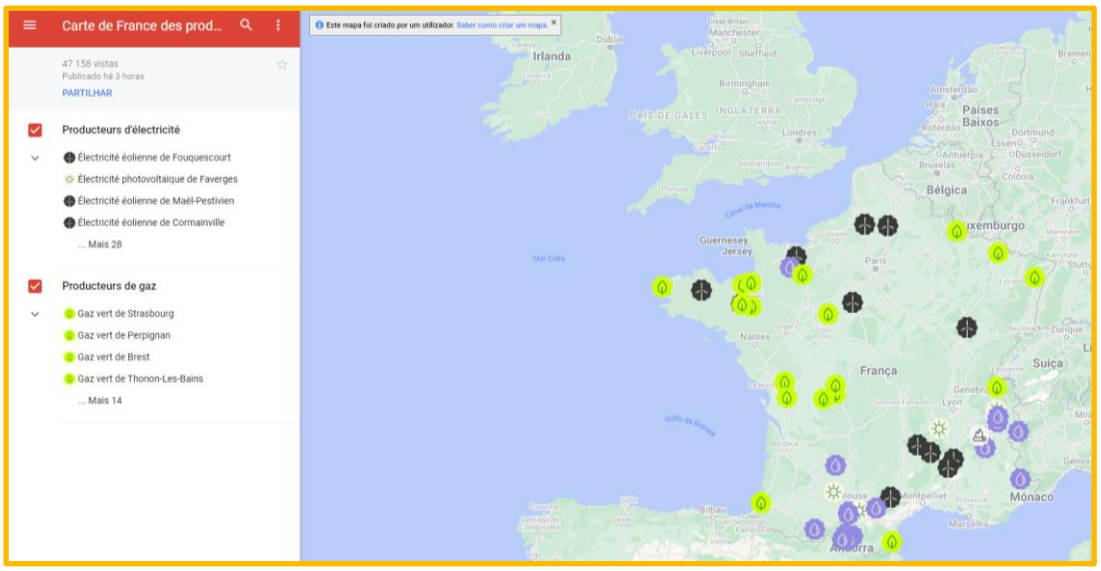


Figure 10 – Example of interactive map detailing production plants/points (France)

This supplier also provides the consumer with information on producer location in the contract.

Figure 11 – Example of information on producer location in consumer contract (France)

Note: due to the energy crisis these suppliers' offers are suspended for now (it is not currently possible to subscribe to any of them).

Recommendation 10: GOs and labels should be considered as two complementary mechanisms. GOs are the legal and technical mechanism used to guarantee the source of energy, whereas labels should be considered as a communication tool to facilitate consumers' understanding of the energy market. Labels can be considered as creating added value for more demanding customers, if it can be guaranteed that the additional impact is associated with the energy supply contract (such as direct investment of funds in new renewable generation capacity or reductions of CO_2 emissions). An excessive number of labels might be confusing for consumers and potentially raise trust issues, if the information provided by these labels is inconsistent. On the supplier side, it would render it difficult for smaller suppliers to be active in every labelling system, especially when fees are charged. GOs should be used as the sole tracking mechanism by labels, in order to ensure reliability and electricity and gas customer trust.

Trinomics' study for the European Commission

In 2021, a study (the EU-wide green label study) was published assessing the options to establish an EU-wide green label with a view to promoting the use of renewable energy coming from new installations.[37] Conducted by Trinomics, in collaboration with Öko-Institut and Ludwig Bölkow Systemtechnik (LBST), the main objective of the study was to provide a technical and economic analysis for a Union-wide green label with a view to promoting the use of renewable energy coming from new installations.

Three options were analysed, as outlined in Figures 12, 13 and 14 below.

