

CEBC 2020 Abstract

Registry System to administer Renewable Gas Movements

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To tackle climate change, the implementation of renewable gases in domestic and European energy systems is crucial. Special focus should be shed on biomethane as it represents the already existing green element of the gas business. However, the development of a competitive renewable gas market on national/European level is complex.

Renewable gases are flexible energy carriers applicable for a broad set of marketing paths (renewable electricity, renewable gas for heating/cooling and industrial applications, fuel in transportation sector), most importantly making use of the existing national/European gas infrastructure. After injection, the renewable and natural gas molecules blend and cannot be differentiated. Thus, the tracking of renewable gas movements, via Renewable Gas Certificates handled by a Renewable Gas Registry, is of utmost importance to allow integration of renewable gases into the European gas market and provide stakeholders with transparent and trustworthy, electronic documentation. Three main data categories are provided on a Certificate: plant specific information, metering data and audited data (on treated substrates). European and national legislations require specific characteristics from renewable gas products (e.g. sustainability criteria according to RED II, criteria for mass balancing along the gas grid, or others) which are to be documented on the Certificate. These requirements result in some cases in different Certificate categories for different marketing paths, e.g. Proofs of Origin (PoO), Guarantees of Origin (GoO).

It will be a sensible option for each country to operate one central clearing agency, one central Renewable Gas Registry, with the ability to cover all types of renewable gases and all types of marketing paths. A centralised system will on the one hand provide simplicity in the operational processes and on the other hand, maximum trust and transparency for all market participants as well as prevent any options for double counting and claiming.

However, not every country decides upon one centralised solution. Austria depicts the example of having different registries interacting on the national market (**Fehler! Verweisquelle konnte nicht gefunden werden.**). AGCS Gas Clearing and Settlement AG, in its role as balance group coordinator, has been operating the Biomethane Registry Austria since 2012, as requested by the Austrian Renewable Electricity Act (ÖSG, Ökostromgesetz). The main purpose is to create Certificates to be accepted by the green power settlement agency (OeMAG, Abwicklungsstelle für Ökostrom) which manages the national renewable electricity subsidy budget. The environmental agency (UBA, Umweltbundesamt) operates the national registry for sustainable biofuels. The Austrian regulator (E-Control) will be responsible for issuing Guarantees of Origin for the purpose of labelling according to RED II. Each registry operates based on a separated IT-system, which requires interconnection via sophisticated processual and technical solutions as any possibilities for double counting must be prevented.

Our presentation will provide an overview of the specific organisational, technical and processual aspects required to establish a successful registry system for a domestic renewable gas market with the ability to tackle the challenges of climate change and provide dynamic options to handle future application developments. Such a centralised registry system could be extended to different energy carriers such as liquid biofuels, hydrogen or renewable electricity.

AGCS has been deeply involved in the establishment of the European Renewable Gas Registry (ERGaR) and the development of a common European renewable gas market, e.g. via the H2020 Project REGATRACE (REnewable GAs TRading CEnter in Europe). We will thus illustrate how to connect domestic registries via the European Renewable Gas Registry to allow renewable gas producers and consumers to gain access to a Europe-wide market. A stable, reliable and common renewable gas market can help achieve political EU-climate targets and decouple its energy systems from fossil fuels.