NATIONAL OIL RESERVES AGENCY
AN GHNÍOMHAIREACHT CHÚLTACA OLA NÁISIÚNTA

THE RENEWABLE TRANSPORT FUEL OBLIGATION

GUIDANCE ON:

THE RENEWABLE TRANSPORT FUEL OBLIGATION

&

APPLYING FOR RTFO CERTIFICATES AND CARBON SAVINGS

&

REPORTING AND DEMONSTRATING COMPLIANCE WITH THE SUSTAINABILITY AND GHG SAVINGS CRITERIA

&

REFUELEU AVIATION COMPLIANCE

BYRNE Ó CLÉIRIGH CONSULTANTS

evelyn PARTNERS

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This document does not purport to be a legal interpretation of the legislation. No party shall be entitled to rely solely on any information or data provided in this document.

If you have any queries in relation to its content, please direct them to the NORAn RTFO Team (BOS@nora.ie).

1 Introduction

History

1.1 This guidance document was originally issued in May 2013 to accompany the first issue of the BOS Application and Sustainability Procedure (ref. 457-X0066).

1.2 In July 2015, the BOS Application and Sustainability Procedure was updated and reissued. That revision was necessitated by the significant developments made to operating the BOS in the intervening period.

1. One of these developments was the switch to an online method of applying for and transferring BOS Certificates, via the BOS Online System (BOSOS).
2. Another introduced a specific BOS interface for the UK & Ireland Carbon Calculator, which NORA arranged to have developed in cooperation with the relevant agency in the UK (the UK RTFO)[1].
3. A third was to refine the method that BOS account holders are required to follow for reporting, verifying and auditing of information relating to the sustainability of renewable fuels. New guidance on this matter was published in 457-X0117 *Reporting Verification and Auditing of Information to be Maintained by BOS account holders* in February 2014.

1.3 In January 2017, the BOS Application and Sustainability Procedure was updated and reissued to take account of changes in legislation, including the mandatory submission of applications for BOS Certificates on a quarterly basis and changes to the GHG emission savings criteria.

1.4 In March 2018, the BOSOS was again modified to cater for two significant legislative changes.

1. The Department of Communications, Climate Action and Environment (DCCAE) transposed Directive 2015/1513 (the ILUC Directive) in May 2018, via SI 169 of 2018.
2. DCCAE published SI 160 of 2017[2] which transposed Article 7a of the Fuel Quality Directive (FQD)[3]. This introduced a requirement on fuel suppliers to reduce the carbon intensity of the fuel they supply to road vehicles and non-road mobile machinery (NRMM) by 6% by 2020. This legislation places responsibility on NORA to put in place guidelines to enable fuel suppliers to report the quantity of transport fuel supplied to the market and the lifecycle greenhouse gas emissions per unit of energy. Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

1.5 In July 2022, the Department of Energy, Climate & Communications (DECC) published SI 350 of 2022. SI 350 transposed the recast Renewable Energy Directive (RED II) into Irish law. To achieve this, SI 350 amended several pieces of legislation, including the NORA Act (No. 7 of 2007) and the Renewable Energy Regulations (SI 33 of 2012), and introduced new requirements. With the increased scope brough about by SI 350, the Biofuel Obligation

[1] This tool is now known as the UK & Ireland Carbon Calculator and may be downloaded from http://www.nora.ie/RTFO-documentation/online-software-resources.274.html

[2] https://www.nora.ie/_files/ugd/b984d0_85e31b9e6a3d4e09b38aee8d5a6731a3.pdf

[3] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0030

Scheme became the Renewable Transport Fuel Obligation (RTFO). There were also several Regulations that were brought into effect under the NORA Act to set, for example, the obligation rate (SI 709 of 2022), the buy-out charge (SI 43 of 2023 and SI 44 of 2023), the minimum percentage ethanol in gasoline (SI 142 of 2023) and the number of additional Certificates that are awarded for certain renewable fuels (SI 143 of 2023).

1.6 In February 2023, the EU Commission published two Implementing Regulations dealing with Renewable Fuels of Non-Biological Origin (RFNBOs): 2023/1184, and 2023/1185. The Regulations provide a methodology for the production of RFNBOs and the minimum threshold for GHG savings of RFNBOs (as well as for RCFs).

1.7 In October 2023, the EU Commission adopted Regulation 2023/2405 ensuring a level playing field for sustainable air transport (the ReFuelEU Aviation Regulations). This Regulation sets a minimum share of sustainable aviation fuel (SAF) in aviation fuel supplied to aircraft operators at Union airports from 2025.

1.8 Article 25 (4) of the revised Renewable Energy Directive (RED III), requires 'credits' to be awarded to economic operators that supply renewable electricity to EVs via public recharging points. These credits will be issued in the form of RTFO Certificates from a date yet to be agreed. The information contained within this document in relation to the supply of renewable electricity to EVs via public recharging points will be applicable when the supporting legislation has been published.

Purpose and Scope

1.9 The reason for revising this document now is to bring this Guidance document up-to-date in the context of the changes referred to in paragraphs 1.5 to 1.8, to incorporate other minor changes since the last revision of this guidance, and to address matters that have been raised in relation to the operation of the scheme.

1.10 As a consequence of the introduction of SI 350, in general, references to the 'BOS' and the 'BOSOS' have all changed. The BOS is now referred to as the RTFO (Renewable Transport Fuel Obligation) and the BOSOS is now referred to as the RTFO Portal.

1.11 The scope of the RTFO has increased. As well as biofuel and biogas, it also includes for renewable liquid and gaseous transport fuels of non-biological origin (RFNBOs), as well as recycled carbon fuels (RCFs) and renewable electricity supplied to public recharging points.

1.12 The purpose of the RTFO has also expanded. As well as administering compliance with the renewable transport fuel obligation (25% by energy in 2025) and the carbon intensity reduction requirement (6%), the RTFO administers compliance with the advanced biofuel obligation (1.5% by energy in 2025). It also administers compliance with the limitation on biofuels and biogas produced from food and feed crops (the crop cap), and the limitation on biofuels and biogas produced from feedstocks with a high indirect land-use change risk.

1.13 NORA was appointed as the competent authority for fuel suppliers under the ReFuelEU Aviation Regulations (2023/2405). This revised document contains information on how aviation fuel suppliers shall demonstrate compliance with the Regulations.

Reference Sources

1.14 The underpinning European legislation is the recast Renewable Energy Directive (RED III)[4] and Article 7a of the Fuel Quality Directive (FQD)[5]. RED III promotes increasing renewable energy in transport by mandating that 29% of the energy consumed in transport in Member States in 2030 shall be from renewable sources. Article 7a of the FQD promotes reducing the carbon intensity of the fuels used in transport by mandating fuel suppliers to reduce the carbon intensity of the fuels they supply by 6% by 2020 (and thereafter). Both Directives rely on renewable fuels to support achieving the targets and both Directives require compliance with the same sustainability and GHG emission savings criteria.

1.15 The NORA Act 2007[6] (as amended) and SI 33 of 2012[7] (the Sustainability Regulations, as amended), along with the Renewable Energy Regulations (SI 350 of 2022) are the primary pieces of national legislation that transpose the requirements of RED III relating to renewable energy in transport. There are also several Regulations that have been brought into effect under the NORA Act to set, for example, the obligation rate (SI 665 of 2024 of 2024), the buy-out charge (SI 43 of 2023 and SI 44 of 2023), the minimum percentage ethanol in gasoline (SI 142 of 2023) and the number of additional Certificates that are awarded for certain renewable fuels (SI 143 of 2023).

1.16 The ReFuelEU Aviation Regulations places obligations on aircraft operators, Union airports and aviation fuel suppliers to increase the share of renewable energy in aviation. The Regulations rely on parts of RED III, e.g. to demonstrate compliance with the sustainability and GHG emissions savings criteria.

1.17 SI 160 of 2017 transposes the requirements of Article 7a of the FQD. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

1.18 Several European Commission Implementing Regulations have also been relied upon. These influence compliance with the RTFO and the activities to be carried out by Account Holders and economic operators involved in the supply chain. Thus, in so far as is practicable, their requirements are included in this guidance.

1.19 In addition, as a consequence of NORA's sharing the UK & Ireland Carbon Calculator, it is necessary to rely on the UK & Ireland Carbon Calculator User Manual.