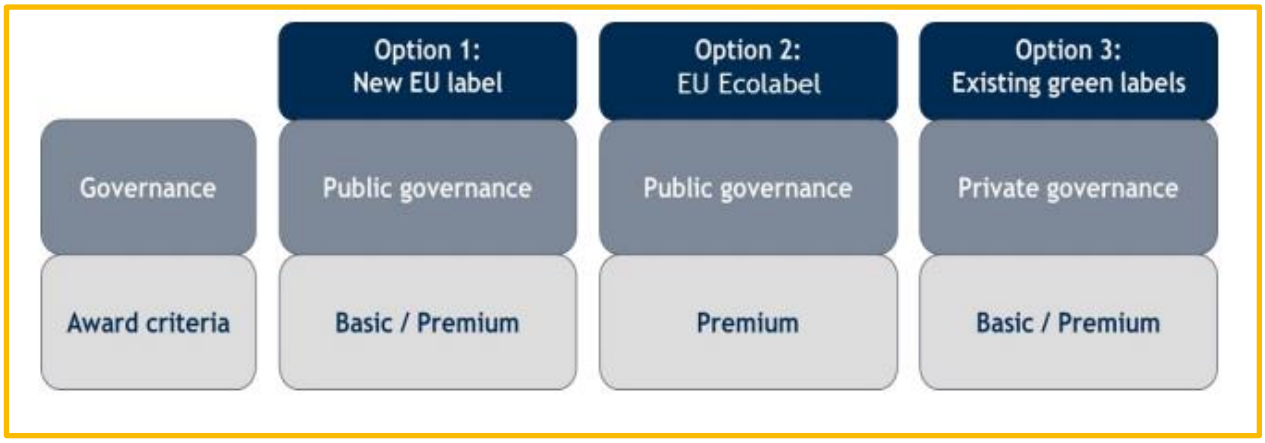


Figure 12 - Proposed governance options and award criteria for an EU-wide green energy label[38]

[37] "Technical assistance for assessing options to establish an EU-wide green label with a view to promote the use of renewable energy coming from new installations," 2021, European Commission. Retrieved from: https://data.europa.eu/doi/10.2833/266012.
[38] Source: The EU-wide green label study.

- **Option 1: New EU label.** A new EU-wide green energy label would be established through a new Regulation allowing for new features (graded label; differences for electricity, heat and gas products) compared to the existing EU Ecolabel. With the new Regulation an official voluntary graded label would be introduced at European level. The new Regulation would use the same governance as the existing EU Ecolabel Regulation (as in option 2). The main difference between this option 1 and option 2 is the establishment of a graded label with a "basic" and a "premium" label, and the possibility to enlarge the options for further elements in the award criteria that are excluded in the current version of the EU Ecolabel Regulation. Option 1 requires additional marketing efforts for the introduction, perception and acceptance of the new label all over Europe;
- **Option 2: EU Ecolabel**. With option 2, the existing EU Ecolabel will be applied as the official EU-wide green energy label. No immediate action is required to change the governance structure, since the EU Ecolabel Regulation does not have to be adjusted or modified. A major effort would nonetheless be required for defining the award criteria, and for introducing the label to the market. Once introduced, the EU Ecolabel for green energy does not exclude the existence and market presence of existing labels, or the emergence of new private labels, which may be expected to be the case in some Member States;
- **Option 3: Existing green labels.** With option 3, the EU will not establish or operate an official EU label for green energy directly, but it recognises private labels (or it "labels existing labels") that meet the minimum governance requirements and the basic and/or advanced award criteria. Further research would be needed to determine the appropriate legal instrument for this option. The proposed instrument should, in any case, be in line with the current EU initiatives of empowering consumers[8] and green claims[9]. In addition to officially recognising those existing labels, EC support should be provided to cover marketing support for the EU-wide recognition of the private labels (*"active" marketing instrument*), and allow the recognised private labels to state and advertise for themselves that they are officially supporting the European energy strategy and are in-line with EU requirements and targets (*"passive" marketing instrument; no active role of the EC*).

Figure 13 - Proposed options for an EU-wide green energy label[39]

[39] Source: The EU-wide green label study.

