



# **All-Island Fuel Mix Disclosure and CO2 Emissions 2024**

## **Information Paper**

**SEM-25-060**

**14 November 2025**

## Executive Summary

The fuel mix and carbon dioxide (CO<sub>2</sub>) emissions disclosure for 2024 provides information on overall fuel mix and CO<sub>2</sub> emissions of electricity generation in the Single Electricity Market (SEM).

The carbon trading products used by suppliers for offsetting their emissions are certificates called Guarantee of Origin Certificates (GOs) in Ireland and Renewable Energy Guarantee of Origin Certificates (REGOs) in Northern Ireland. Each type of certificate counts as 1 MWh of electricity generated from renewable sources which can be bought by electricity suppliers and then be used to offset against non-renewable fuel source electricity. It should be noted that the fuel mix is calculated after accounting for these certificates and thus, not an indication of the actual amount of electricity produced from each fuel type. This is because electricity suppliers are allowed to use carbon trading products to offset emissions and assign these certificates to different fuels based on their consumption. The main fuel types listed in the annual report are gas and renewables.

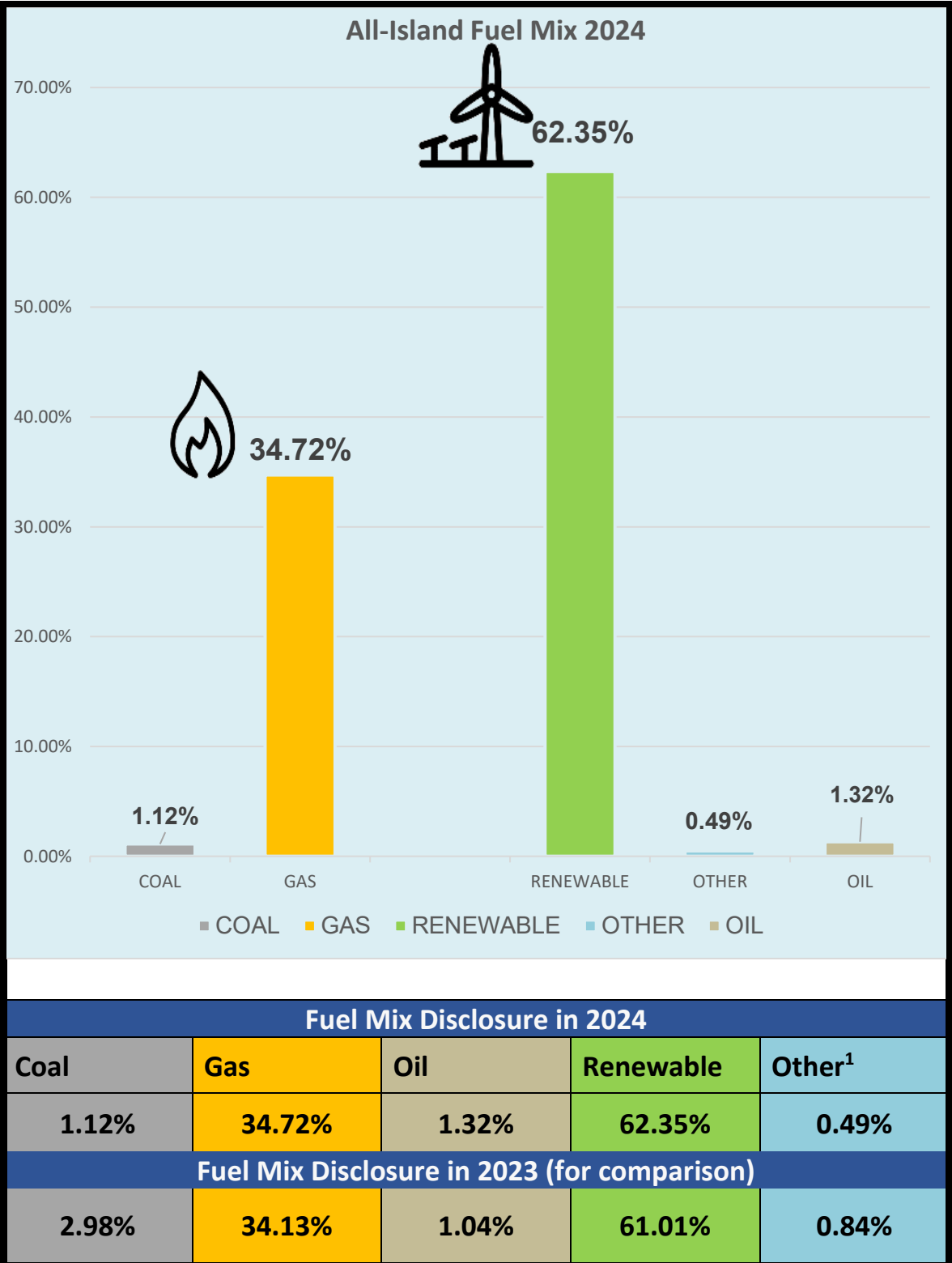
The annual Fuel Mix Disclosure (FMD) is published following a process carried out by the SEMO based on the procedure set out by a SEM Committee decision paper, [SEM/11/095](#). The SEM Committee decision paper [SEM/11/095](#) outlines the calculation methodology and assumptions that have been used to calculate the fuel mix and CO<sub>2</sub> emissions for 2024. It should be noted that the fuel mix of each electricity supplier (outlined in this paper) does not necessarily represent metered generation in Ireland or Northern Ireland (NI), as suppliers may claim the attributes of renewable electricity generated outside of the SEM through GOs or REGOs.

For 2024, the predominant fuels in the final residual mix were renewables and gas. These 2 fuels make up 97.07% of the fuel mix with the remaining portion made up of coal (1.12%), oil (1.32%) and waste (0.49%). Gas shows a modest increase from 34.13% in 2023 to 34.72% in 2024 and renewables have risen from 61.01% in 2023 to 62.35% in 2024. Peat is no longer part of the SEM fuel mix.

