

Guarantees of Origin and sustainability certificates: facilitating markets in renewable and low carbon energy attributes

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Introduction

EFET welcomes European policies to decarbonise the energy sector and eventually the whole economy, with renewable energy sources playing an important role in achieving eventual net zero carbon. Progress towards a 55% carbon emissions reduction target for 2030 and the achievement of carbon neutrality by 2050 will require contributions from every energy consumption sector and utilisation of various renewable and low carbon production, conversion and storage technologies.

This means that the energy industry, standards bodies and issuing bodies should redouble our efforts to define EU-wide standards for validating the renewable origin or other sustainability attributes of renewable and low carbon energy carriers. The EU Commission should take a lead in harmonising national arrangements for the issuance, use and cancellation of Guarantees of Origin (GoOs), building on the work already being done by the Association of Issuing Bodies (AIB).

Such instruments can increase consumer trust, give consumers more transparent choices, help verify national energy mixes by source and attributes on the path to net zero carbon, stimulate investment in RES and low carbon technologies, support national and international markets in renewable and low carbon attributes and provide the redemption channel for fulfilment of any RES or low carbon quotas, which governments may decide to set in specific energy end use sectors.

As RECS International puts it, in the case of renewable power: “Energy attribute certification systems allow for the allocation of renewable attributes from a producer to a consumer. Not only does this provide consumers with an option to choose a specific energy product, but it also puts a level of responsibility on to electricity consumers for the choices they make.”

RED II revision: the opportunities

EFET has evaluated the inception impact assessment for RED II revision (“the IIA”) and anticipates the prospective passage of a RED II revision Directive through the EU primary legislative process. RED II revision brings opportunities to consolidate a Europe-wide approach to developing standards and harmonising national arrangements for the issuance, use and cancellation of Guarantees of Origin (GoOs) in the gas sector as well as the power sector. The AIB has already developed a standardised system: the European Energy Certificate System - “EECS”. EECS is based on structures and procedures designed to ensure the reliable cross border operation of certificate schemes. Greater European harmonisation would surely facilitate international trade in guarantees of origin and further development of the EECS.

Revision of RED II and the envisaged Gas Decarbonisation and Hydrogen legislative package can also lay out a role for the EU Commission to develop with the energy industry and issuing bodies new standards for “GoO plus” instruments, certifying both source and carbon intensity (especially important in the gas sector). The temporal, locational and additionality attributes of power supplies are best reflected in the formation of prices in various timeframes of the

wholesale electricity market. However, if the eligibility of some remote sources of the power to be used in future electrolytic production of hydrogen is to be constricted under a revised RED II, then GoO plus instruments could play a useful role in validating such eligibility. In any case, it would be good if the maximum permitted interval between issuance and cancellation of a particular GoOs would be standardized or at least further harmonized among EU Member States.

Eventually there may be scope for the use of more sophisticated life cycle sustainability certificates in fuel consumption sectors beyond transport. However, EFET sees any capturing of transactions in a registry or database, alongside registration of the certificates themselves, as creating simply a statistical tool for Member States. While such a tool might help to validate consumption of RES fuels and be perceived to minimise risks of fraud, an absolute EU obligation to track commodity transactions, as a pre-requisite for recognition of an accompanying certificate, will surely negate any value in such certificates as fungible instruments in the gases sector. It might also impede liquidity in the underlying renewable gas as a commodity and thereby hinder rather than enhance trade between Member States in gaseous fuels, even as those fuels become increasingly renewable.

GoOs and “GoO plus”

Our overall vision for the issuance and use of GoOs and evolving “GoO plus” instruments, in relation to renewable electricity, renewable gases and low carbon gases is that they can significantly help Europe to decarbonise the energy sector and other parts of the economy.

To help realise this vision, EFET foresees that:

- The energy industry and energy users will continue to work with EU and national institutions to define EU-wide standards for the renewable origin, or the low carbon characteristics at source and/ or other sustainability attributes of electricity and various renewable and low carbon fuels in a transparent, consistent and credible manner
- Such standards, encapsulated in GoOs or “GoO plus” instruments will help to:
 - Increase transparency and consumer trust
 - Verify national energy mixes on the path to net zero carbon
 - Help demonstrate the carbon intensity of emissions from installations falling under the EU ETS
 - Support existing voluntary markets in GoOs and new voluntary markets in “GO plus” instruments
 - Underpin renewable or low carbon quotas set by governments in certain energy end use sectors (supporting the development of sectoral roadmaps in line with the EU Climate Law proposal)
- Any producer or importer of renewable or low carbon energy in the EU will enjoy an absolute right to call for a GoO or “GoO plus” as appropriate to be issued by an authorized issuing body in a Member State, if it can demonstrate compliance of a source and/or the energy produced at a source with a defined standard recognised in the EU, irrespective of whether a financial support scheme is in place for the relevant energy production and irrespective of whether the producer or importer has put in place a long term sales agreement for the energy produced
- Standardisation across Europe will be facilitated by a harmonised process for the validation and verification of origin, low carbon characteristics and/ or sustainability

attributes for renewable and low carbon energy carriers, carried out by authorised issuing bodies and overseen by duly appointed regulatory agencies

