

THE FUTURE COULD BE BRIGHT FOR EUROPE'S RENEWABLE ENERGY MARKETS

Spring 2024



RECS is proposing key reforms to the EU's law on GOs to ensure they play their full part in accelerating the energy transition and valuing consumer demand for renewables. We make these proposals well ahead of time to build broad support for what some EU legislators consider to be a niche topic, despite its enormous potential to support the development of renewables.

More detail on the legislative history of GOs in the EU is available to RECS Members in an expanded version of this paper. The full, members only version also details RECS' work on other EU legislative files of relevance to GOs and European renewable energy markets.

RECS Members can access the full range of RECS' resources on EAC markets. Beyond that, being a RECS member allows you to be contribute to the development of RECS' policy positions, technical papers, and standard contracts through our members-only meetings and working groups.

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RECS' 10-point plan for the RED-4

1. Adopt full consumption disclosure
2. Consolidate all relevant EU law
3. Support the most impactful buying choices
4. Move to monthly disclosure periods
5. Clear rules on mutual recognition with third countries
6. Recognising EACs within the CBAM regime
7. Clearer GO timestamping rules
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Introduction

The EU initially adopted and implemented its Directives on renewable electricity and energy on a decadal basis. The 2001 Renewable Electricity Directive (RED) set the framework for targets that Member States had to achieve by 2010. The 2009 Renewable Energy Directive (RED-1) set the framework for targets that Member States had to achieve by 2020. The 2018 Renewable Energy Directive (RED-2) set the framework for targets that Member States had to achieve by 2030¹.

However, the EU decided to interrupt this logical progression and adopt more ambitious targets to address the worsening climate crisis and strengthen the EU's energy independence to respond to the energy crisis precipitated by the Russian invasion of Ukraine. In 2021, and for the following two years, the EU institutions proposed, negotiated, and agreed upon a revised Renewable Energy Directive, to be known as the RED-3.

The EU's work on the RED-3 focused on essential elements that the institutions wanted to revamp in response to these twin crises. The crisis management nature of the work also meant the European legislators accelerated the legislative process to secure the new law's adoption as quickly as possible. Therefore, limited space was available to advocate for the progressive development of the EU's laws on GOs. Despite RECS' best efforts, we were not able to secure our key demands for full consumption disclosure and other important improvements. RECS and its members are determined to have a greater impact next time around. And so even as the ink is drying on the RED-3, we are already thinking about its successor, the RED-4.

RED-4 expected timeline and scope

RECS assumes that the RED-4 will return to the logical, decadal, progression of the RED, RED-1, and RED-2. This means that the Commission is likely to publish its first proposal for the law in the first half of the next European political cycle (2024-2029). Assuming the commission does make a proposal in 2025, then it could take two to three years for European legislators to negotiate and agree a final text – in 2028. The law would provide the EU's renewable energy framework from 2030 to 2040.

1 More detail on the legislative history of GOs in the EU is available to RECS Members in an expanded version of this paper. The full, members only version also details RECS' work on other EU legislative files of relevance to GOs and European renewable energy markets. For more details on RECS Membership please see: www.recs.org/become-a-member/

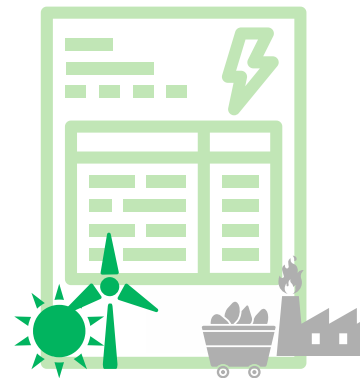
In 2030 the EU should be well on the way to transitioning to a much more sustainable energy system. However, much work will remain to reach the goal that RECS shares with other key stakeholders of European societies and economies powered exclusively by renewables. Therefore, RECS is proposing key reforms to the EU's law on GOs to ensure they play their full part in accelerating the energy transition and valuing consumer demand for renewables. We make these proposals well ahead of time to build broad support for what some EU legislators consider to be a niche topic, despite its enormous potential to support the development of renewable energy. While this paper focuses on the RED-4, RECS considers that law as the last opportunity to adopt these reforms. Therefore, along with its members, RECS will take every opportunity at EU and Member State level to advocate for the 10-point plan set out below.