In total, 20,259,452 GO certificates were imported into the SEM in 2024, an 11% increase from the previous year, when the quantity imported was 18,130,181. It should be noted that all the fuel mix figures presented in this information paper are inclusive of GOs. **The inclusion of GOs in calculating the SEM Fuel Mix has the effect of increasing the figure for renewables and reducing the figures for non-renewables in the fuel mix when compared to the actual metered generation.**

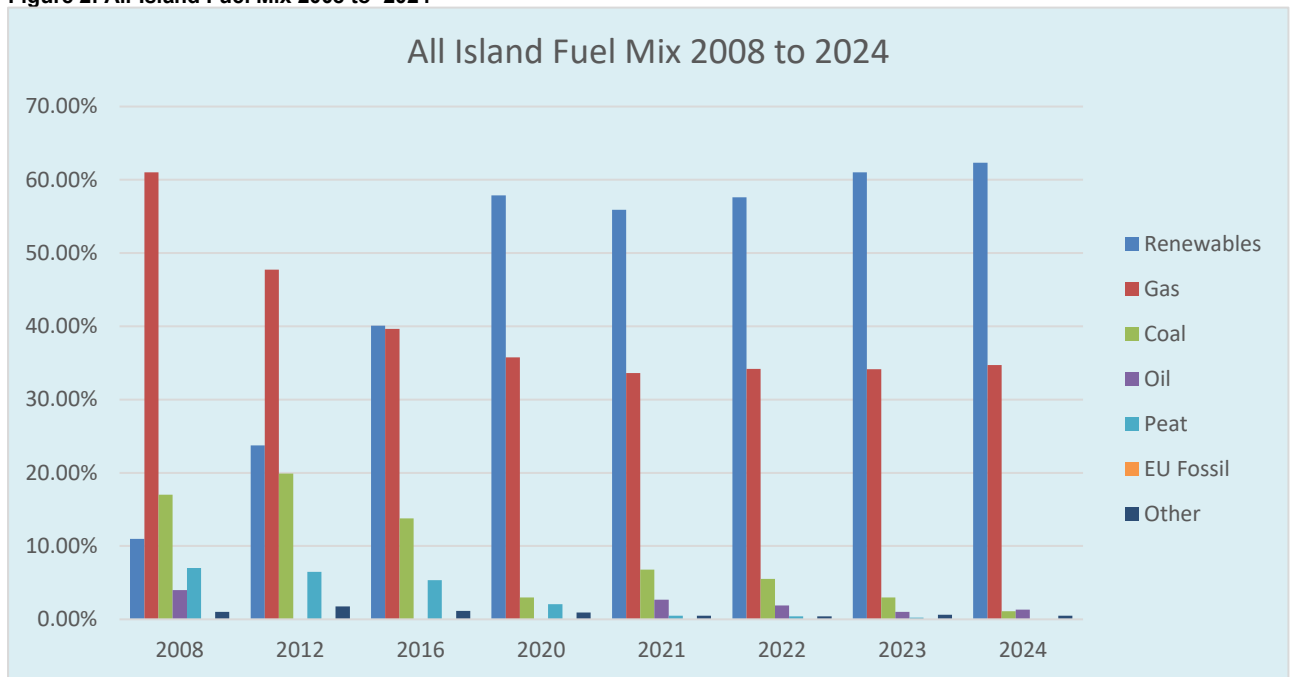
All Island Fuel Mix 2024

Figure1: All-Island Fuel Mix 2024.

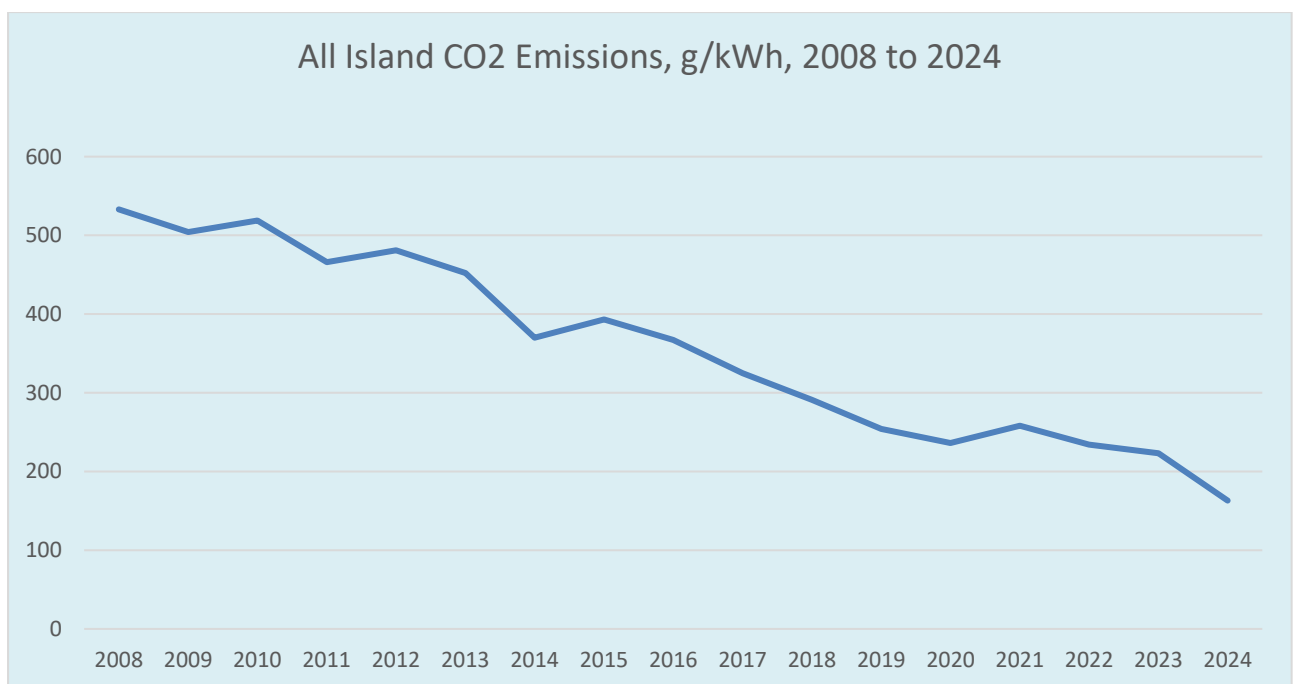


<sup>1</sup> For this report in 2024 Waste to Energy meets the criteria for inclusion in the “Other” category.

