



An Coimisiún
um Rialáil Fóntas
**Commission for
Regulation of Utilities**

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Commission for Regulation of Utilities

Green Source Product Verification Report 2021

Information Paper

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CRU Draft Strategic Plan 2022 - 2024

The core elements of the CRU's strategic plan 2022-24 are set out in the Table below.

Our Mission Protecting the public interest in water, energy, and energy safety.	Our Strategic Priorities <ul style="list-style-type: none">▪ Ensure Security of Supply▪ Drive a Low Carbon Future▪ Empower and Protect Customers▪ Enable our People and Organisational Capacity
Our Vision Safe, secure, and sustainable supplies of energy and water, for the benefit of customer now and in the future.	

Executive Summary

This information paper presents information on the result of the CRU's and SEMO's annual verification process for 2021 of any electricity suppliers in Ireland offering "Green Source Products" which have not attained an overall 100% renewable annual fuel mix for all their customers' demand. The report would be best read in conjunction with the more general 2021 Fuel Mix Disclosure paper published by the CRU, linked [here](#).

The report finds that in 2021 there were two suppliers offering such products and they were found to be 100% green. In addition, the report outlines the Public Service Obligation (PSO) and non-PSO split for all suppliers' Fuel Mix.

Public/ Customer Impact Statement

Green source products are tariff plans offered by electricity suppliers guaranteeing the source of electricity to be 100% renewable for any customer on that plan. This report provides verification of electricity suppliers' green source product offerings for 2021 to certify that a customer on such an offering was using electricity sourced entirely from renewable generation, including Guarantees of Origin (GO) certificates. Outlined in this report is each supplier's verified fuel mix for both their green and non-green customers.

The CRU and SEMO carry out an independent verification process and publish the results of suppliers' green source products each year. All suppliers offering green source products complete the same single verification process to make it easier for customers to understand the process and trust its accuracy. It is considered that such a verification and this subsequent CRU report on suppliers' green source offerings should provide public confidence that appropriate oversight of suppliers' fuel source claims are in place.

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Glossary of Terms and Abbreviations

Abbreviation or Term	Definition or meaning
AIB	Association of Issuing Bodies
BEIS	Department for Business, Energy and Industrial Strategy
CRU	Commission for Regulation of Utilities
DfE	The Department for the Economy
EECS	European Energy Certificate System
FMD	Fuel Mix Disclosure
GO	Guarantee of Origin
GSPV	Green Source Product Verification
kWh	Kilowatt Hour
MWh	Megawatt Hour
NI	Northern Ireland
OFGEM	The Office of Gas and Electricity Markets
PSO	Public Service Obligation
REFIT	Renewable Feed in Tariff
REGO	Renewable Energy Guarantee of Origin
ROI	Republic of Ireland
SEMO	Single Electricity Market Operator
UK	United Kingdom

1. Introduction

1.1 Commission for Regulation of Utilities

The Commission for Regulation of Utilities (CRU) is Ireland's independent energy and water regulator. The CRU's mission is to protect the public interest in Water, Energy and Energy Safety. The work of the CRU impacts every Irish home and business. The sectors the CRU regulates underpin Irish economic competitiveness, investment, and growth, while also contributing to the CRU's international obligations to address climate change.

The CRU is committed to playing its role to help deliver a secure, low carbon future at the least possible cost, while ensuring energy is supplied safely, empowered, and protected customers pay reasonable prices, and the CRU delivers a sustainable, reliable, and efficient future for energy and water.

The CRU is guided by four strategic priorities that sit alongside the core activities the CRU undertakes to deliver on the public interest. These are:

- Deliver sustainable low-carbon solutions with well-regulated markets and networks.
- Ensure compliance and accountability through best regulatory practice.
- Develop effective communications to support customers and the regulatory process.
- Foster and maintain a high-performance culture and organisation to achieve the CRU's vision.

Further information on the CRU's role and relevant legislation can be found on the CRU's website at www.cru.ie.