RECS' 10-point plan for the RED-4

RECS has an ambitious programme for next steps in the development of the European GO system, which are set out in more detail below.

1. Adopt full consumption disclosure

RECS has long advocated for full consumption disclosure², which is the practice of requiring all consumers, or suppliers on their behalf, to document the origin of all the energy they are buying. This means that every consumer has information about what energy they have paid for, be it solar or coal power, renewable or fossil hydrogen. When provided with complete and transparent information, consumers can make clear choices as to what energy they want to pay for.



In the case of larger companies who disclose their energy procurement practices, they would all be playing by the same rules, and stakeholders would be able to know exactly what energy such companies are buying. Such completeness and transparency in the tracking of energy attributes within one system would also eliminate the risk of any double counting.

² Most recent RECS papers on Full Consumption Disclosure: 1. [What full disclosure means and why it is so important](#), 2. [How the RED 3 can boost EU renewable energy markets](#), 3. [Full Consumption Disclosure in the Netherlands](#)

Full consumption disclosure pre-supposes full production disclosure since consumers could not buy energy without also buying an equivalent volume of GOs certifying the origin of production. Meaning that all producers would have to offer GOs to the market to keep energy and GO volumes in balance. Ensuring the certification of all production would also mean that all energy market participants share the costs of GO systems. Currently, only those supporting the energy transition by consuming or producing renewables pay for GO system costs, and not those who fail to participate in the same way. RECS maintains that bringing such transparency and fairness into energy markets would encourage more consumers to buy renewable energy, as underpinned by GOs. This would both send a clear market signal to producers and provide them with the income they need to fund the investments needed to meet the demand.



Current EU legislation does not block the introduction of full consumption disclosure schemes – as shown by the implementation of such schemes in the Netherlands, Ireland, and Austria (and Switzerland as an EFTA member country)³. However, neither the current RED-2 nor the almost finalised RED-3 actively supports the use of such a valuable tool. RECS International calls on EU legislators to push Member States to implement full consumption disclosure schemes by amending EU law on GOs, (currently Art.19 of the Renewable Energy Directive to include the following new provision:

Member States shall implement full consumption disclosure, based on guarantees of origin, on their territory. Member State full consumption disclosure schemes must allow for suppliers of either energy or guarantees of origin to cancel such certificates on behalf of consumers.

³ The AIB report 'European Residual Mixes' shows the results of the calculation of the 2022 national residual mixes of AIB Member countries. It shows which countries track the attributes of all energy production.

Suppliers of either energy or GOs must be able to cancel certificates on behalf of consumers to ensure market liquidity, efficiency, and consumer choice. Such an arrangement allows consumers to choose whether to buy their energy and GOs together or separately, meaning that they can support precisely the kind of energy generation they prefer. Eurobarometer surveys consistently show that EU citizens think that the costs of climate change are much higher than investing in a green transition, that we should allocate more support to the energy transition, and that we should accelerate the use of renewable energy sources. In addition, full disclosure should also include GHG emissions values on every EAC. This would help consumers and regulators in understanding the distribution of emissions related to the consumption of energy (scope 2). Every consumer could easily calculate their scope 2 emissions by summing the GHG value of each EAC by the total number of certificates they cancel. Consumers and regulators would no longer need to rely on estimations related to residual mix GHG emissions.

Full consumption disclosure empowers EU citizens to follow their convictions, to understand how to meet those convictions in practice, and by doing so to support the energy transition.