Impact aspect	Baseline	1. New EU label	2. EU Ecolabel		3. Existing labels
Relevance					
Coherence					
Effectiveness			Fund model included	Without fund model	
Efficiency: Label costs					
EU added value					

Green = positive impact or low costs, yellow = medium/neutral impact or costs, red = limited or negative impact or high costs and grey = no information available. For the colour red, we have applied different tints/shades to bring some nuances into the Table. For instance, option 1 was given dark red for efficiency as this option is the costliest, followed by option 2.

Figure 14 - Overview of the impacts per label option against the baseline[40]

The EU-wide green label study made the following conclusions and recommendations: " Based on the comparison, we conclude that the option for an EU Ecolabel (option 2), including fund model, is the preferred option. Compared to the baseline, this option shows marginal improvements in e.g. on uptake levels and the deployment of new installations. This options also is the most coherent option as it builds upon an existing EU tool and it is the most efficient among the three label options."

Recommendation 11: When subscribing to a retail energy product described as "green" by a supplier, and in cases where there is no competent body verifying such claims, the supplier should provide all necessary information to enable the consumer to verify the accuracy of what makes the offer green. For this purpose, a list of relevant information should be defined at national level by the competent body/authority for green claims verification. Additionally, competent bodies/authorities should cooperate at European level for converging at least on what information is required.

Belgium (VREG) case study

The Belgian NRA, VREG, ensures that all GOs necessary to substantiate the electricity supplied, are correctly submitted. On this basis, VREG also calculates the fuel mix of each supplier that delivers electricity to end customers in Flanders.

Furthermore VREG provides end-consumers with a web-based tool, "Groencheck," to check that the electricity that was supplied to them was effectively green, if they have a contract for green electricity. This information is supplied based on the European Article Numbering (EAN) code of their connection. Another tool ("Herkomstvergelijker") allows end-consumers to check the energy source, technology and country of origin of the electricity supplied to them, based on the GOs that the supplier has cancelled for their contract.

[40] Source: The EU-wide green label study.

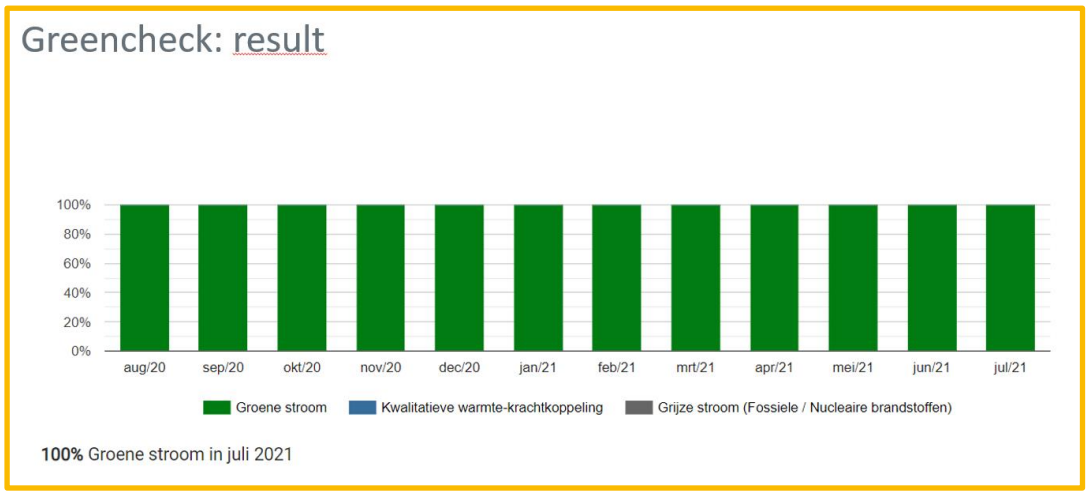


Figure 15 - Example of green energy information provided by Groencheck (Belgium)