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[4] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC

[5] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31998L0070&qid=1674145055753

[6] http://www.irishstatutebook.ie/eli/2010/act/11/enacted/en/pdf

[7] European Union (Renewable fuel Sustainability Criteria) Regulations 2012 http://www.irishstatutebook.ie/eli/2012/si/33/made/en/pdf

2 Operation of the RTFO

Certificates

2.1 The Renewable Transport Fuel Obligation (RTFO) applies to gasoline and diesel consumed by road vehicles. Any company that places such fuel on the market, that is to say, it reports the disposal via an OLA Return[8] submitted to the Department of Environment, Climate and Communications (DECC) and it is liable for the NORA Levy on that disposal, is an 'obligated party'.

2.2 Obligated parties may meet their RTFO by discharging RTFO Certificates or by paying a 'buy-out' (a fixed amount for each megajoule of fuel). RTFO Certificates are awarded for sustainable renewable fuels placed on the transport market in Ireland (including renewable electricity supplied via public recharging points). Those wishing to apply for RTFO Certificates must have an RTFO account with NORA.

2.3 Renewable fuels are liquid and gaseous fuels used for transport, and they include:

- Biofuels (including sustainable aviation fuel, SAF)
- Biogas
- Advanced biofuels (including SAF)
- Renewable liquid and gaseous fuels of non-biological origin (RFNBO, *liquid or gaseous fuels which are used in the transport sector other than biofuels or biogas, the energy content of which is derived from renewable sources other than biomass*, e.g. hydrogen)
- Recycled carbon fuels (RCF, *liquid and gaseous fuels that are produced from liquid or solid waste or solid waste streams of non-renewable origin which are not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC, or from waste processing gas and exhaust gas of non-renewable origin which are produced as an unavoidable and unintentional consequence of the production process in industrial installations*)

2.4 Although not obligated under the RTFO, aviation fuel suppliers may also apply for RTFO Certificates for the SAF supplied in Ireland. See Section 8 for more information on compliance with the ReFuelEU Aviation Regulations.

2.5 Subject to compliance with paragraph 2.6, Certificates may be claimed for every megajoule of sustainable renewable fuel supplied to the transport sector in Ireland. Renewable fuels produced from the feedstocks listed in Annex IX of RED III are incentivised by awarding two RTFO Certificates per megajoule. Additional Certificates are also awarded for other renewable fuels and renewable electricity:

[8] It is a requirement under the National Oil Reserves Agency Act 2007 that oil companies and consumers pay NORA a Levy (the NORA Levy) on their relevant disposals of petroleum product in the State and report its disposals (and other relevant information) in a monthly Levy Return (the OLA Return) submitted to DECC.

- biomethane
- hydrogenated vegetable oil (HVO)
- biodiesel produced from category 1 tallow
- RFNBOs
- renewable fuels supplied to aviation and marine
- renewable electricity supplied to electric vehicles via public recharging points (once the enabling legislation is published)

2.6 Where bioethanol is blended with gasoline, a minimum 5.5% bioethanol blend is required.

2.7 To be eligible for RTFO Certificates, the renewable fuel must not have been accounted for in another Member State, or a Third Country (e.g. the UK), or under another Irish renewable energy obligation scheme or system.

2.8 Data on the sustainability of the renewable fuel supplied must be independently verified before Certificates can be awarded and NORA requires evidence to be provided that this has been carried out.

2.9 Certificates may be transferred between account holders. Other than facilitating the transfer, NORA is not involved in the commercial arrangements between account holders that transfer Certificates.

2.10 Crop-derived fuels are limited to a maximum of 2 percentage points of a supplier's obligation. Red Certificates are awarded for crop-based renewable fuels (see paragraphs 3.7 to 3.11).

2.11 The contribution of renewable fuels produced from high indirect land use change (ILUC)-risk[9] feedstocks (palm oil) are limited to the amount disposed of in 2019 (48.96 TJ), and only the companies that placed the fuel on the market in 2019 are permitted to dispose of such fuel in the period thereafter.

2.12 RFNBOs produced from renewable electricity are awarded Blue Certificates. Blue Certificates can be discharged against the RTFO, and, subject to enabling legislation, the advanced biofuel obligation. In the future, it is envisaged that Blue Certs will be discharged against a distinct RFNBO obligation (see paragraphs 3.29 to 3.35).

2.13 Renewable fuels produced from the feedstocks listed in **Part A** of Annex IX of RED II are awarded Green Certificates. They are awarded two Green Certificates per megajoule, and potentially more, if the type of fuel is listed in the additional multiplier regulations (SI 143 of 2023). The obligation relating to advanced biofuel obligation was introduced on the 1st January 2023. Only Green Certificates can be discharged against the advanced biofuel obligation (they can also be discharged against the RTFO). (See paragraphs 3.15 to 3.25.)

[9] ILUC can occur when land previously used food or feed production is converted to produce biofuels, bioliquids and biomass fuels. In that case, the food and feed demand still needs to be satisfied, which may lead to the extension of agricultural land into areas with high carbon stock such as forests, wetlands and peat land, causing additional greenhouse gas emissions.

Subject to enabling legislation Blue Certificates, may also be discharged against the advanced biofuel obligation.

2.14 Orange Certificates, which can be discharged against the RTFO but not the advanced biofuel obligation, are awarded for following:

- Renewable fuels produced from the feedstocks listed in **Part B** of Annex IX of RED II. (Two Orange Certificates are awarded per megajoule, and potentially more, if the type of fuel is listed in the additional multiplier regulations.)
- Renewable fuels that are not listed in Annex IX and are not crop-based, category 3 tallow, for example. (One Orange Certificate is awarded per megajoule, and potentially more, if the type of fuel is listed in the additional multiplier regulations, SI 143 of 2023). (See paragraphs 3.26 to 3.28.)
- Renewable RCFs (see paragraphs 3.36 to 3.37).
- Renewable electricity supplied to EVs via public recharging points by an RTFO account holder that is the charge point operator of the public recharging point in the State (four Orange Certificates per megajoule will be awarded).

2.15 RTFO Certificates that are not discharged against the RTFO or the advanced biofuel obligation will be carried forward for a maximum of two years. If they are not discharged after the two years, they will be rendered invalid.

2.16 The number of Certificates carried forward from previous periods that may be discharged against the RTFO or the advanced biofuel obligation is limited to 15% of the respective obligation.

2.17 Actions such as applying for RTFO Certificates, transferring Certificates and viewing statements of account are all undertaken online, through the RTFO Portal. Only account holders have access to Portal.

2.18 The quantities of fossil and renewable fuels placed on the market in Ireland are reported through DECC's OLA system. Except for renewable electricity supplied to public recharging points, only renewable fuels reported through OLA will be eligible for RTFO Certificates.

Carbon Savings

2.19 Carbon savings are used to measure designated fuel suppliers' compliance with a requirement to reduce the carbon intensity of the fuels they supply by 6% relative to the fuel baseline standard (94.1 gCO_{2eq}/MJ).

2.20 The carbon savings are calculated by NORA using the lifecycle carbon intensity of the renewable fuels reported in applications for RTFO Certificates.

2.21 Carbon savings are awarded for sustainable renewable fuels and fossil fuels supplied to road, rail, non-road mobile machinery (NRMM), including inland waterway vessels when not at sea), agricultural and forestry tractors, recreational craft when not at sea and electricity for use in road vehicles.

2.22 Applications for carbon savings from renewable fuels supplied to transport (excluding electricity) form part of applications for RTFO Certificates – there are no additional application requirements.

2.23 Carbon savings are awarded to fossil fuels using the data submitted in the OLA Returns (negative savings are awarded for fossil fuels that have carbon intensities greater than the fuel baseline standard).

2.24 Carbon savings for electricity supplied to road vehicles may be awarded to electricity suppliers upon application, shortly after the end of the obligation period.