2. Consolidate all relevant EU law

The EU's renewable energy directives have always provided the core of EU law related to GOs. However, as RECS' legislative history of energy attribute tracking in the EU shows⁴, there are other important pieces of regulation and legislation that influence how GO systems operate. This spreading of GO related rules can result in confusion, overlap, and loopholes. A clear recent example is the introduction of the EU's Union Database for gaseous energy carriers. RECS highlights our concerns with the Union Database in the full version of this paper, available to members, which includes an analysis of past and current EU law related to GOs.

The risks of disparate legislation in this area would be minimised if EU legislators clarified and consolidated all law related to the certification, disclosure, and claims to the use of energy attributes, and if they recognised GOs as the primary tool supporting such activities. This may require clear references back to the renewable energy directive and careful coordinated legislative drafting that takes full account of what GO systems and markets need, and what is already in place.

⁴ Included in the full version of this briefing, available to RECS Members

3. Support the most impactful buying choices

There are many means of buying renewable energy, some of which are more impactful than others. RECS has already provided [guidance to market participants on maximising the reliability and impact of buying renewables](#). This guidance describes how, for RECS, the impact of purchasing renewables is based on two important aspects – one environmental and the other socio-economic. The key environmental impact is the reduction in greenhouse gas emissions per megawatt-hour (MWh) of power generated and consumed. The key socio-economic impact is the contribution made to a transition towards 100% renewable energy systems. The guidance also encourages renewable electricity consumers to develop their own understanding of the impact of their energy procurement. It does this by identifying the key choices that consumers consider when seeking to make impactful energy purchases.

EU legislation can help to guide consumers towards more impactful energy purchases in several ways.

RECS believes, for example, that consumers of renewable energy should have their efforts recognised through reductions in VAT and/or other energy related taxes and charges. While Member States may not be willing to extend this benefit to all renewable energy consumers, RECS accepts that the EU and/or its Member States could set criteria for the nature of energy procurement that could qualify for such benefits. Such criteria could, for example, encourage the consumption of the newest, most efficient renewables with the greatest need for support.

RECS also believes that EU law should encourage consumers to buy renewable energy on long-term contracts. Such contracts are the most effective at supplementing or replacing public support, as they offer producers stable and predictable income. As with the purchase of energy from younger renewables installations, those purchases of renewables made through long-term contracts could benefit from reductions in relevant taxes or tariffs.

4. Move to monthly disclosure periods

Currently, EU rules stipulate that GOs have a validity period of a year. This means that a GO from production in June 2022, can cover consumption in May 2023. This is part of the nature of a book and claim mechanism such as the GO system. Under book and claim rules, the production of a unit of energy is 'booked' into a GO, then separated from the underlying energy, traded to a consumer, and 'claimed' for use by being cancelled. Book and claim mechanisms certify the attributes of a unit of energy and document their progress

through chain of custody because it is impossible to track the underlying energy itself. Once producers inject a kilowatt of power into the grid, or a cubic meter of gas into a pipeline, it becomes indistinguishable from the rest of the power or gas, and impossible to track its progress.

However, it is possible to place more stringent restrictions on book and claim systems, such as reducing the validity of GOs. Monthly disclosure periods would mean that market participants would have to buy GOs from production in May 2023 to cover their consumption in May 2023. Doing this would ensure that the GO market more closely reflects the seasonal variation of energy generation and would encourage producers to ensure that there was enough renewable energy generation every month to cover that month's demand.

Monthly disclosure could impact the liquidity of GO markets, particularly in months of higher demand and potentially lower supply. National and European legislators should assess such potential concerns and take them into account if and when they plan to establish monthly disclosure.

That said, this paper expects the RED-4 to cover the period 2030-2040 and some, if not all, Member States may have already instituted monthly disclosure, as France did in 2021. In this case, the RED-4 should push MS to take the next logical step and move the whole Union to 2-weekly, weekly, or even daily disclosure periods. Different energy carriers may require different disclosure periods. For example, gases can be stored for extended periods, which is



still challenging for electricity. Readers should note that some EU Member States still fail to adequately implement the EU's annual disclosure periods because of gaps in EU law. RECS covers this in detail in a separate paper on increasing temporal granularity in EAC schemes titled "RECS position on granular tracking and matching".