1.2 Background

There are two main drivers for Green Source Products leading to the existence of two distinct forms:

- 1) either providing for investment in environmentally beneficial schemes (e.g., investment in a specific technology or carbon offsets); or
- 2) guaranteeing that a customer's electricity is sourced from renewable generation.

The Green Source Product Verification (GSPV) (and any references in this paper to "green source products") concerns the second form of green source product, i.e., the guarantee that

a customer's electricity is sourced from renewable generation, including Guarantees of Origin (GO).¹

This report from the CRU provides the outcome of the GSPV process for 2021. It provides verification that electricity suppliers' green source product offerings for 2021 were using electricity sourced from renewable generation. This report also provides the PSO and non-PSO split for suppliers with 100% renewable fuel mix. The CRU notes that the report is best read in conjunction with the more general 2021 Fuel Mix Disclosure information paper published by the CRU, linked [here](#).

For background, the CRU published its decision with regard to the regulation of green source products in the electricity retail market ([CER/15/205](#)) in August 2015. This decision set out that any electricity supplier offering green source products must go through an annual ex-post verification process to confirm whether it has sufficient green attributes to cover its sale of green source products. The decision also set out that this verification process would be administered by Single Electricity Market Operator (SEMO) and that the CRU would publish a report on the outcome of the process.

In [CRU18080](#) the CRU decided that suppliers with an Annual Fuel Mix Disclosure (FMD) of 100% renewable fuel sources do not have to partake in the GSPV process. Through the Annual FMD calculation, such suppliers have already proven (with appropriate checks by SEMO) that 100% of the aggregated electricity demand of their "green" customers were served by electricity generated from renewable sources. It is for this reason that – for a given FMD disclosure year - the CRU exempts suppliers with a FMD of 100% renewable fuel sources from the concurrent GSPV verification process.

The CRU notes that the existence of GOs, and their application across the European Union (EU), is a long-established system, which has supported the addition of renewable generation across the EU. However, the CRU recognises that this approach is a slightly difficult process for electricity consumers in Ireland to understand. As such, the CRU will be proposing some changes to the approach for the 2022 fuel mix disclosure in order to provide greater transparency regarding GOs for Irish electricity consumers.

¹ Note that all green source product references in this document refer to this type.

1.3 Purpose of Paper

This paper presents information on the result of the CRU's and SEMO's annual verification process for 2021 of any electricity suppliers in Ireland offering "Green Source Products" which have not attained an overall 100% renewable annual fuel mix for all their customers' demand. In addition, the information paper outlines the Public Service Obligation (PSO) and non-PSO split for all suppliers' Fuel Mix.

1.4 Related Documents

- [CRU2022967](#): Information paper on Fuel Mix Disclosure and CO₂ Emissions 2021.
- [SEM/22/065](#): All-Island Fuel Mix Disclosure and CO₂ Emissions 2021.
- [SEM/11/095](#): Decision paper on the Fuel Mix Disclosure in the Single Electricity Market.
- [CER/11/824](#): Decision on Supervisory Framework for Administration of Guarantees of Origin
- [CER/15/205](#): Regulation of Green Source Products in the Electricity Retail Market.

1.5 Structure of Paper

This information paper is structured as follows:

- **Section 1**: introduces the CRU and provides background to this information paper.
- **Section 2**: sets out the methodology of the GSPV process and presents the outcome of this process for 2021.

1.6 Obligations Arising from this Paper

As per the CRU decision on the regulation of green source products in the electricity retail market ([CER/15/205](#)), electricity suppliers have to make their GSPV results available on their website, via their telephone service and in hard copy, if requested. All suppliers who offer green source products have to provide the following statement on their bills:

"SUPPLIER Z" now offers green source products which is likely to change your fuel mix when compared to the supplier fuel mix shown. For information on your fuel mix

*and on the environmental impact of your electricity supply visit www.SUPPLIER_Z.ie
or, for further details call 00XXX X XXX XXXX.”*

Suppliers must provide fuel mix information on all bills within two months of the publication of the CRU’s Fuel Mix Disclosure information paper. The publication of this information paper also requires suppliers to make their GSPV results available by the means stated above within two months of the date of publication.