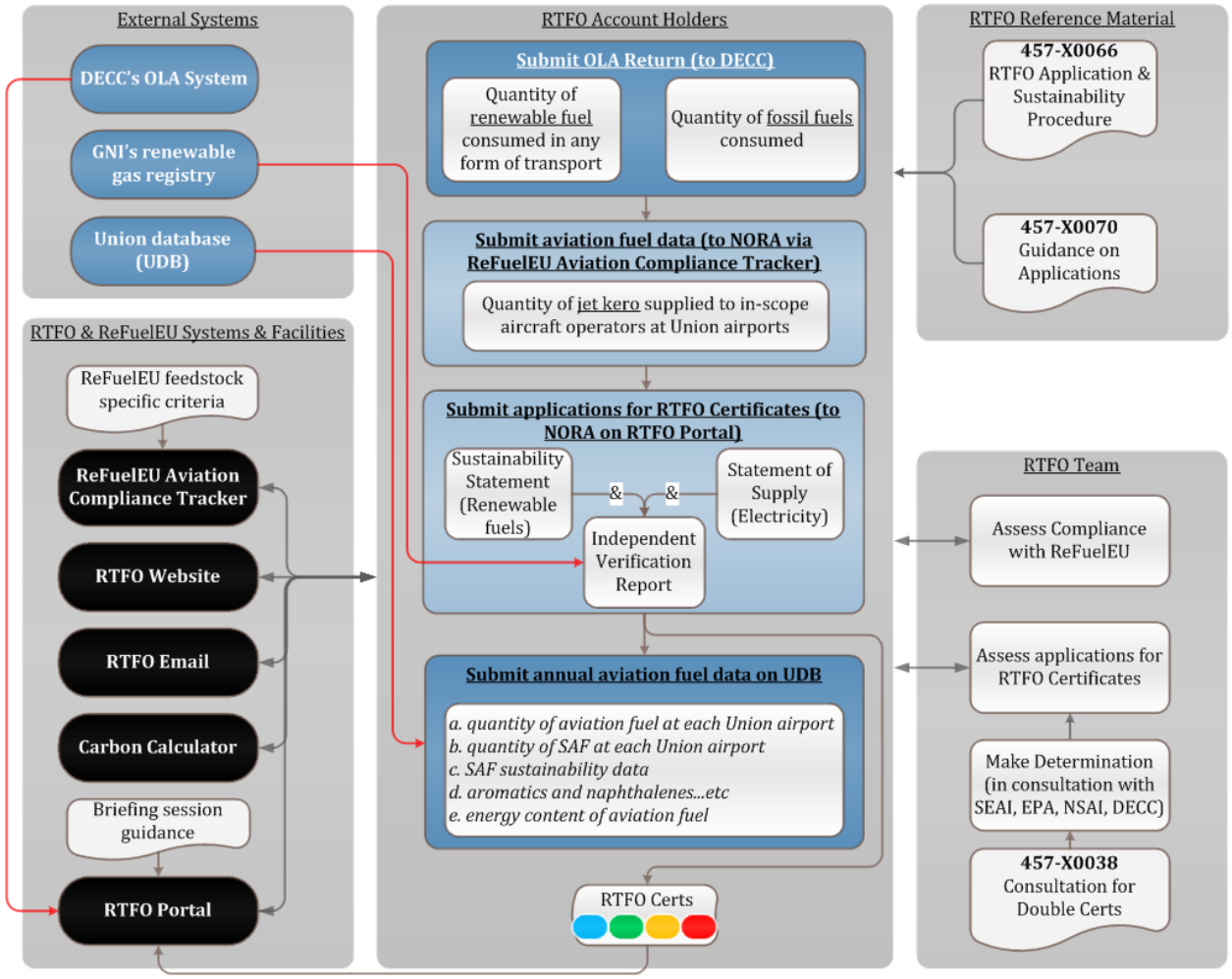
2.25 Carbon savings may also be awarded for carbon savings generated by upstream emission reductions (UERs) upon application, shortly after the end of the obligation period.

2.26 There is no carry over of carbon savings between obligation periods.

2.27 All actions in relation to carbon savings, such as transferring carbon savings and viewing the carbon intensity reduction achieved, are undertaken through RTFO Portal and OLA.

2.28 The linkages between the IT systems, the actions required to generate RTFO Certificates and carbon savings, compliance with the ReFuelEU Aviation Regulations, and the supporting documentation are illustrated in Figure 1.

Figure 1: Overview of RTFO for renewable fuels (including electricity) and ReFuelEU compliance



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3 Applying for Certificates and Carbon Savings

Renewable fuels and renewable electricity

3.1 Section 44G (3) of the NORA Act, as amended, required NORA to make a 'determination' in respect of each 'reporting period'[10] specifying the closing date for submitting applications for RTFO Certificates. NORA published this determination on the RTFO section of its web site – the closing dates are set out in the following table and apply to all fuels (biofuel, SAF, RFNBOs, RCFs & renewable electricity supplied to EVs via public charge points).

Table 1: Deadline dates for submitting applications for RTFO Certificates & carbon savings

Quarter	Deadline
1 January to 31 March	15 May
1 April to 30 June	14 August
1 July to 30 September	14 November
1 October to 31 December	14 February

Applications for RTFO Certificates incorporate applications for carbon savings; the same deadline dates apply.

3.2 Failure to adhere to these deadlines may result in an application for RTFO Certificates and carbon savings not being processed, even where Levy-paid renewable fuel has been placed on the market. Compliance with the deadlines will also form part of the selection criteria for NORA's annual auditing programme (see paragraph 7.66) and will be recorded in audit reports.

3.3 If an account holder is supplying sustainability data to an exchange partner, sufficient time should be allowed so they too can be assured of meeting the deadline dates.

3.4 By prior arrangement with NORA, RTFO account holders may submit applications monthly. In such cases, NORA will process the applications and issue RTFO Certificates and carbon savings in relation to renewable fuel disposals at monthly intervals, provided the account holder has verifiably demonstrated that *inter alia* the sustainability and GHG savings criteria have been met.

3.5 Applications for RTFO Certificates and carbon savings shall be submitted using the RTFO Portal, which can be accessed at https://bos.nora.ie.

3.6 The activities relied upon to prepare applications for RTFO Certificates and carbon savings from disposals of renewable fuels are set out in other sections of this guidance.

[10] 'Reporting period' is defined as a period of 3 consecutive months beginning on 1 January, 1 April, 1 July and 1 October.

Certificates – crop-based biofuels and biogas

3.7 Red Certificates are awarded for biofuels and biogas produced from food and feed crops. One Red Certificate will be awarded per megajoule.

3.8 The contribution of Red Certificates towards the RTFO is limited to approximately 2% of diesel and gasoline consumption, by energy. The exact percentage limit is specified by way of a Ministerial Order.

3.9 Red Certificates may be carried forward for a maximum of two years, but only 15% of the RTFO can be satisfied using Certificates from previous periods.

3.10 Additional Red Certificates are awarded for:

1. renewable fuels consumed in aviation or maritime transport sectors (0.2 Certificates per megajoule);
2. hydrogenated vegetable oil (HVO) or co-processed HVO (CHVO) consumed in road, rail or non-road mobile machinery (NRMM) (0.25 Certificates per megajoule);
3. biogas/biomethane consumed in road, rail or NRMM (0.7 Certificates per megajoule);

The number of additional Certificates to be awarded is specified in SI 143 of 2023.

3.11 Red Certificates will be awarded for renewable fuels produced from high and low ILUC-risk feedstocks. However, only those companies that placed renewable produced from high ILUC-risk feedstocks (palm oil) on the market in 2019 will be permitted to claim Red Certificates for disposals of renewable fuel produced from high ILUC-risk feedstocks up to a limit of that placed on the market in 2019 (48.96 TJ). In other words, if your company did not pay the Biofuel Levy on biofuel produced from palm oil in 2019, it will not be awarded Certificates if it does so thereafter, unless it is certified as **low** ILUC-risk.

3.12 It is specified in Section 44C (4) of the BOS Act that the high ILUC-risk limit shall be reduced to 0 TJ by the end of 2030. The rate of reduction will be specified in Regulations that are yet to be published under Section 44D.

3.13 Palm oil that is certified as low ILUC-risk by a voluntary scheme which is approved by the European Commission to certify low ILUC-risk renewable fuels will not be subject to the limit described in 3.11 above, provided the renewable fuel meets the sustainability and GHG savings criteria. Delegated Regulation (EU) 2019/807 states that 'under certain circumstances, the ILUC impacts of biofuels, bioliquids and biomass fuels generally considered as high ILUC-risk can be avoided and the cultivation of the related feedstock can even prove to be beneficial for the relevant production areas. For such cases, it is necessary to lay down criteria to allow the identification and certification as low ILUC-risk biofuels, bioliquids and biomass fuels'. The Delegated Regulation sets out the criteria for certifying low ILUC-risk fuels.

3.14 The RTFO Portal will automatically determine how many Red Certificates are being applied for, using the information contained in the Sustainability Statement (see paragraphs 4.64 to 4.68) and verified using data reported via OLA.