5. Clear rules on mutual recognition with third countries

The RED-2 introduced a rule that "Member States shall not recognise guarantees of origins issued by a third country except where the Union has concluded an agreement with that third country on mutual recognition of guarantees of origin issued in the Union...". However, the rule, which RED-3 retains, does not set out what requirements would need to be met, or how they should be demonstrated, for a third country to achieve mutual recognition with the EU.

RECS has supported members in Switzerland and the UK, as well as other third countries, to understand these rules and to work with their governments to achieve mutual recognition on GOs with the EU. Despite both the UK and Switzerland formerly being part of the EU's GO market, neither have been able to achieve mutual recognition since the RED-2 came into force in 2021. RECS' engagement with EU, Swiss, and UK authorities led us to conclude that any move towards mutual recognition would have to be part of larger agreements covering a wider range of energy-related topics.

For Switzerland, the EU has informally stated that it could only discuss mutual recognition on GOs after both parties ratified the EU-CH inter-institutional framework agreement – which Switzerland has decided not to do. As a result, Swiss renewable energy producers will no longer be able to sell their GOs into the EU's Internal Market for the purpose of electricity disclosure, even though they had been able to do so before this legal change. This is also despite Switzerland having one of the most sophisticated GO schemes, an electricity full disclosure scheme (both on production and consumption side), being one of the leading members of the AIB and having implemented the AIB's European Energy Certificate System rules. These are the



same rules adhered to by the large majority of EU and EEA Member States who are also AIB members. Despite this export ban on Swiss GOs to the EU, the Swiss Federal Office of Energy (SFOE) has decided that Switzerland will unilaterally allow Swiss energy consumers to import GOs from the EU's Internal Market for cancellation in Switzerland.

Following Brexit, the EU considers the UK as a third country, and negotiators did not include mutual recognition of GOs/REGOs in the Brexit trade agreement which closed in December 2020. Therefore, despite the UK's GO certificates, called Renewable Energy Guarantees of Origin (REGOs), being fully compliant with the relevant EU law, the EU no longer allows its Member States to recognise them for disclosure. Therefore, despite having a fully developed GO scheme (although not EECS compliant) that was until recently a part

of the EU GO scheme, UK producers join their Swiss counterparts in no longer being able to sell their GOs/REGOs into the EU's Internal Market. In response to this change of circumstance, the UK Government decided to reciprocate and no longer recognise EU GOs, however the UK Government still aims to achieve mutual recognition in the longer term.

To clarify this situation, the EU should specify exactly what third countries have to do to achieve mutual recognition. For example, the RED-2 (and RED-3) places a requirement on EU Member States to comply with European standard CEN - EN 16325 on Guarantees of Origin. The European standards organisation, CEN, is currently updating this standard to bring it into line with the legal changes made in the RED-2, including that GOs shall be issued to all forms of renewable energy, not only renewable electricity. The standard is stringent and detailed, and it would seem logical for the EU to expect any third country seeking mutual recognition on GOs to comply with it. Beyond that, the EU could also require a specific level of energy-related



trade agreement with third countries to ensure that parties can trade or transfer both energy and energy attribute certificates between the EU and the third country in question. RECS will continue to advocate on behalf of Members both inside and outside the EU on this matter.

In addition, the mutual recognition of GOs for gaseous energy carriers between EU Member States can be challenging. The implementation of current legislation (e.g. the RED-3) must ensure that the recognition of all GOs between EU Member States is guaranteed, the only exception to this is already covered by the renewable energy directive which allows a Member State to 'refuse to recognise a guarantee of origin only where it has well-founded doubts about its accuracy, reliability or veracity'. In such cases 'the Member State shall notify the Commission of such a refusal and its justification' following which the Commission may accept or reject the refusal.