2. GSPV Process 2021

2.1 Methodology of the Green Source Verification Process

Electricity suppliers offering green products, which do not have an annual FMD of 100% renewable fuel sources, should liaise with SEMO who will advise them of what is required to have their green source product verified. This will include the provision of the following to SEMO:

- A green source submission, which details the total aggregate demand kilowatt hour (kWh) of all the supplier's customers who are availing of green source products; and
- An independent audit of the content of the green source submission. It is the responsibility of the supplier to procure and deliver this independent audit.

From these submissions, the SEMO determines and confirms to the supplier the percentage of their green source product demand that has been met from renewable generation and GOs.² SEMO also provides the fuel mix for the supplier's green and non-green customers. Note that suppliers are required to allocate any shortfall in GOs equally across their customers who avail of green source products.

Those suppliers who have proved that their electricity as sourced 100% from renewable sources through the Annual Fuel Mix Disclosure (FMD) are exempt from the Green Source Product Verification (GSPV) process as they have already proved (through appropriate checks) their "green" claims.

Where the CRU has doubts about the reliability of a supplier's claim, or its marketing related to Green Source Products, investigation and ultimately, enforcement action may be taken to address the situation.

2.2 PSO Attribution

The Public Service Obligation (PSO) levy is a government subsidy charged to all electricity customers in Ireland. It is designed by the Irish Government and currently supports national policy objectives related to renewable energy and towards achieving a low-carbon economy.

² see Appendix 1

The proceeds of the levy are used to contribute to the additional costs incurred by PSO-supported renewable electricity generation which are not recovered in the electricity market, typically via contracts that suppliers have in place with electricity generators.³

PSO-supported renewable generation has to be attributed equally across all of a supplier's customers (irrespective of which customers are on a specific green source product or not). This is calculated by SEMO by dividing the total amount of PSO supported renewable generation that the supplier is contracted with by the supplier's total demand for the period. Suppliers offering green source products are required to allocate PSO supported renewable generation evenly amongst all of their customers – i.e., all a supplier's customers will receive the same % of renewable sources associated with PSO renewable generation.

This approach is adopted because all customers pay (and hence contribute) to the support of PSO renewable generation through the PSO levy. However, the allocation of PSO supported generation varies from supplier to supplier, as it is dependent upon the number and volume of PSO contracts that a supplier has.

2.3 Outcome of the GSPV Process for 2021

For 2021, only two suppliers who were offering green source products were confirmed to not have an overall annual FMD of 100% renewable fuel sources. These suppliers have been confirmed through the GSPV process to have sourced the electricity for their green source products from renewable fuel sources.

Table 1: Suppliers in Ireland who completed the GSPV process successfully for 2021

Irish Supplier	GSPV passed
Bord Gáis Energy	YES
Electric Ireland⁴	YES

The following suppliers, who offered green source products in 2021, were confirmed through the FMD process as having a 100% renewable Fuel Mix, and therefore were not obliged to complete the GSPV process:

³ See Appendix 2

⁴ Note that all of ESB's electricity supply licences (both Ireland and NI) are branded as Electric Ireland.

Table 2: Suppliers in Ireland who were confirmed through the FMD process as having a 100% renewable Fuel Mix

Irish Supplier
Energia (ROI)
Panda Power
Go Power (ROI)
SSE Airtricity (ROI)
Flogas Enterprise Solutions (ROI)
Pinergy
Arden Energy
Orsted Ireland Green Energy
Captured Carbon
Cenergise Trading
Ecopower
ElectroRoute Energy Supply
Flogas Natural Gas
Iberdrola Ireland
Axpo UK
Statkraft Markets GmbH

The following suppliers did not offer any green source products in 2021, so were not required to partake in the GSPV process:

Table 3: Suppliers in Ireland who did not offer any green source products in 2021

Irish Supplier
Power NI
Click Energy
Community Power
Glowpower
PrePay Power
Waterpower Engineering

2.4 Fuel Mix of Green and Non-Green Source Product Customers for 2021

Table 4 and table 5 below outline the fuel mixes for those suppliers having a combination, in 2021, of some customers who were supplied 100% green source electricity and others who were supplied non-green source electricity. These tables also include the split of the suppliers' renewable fuel sources into:

- **PSO**: the share which was allocated from the supplier's procurement of electricity via contracts supported by the PSO Levy; and
- **non-PSO**: the combination of the renewable electricity which was not supported by the PSO levy and the additional credits for GO certificates, as imported by the supplier.

For each supplier, this is divided out to show the fuel mix for providing the electricity to a supplier's "green" and "non-green" customer. Additionally, the annual FMD submitted by the supplier for its overall fuel mix across all its customers alongside the average all-Island fuel mix is provided for comparison. At the bottom of these tables the environmental impact of each kWh of electricity used by the various customer groups is provided in the form of CO₂ Emissions in grams per kWh. It should be noted that the average All-Island Market fuel mix provided covers Ireland and Northern Ireland (NI). Moreover, it should be noted that the overall annual FMD Supplier Mix and the mix for each cohort of Green and non-Green customers applies to Ireland only.

Table 6 below covers suppliers with an annual FMD of 100% renewable fuel sources. It should be noted that these suppliers only have green customers. The share of renewable electricity fuel sources is split into the PSO levy, and the renewable sources purchased without the PSO levy⁵.

⁵ The PSO levy compensates electricity suppliers for the additional costs they may incur by purchasing electricity generated by renewable sources (see Appendix 2 below). This is via government-designed contracts that suppliers have in place with electricity generators through the Renewable Energy Feed in Tariff (REFIT) schemes/supports.

Table 4: Suppliers with Green and non-Green Source Customers - Bord Gais Energy

Electricity Supplied has been sourced from the following fuels	Green Demand Customers Mix	Non-Green Demand Customers Mix	Annual FMD Supplier Mix	Average All-Island Market
Renewable	100.0%	30.8%	41.1%	55.9%
• PSO	15.8%	51.2%	-	-
• Non PSO	84.2%	48.8%	-	-
Gas	0.0%	48.3%	41.1%	33.6%
Oil	0.0%	5.3%	4.5%	2.7%
Coal	0.0%	13.5%	11.5%	6.8%
Other	0.0%	2.1%	1.8%	1.0%
Total	100.0%	100.0%	100.0%	100.0%
Environmental Impact				
CO ₂ Emissions	0 g per kWh	427 g per kWh	363 g per kWh	258 g per kWh
Radioactive Waste	0 g per kWh	0 g per kWh	0 g per kWh	0 g per kWh

Table 5: Suppliers with Green and non-Green Source Customers - Electric Ireland

Electricity Supplied has been sourced from the following fuels	Green Demand Customers Mix	Non-Green Demand Customers Mix	Annual FMD Supplier Mix	Average All-Island Market
Renewable	100.00%	56.1%	65.3%	55.9%
• PSO	12.3%	21.9%	-	-
• Non PSO	87.7%	78.1%	-	-
Gas	0.0%	37.5%	31.0%	33.6%
Oil	0.0%	1.6%	0.9%	2.7%
Coal	0.0%	4.2%	2.4%	6.8%
Other	0.0%	0.6%	0.4%	1.0%
Total	100.0%	100.0%	100.0%	100.0%
Environmental Impact				
CO ₂ Emissions	0 g per kWh	235 g per kWh	179 g per kWh	258 g per kWh
Radioactive Waste	0 g per kWh	0 g per kWh	0 g per kWh	0 g per kWh