Certificates – advanced biofuels and biogas

3.15 Green Certificates are used to discharge an obligated party's advanced biofuel obligations (see section 44C (4) of the NORA Act, as amended). Green Certificates are also used to discharge an obligated party's RTFO.

3.16 Green Certificates may be carried forward for a maximum of two years, but only 15% of the advanced biofuel obligation can be discharged using Certificates from previous periods.

3.17 Green Certificates are awarded for advanced biofuels or biogas, i.e. biofuels or biogas produced from feedstocks listed in Annex IX **Part A** of RED III. Two Green Certificates will be awarded per megajoule.

3.18 Where an RTFO account holder makes an application in respect of a renewable fuel that it considers may be eligible for two RTFO Certificates per megajoule – because the feedstock may meet a description contained in Annex IX Part A (b), (c), (d), (p) or (q) – and a determination was not previously made, then a determination will be required.

3.19 Applications for RTFO Certificates should be made as normal on the RTFO Portal, but the following additional information is required to be submitted, by email:

- The Annex IX Part A feedstock description which, in the opinion of the applicant, the feedstock satisfies;
- A justification for the claim by setting out the rationale/logic/argument/supporting documentation or opinion, so as to **convincingly** demonstrate that the feedstock meets the description. There is no prescribed format for this justification, but it should be a detailed submission containing robust proof that the feedstock meets all aspects of the description. For example, Annex IX (d) refers to 'biomass fraction of industrial waste not fit for use in the food or feed chain…' Thus, the feedstock should be clearly demonstrated to be:
    i. Biomass;
    ii. Industrial waste;
    iii. Not fit for use in the food chain;
    iv. Not fit for use in the feed chain.

3.20 In making a determination, NORA is obliged to follow the process that is laid down in Sections 44G (11) to (14) of the NORA Act.

3.21 NORA must consult with NSAI, SEAI, the EPA, the Minister for Transport, and any other agencies or bodies NORA deems appropriate.

3.22 NORA must publish a draft of the determination (a proposed determination) on its website for a period of 28 days and invite persons to make representations in writing.

3.23 Once determined, NORA must publish a notice in Iris Oifigiúil and add the feedstock to the list of determinations it maintains on its website.

3.24 Additional Green Certificates are awarded for:

1. advanced biofuels consumed in the aviation or maritime sectors (0.4 Certificates per megajoule);
2. advanced biofuels that are either HVO or CHVO consumed in road, rail or NRMM (0.5 Certificates per megajoule);
3. biogas/biomethane consumed in road, rail or NRMM (1.4 Certificates per megajoule);

The number of additional Certificates to be awarded is specified in SI 143 of 2023.

3.25 The RTFO Portal will automatically determine how many Green Certificates are being applied for, using the information contained in the Sustainability Statement and verified against the data reported in OLA.

Certificates – biofuels and biogas

3.26 Orange Certificates are awarded for biofuels and biogas produced from feedstocks that are listed in Annex IX **Part B** of RED II or where the feedstocks do not qualify for Red Certificates or Green Certificates. For biofuels and biogas produced from Annex IX Part B feedstocks, two Orange Certificates are awarded per megajoule; for all other qualifying feedstocks, one Orange Certificate is awarded per megajoule.

3.27 Orange Certificates may be carried forward for a maximum of two years, but only 15% of the RTFO in any given year can be satisfied using Certificates from previous periods.

3.28 Additional Orange Certificates are awarded for:

1. renewable fuels consumed in aviation or maritime transport sectors (0.4 Certificates per megajoule if produced from Annex IX Part B feedstock, and 0.2 Certificates per megajoule if produced from feedstock not listed in Annex IX);
2. HVO or CHVO consumed in road, rail or NRMM (0.5 Certificates per megajoule if produced from Annex IX Part B feedstock, and 0.25 Certificates per megajoule if produced from feedstock not listed in Annex IX);
3. biogas/biomethane consumed in road, rail or NRMM (1.4 Certificates per megajoule if produced from Annex IX feedstocks, and 0.7 Certificates per megajoule if produced from feedstocks not listed in Annex IX).

The number of additional Certificates to be awarded is specified in SI 143 of 2023.

Certificates – RFNBOs

3.29 Renewable liquid and gaseous transport fuels of non-biological origin (RFNBOs) are 'liquid or gaseous fuels which are used in the transport sector other than biofuels or biogas, the

energy content of which is derived from renewable sources other than biomass'. It is expected that the most common RFNBO will be hydrogen produced by an electrolyser powered by renewable electricity. (Hydrogen produced from biomass is a biogas.)

3.30 RFNBOs must be produced from renewable electricity, as defined by Commission Delegated Regulation (EU) 2023/1184, to be eligible for Certificates.

3.31 Certificates can also be awarded to RFNBOs used as intermediate products to produce:

1. Conventional transport fuels;
2. Biofuels, provided that the GHG savings from the RFNBOs are not counted in the calculation of GHG savings of the biofuels.

3.32 Four Blue Certificates will be awarded per megajoule of RFNBO, in accordance with SI 143 of 2023. The RTFO Portal will automatically determine how many Blue Certificates are being applied for, using the information contained in the Sustainability Statement and verified against the data reported in OLA.

3.33 Blue Certificates are also used to discharge an obligated party's RTFO. Subject to enabling legislation, Blue Certificates may also be used to discharge an obligated party's advanced biofuel obligations.

3.34 It is envisaged that in the future Blue Certificates will be used to demonstrate compliance with a separate RFNBO obligation.

3.35 Blue Certificates may be carried forward for a maximum of two years, but only 15% of the RTFO can be discharged using Certificates from previous periods.

Certificates – RCFs

3.36 Recycled carbon fuels (RCFs) are '… liquid and gaseous fuels that are produced from liquid or solid waste or solid waste streams of non-renewable origin which are not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC, or from waste processing gas and exhaust gas of non-renewable origin which are produced as an unavoidable and unintentional consequence of the production process in industrial installations'.

3.37 Orange Certificates will be awarded for RCFs. One Orange Certificate will be awarded per megajoule.

Certificates – Renewable electricity

At the time of completing this guidance, the legislation required to enable NORA award Certificates for renewable electricity supplied to electric vehicles via public charge points was not finalised. It is anticipated that the legislation necessary to give effect to Article 25 (4) of RED III will be transposed into Irish law during 2025. Once the legislation is published, it is anticipated the following will come into effect.

3.38 Orange Certificates are awarded for renewable electricity supplied by operators of public recharging points that supply renewable electricity to electric vehicles (EVs) via public charge points.

3.39 Four Orange Certificates will be awarded per megajoule (MJ) of renewable electricity supplied by Charge Point Operators (CPOs) to EVs through public charge points.

3.40 Orange Certificates may be carried forward for a maximum of two years, but only 15% of the RTFO in any given year can be satisfied using Certificates from previous periods.

3.41 An operator of a charging point, a CPO, is the entity that is responsible for managing and operating a charging point. The CPO must be a registered with the Irish IDRO (ID Registration Organisation), namely Transport Infrastructure Ireland (TII).

3.42 According to Regulation (EU) 2023/1804, a 'public recharging point is one that is accessible to the public, regardless of whether it is located on public or private property. This includes recharging points in public parking areas, supermarket parking lots, and other locations where the general public can access them. Even if access is restricted to a certain general group of users, such as clients, it is still considered publicly accessible. However, recharging points that are restricted to a limited and determinate group, such as employees in an office building, are not considered publicly accessible. The public recharging point must be listed on the Data Exchange Platform (DXP), which is also managed by Transport for Ireland'.

3.43 Regulation (EU) 2023/1804 defines a recharging station as 'a physical installation for recharging electric vehicles. Every recharging station has a theoretical maximum power output, expressed in kW, and has at least one recharging point that can serve only one vehicle at a time. The number of recharging points at a recharging station determines the number of vehicles that can be charged at that station at any given time.'

3.44 Regulation (EU) 2023/1804 defines a recharging pool as a group consisting 'of one or more recharging stations at a specific location, including the dedicated parking places adjacent to them[11].'