**Figure 2: All-Island Fuel Mix 2008 to 2024**



**Figure 3: All-Island Emission Factors 2008 to 2024 net of offsets**



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## Glossary of Terms and Abbreviations

| Abbreviation or term | Definition or meaning                                    |
|----------------------|----------------------------------------------------------|
| <b>AIB</b>           | Association of Issuing Bodies                            |
| <b>BEIS</b>          | Department for Business, Energy and Industrial Strategy  |
| <b>CO2</b>           | Carbon dioxide                                           |
| <b>DAERA</b>         | Department of Agriculture, Environment and Rural Affairs |
| <b>EEA</b>           | European Economic Area                                   |
| <b>EPA</b>           | Environmental Protection Agency                          |
| <b>EU</b>            | European Union                                           |
| <b>FMD</b>           | Fuel Mix Disclosure                                      |
| <b>GO</b>            | Guarantees of Origin                                     |
| <b>GB</b>            | Great Britain                                            |
| <b>gCO2/kWh</b>      | grams of carbon dioxide per kilowatt hour                |
| <b>MWh</b>           | Megawatt hour                                            |
| <b>NBDFW</b>         | Non-Biodegradable Fraction of Waste                      |
| <b>NI</b>            | Northern Ireland                                         |
| <b>Q</b>             | Quarter                                                  |
| <b>RA</b>            | Regulatory Authority                                     |
| <b>REGO</b>          | Renewable Energy Guarantees of Origin                    |
| <b>SEM</b>           | Single Electricity Market                                |
| <b>SEMO</b>          | Single Electricity Market Operator                       |
| <b>UK</b>            | United Kingdom                                           |

# 1. Introduction

## 1.1 Background

The purpose of this Information paper is to set out the 2024 fuel mix and carbon dioxide (CO<sub>2</sub>) emissions figures for electricity suppliers operating in the all-island wholesale Single Electricity Market (SEM). This is shown on average across the island in Sections 2 and 3 of this information paper, along with year-on-year trends, and per supplier in Section 4. The fuel mix and CO<sub>2</sub> emissions disclosures are taken from data provided to the RAs by the Single Electricity Market Operator (SEMO).

## 1.2 Guarantees of Origin (GOs)

Guarantees of Origin (GOs) are electronic certificates issued for energy generated from renewable sources in the EEA Member States and are issued to renewable generators that are not in support schemes<sup>2</sup>. These are tradeable instruments at the European level and do not need to follow the physical flow of energy. The Association of Issuing Bodies (AIB)<sup>3</sup> operates a hub where such certificates can be traded between countries. This allows suppliers to purchase the renewable benefit of certain generators across Europe and include it in their total fuel mix. GOs are both exported from SEM and imported into SEM, to and from the rest of Europe.

Renewable generators that are signed up to the AIB's GO scheme are issued GOs per megawatt hour (MWh) of generation which can then be transferred to suppliers to use in their fuel mix disclosure. Each GO (or REGO in NI) can be used to offset against one MWh of non-renewable generation or add to the figure for renewable generation. Each year, electricity suppliers submit a completed fuel mix declaration form to SEMO which then performs the fuel mix disclosure (FMD) calculations on behalf of the RAs.

## 1.3 The calculation process of the final All-Island Fuel-Mix

It is the role of SEMO to administer and calculate the fuel mix figures from the information provided by suppliers. The supplier fuel mix and associated environmental impact information (emissions) are calculated by SEMO in accordance with the SEM Committee's methodology. This methodology can be found in the SEM Committee Decision Paper "*Fuel Mix Disclosure*

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<sup>2</sup> Note that in NI generators who accredited for the Northern Ireland Renewables Obligation (NIRO) scheme can also receive REGOs/GOs.

<sup>3</sup> The EU Residual Mix was calculated by REDISS from 2011 to 2014, and by AIB from 2015.

in the Single Electricity Market: Calculation Methodology Decision Paper” ([SEM/11/095](#)) and is used to calculate the fuel mix and CO2 emissions for 2024.

At a high level, and in accordance with [SEM/11/095](#), the final fuel mix figure for a supplier consists of the following:

- non-renewable generation attributes;
- Guarantees of Origin (GOs) or Renewable Energy Guarantees of Origin (REGOs);
- renewable generation attributes assigned to a supplier that is not included in the GO scheme; and
- the Residual Mix<sup>4</sup> or European Union (EU) Residual Mix<sup>5</sup>.

## 1.4 Fuel Mix and Metered Generation

Attention should be drawn to the following when considering the fuel mixes and CO2 emission intensities set out in this information paper:

- Firstly, **the all-island and jurisdictional fuel mixes - resulting from the application of trading in GOs and REGOs - have the potential to vary significantly from the actual renewable generation produced within each jurisdiction.** This depends on the quantity of GOs and REGOs imported or exported<sup>6</sup> to or from Ireland and Northern Ireland in respect of the 12-month period for which the calculated fuel mix applies.
- The key function of the GO is to demonstrate that a given share or quantity of energy was produced from a renewable source in the EEA member states. A single GO is issued per MWh of electricity generated and this one GO can only be used once for the purposes of the fuel mix disclosure. Therefore, there is no double-counting of the same unit of European renewable electricity generation in the fuel mix disclosure.
- Secondly, in the event that there is a deficit of generation attributes to meet overall All-Island demand, the European Residual Mix will be used to meet the deficit. This also – but to a lesser extent - has the ability to lead to a fuel mix that differs from actual metered generation. It must be noted that in recent years, SEM was not in deficit of generation attributes and thus has not used European Residual Mix in SEM fuel mix.