- Cancellation of GoOs and “GoO plus” instruments once sold or declared to an end consumer, once swapped for an LCA sustainability certificate applying to the same volume in respect of a particular end use, or once redeemed by a supplier to fulfil a renewable energy supply quota, irrespective of the country in which consumption occurs
- One of the standards for a “GoO plus” could provide evidence, as mentioned in the preceding section of this paper, that electricity used for production of green hydrogen via electrolysis (as an RFNBO) can be considered fully renewable, featuring “tabs” (or data fields) validating the additionality, locational and/ or temporal attributes of relevant volume of electricity generated in a particular unit over a relevant period of time
- Clear and simple safeguards against double-counting of attributes and against fraud will be implemented by issuing bodies and monitored by appointed regulatory agencies, without resorting to reliance on an unnecessary nexus between GoOs or “GoO plus” instruments and wholesale energy market transactions
- Alignment of an EU system for GoOs or “GoO plus” instruments with the operation of the EU ETS. Validation of an emitter’s acquisition of these instruments should allow for the carbon abatement value of renewable and low carbon fuels to be recognised under the ETS MRR. The carbon abatement value will in turn help determine the net obligation of an emitter to purchase EUAs.
- EU objectives should include the creation of a truly pan-European market in GoOs and GoO plus instruments to encompass well interconnected third countries, as long as their networks form part of the European high pressure gas grid and/ or the high voltage power grid and display strong convergence with overall EU climate and energy policies

Life cycle (LCA) sustainability certificates

We note DG ENER ideas for expansion of the certification system under RED II for fuels used in transport into other sectors as envisaged in the EU Strategy for Energy System Integration¹ (ESI), the EU Hydrogen Strategy and the roadmap for RED II revision set out in the IIA.² We welcome the concept of sophisticated European certification of renewable and low carbon attributes of fuels at a point of use as a means of revealing the value of these attributes. On the other hand, we would like to see more ambition in a RED III in parallel around provisions dealing with Guarantees of Origin and “GO plus” instruments, since in most sectors they will be more easily implementable in the short to medium term.

According to the IIA the Commission wants to establish a comprehensive certification system covering all renewable and low carbon energy carriers, with the intention to:

- ✓ Facilitate energy system integration in Europe
- ✓ Inform consumer choices
- ✓ Support cost-effective production of renewable and low carbon energy carriers, including hydrogen
- ✓ Foster EU-wide hydrogen trading.

¹ See COM(2020) 299 final, p.13

² See Inception Impact Assessment for the Revision of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, p.3

While the idea of placing provisions about certification applying to both renewable and low carbon fuels under a prospective RED III is laudable³, we are concerned about several aspects of the proposed design for a certification system as set out in the draft IIA.

We believe a design involving tracking and registration of wholesale commodity transactions tied to certificates is incompatible with continuing competition and liquidity in the internal market for gaseous fuels (possibly liquid fuels too) and will not serve the Commission's own objectives. The existing natural gas system in Europe, with its multiple injection points, hubs and withdrawal points, constitutes essentially *a single facility* when viewed in terms of *fuel logistics*. Markets in instruments evidencing renewable or low carbon sources and/ or attributes can only flourish if these instruments become tradable at wholesale level separately from the underlying commodity. Equally markets in the underlying commodity will be impeded and distorted if every forward and spot transaction in those markets is expected to be tied to a transaction in certificates evidencing carbon content and sustainability attributes. At the retail level there may be more scope to make issuance of a life cycle certificate dependent on emissions entailed in the end use application of a fuel, though in the case of gaseous fuels differences in such emissions seem unlikely to be significant.

Thus we think it is important that in the case of gases, instead of trying to link certificates to wholesale transactions in gaseous fuels injected into and withdrawn from transmission systems, implementation proceed by means of a *gross mass balancing* mechanism. This mechanism could be overseen by issuing bodies in conjunction with TSOs and DSOs, as part of the operation of existing natural gas grids and new hydrogen grids. It would entail total injections and total withdrawals of renewable and low carbon gases meeting specified standards being checked one against the other over defined periods of time, by reference to corresponding issuance and cancellation of certificates.

We hope that eventually systems used for GoO plus instruments and more sophisticated LCA sustainability certificates might evolve and become compatible. That might lead to the inclusion of both "GoO plus" instruments and sustainability certificates, once issued, in a national and/ or EU registry. If legislators cannot agree to encompass LCA certificates and "GoO plus" instruments in one system, then enhancement and greater harmonisation of current Member State GoO schemes will be required. Anyway, the Commission should consider the merit of recognising GoO plus instruments for network bound gaseous fuels cancelled at a point of consumption, when evaluating fulfilment of RES and low carbon targets by Member States, in addition to counting any LCA certificates registered.

Conclusion

EU-wide standards for validating the renewable origin or other sustainability attributes of renewable and low carbon energy carriers have a significant role to play on the path to net zero carbon. GoOs and GoO plus instruments based on such standards may be traded through the energy value chain and reveal value attached to such attributes by consumers.

It is important that all EU Member State governments be obliged to issue GoOs or GoO plus instruments as appropriate upon request of producers of renewable and low carbon energy, whether or not financial support or a long term PPA (or gas purchase agreement) is in place. Cancellation of GoOs and "GoO plus" instruments must be organised, validated and recorded by issuing bodies according to arrangements recognised throughout the EU, irrespective of

³ See EFET recommendations for RED II revision [here](#)

the countries in which production and consumption occur. The EU should legislate to introduce the obligations and rights involved either entirely within RED III or else within RED III for RES and within the envisaged Gas Decarbonisation and Hydrogen package for low carbon fuels.

It is also important that any arrangements mandated in the course of revision of RED II for Member States to use life cycle sustainable fuel certificates to validate the consumption of renewable gases in their territory do not require tracking of transactions undertaken within the interconnected European gas grid *nor* within any new hydrogen transmission system. Furthermore, we see merit taking account of GoO plus instruments for network bound gaseous fuels cancelled at a point of consumption, when the Commission evaluates the fulfilment of RES and low carbon targets by Member States, alongside any LCA certificates registered.