6. Recognising EACs within the CBAM regime

The Carbon Border Adjustment Mechanism (CBAM) sets out to address the perceived problem of 'carbon leakage.' As EU legislators set increasingly stringent rules on EU companies to reduce their carbon emissions, some stakeholders fear that business will move some carbon-intensive activities to countries with less stringent carbon reduction policies – causing 'carbon leakage.'

Therefore, the CBAM seeks to put a price on the carbon emitted during the production of goods imported to the EU. European legislators hope that this will encourage cleaner industrial production in non-EU countries. However, while the idea behind the CBAM is simple, developing the specific regulations and implementing them is anything but. The CBAM is a complex regulation that a series of detailed implementing acts makes more complex still. We wait to see, in September 2023, exactly how the CBAM will calculate the emissions related to the production of goods imported to the EU. The EU may develop, adjust, and refine the relevant calculation methodologies over the transition period of the CBAM, in consultation with EU and third country stakeholders.

During this process, RECS would like to see the mutual recognition of energy attributes between the EU and third countries clarified in the RED-4 (see above) and reflected in the

CBAM. Producers of CBAM covered goods that are using renewable energy in their production processes (as recorded through the cancellation of recognised EACs), should have the reduced carbon content of that production reflected in their CBAM charge. This would encourage producers outside of the EU to purchase renewable energy, and support more renewable energy generation in their countries.

7. Clearer GO timestamping rules

The RED-3 did provide more detail on how Member States should document the start and end date of production included on a GO. For renewable gases (including RFNBOs), Member States may specify it at an hourly or sub-hourly level, and for renewable electricity they may specify it in accordance with the relevant imbalance settlement period. While this provision does not place a firm obligation on MS, it does set a clearer standard as to the granularity of detail about the production period of a unit of energy that producers and competent bodies can provide on GOs.

However, due to the lack of a firm obligation on Member States, RECS expects a wide divergence to remain between MS on this point. Some may not implement it at all, while others may choose different time periods for renewable gasses and may have differing imbalance settlement periods. RECS respects the rights of EU Member States to implement their own GO systems, but also supports the provision of clear and comparable information to energy consumers.

RECS believes that the EU could achieve greater clarity on this point by simply requiring all MS to specify the minute or second when the production of a given MWh of power or cubic meter of gas started and ended. This has been the case for several years already in Norway for renewable electricity and should be feasible for all Member States by the time a RED-4 is being concluded and implemented.

8. Recognition of the role of the AIB

The Association of Issuing Bodies (AIB) develops, uses, and promotes a European, harmonised, and standardised system of energy certification for all energy carriers known as the European Energy Certificate System (EECS). EECS is based on structures and procedures which ensure the reliable operation of energy certificate schemes in Europe, to facilitate the international exchange of guarantees of origin. In order to practically enable such trade, the AIB operates a pan-European (EU, EEA, and Energy Community member states) inter-registry communications hub. Of the 27 EU Member States, only Poland, Bulgaria, Romania, and Malta are not yet full AIB Members implementing the EECS rules.

Given that 23 of 27 EU Member States are already full AIB Members, and that the remaining four have shown interest in joining in the near future, the role of the AIB and the EECS rules should be formally recognised at EU level. While the AIB is unlikely to ever become a full EU agency, the RED-4 could, and should, secure its recognition by requiring Member States to become members of the Association and follow the EECS rules.

9. No geographical limits to single market GO trades

Some stakeholders in renewable electricity markets and systems consider that consumers should only be allowed to purchase energy from generation sites located on the same physical grid and/or with a high possibility for delivery through interconnectors. They argue that it would increase public confidence in EAC schemes if consumers were only able to use 'local' GOs to certify the origin of the energy they consume.