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<sup>4</sup> The Residual Mix is the mix of all unclaimed electricity in the system. It is measured by taking the total metered generation both In-SEM and Out-of-SEM, and deducting from this the four categories of energy that can be claimed by a supplier, in the following order: Public Service Obligation (PSO) energy; Guarantees of Origin (GOs); Renewable Energy Guarantees of Origin (REGOs); Generator Attributes – total amount of non-renewable generation from a fossil-fuelled unit registered by a supplier to be tracked by the calculating body.

<sup>5</sup> The EU Residual Mix is the mix of all unclaimed electricity at the European level.

<sup>6</sup> A total of 18.13 million imported GO certificates were declared by suppliers for disclosure in the 2023 fuel mix and 20,259,452 in 2024. One GO represents 1 MWh of electricity produced from a renewable source.

For the reasons above, the FMD and CO2 emission figures for a given disclosure period may not necessarily be reflective of the actual all-island electricity generation for a given calendar year.

### 1.5 Recognition of REGOs and GOs in Ireland and Northern Ireland

As a result of Brexit, Renewable Energy Guarantees of Origin (REGOs) from the United Kingdom (UK) are not useable as renewable certificates within European Union (EU) Member States (including Ireland) since 1 January 2021.<sup>7</sup>

In the previous All-Island FMD, SEMO, in conjunction with both RAs, provided an update on GOs and REGOs arrangements in the EU, NI and UK. The latest arrangements on GOs and REGOs in the EU, NI and UK are summarised as follows:

- **For Suppliers licensed in Northern Ireland:** The UK Government announced in July 2022 its intention to cease the recognition of EU GOs from April 2023. The Government will ensure Ofgem will continue to issue REGOs to allow electricity suppliers in NI to comply with their FMD obligations.<sup>8</sup>

It should be noted that the NI Government has not made a decision to disallow the use of EU GOs in NI. However, market participants should monitor communications or agreements from either the EU, NI or UK authorities with regards to this position.

- **For Suppliers licensed in Ireland:** From 1 January 2021, UK REGOs are not accepted for import or cancellation for FMD in Ireland.

The above arrangements are currently in place, should subsequent communications or agreements from either the EU, NI or UK authorities indicate a change in this position, both RAs in conjunction with SEMO, will as far as is practicable, provide market participants with an update on any changes to any future FMD processes.

### 1.6 Publication of Fuel Mix by Suppliers

The publication of the fuel mix of suppliers and the provision of information regarding the environmental impact of electricity produced from that fuel mix is required by Article 18(6) and point 5 of Annex I of Directive (EU) 2019/944<sup>9</sup>. It should be noted that the fuel mix and CO2 disclosures have to be published on bills from electricity suppliers to customers in Ireland and Northern Ireland (NI) no later than two months from the publication of this paper. The fuel mix

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

<sup>8</sup> <https://www.ofgem.gov.uk/environmental-and-social-schemes/renewable-energy-guarantees-origin-rego/renewable-energy-guarantees-origin-rego-electricity-suppliers-and-generators/guarantees-origin-goos>

<sup>9</sup> The requirements in Article 3(9) of [Directive 2009/72/EC](#), which is now repealed, is recast as [Directive \(EU\) 2019/944](#).

information should be presented (“disclosed”) on electricity bills in accordance with SEM/11/095. A template for this purpose is reproduced in Appendix 1 of this paper. In particular the RA would like to remind suppliers of the following:

- Where fuel mix information is on the back of a bill, reference must be made to it on the front of the bill;
- While radioactive waste information is required by of Directive (EU) 2019/944, this figure is zero for all suppliers in 2024 and therefore need not be included with the 2024 FMD information on bills;
- To ensure consistency across suppliers, percentages should be rounded to one decimal place;
- CO2 emissions information should be given in the unit grams of CO2 per kilowatt hour (gCO2/kWh);
- Where separate products associated with a particular fuel mix are offered to certain customers, all the supplier’s customers should receive information, on request, regarding the fuel mix associated with their electricity (not simply the supplier’s average fuel mix) in accordance with SEM/11/095; and
- The 2024 fuel mix and CO2 emissions information must be on all bills within two months of the publication of this paper.

The widely used unit of measure<sup>10</sup> gCO2/kWh is the preferred unit of measure for reporting on emissions intensity associated with electricity generation. For consistency, the unit gCO2/kWh should be used in billing, advertising, and promotional material of suppliers, including on website presentations, customer bills, infographics, annual reports, etc.

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<sup>10</sup> The unit of measure kg CO2/MWh was used in the 2018 report and for some years before that. Use of the unit gCO2/kWh was re-introduced for the 2019 report for disclosures and continues.