[11] https://eur-lex.europa.eu/eli/reg/2023/1804/oj

3.45 The RTFO Portal enables CPOs to perform the following tasks.

1. Submit applications for RTFO Certificates for renewable electricity supplied via public recharging points.
2. Transfer RTFO Certificates.
3. View interim and final statements of account for compliance with the RTFO and advanced biofuel obligation, if the account holders are also obligated parties.
4. View the following (via dashboards):
    a. the number of RTFO Certificates held;
    b. records of RTFO Certificate transfers;
    c. records of the quantity of renewable fuel and obligated fossil fuel placed on the market.

3.46 Each application for RTFO Certificates from electricity supplied via public charging points must be accompanied by an RTFO **Statement of Supply**. The RTFO Statement of Supply template is provided on NORA's website.

3.47 The Statement of Supply must be submitted in CSV format[12] and uploaded to the RTFO Portal when submitting an application for RTFO Certificates. The file must contain the following information for each charging point for which Certificates are being claimed:

1. the Meter Point Reference Number (MPRN) – a unique 11-digit number assigned to every electricity connection and meter;
2. whether the MPRN is dedicated to EV recharging;
3. the recharging pool ID, if applicable;
4. the station ID, if applicable;
5. the recharging point reference number – a unique number assigned to each public recharging point. This shall be the number listed on the DXP for each recharging point;
6. the IDRO Code – an ID issued by the IDRO with a national country code for CPOs;
7. the quantity of electricity supplied, expressed in kilowatt hours (kWh);
8. whether the electricity was sourced from the 'Grid' or from a 'Direct' connection.

3.48 The RTFO Statement of Supply must be uploaded when making an application, together with the Independent Verification Report (IVR) – Section 7 describes the verification and auditing requirements, which include preparing an IVR.

3.49 The number of Certificates that may be awarded for renewable electricity supplied from a grid connection and a direct connection to a renewable source will be different.

[12] A CSV file can be generated with Microsoft Excel by selecting the CSV (Comma delimited) (*.csv) from the file type dropdown when saving the spreadsheet.

Direct Connection: For renewable electricity supplied through a direct connection to an installation generating renewable electricity, all the electricity supplied is eligible for RTFO Certificates. The number of Certificates to be awarded is calculated as follows:

$$Direct\ Cert\ Allocation = \sum 3.6\ \times\ E\ \times\ F$$

where:
E = electricity supplied to public charge point (kWh)
F = multiplier (4)
3.6 = conversion from kWh to MJ (Certificates are awarded per MJ)

Grid supplied: For renewable electricity supplied through the national electricity grid, the number of RTFO Certificates to be awarded is based on the average share of renewable electricity supplied in the two previous years. However, the percentage renewable electricity share (RES-E) for the previous year (Y-1) will not be known until the end of the year in which Certificates are being awarded (Y). Therefore, the awarding of Certificates for each quarter shall be carried out in two steps.

1. The number of Certificates to be awarded <u>initially</u> is calculated by multiplying the amount of electricity supplied by the RES-E for Y-2. For example, for Certificates awarded in 2025, the 2023 RES-E will be used for the initial award of Certificates. In addition, to avoid the possibility of awarding too many Certificates as a consequence of the RES-E reducing from Y-2 to Y-1, 90% of the Certificates will be awarded for each quarter.
2. Along with awarding the Q4 Certificates, a <u>supplementary</u> award will be made, taking into account the RES-E for the previous year (Y-1).

$$Initial\ award\ for\ quartly\ applications\ = \sum_{i=1}^{3}(3.6\ \times E_M \times RE_{Y-2} \times F) \times 90\%$$

$$Supplementary\ award\ = \sum_{i=1}^{12}(3.6\ \times\ E_M \times RE_F \times \mathrm{F}) - \sum_{i=1}^{12}(3.6 \times\ E_M \times RE_{Y-2} \times F) \times 90\%$$

where:
RE_{Y-1} = previous year's RES-E
RE_{Y-2} = the RES-E from two years ago
$$Final\ Renewable\ Electricity\ (RE_F) = \frac{RE_{Y-1} + RE_{Y-2}}{2}$$
E_M = electricity supplied to charge point (kWh)
i = 1 is the first month
F = Multiplier (4)
90% = risk-adjusted allocation factor
3.6 = conversion from kWh to MJ (Certificates are awarded per MJ)

Carbon savings – all biofuels and biogas

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

3.50 Carbon savings are required for demonstrating compliance with SI 160, which requires designated fuel suppliers to reduce the carbon intensity of the fuel they supply by 6% by 2020, and every year thereafter. Carbon savings are calculated by comparing the lifecycle carbon intensity of the fuel with that of the Fuel Baseline Standard (FBS), 94.1 gCO_{2eq}/MJ.

3.51 Carbon savings may be generated by placing certain renewable fuels on the market. Carbon savings are also generated by placing lower carbon intensity fossil fuels on the market (see paragraphs 3.63 to 3.71), supplying electricity to road vehicles (see paragraphs 3.72 to 3.77) and by applying for carbon savings from Upstream Emission Reductions (see paragraphs 3.78 to 3.93). There is no multiple counting or other forms of differentiation between carbon savings generated by different feedstocks, fuel types, or end use.

3.52 Carbon savings will be awarded alongside RTFO Certificates, where the biofuel or biogas is within the scope of SI 160 of 2017, i.e. where used to propel road vehicles, non-road mobile machinery (including inland waterway vessels when not at sea), agricultural and forestry tractors, recreational craft when not at sea and electricity for use in road vehicles.

3.53 Carbon savings will be awarded based on the carbon intensity reported in the Sustainability Statement.

3.54 Biofuels and biogas outside the scope of SI 160 of 2017, which include those used in the aviation and maritime sectors, will not be awarded carbon savings.

Carbon savings – RFNBOs

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked. Two types of RFNBOs can be awarded carbon savings:

1. compressed hydrogen consumed in a fuel cell where the hydrogen is produced by '*electrolysis fully powered by non-biological renewable energy'*[13];
2. compressed synthetic methane consumed in a spark ignition engine where the methane is produced by a '*Sabatier reaction of hydrogen from non-biological renewable energy electrolysis'*[13].

[13] Directive 652/2017, Annex I, Part 2 (5)

3.55 Carbon savings are awarded for these two types of RFNBOs based on the carbon intensity reported in the Sustainability Statement, but only where the RFNBOs are within the scope of SI 160 of 2017, i.e. where used to propel road vehicles, non-road mobile machinery (including inland waterway vessels when not at sea), agricultural and forestry tractors, recreational craft when not at sea and electricity for use in road vehicles.

3.56 Where the two types of RFNBOs are consumed in transport sectors that are outside the scope of SI 160 of 2017, which include the aviation and maritime sectors, carbon savings are not awarded.

3.57 The lifecycle carbon intensities to be reported in a Sustainability Statement are 9.1 gCO_{2eq}/MJ for compressed hydrogen and 3.3 gCO_{2eq}/MJ for synthetic methane.

Carbon savings – RCFs

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

3.58 RCFs can be awarded carbon savings for: petrol, diesel or gasoil produced from '*waste plastic derived from fossil feedstocks'*[13].

3.59 Carbon savings are awarded based on the carbon intensity reported in the Sustainability Statement, but only where the RCF is within the scope of SI 160 of 2017.

3.60 RCFs outside the scope of SI 160 of 2017, which include those used in the aviation and maritime sectors, are not awarded carbon savings.

3.61 The lifecycle carbon intensity to be reported in a Sustainability Statement for RCFs produced from waste plastic that was derived from fossil feedstocks is 3.3 gCO_{2eq}/MJ.

3.62 Given there have been no RCFs placed on the market in Ireland, and they are not commonly available on the international market, if an obligated party intends to place an RCF on the market in Ireland, please contact the RTFO Team in advance so that the reporting of the fuel within OLA, the Carbon Calculator and the RTFO Portal can be facilitated.

Carbon Savings – fossil fuels

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

3.63 Carbon savings will be awarded for fossil fuels placed on the market by designated fuel suppliers and reported via OLA.

3.64 As is the case with renewable fuels, carbon savings from fossil fuels are calculated by comparing the lifecycle carbon intensity of the fossil fuel with that of the FBS. The average lifecycle carbon intensity of fossil fuels are set out in Annex I, Part 2 of Directive 2015/652 and are applied when NORA calculates the carbon saving.