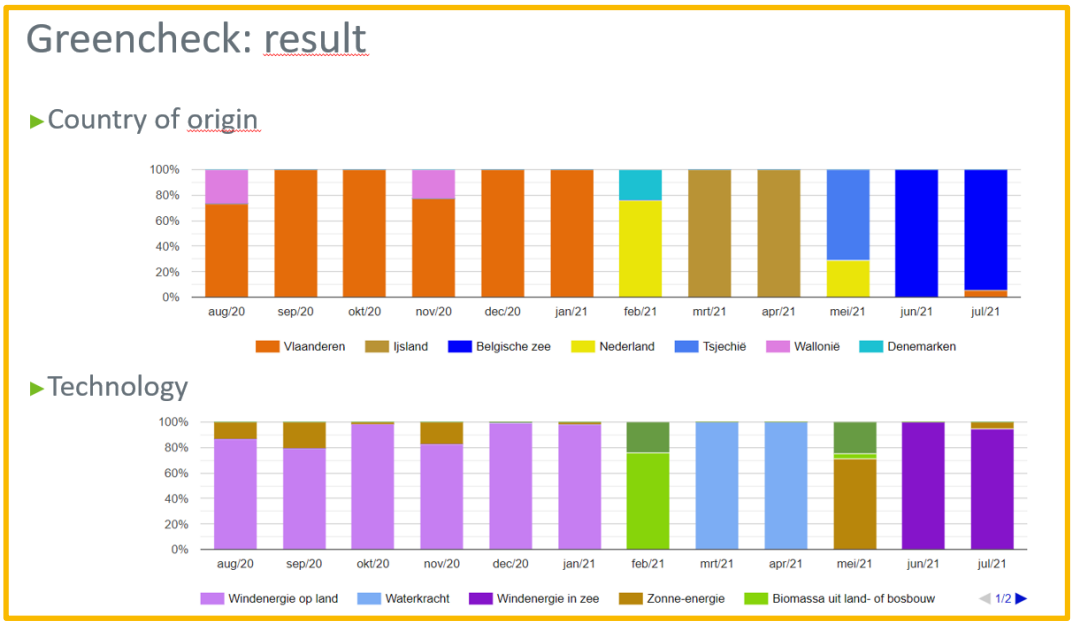


Figure 16 - Example of country of origin and technology information provided by Groencheck (Belgium)