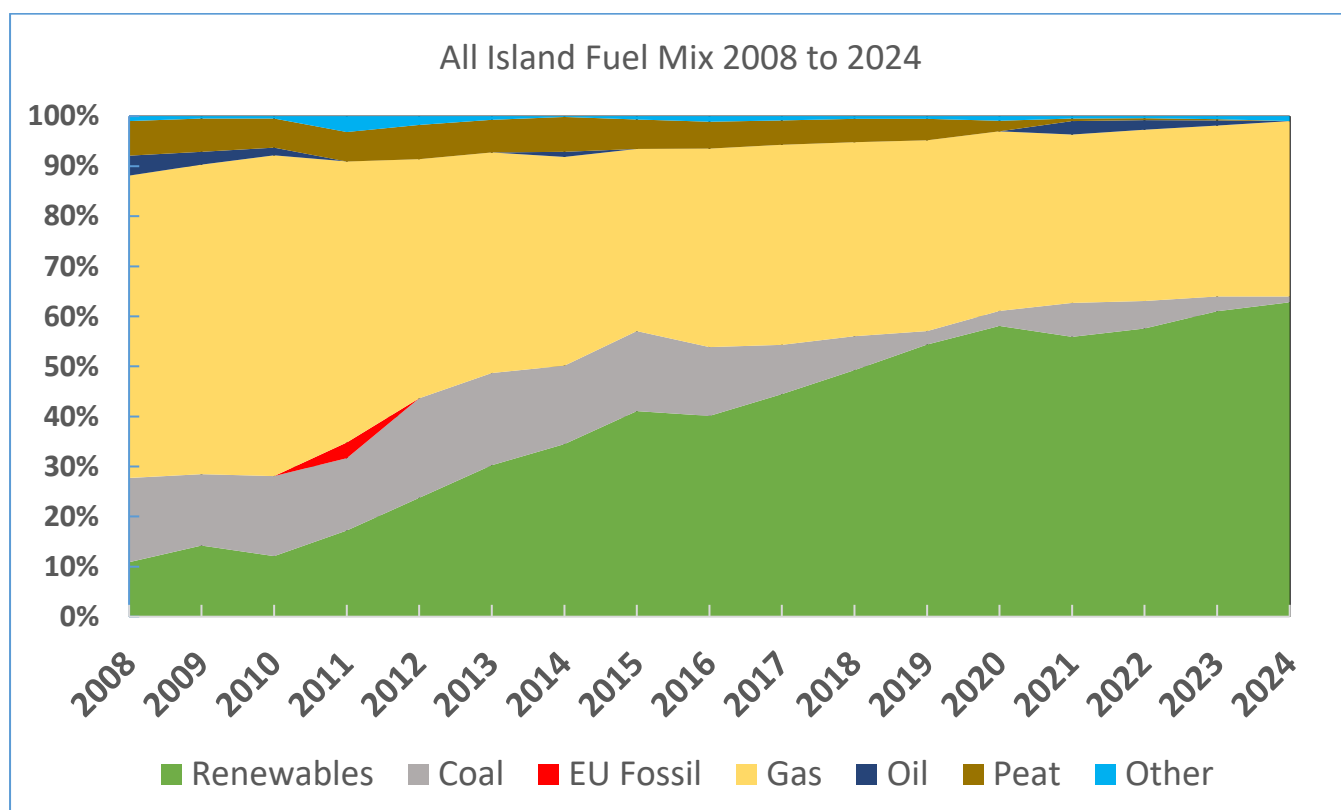
## 2. Average All-Island Fuel Mix 2024

This section sets out the 2024 and year-on-year fuel mix for the all-island SEM.

| Fuel Mix Disclosure in 2024                  |        |       |           |       |
|----------------------------------------------|--------|-------|-----------|-------|
| Coal                                         | Gas    | Oil   | Renewable | Other |
| 1.12%                                        | 34.72% | 1.32% | 62.35%    | 0.49% |
| Fuel Mix Disclosure in 2023 (for comparison) |        |       |           |       |
| 2.98%                                        | 34.13% | 1.04% | 61.01%    | 0.84% |

For 2024, the predominant fuels in the final residual mix were renewables and gas. The share of coal has decreased from 2.98% in 2023 to 1.12% in 2024 and the share of renewables has increased by 1.34% to 62.35 %. A large proportion of the renewables were made up of imports claimed from outside of the SEM. In total, 20,259,452 GO certificates were imported into the SEM in 2024, an 11.7% increase from the previous year.

Figure 5: All-Island Fuel Mix 2008-2024 (inclusive of GOs & REGOs). Source: SEMO Data



In accordance with [SEM/11/095](#), the “Other” category consists of the aggregate of all fuels in a given year that individually represent less than 1% of the final overall generation. In 2024, waste to energy (0.49%) meets the criteria for inclusion in the “Other” category.

**Table 1: Fuel-Types Comprising “Other” Category by Year. Source: SEMO Data**

| <b><u>Year</u></b> | <b><u>Fuel Type</u></b> |
|--------------------|-------------------------|
| <b>2016</b>        | Waste to Energy, Oil    |
| <b>2017</b>        | Waste to Energy, Oil    |
| <b>2018</b>        | Waste to Energy, Oil    |
| <b>2019</b>        | Waste to Energy, Oil    |
| <b>2020</b>        | Waste to Energy, Oil    |
| <b>2021</b>        | Waste to Energy, Peat   |
| <b>2022</b>        | Waste to Energy, Peat   |
| <b>2023</b>        | Waste to Energy, Peat   |
| <b>2024</b>        | Waste to Energy         |

As for previous years, the significant renewable and gas claims meant that there was a surplus of claims and indigenous generation compared to supplier demand leading to a net surplus of Residual Demand. This meant that there was no need to use the EU Residual Mix for 2024 leading to zero values for Nuclear and EU Fossil which are components of the EU Residual Mix. Table 2 below provides the All-Island Mix by year.