Table 2: Carbon Intensity of fossil fuels

Raw material	Fuel placed on the market	Weighted lifecycle GHG emissions (gCO2eq/MJ)
Conventional crude, natural gas-to-liquid, coal-to-liquid, natural bitumen & oil shale	Gasoline	93.3
	Diesel / gasoil	95.1
Any fossil source	LPG in spark ignition engine	73.6
Natural gas, EU mix	CNG in spark ignition engine	69.3
	LNG in spark ignition engine	74.5
Natural gas using steam reforming	Compressed hydrogen in a fuel cell	104.3
Coal		234.4
Coal with carbon capture and storage		52.7

3.65 Relevant disposals of fossil fuel are reported to the Department of Environment, Climate and Communications (DECC) via the OLA system. This data is then supplied to the RTFO Portal where account holders can view the carbon savings generated. There is no further information to be submitted to NORA to generate carbon savings from fossil fuels.

3.66 Fuel suppliers that are obligated under SI 567 of 2007 are required to make monthly OLA returns. Those companies that pay the NORA Levy on sales of fossil fuel will be awarded the carbon savings.

3.67 Fuel suppliers that are not obligated under SI 567, but are supplying fuels that fall under the scope of SI 160 of 2017 (compressed natural gas (CNG) and LPG for transport, for example) are required to report the quantity of fuel supplied each month using the OLA system.

3.68 Fuel suppliers will be advised of the arrangements for using OLA when setting up an RTFO account.

3.69 Both obligated and non-obligated fuel suppliers are required to report their relevant disposals via OLA by the 18th day of the following month (as set out in Regulation 3 of SI 567).

3.70 In OLA, suppliers of 10ppm gasoil are required to report 80% of their gasoil sales under the transport heading and 20% under the non-transport heading. The 80:20 split needs to be reflected in the 'Total levy liability in litres' value calculated in OLA. The following table illustrates where the 80:20 split applies.

		Gasoil		
		10ppm Sulphur (transport) (Litres)	10ppm Sulphur (non-transport) (Litres)	Calculation
A	*Opening stock in beneficial ownership*			
K	Total Sales (observed)	93	22	
L	Statistical difference	-	-	
M	Sales to listed parties	8	2	
N	Levy paid sales to listed part	-	-	
O	Marine bunkers	5	-	
P	Aviation fuels	-	-	
Q	Refinery production	-	-	
R	**Total levy liabilty in litres**	**80**	**20**	=K-M-O-P
S	Total levy liabilty in Euro	€ 1.60	€ 0.40	R * €0.02

3.71 As is the case for renewable fuels, fossil fuels outside the scope of SI 160 of 2017, which include those used in the aviation and maritime sectors, will not be awarded carbon savings.

Carbon Savings from Renewable Electricity

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

3.72 Carbon savings may be claimed by electricity suppliers for electricity supplied to road vehicles or motorcycles.

3.73 Upon request, NORA will provide electricity suppliers that wish to claim carbon savings with the information required to apply.

3.74 The lifecycle carbon intensity value published in Table A of the Annex to the Commission Delegated Regulation on the methodology for determining GHG emissions savings from RFNBOs and RCFs (108 gCO_{2eq}/MJ in 2018) will be updated by NORA using an improvement factor (IF) based on the change in SEAI's GHG intensity data between 2018 and the latest available year. This calculated value will be provided to those electricity suppliers wishing to claiming carbon savings.

3.75 An estimate of Ireland's total consumption of electricity by EVs will be calculated by NORA using the formula provided in Directive 2015/652 (electricity consumption = distance travelled × consumption efficiency). The total quantity of electricity consumed by EVs in Ireland will be apportioned among the electricity suppliers in accordance with their

market share. These calculated values will be provided to those electricity suppliers wishing to claiming carbon savings.

3.76 Neither the lifecycle carbon intensity data nor electricity consumption data will need to be verified, because NORA will have provided both items of information to the applicants.

3.77 Applications for carbon savings arising from electricity consumed in EVs in Ireland in any given year shall be submitted using the RTFO Portal by the deadline of **14th February** of the following year.

Carbon Savings from Upstream Emission Reductions (UERs)

SI 160 of 2017 transposes the requirements of Article 7a of the FQD and make provision for awarding carbon savings. Please note that Article 7a of the FQD has been deleted (by Article 3 (4) of Directive (EU) 2023/2413). SI 160 of 2017, which transposed Article 7a, has not yet been revoked and so the provisions of SI 160 remain part of the RTFO until it is revoked.

3.78 Account holders may use UERs to claim carbon savings.

3.79 This guidance on UERs in Ireland is informed by the EU Commission's Guidance Note on approaches to quantify, verify, validate, monitor and report upstream emission reductions[14].

3.80 All GHG reduction projects, in any country, at upstream sites producing and extracting non-biological raw-material which is used for producing fuels for transport, and is supplied for uses covered by the FQD, can be considered as potentially eligible, so long as they are consistent with the definitions in Article 2 of the FQD.

3.81 Upstream emissions are all GHG emissions occurring at any facility or infrastructure in the supply chain prior to the facility at which the finished transport fuel is produced.

3.82 NORA understands that a typical UER project is one that reduces flaring or venting of associated petroleum gases produced during oil extraction.

3.83 In general, it is the role of the producer of the UER to ensure:

1. the necessary data is being tracked and verified;
2. the appointed validation and verification teams are qualified;
3. the validation and verification meets expected standards;
4. the tests for additionality are being appropriately applied; and
5. an appropriate chain of custody is in place so that the UERs generated cannot be improperly claimed by others.

[14] https://ec.europa.eu/clima/sites/clima/files/guidance_note_on_uer_en.pdf

3.84 The role of the fuel supplier is to:

1. undertake due diligence to ensure that any UERs made available for them through commercial arrangements are eligible, and reflect real emissions savings;
2. ensure UER producers with whom they enter into commercial arrangements have not made the same UERs available to other fuel suppliers or redeemed them for compliance with other regulations;
3. ensure all required data is available and prepare the data in the required format;
4. appoint an independent verifier to provide assurance that the data supplied to NORA has been subject to verification.

3.85 To be eligible for carbon savings, UERs shall comply with the following criteria.

3.86 UERs can only be applied to the upstream emission's part of the average default values for petrol, diesel, CNG or LPG and cannot be greater than this upstream emissions portion of the default fossil fuel GHG intensity value.

3.87 UERs shall only be counted if they are associated with projects that have started after 1st January 2011.

3.88 UERs can only be claimed as carbon savings for the calendar year in which they were created. They cannot be aggregated over the lifetime of the UER project.

3.89 The emissions reductions must have occurred already. UERs cannot be claimed for emissions savings that are expected to occur in the future.

3.90 UERs that are used to claim carbon savings in Ireland must not be used in other Member States, or for complying with any other emission reduction requirements, or any other GHG offsetting mechanism, such as the Clean Development Mechanism under the Kyoto Protocol, for example.

3.91 A UER project must offer GHG savings that would not have occurred in the absence of the project. UERs must be additional to any emissions changes that would have been expected in the most likely counterfactual scenario. It is not, however, necessary to prove that the UER project was the direct result of the requirements of the FQD or that the UERs would not have taken place without the reporting requirement set out in Article 7a of the FQD.

3.92 UERs shall be estimated and validated in accordance with principles and standards identified in International Standards, and in particular ISO 14064[15], ISO 14065[16] and ISO 14066[17].

[15] Comprises ISO 14064-1:2006 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, ISO 14064-2:2006 Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emissions reductions or removal enhancements, and ISO 14064-3:2006 Specification with guidance for the validation and verification of greenhouse gas assertions.

[16] ISO 14065:2013 Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition.

[17] ISO 14066:2011 Competence requirements for greenhouse gas validation teams and verification teams

3.93 UERs generated from projects certified under the Clean Development Mechanism (CDM) or Joint Implementation (JI) mechanism are eligible for carbon savings if they satisfy points 3.86 to 3.92; however, if any reductions have been credited in the form of Certified Emissions Reductions (CERs) under the CDM or Emissions Reduction Units (ERUs) under JI, those reductions can only be claimed as verified and validated UERs if it is verified that any CER or ERU issued for these reductions have been cancelled and have not already been, nor will be, used for compliance with any other emissions reduction requirement or in relation to another offset scheme.

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4 Reporting compliance with the Sustainability and GHG Savings Criteria

Introduction

4.1 Compliance involves ensuring that renewable fuels (including sustainable aviation fuel) placed on the market meet the sustainability and GHG savings criteria, and by reporting certain information to NORA, which must be independently verified prior to submission. This section deals with reporting and demonstrating compliance with the sustainability and GHG savings criteria.