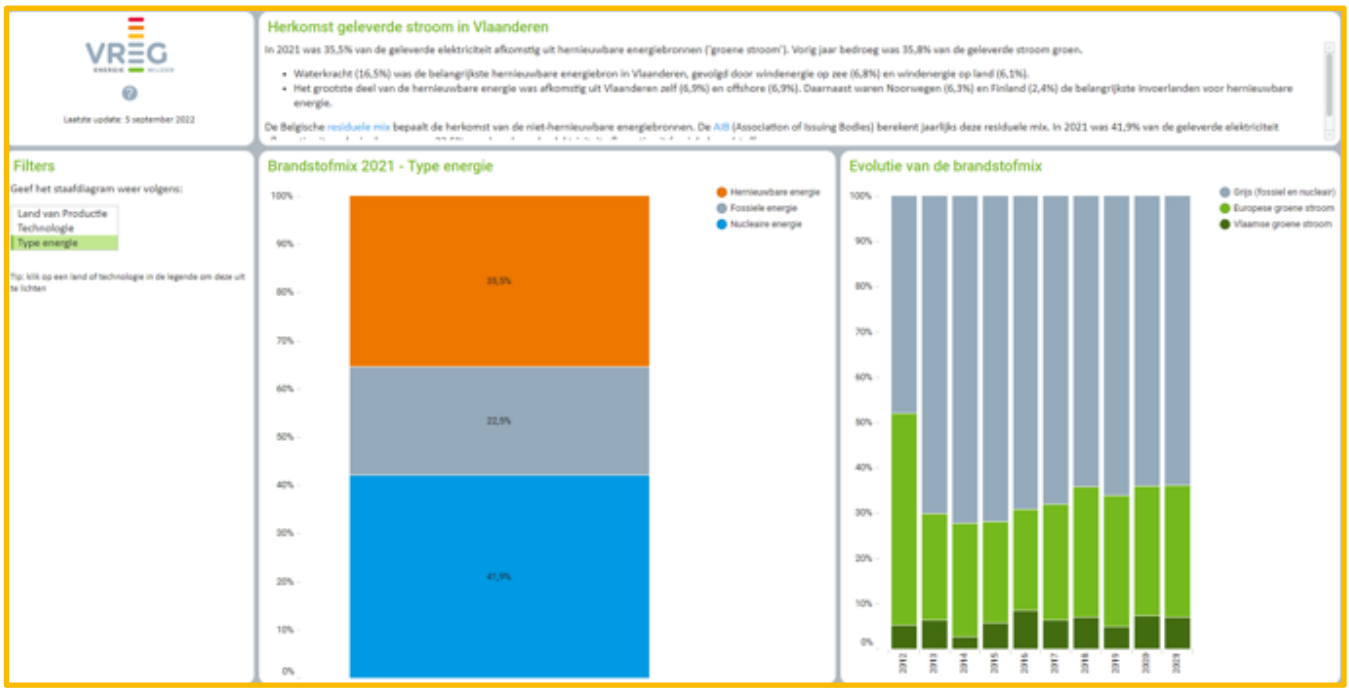


Figure 17 - Example of origin comparator by Herkomstvergelijker (Belgium)

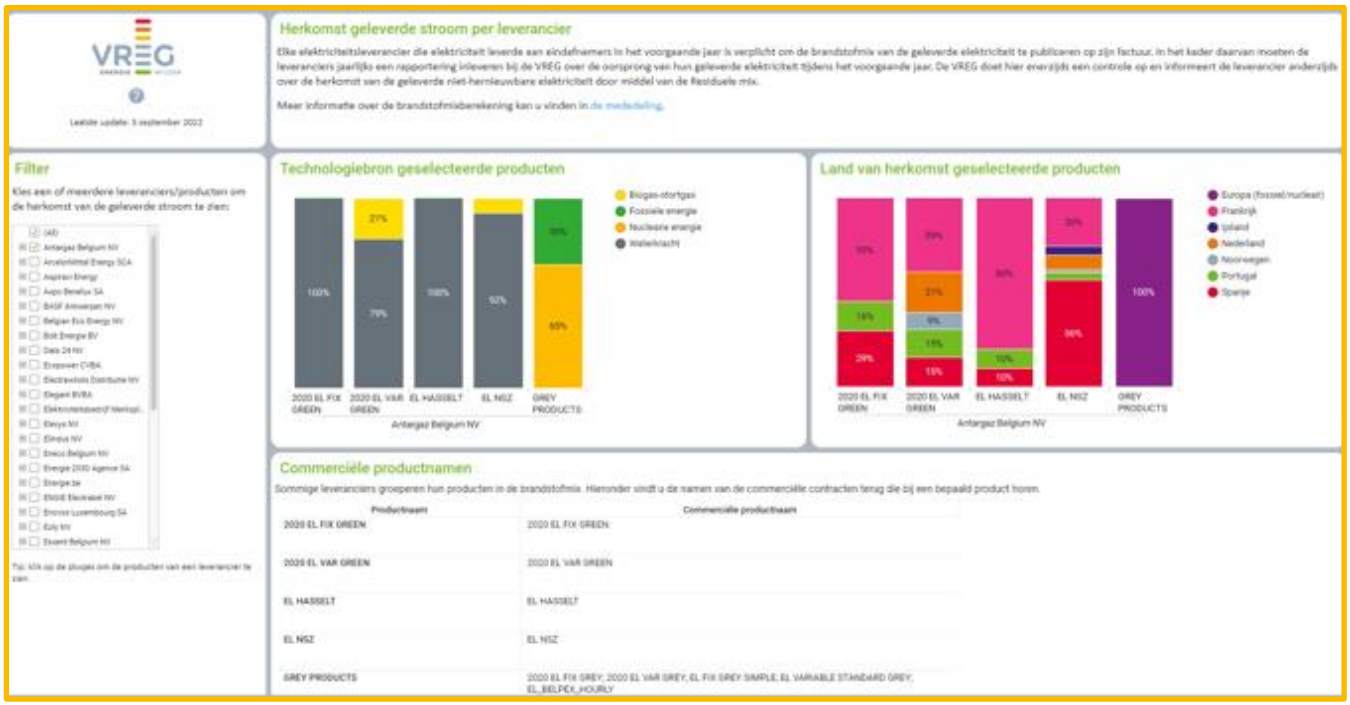


Figure 18 - Example of technology and country of origin comparator by Herkomstvergelijker (Belgium)