**Table 2: All-Island Mix by Year. Source: SEMO Data**

| <b><u>Fuel</u></b>     | <b><u>2024</u></b> | <b><u>2023</u></b> | <b><u>2022</u></b> | <b><u>2021</u></b> | <b><u>2020</u></b> | <b><u>2019</u></b> | <b><u>2018</u></b> | <b><u>2017</u></b> |
|------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| <b>Coal</b>            | 1.12%              | 2.98%              | 5.50%              | 6.80%              | 2.98%              | 2.63%              | 6.77%              | 9.83%              |
| <b>EU Fossil</b>       | 0.00%              | 0.00%              | 0.0%               | 0.0%               | 0.00%              | 0.00%              | 0.00%              | 0.00%              |
| <b>Gas</b>             | 34.72%             | 34.13%             | 34.20%             | 33.60%             | 35.75%             | 37.86%             | 38.51%             | 39.96%             |
| <b>Nuclear</b>         | 0.00%              | 0.00%              | 0.00%              | 0.00%              | 0.00%              | 0.00%              | 0.00%              | 0.00%              |
| <b>Oil</b>             | 1.32%              | 1.04%              | 1.90%              | 2.70%              | 0.41%              | 0.66%              | 0.59%              | 0.60%              |
| <b>Peat</b>            | 0.00%              | 0.22%              | 0.40%              | 0.50%              | 2.07%              | 4.25%              | 4.63%              | 4.86%              |
| <b>Renewable</b>       | 62.35%             | 61.01%             | 57.60%             | 55.90%             | 57.86%             | 54.04%             | 48.95%             | 44.47%             |
| <b>Waste to Energy</b> | 0.49%              | 0.63%              | 0.40%              | 0.50%              | 0.94%              | 0.56%              | 0.55%              | 0.28%              |

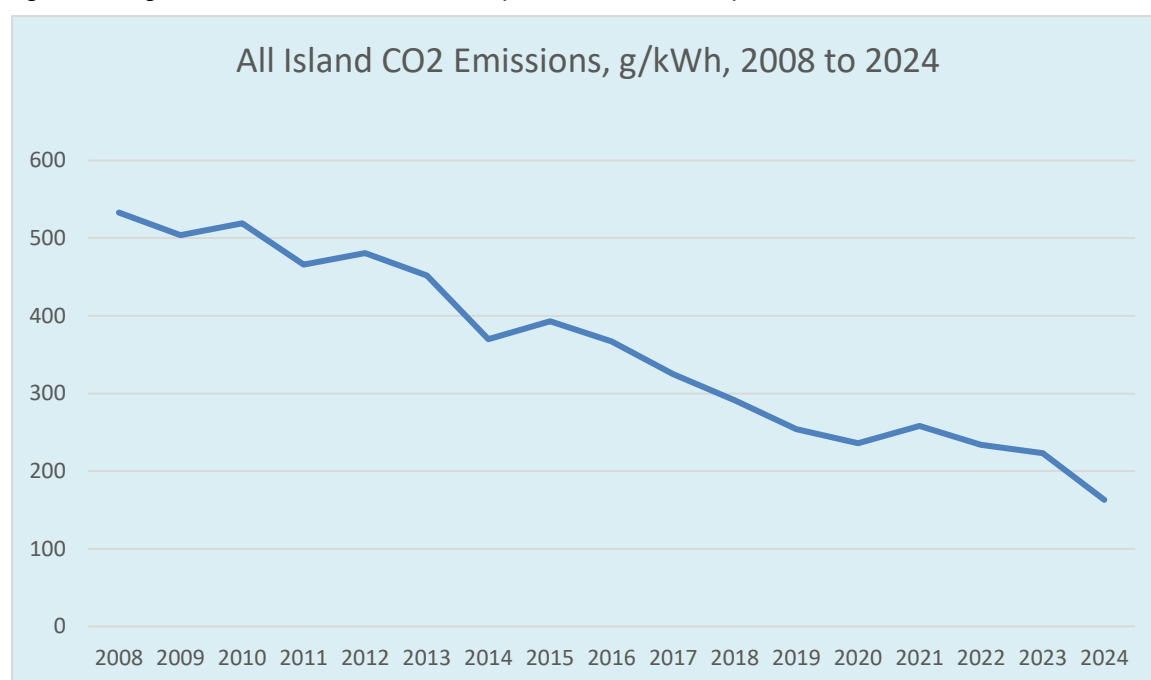
### 3. Average All-Island CO2 Emissions 2024

Emissions data for each generator in the SEM is supplied annually to SEMO by the EPA (Environmental Protection Agency) for Ireland and the DAERA (Department of Agriculture, Environment and Rural Affairs) for Northern Ireland.

The emission figures are grouped according to fuel type and divided by metered generation to give specific emission factors for each fuel. These values and imported GOs are then used to calculate the average all-island CO2 Emissions Factor and each individual supplier's CO2 Emissions Factor.<sup>11</sup>

The average All-Island CO2 emissions per kWh of electricity has decreased by 26.9% between 2023 and 2024, from 223g/kWh in 2023 to 163 g/kWh in 2024. This decrease is predominantly driven by an increase in renewable generation and reduced coal, oil, and peat generation in 2024 with peat generation now at zero. The large number of imported GOs has also contributed to this lowering of the all-island emissions factor.

Figure 6: Average All-Island CO2 Emissions 2008-20223 (inclusive of GOs & REGOs). Source: SEMO data.



<sup>11</sup> This is done in line with the existing EU legislation.

## 4. Suppliers' Fuel Mix and CO2 Emissions 2024

Following the information in Section 2 and Section 3 above, this section sets out the fuel mix and CO2 emissions for each electricity supplier.

The fuel mix calculation is carried out on an individual licence basis. Up to and including the 2024 year, where a supplier operates as a single company but holds separate licences (such as a supplier that operates in both jurisdictions), those licences that have excess generation attributes are distributed among the licences with excess demand: the generation attributes can be distributed to the excess demand within the single company prior to using the Residual Mix if the company holds multiple licences.

Table 3 below shows the individual fuel mixes and CO2 emissions in grams per kWh of electricity for each supplier. Those which are below the All-Island Emissions Factor are highlighted in Green. Suppliers with an Emissions Factor above the All-Island Emissions Factor are highlighted in Red. The average All-Island fuel mix, as declared by the supply companies, (as per section 2) is also provided for reference.