4.2 Compliance with the sustainability and GHG savings criteria does not apply to renewable electricity supplied via public recharging points to EVs.

4.3 Schedule 3 of the Renewable Energy Regulations (SI 350 of 2022) sets out the sustainability and GHG emissions savings criteria for biofuels and biogases. Biofuels and biogases produced from waste and residues, including wastes and residues that are first processed into a product before being further processed into biofuels and biogases (other than agricultural, aquaculture, fisheries and forestry residues) are required to fulfil just the GHG emissions savings criteria – there are no other sustainability criteria to be fulfilled.

4.4 Implementing Regulation (EU) 2023/1185 sets out the requirements for GHG emissions savings criteria for RFNBOs and RCFs, and the rules for demonstrating the renewable electricity used to produce the RFNBO can be classified as 'renewable'.

4.5 According to the Regulation 5 of SI 33 of 2012 (as amended), there are three methods for demonstrating compliance with the sustainability and GHG emission savings criteria:

1. through compliance with any national scheme arranged by NORA;
2. through compliance with a national scheme set up by another Member State; or
3. through a voluntary scheme.

NORA has not established a national scheme (item i above), so the RTFO relies on voluntary schemes and national schemes of other Member States. It is envisaged that most of the renewable fuel supplied to the Irish market will be certified by a voluntary scheme and thus compliance with the sustainability and GHG savings criteria will be demonstrated by data reported in voluntary scheme proofs of sustainability (PoS); equivalent documentary evidence would need to be provided for the national schemes of other Member States.

4.6 Voluntary scheme certified operators must abide by the voluntary scheme rules and requirements to ensure compliance with the sustainability and GHG savings criteria. The European Commission has approved the voluntary schemes for demonstrating compliance with the sustainability and GHG savings criteria. Given the supply chain will be reliant on voluntary schemes, it will be the voluntary scheme rules and requirements that will

dictate to a large extent how economic operators ensure compliance with the sustainability and GHG savings criteria. The purpose of this section of the guidance is to supplement this and to provide guidance to RTFO account holders in establishing how compliance with the sustainability and GHG savings criteria is achieved. It also describes how additional information, which may not be covered by voluntary schemes, may also be required to be supplied.

4.7 If an RTFO account holder makes a disposal of renewable fuel that does not comply with the sustainability and GHG savings criteria, such a disposal will be treated as a disposal of petroleum product and the quantity disposed of will incur an obligation under Section 44D of the NORA Act.

Criteria Relating to GHG Emission Savings

4.8 The following mandatory criteria apply to GHG emission savings from all renewable fuels (including sustainable aviation fuel) and are provided in Article 29.10 and Article 25.2 of RED III.

4.9 For biofuels and biogas, the criteria depend on when the installation used to produce the renewable fuel came into operation. For biofuel and biogas, the minimum GHG savings thresholds are:

1. 50% for installations in operation on or before 5th October 2015;
2. 60% for installations starting operation from 6th October 2015 until 31st December 2020;
3. 65% for installations starting operation from 1st January 2021.

4.10 For RFNBOs and RCFs, the minimum GHG savings threshold is 70% (Article 29a of RED III).

4.11 The methodology to be used for calculating the GHG emission savings from biofuels is set out in Annex V of RED III. The methodology for calculating GHG emissions savings for biomethane used in transport is contained in Annex VI. In both cases, the methodology specifies three options when calculating the GHG emissions savings.

4.12

Table 3: GHG Calculation Options

No.	Option	Biofuel (Annex V)	Biomethane (Annex VI)
1	Use the default values for GHG savings for a specific fuel chain, provided there has been no net carbon emissions from land-use during the cultivation of any feedstocks used	Part A and B	Part A
2	Use the actual values for GHG emissions from each stage in the fuel chain (cultivation, processing, transport and distribution) and follow the calculation method.	Part C	Part B
3	Use a combination of disaggregated default values for some stages of the fuel chain, and actual values for the other stages.	Part D or E	Part C
	Using the calculation methodology set out in:	Part C	Part B

4.13 The methodology to be used for calculating the GHG emission savings from RFNBOs is set out in the Annex of Commission Delegated Regulation (EU) 2023/1185. Unlike for biofuels and biomethane, the only option to calculate the GHG emissions savings of RFNBOs and RCFs is through the use of actual values for GHG emissions from each stage in the fuel chain (emissions from inputs, processing, transport and distribution, combustion). (See paragraph 4.35).

4.14 The GHG emission savings criteria do not apply to renewable electricity supplied via public recharging points to EVs.

Default values

4.15 If option 1 of paragraph 4.11 is used, this will be relatively straight forward, but default values are deliberately conservative and may understate the savings for some fuel chains.

4.16 Default values are available in RED III Annex V Part A and B for:

1. Ethanol, ethyl-tertio-butyl-ether (ETBE), and tertiary-amyl-ethyl-ether (TAEE) from beet, sugar cane, corn and other cereals (excluding maize);
2. Ethanol from wheat straw;
3. FAME biodiesel, HVO (does not include co-processed HVO), and pure plant oil from rape seed, palm, soybean, sunflower, waste cooking oil and tallow (excluding category 3);
4. Methanol, dimethylether (DME), methyl-tertio-butyl-ether (MTBE) and Fischer-Tropsch diesel and petrol from waste wood, farmed wood, and black-liquor gasification integrated with a pulp mill.

4.17 Default values are available in RED III Annex VI for biomethane (as compressed natural gas) for several combinations of biomethane production systems and technology options which include from wet manure, maize, biowaste, and mixtures of wet manure and maize.

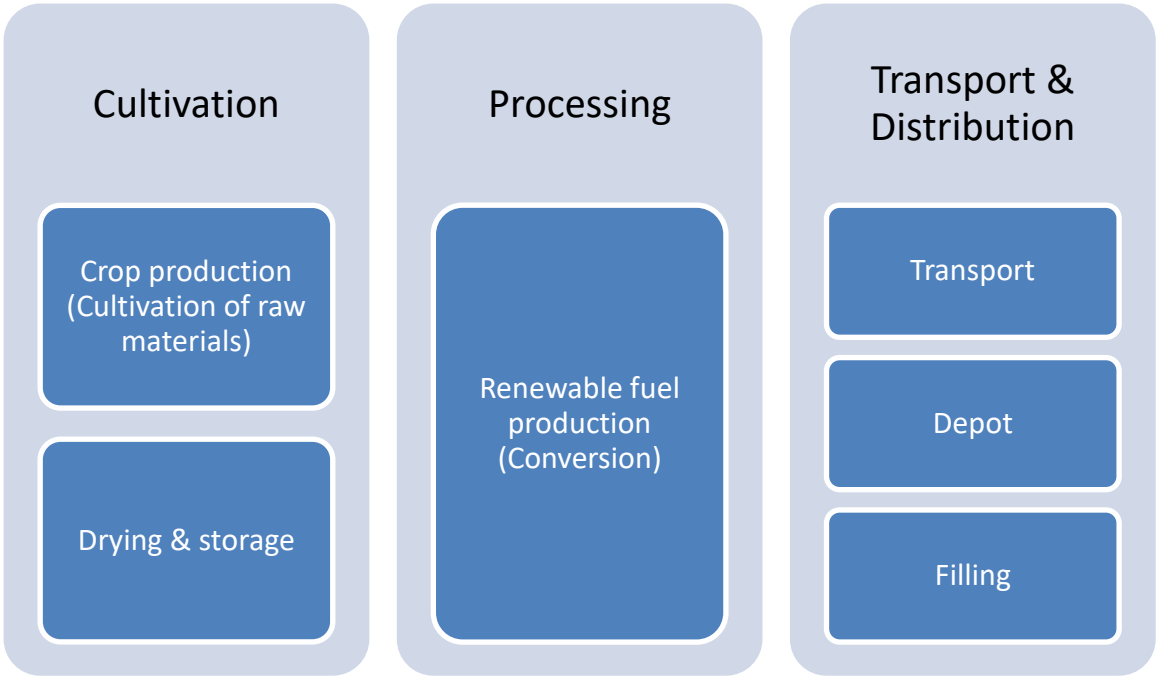
4.18 It should be noted that the default values do not take into account potential direct or indirect land-use change impacts. Any direct land-use change emissions must be accounted for and added to the default value. It should also be noted that the default values are conservative and may not represent typical practice. There are defaults that do not meet the 50% GHG saving threshold for biofuel production installations that were in operation before the 5th October 2015; biodiesel produced from rape seed, for example. There are also biofuels produced in newer installations (those that started operating after 5th October 2015, or after 1st January 2021) that are required to comply with higher GHG savings thresholds (60% and 65%). Again, there are defaults that do not meet these GHG saving thresholds; HVO from soy, for example. In such instances, actual data will need to be used to calculate the GHG savings, because the defaults are below the GHG savings threshold.