Table 6: PSO and non-PSO where annual FMD is 100% renewable fuel sources

Supplier	PSO	Non PSO
Energia	25.5%	74.5%
Panda Power	3.7%	96.3%
Go Power (ROI)	3.0%	97.0%
SSE Airtricity (ROI)	35.5%	64.5%
Flogas Enterprise Solutions (ROI)	74.3%	25.7%
Pinergy	3.0%	97.0%
Arden Energy	3.0%	97.0%
Orsted Ireland Green Energy	99.5%	0.5%
Captured Carbon	100.0%	0.0%
Cenergise Trading	3.0%	97.0%
Ecopower	3.0%	97.0%
ElectroRoute Energy Supply	100.0%	0.0%
Flogas Natural Gas	3.0%	97.0%
Iberdrola Ireland	3.0%	97.0%
Axpo UK	3.0%	97.0%
Statkraft Markets GmbH	100.0%	0.0%

2.5 Shortfall in GOs and REGOs on an Individual Supplier Basis for 2021

As per section above, all electricity suppliers offering green source products in 2021 passed the verification process with no shortfall in GOs and REGOs.

2.6 Interim GSPV

Given that the annual GSPV only happens once every 12 months, SEMO, in its role in administering the GSPV, has developed an “interim GSPV” process. This process is applied

to those suppliers who do not have historical evidence of meeting the GSPV requirements, although have started offering green source products. This interim process provides assurance to consumers that such suppliers are on track to meet their green source product assurances to consumers.

Such suppliers who wish to commence offering green products should refer to the CRU's general clarifications⁶ and follow the interim GSPV process: details of the process are available by contacting guaranteesoforigin@sem-o.com.

2.7 Forthcoming 2021 GSPV Process

Suppliers offering green source products which do not have a final annual fuel mix of 100% renewable fuel sources shall provide their GSPV submission one month after confirmation of their final FMD mix.

It should be noted that in 2022, the 2021 FMD and GSPV timeline were as follows:

- Supplier FMD declaration deadline **31/03/2022.**
- Final supplier FMD confirmed **27/07/2022.**
- Supplier GSPV submission deadline **09/08/2022.**
- Supplier GSPV issued to the CRU **23/08/2022.**
- Supplier GSPV issued to suppliers **23/08/2022.**

It is intended that similar timelines will be used in the administration of the FMD and GSPV processes for the 2022 year, as will be calculated and published in 2023.

⁶ For references and links, see [the Fuel Mix Disclosure Information Paper for 2022](#).

Appendix 1: GO/ REGO

A Guarantee of Origin (GO) certificate is an instrument defined in European legislation that certifies that electricity generated is from renewable energy sources. The GO guarantees that one megawatt hour (MWh) of electricity has been produced from renewable energy sources. Electricity suppliers buy GOs to certify that their electricity demand is covered by certified renewable sources.

The Renewable Energy GO is equivalent scheme for the United Kingdom, operated by the Office of Gas and Electricity Markets (OFGEM). The scheme operates in NI, and therefore feeds into the All-Island Fuel Mix.

In Ireland, SEMO is a member of the Association of Issuing Bodies (AIB) since May 2015. AIB is a European body that provides a standardised system for European Energy Certificate System (EECS) and GOs are part of this European certification system. In Ireland, SEMO is the body that issues GOs to generators.

GOs are electronic certificates issued for energy generated from renewable sources and are issued to renewable generators that are not in support schemes (such as the PSO in Ireland) per MWh of generation. These are tradeable instruments and do not need to follow the flow of energy. GOs are traded at a European level. The AIB operates a hub where such certificates can be traded between countries. Suppliers can purchase GOs to use as proof of the share or quantity of energy from renewable sources in their Fuel Mix. GOs can be imported and exported between Ireland and the rest of Europe.

Renewable generators that are signed up to the GO scheme are issued GOs per MWh of generation which can then be transferred to suppliers to use in their fuel mix disclosure. Every year, suppliers submit a fuel mix declaration form to SEMO, which performs the fuel mix calculation on behalf of the Regulatory Authorities. This declaration outlines all of a supplier's claims on electricity, broken down into GOs held by the supplier on SEMO's registry, Renewable Energy GOs (which are held on OFGEM's registry) and the attributes of specific generators, some of which may be supported by the PSO levy. A supplier can also include non-renewable Generator Attributes in its fuel mix declaration.