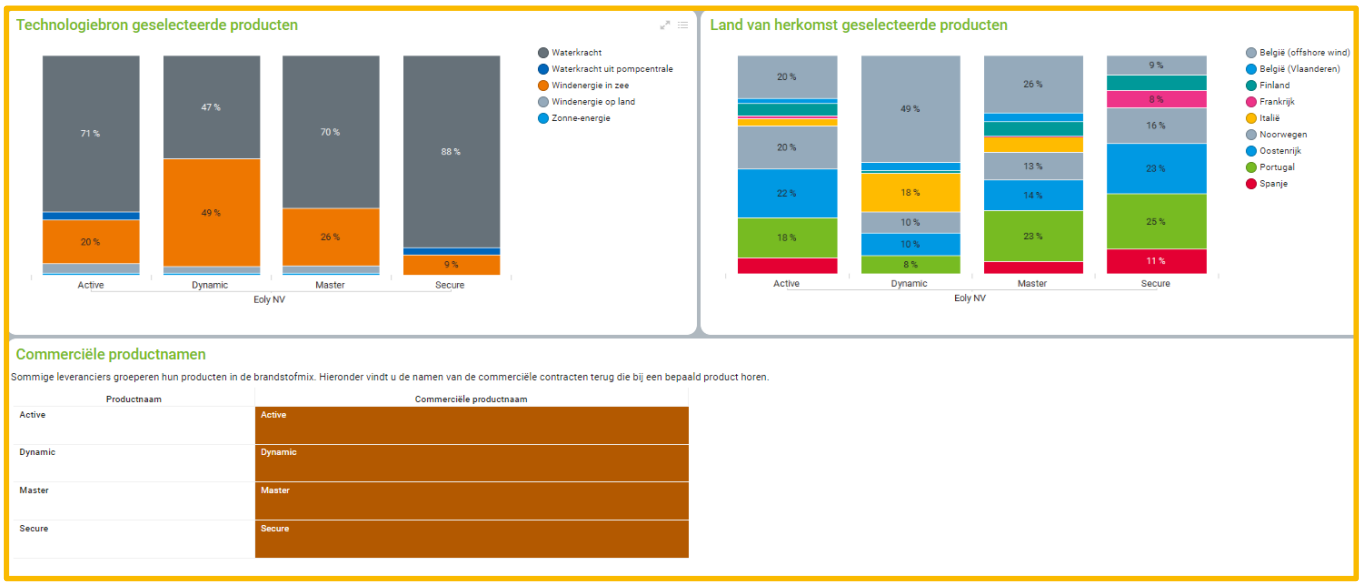


Figure 19 - Example of origin information for supplier 1 (Belgium)