Table 3: Declared Suppliers' Fuel Mix by Fuel Type in 2024 (inclusive of GOs & REGOs). Source: SEMO Data

| Supplier                                                                            | Jurisdiction      | Coal  | Gas    | Renewable | Oil   | Other | gCO2 /kWh |
|-------------------------------------------------------------------------------------|-------------------|-------|--------|-----------|-------|-------|-----------|
|  | All-Island        | 1.12% | 34.72% | 62.35%    | 1.32% | 0.49% | 163       |
| Bord Gais Energy                                                                    | ROI               | 0.00% | 0.00%  | 100%      | 0.00% | 0.00% | 0.00      |
| Budget Energy                                                                       | NI                | 0.00% | 0.00%  | 100%      | 0.00% | 0.00% | 0.00      |
| Electric Ireland <sup>12</sup>                                                      | All-Island        | 0.80% | 31%    | 67%       | 0.90% | 0.3%  | 137       |
|                                                                                     | ROI <sup>13</sup> | 0.90% | 29.2%  | 68.5%     | 1.00% | 0.40% | 134       |
|                                                                                     | NI <sup>14</sup>  | 0.00% | 45.43% | 54.57%    | 0.00% | 0.00% | 161       |

<sup>12</sup> Note that all of ESB's electricity supply licences (both ROI and NI) are branded as Electric Ireland.

<sup>13</sup> ESB Customer Supply and ESB ROI Independent Energy combined

<sup>14</sup> ESB NI Independent Energy

|                                                 |     |       |        |         |       |       |      |
|-------------------------------------------------|-----|-------|--------|---------|-------|-------|------|
| <b>Energia</b>                                  | ROI | 0.78% | 22.47% | 75.48%  | 0.93% | 0.34% | 108  |
| <b>Panda Power</b>                              | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Go Power<sup>15</sup></b>                    | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
|                                                 | NI  | 1.49% | 42.7%  | 53.4%   | 1.76% | 0.66% | 205  |
| <b>Power NI<sup>16</sup></b>                    | NI  | 1.86% | 53.46% | 41.65%  | 2.20% | 0.82% | 256  |
| <b>Click Energy</b>                             | NI  | 1.07% | 30.86% | 66.32%  | 1.27% | 0.47% | 148  |
| <b>SSE Airtricity</b>                           | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
|                                                 | NI  | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Flogas Enterprise Solutions<sup>17</sup></b> | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
|                                                 | NI  | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Pinergy</b>                                  | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Arden Energy</b>                             | ROI | 2.22% | 63.85% | 30.32%  | 2.63% | 0.98% | 306  |
| <b>Orsted Ireland Green Energy<sup>18</sup></b> | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Captured Carbon</b>                          | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Cenergise Trading</b>                        | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Ecopower</b>                                 | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |

<sup>15</sup> LCC ROI and NI are branded as GO Power.

<sup>16</sup> Power NI is a combination of the Power NI and Energia NI licences which are all under the Power NI brand and considered together for FMD.

<sup>17</sup> Naturgy has rebranded as Flogas Enterprise Solutions NI and ROI. This is different again from Flogas Natural Gas Limited.

<sup>18</sup> BRI Green Energy was bought by Orsted and now go by the name Orsted Ireland Green Energy.

|                                   |     |       |        |         |       |       |      |
|-----------------------------------|-----|-------|--------|---------|-------|-------|------|
| <b>Community Power</b>            | ROI | 1.79% | 51.55% | 43.74%  | 2.12% | 0.79% | 247  |
| <b>ElectroRoute Energy Supply</b> | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Flogas Natural Gas</b>         | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>3T Power</b>                   | NI  | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>Axpo</b>                       | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |
| <b>PrePay Power</b>               | ROI | 2.23% | 64.18% | 29.96%  | 2.64% | 0.98% | 308  |
| <b>Edenderry Supply Company</b>   | ROI | 0.00% | 0.00%  | 100.00% | 0.00% | 0.00% | 0.00 |

The Residual Mix CO2 Emissions Factor has decreased from 461 g/kWh in 2023 to 341g/kWh in 2024. It should be noted that suppliers who did not submit a fuel mix declaration to SEMO for this FMD have been assigned the Residual Mix and are highlighted as such in Table 4.

**Table 4: Suppliers assigned the Residual Mix in 2024 (inclusive of GOs & REGOs). Source: SEMO Data**

| <b>Suppliers assigned All Island Residual Mix</b> | <b>Jurisdiction</b> | <b>Coal</b> | <b>Gas</b> | <b>Renewable</b> | <b>Oil</b> | <b>Other</b> | <b>gCO2 /kWh</b> |
|---------------------------------------------------|---------------------|-------------|------------|------------------|------------|--------------|------------------|
| <b>Waterpower Engineering</b>                     | ROI                 | 2.33%       | 67.00%     | 26.88%           | 2.76%      | 1.03%        | 341              |

Two self-suppliers<sup>19</sup> made a declaration for the purposes of fuel mix disclosure. These associated fuel mixes have been included in Table 5 below.<sup>20</sup>

**Table 5: Self-Suppliers' Fuel Mix by Fuel Type in 2024 (inclusive of GOs & REGOs). Source: SEMO Data**

| <b>Self-Supplier</b>                 | <b>Jurisdiction</b> | <b>Coal</b> | <b>Gas</b> | <b>Renewable</b> | <b>Oil</b> | <b>Other</b> | <b>gCO2 /kWh</b> |
|--------------------------------------|---------------------|-------------|------------|------------------|------------|--------------|------------------|
| <b>Dublin Waste to Energy Supply</b> | ROI                 | 0.00%       | 0.00%      | 100.00%          | 0.00%      | 0.00%        | 0.00             |
| <b>Statkraft Markets GmbH</b>        | ROI                 | 0.00%       | 0.00%      | 100.00%          | 0.00%      | 0.00%        | 0.00             |

<sup>19</sup> A self-supplier is a supply company which supplies electricity only to its own site and which does not compete to supply energy to any third party.