As a result of Brexit, REGOs from the United Kingdom (UK) are not acceptable as renewable certificates within EU Member States (including Ireland) since 1 January 2021. The following is from the notification from the European Commission⁷:

“Guarantees of origin that have been issued by designated bodies in the United Kingdom in accordance with Article 15(2) of Directive 2009/28/EC will no longer be recognised by the EU-27 Member States as of the withdrawal date.”

In November 2020, SEMO – in conjunction with the Regulatory Authorities - provided an update on fuel mix disclosure⁸. This is summarised as follows:

- **For Suppliers licensed in Northern Ireland:** Until such time as the United Kingdom (UK) reviews the continuation of eligibility of EU GOs, they are accepted for import or cancellation in Northern Ireland. Ofgem has stated that:

‘[UK] Government has indicated its intention to review this in 2021 so that, longer term, domestic recognition of Guarantees of Origin issued in EU countries will take place only on a reciprocal basis’.

- **For Suppliers licensed in Ireland:** From 1 January 2021, UK Renewable Energy Guarantees of Origin (REGOs) are not accepted for import or cancellation for FMD in Ireland.

The above arrangement is still in place, should subsequent communications or agreements from either the EU or UK authorities indicate a change in this position, both RAs in conjunction with SEMO, will provide market participants with an update on any changes to FMD or GSPV processes.

Additionally, there may be changes to the approach for the 2022 FMD as a result of consultations that are ongoing by the Department for Business, Energy and Industrial Strategy (BEIS) and Ofgem in Great Britain (GB), or the Department for the Economy (DfE) in NI⁹. Any changes will be reflected in future FMD and GSPV processes.

⁷ [Notification](#) from the European Commission, issued on 7 March 2018.

⁸ <https://www.sem-o.com/market-messages/message/index.xml?message=3026>

⁹ [Revocation of EU Guarantees of Origin \(GoOs\) and Combined Heat and Power GoOs | Department for the Economy \(economy-ni.gov.uk\)](#)

Appendix 2: PSO Levy

The Public Service Obligation (PSO) levy is a government subsidy charged to all electricity customers in Ireland. It is designed by the Irish Government and currently provides support for renewable energy projects, such as wind energy, in order to help achieve a low-carbon future. The proceeds of the levy are used to contribute to the additional costs incurred by PSO-supported renewable electricity generation which are not recovered in the electricity market, typically via contracts that suppliers have in place with electricity generators.

For the purpose of GSPV, the share of each supplier's renewable electricity fuel source obtained via the PSO levy, is equally attributed amongst both their "Green" and "non-Green" customers. This is because all customers contribute to the PSO levy in their electricity charges, so are considered to have that proportion of PSO renewable electricity attributable to their usage.

This is calculated by dividing the total amount of PSO supported renewable generation that the supplier is contracted with by the supplier's total demand for the period. The PSO is then allocated to the Green and non-Green customers based on their percentage shares.

Whilst any individual supplier's customers are all provided the same allocation of PSO support generation, the allocation of PSO supported generation varies from supplier to supplier. This is because it is dependent upon the number and volume of PSO contracts that a supplier has. The proceeds from the PSO levy are paid to suppliers who have contracted with PSO supported electricity generators, who in turn pay for the electricity generated in line with the contract that it struck with the generator. Suppliers are free to compete for 15-year contracts with generators that qualify for PSO support. With this open competition, suppliers have entered into varying numbers of PSO supported contracts. In the calculation of a supplier fuel mix, the fuel mix considers:

- the PSO supported renewable contracts that the supplier has entered into;
- the number of GOs or REGOs that the supplier is declaring for the period in question; and
- any non-renewable generation that the supplier is declaring.