However, RECS believes that the lack or limitation of a physical connection between producer and consumer should not prevent the purchasing of renewable energy certificates from within the same legal/energy market area, such as the EU's internal energy market. Indeed, increased production of cost-efficient renewable energy in one grid region along with increased consumption of that energy in another region would send a clear signal for greater in-market physical connections. Also, RECS holds that all consumers in the European internal energy market, should have the same access to products within a book and claim system, without arbitrary geographic limitations. This supports the market liquidity that is crucial to the

efficiency of the GO market. Therefore, RECS would resist the inclusion of geographic limits to GO trades within the EU internal Energy Market in the RED-4 or other EU legislative acts.

10. Modernisation and digitalisation of EU GO Registries

In collaboration with members, RECS has developed a technical working paper on the modernisation and digitalisation of EU GO registries. This paper sets out in detail what key improvements market participants expect in the modernisation of all EAC systems, including the European GO system. These improvements are:

1. Full digitalisation
2. A common EAC communication standard
3. APIs and rules to facilitate registry access
4. Facilitating full disclosure
5. Allowing for greater granularity

In more detail, full digitalisation means recognising that EAC markets are growing both in volume and value. This growth will place ever greater pressure on EAC systems relying on manual data management both in terms of the volume of data to be managed and the potential cost of human errors with that data. Therefore, EAC systems should all move to become fully digitalised and automated as soon as possible.

A common EAC communication standard would overcome the challenge posed by different EAC system operators developing and maintaining their systems independently. This can lead to significant differences in operating practices and procedures, making it more difficult than necessary, and sometimes impossible for market participants to trade across EAC systems



within the same market. RECS therefore calls on EAC system operators to identify and adopt a common communication standard for processing interactions between different EAC systems.

Currently, EAC systems have different methods for gaining access to the information in their registries, and different rules regarding to whom they allow such access. Some allow full access for market participants, and other allow no access at all. Even those allowing access sometimes do not have the necessary APIs that allow users to interact with the data efficiently. Therefore, once EAC systems have digitalised, RECS calls on them to allow registry access to all stakeholders, to adopt rules on access for such stakeholders, and to set up APIs that make gaining access and information quick and easy.



As is made clear above, Full disclosure is RECS' priority demand for the development of mature EAC systems. To implement full disclosure effectively and efficiently, EAC systems have to be modernised through digitalisation, common language and tools, APIs, and registry access. In addition to these key points, RECS also believes that the technical development of EAC systems would be enhanced by only having one system operator for EACs from all energy carriers and sources.

Some EAC stakeholders have shown interest in increasing the temporal granularity of EAC systems. More granularity in EAC schemes could drive volume growth, particularly if other jurisdictions follow the EU in allowing the certification of fractions of a MWh, down to a single watthour. Granularity would also increase the complexity of EAC trading. Such developments would put further pressure on EAC systems to modernise. As a first technical step towards allowing for greater granularity, EAC systems should precisely timestamp the certificates they issue, so that the exact moment of the related energy generation is known.

Conclusion

The full version of this paper (available to RECS Members only) provides a history of Guarantees of Origin in the EU, before setting out RECS' 10-point plan for taking this crucial energy transition tool to the next level in a public facing advocacy paper.

RECS will continue to work to ensure that all relevant EU legislation helps to maintain and further develop efficient and effective GO markets that can help to accelerate the transition to 100% renewable energy.

The RECS Board and Secretariat calls on the Association's members to support us in this work, and encourages all organisations engaged in the GO sector to [join us](#).

About the authors

The RECS Secretariat produced this document with the support of RECS Members and the oversight of the RECS Board. The RECS Energy Certificate Association (RECS) is a non-profit foundation dedicated to tackling climate change by reducing emissions through an accelerated transition to renewable energy that is supported by consumer demand. We do this by fostering the development of existing and emerging Energy Attribute Certificate (EAC) markets, which are the foundation of trading renewable energy. With well over 100 members across the world, RECS is the leading industry association representing the users of EACs, from renewables producers, through traders, to consumers. RECS is dedicated to enhancing the knowledge, motivation, and confidence consumers need to buy 100% renewable energy