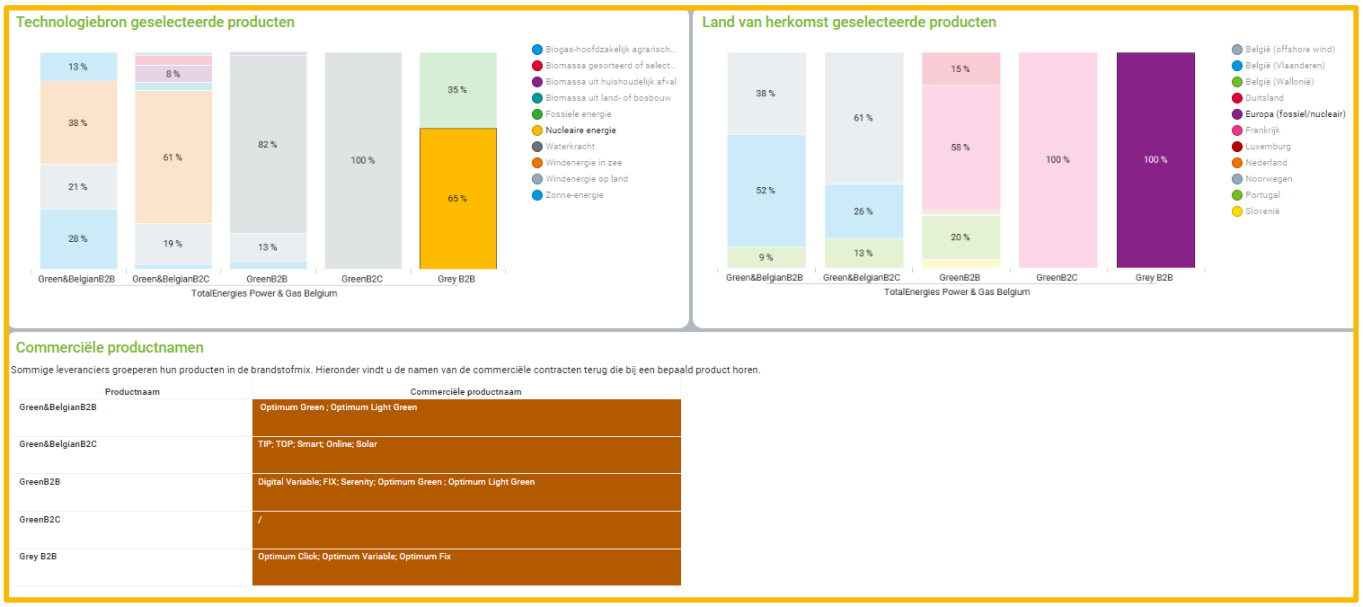


Figure 20 - Example of origin information for supplier 2 (Belgium)

UK case study

Ombudsman are concerned about whether suppliers are making it clear enough to consumers what backs up their claims. In March 2021 it was reported in the Financial Times newspaper that Andrew Ward, chief executive for UK retail at ScottishPower, was considering making a complaint to the Advertising Standards Authority about the marketing of 100% renewable energy deals, stating "There's been a huge misleading of customers in the UK."[41]

[41] See: https://www.ft.com/content/09852350-e938-4bfb-9a18-ed72c062b091.

Annex 5 - About CEER

The Council of European Energy Regulators (CEER) is the voice of Europe's national energy regulators. CEER's members and observers comprise 39 national energy regulatory authorities (NRAs) from across Europe.

CEER is legally established as a not-for-profit association under Belgian law, with a small Secretariat based in Brussels to assist the organisation.

CEER supports its NRA members/observers in their responsibilities, sharing experience and developing regulatory capacity and best practices. It does so by facilitating expert working group meetings, hosting workshops and events, supporting the development and publication of regulatory papers, and through an in-house Training Academy. Through CEER, European NRAs cooperate and develop common position papers, advice and forward-thinking recommendations to improve the electricity and gas markets for the benefit of consumers and businesses.

In terms of policy, CEER actively promotes an investment friendly, harmonised regulatory environment and the consistent application of existing EU legislation. A key objective of CEER is to facilitate the creation of a single, competitive, efficient and sustainable Internal Energy Market in Europe that works in the consumer interest.

Specifically, CEER deals with a range of energy regulatory issues including wholesale and retail markets; consumer issues; distribution networks; smart grids; flexibility; sustainability; and international cooperation.

The work of CEER is structured according to a number of working groups and work streams, composed of staff members of the national energy regulatory authorities, and supported by the CEER Secretariat. This report was prepared by the Customer Empowerment Work Stream of CEER's Customer and Retail Market Working Group.

CEER wishes to thank in particular the following regulatory experts for their work in preparing this report: Ms Helena Almeida, Mr Stefan Arent, Ms Pamela Boeri, Ms Christelle Heng, Mr Abid Sheikh, Ms Jana Vášová, Mr Slobodan Vidović and Ms Cora Zonderland.

More information is available at www.ceer.eu.