<sup>20</sup> It should be noted that the purpose of this paper is to provide information to customers on the fuel mix and CO2 emissions of their electricity supply. Only suppliers serving electricity customers are required to disclose their assigned fuel mix.

## Appendix 1: Presentation of Information on Bills

### Default Presentation of Information<sup>21</sup>

The fuel mix information should be presented on electricity bills in accordance with [SEM/11/095](#). For this purpose, a template from this decision paper is reproduced below.<sup>22</sup>

Suppliers who offer green source products in Ireland should refer to Section 3.5.3 of the CRU's Decision paper, [CER/15/205](#), on the "*Regulation of Green Source Products in the Electricity Retail Market*".

| <b>SUPPLIER Z Disclosure Label</b>                                                                                                                                                                                                                                                            |                                           |                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------|
| <b>Applicable Period: January 2024 to December 2024</b>                                                                                                                                                                                                                                       |                                           |                                                       |
| <b>Electricity supplied has been sourced from the following fuels:</b>                                                                                                                                                                                                                        | <b>% of total</b>                         |                                                       |
|                                                                                                                                                                                                                                                                                               | <b>Electricity supplied by SUPPLIER Z</b> | <b>Average for All Island Market (for comparison)</b> |
| Coal                                                                                                                                                                                                                                                                                          | X %                                       | X %                                                   |
| Natural Gas                                                                                                                                                                                                                                                                                   | X %                                       | X %                                                   |
| Nuclear                                                                                                                                                                                                                                                                                       | X %                                       | X %                                                   |
| Renewable                                                                                                                                                                                                                                                                                     | X %                                       | X %                                                   |
| Peat                                                                                                                                                                                                                                                                                          | X %                                       | X %                                                   |
| Oil                                                                                                                                                                                                                                                                                           | X %                                       | X %                                                   |
| EU Fossil                                                                                                                                                                                                                                                                                     | X %                                       | X %                                                   |
| Other                                                                                                                                                                                                                                                                                         | X %                                       | X %                                                   |
| <b>Total</b>                                                                                                                                                                                                                                                                                  | 100 %                                     | 100 %                                                 |
| <b>Environmental Impact</b>                                                                                                                                                                                                                                                                   |                                           |                                                       |
| CO2 Emissions                                                                                                                                                                                                                                                                                 | X g/kWh                                   | X g/kWh                                               |
| Your specific fuel mix may differ from the fuel mix shown because SUPPLIER Z offers green source products. For information on your fuel mix and on the environmental impact of your electricity supply visit <a href="#">www.SUPPLIER Z.ie</a> or, for further details call 00XXX X XXX XXXXX |                                           |                                                       |

<sup>21</sup> Refer to [SEM/11/095](#) for further detail on presentation requirements. Note that the fuel categories used each year can vary.

<sup>22</sup> Please refer to Section 1.7 of [SEM/11/095](#) for further details.

## Appendix 2: All-Island Fuel Mix 2006-2024

Table 5: Fuel Mix 2005-2022 (Percentage share of total inclusive of GOs & REGOs).

|                     | 2006  | 2007  | 2008  | 2009  | 2010  | 2011  | 2012  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| <b>Coal %</b>       | 19.00 | 18.00 | 17.00 | 14.24 | 15.98 | 14.44 | 19.89 | 15.71 | 16.02 | 13.76 | 9.83  | 6.77  | 2.63  | 2.98  | 6.80  | 5.50  | 2.98  | 1.12  |
| <b>EU Fossil %</b>  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 3.12  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| <b>Gas %</b>        | 50.00 | 55.00 | 61.00 | 61.85 | 64.06 | 56.16 | 47.74 | 41.60 | 36.36 | 39.66 | 39.96 | 38.51 | 37.86 | 35.75 | 33.60 | 34.20 | 34.13 | 34.72 |
| <b>Oil %</b>        | 9.00  | 6.00  | 4.00  | 2.53  | 1.59  | 0.00  | 0.00  | 1.06  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 2.70  | 1.90  | 1.04  | 1.32  |
| <b>Renewables %</b> | 11.00 | 11.00 | 11.00 | 14.23 | 12.11 | 17.21 | 23.74 | 34.46 | 41.06 | 40.09 | 44.47 | 48.95 | 54.04 | 57.86 | 55.90 | 57.60 | 61.23 | 62.35 |
| <b>Peat %</b>       | 7.00  | 6.00  | 7.00  | 6.70  | 5.78  | 5.88  | 6.86  | 6.95  | 5.90  | 5.35  | 4.86  | 4.63  | 4.25  | 2.07  | 0.50  | 0.40  | 0.22  | 0.00  |
| <b>Other %</b>      | 4.00  | 4.00  | 1.00  | 0.45  | 0.48  | 3.18  | 1.77  | 0.17  | 0.17  | 0.15  | 0.28  | 0.55  | 0.56  | 0.94  | 0.50  | 0.40  | 0.63  | 0.49  |

### Note:

- Figures from 2005 to 2007 relate to Ireland-only and calculations are based on a pre-SEM methodology.
- Figures for 2008, 2009 and 2010 relate to Ireland and Northern Ireland and are based on the Interim Arrangements Methodology ([SEM/09/081](#)).
- Figures for 2011 onwards relate to Ireland and Northern Ireland and are based on the SEM Committee Decision Paper Fuel Mix Disclosure in the Single Electricity Market: Calculation Methodology Decision Paper ([SEM/11/095](#)), referenced in the Related Documents section of this paper.
- The threshold for a fuel-types inclusion in the “Other” category is <1% of Final All-Island Mix. The “Other” category consists of Non-Biodegradable Fraction of Waste (NBDFW) and EU Fossil (only for 2011).