4.19 There will also be fuels for which there are no default values. These include, for example, bioethanol produced from liquid whey permeate and waste starch slurry, and co-processed HVO. Where no default values are available, account holders will need to report the actual values, i.e. a calculation of the carbon intensity of the fuels will need to be carried out using the methodology detailed in Annex V or VI of RED II.

4.20 When using default values, it is important to understand the structure and boundaries of the fuel chain and how it compares to the default fuel chains. The Carbon Calculator[18] illustrates how default fuel chains are constructed by arranging common modules into a series of sequential stages. The default fuel chains in the Carbon Calculator can be used as templates for actual value calculations. The modules common to the fuel chains that are used to define a renewable fuel chain are illustrated in Figure 2.

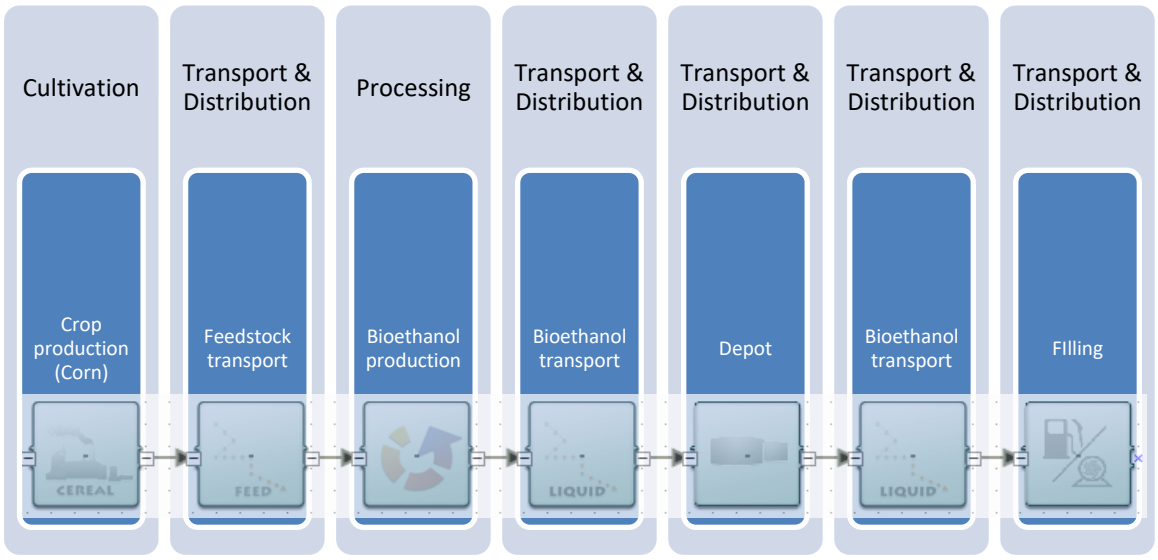
[18] Note that the Carbon Calculator can also be used by economic operators in the UK reporting under the RTFO. When prompted to select the reporting scheme upon opening the calculator, economic operators reporting under the RTFO should select "Ireland – Renewable Transport Fuel Obligation". It can also be used to prepare Sustainability Statements which can be uploaded to Portal and submitted (once verified) to NORA to apply for RTFO Certificates.

Figure 2: Carbon Calculator modules



An example of a bioethanol fuel chain is shown in Figure 3, along with the modules from the Carbon Calculator.

Figure 3: Sample fuel chain



Disaggregated default values

4.21 Similar to default values, disaggregated default values are provided in Annex V and VI of RED III. Disaggregated values can be combined with actual values from individual GHG calculations.

Actual Values (biofuels)

4.22 Actual values can be calculated using the Carbon Calculator, or using other calculators designed to adhere to the methodology contained in RED III. If actual values are calculated, then, depending on the way in which feedstock was cultivated and subsequently processed into renewable fuel, calculating the GHG savings could be very complex and prone to error.

4.23 The lifecycle methodology set out in RED III (described in detail in Part C of Annex V) must be used for all GHG calculations carried out for reporting under the RTFO. This methodology is based on a well-to-wheel (or equivalent) approach that includes all significant sources of direct GHG emissions.

4.24 The calculations should ensure that all sources of GHG emissions that influence the carbon intensity of the biofuel are taken into account (from origin of the biofuel feedstock to the filling station)[19].

4.25 If planning to calculate actual values, it is important to understand the structure and boundaries of the fuel chain. Wherever practicable, it is strongly recommended to select from the common modules shown in Figure 2 and Figure 3, which align with the calculation methodology set out in Annex V of RED II.

4.26 There are 'default' fuel chains provided in the Carbon Calculator that can be used to construct new, bespoke fuel chains. Before adjusting existing fuel chains, it is important that suppliers understand the structure of their fuel chain and how it compares to the relevant default fuel chain. Alternatively, an entirely new fuel chain can be constructed using the modules provided in the Calculator.

4.27 Account holders should note that in the Carbon Calculator a 'conservative factor' is applied to the default processing step: a multiplier of 1.4 is applied in the processing step thereby increasing emissions from processing by 40%.

4.28 If actual data is used for the processing step(s), it is possible for the conservative factor to be removed. See paragraphs 3.10 to 3.17 of the UK and Ireland Carbon Calculator: User Manual for further guidance.

Actual Values – Wastes and Residues

4.29 Wastes and residues are considered to have zero lifecycle GHG emissions up to the process of collection of those materials.

4.30 All transport emissions involved in collecting the waste or residue and transporting it for further processing should be included. The 'process of collection' means the beginning of the process of collection. For example, used cooking oil may be collected from different

[19] There is some variation in what influence means. RSB voluntary scheme has a threshold of materiality of 0.1%. ISCC: 'Inputs with little or no effect are those that have an impact on overall emissions of the respective calculation formula element (e.g. cultivation eec) that is lower than 0.5%'. UK RTFO guidance: 'Suppliers should ensure that all sources of GHG emissions which will influence the final carbon intensity of the biofuel by one percent or more are taken into account'.

restaurants and food processing plants. The GHG emissions from transportation of this used cooking oil will need to be calculated and allocated to the final biofuel.

4.31 When calculating actual GHG value, then all emissions – from processing the waste material to extracting the useful portion – must also be included; for example, if palm sludge oil is extracted from palm oil mill effluent, the GHG emissions from this will need to be calculated and allocated to the final biofuel.

Actual Values – Partially Renewable Fuels (excluding RFNBOs)

4.32 For partially renewable fuels, the sustainability and GHG savings criteria apply to the renewable part of the fuel. Therefore, any GHG calculations apply to the quantity of the partially renewable fuel that has been reported as renewable and should consider only the renewable feedstock. The emissions from the non-renewable part of the partially renewable fuel are not included.

4.33 For ETBE (ethyl tertiary-butyl ether), TAEE (tert-amyl ethyl ether) and MTBE (methyl tertiary-butyl ether), the GHG emissions from the finished fuel are equal to that of the ethanol or methanol production pathway used.

4.34 For all other partially renewable fuels (e.g. co-processed HVO) the GHG emissions must be calculated for the renewable portion as they are calculated for fuels which are wholly renewable.

Actual Values – RFNBOs and RCFs

4.35 For RFNBOs and RCFs, there are no default values. Thus, actual values will need to be calculated using the method set out in the Annex to the Commission Delegated Regulation 2023/1185 which specifies the methodology for assessing GHG emission savings from RFNBOs and RCFs[20]. Actual values can be calculated using calculators designed to adhere to the methodology contained in the Annex of 2023/1185.

4.36 The lifecycle methodology set out in the Annex of 2023/1185 must be used for all GHG calculations carried out for reporting under the RTFO. This methodology is based on a well-to-wheel (or equivalent) approach that includes all significant sources of direct GHG emissions.

4.37 The calculations should ensure that all sources of GHG emissions that influence the carbon intensity of the RFNBO are taken into account (from the emissions of elastic and rigid inputs to combusting the fuel in its end-use).

4.38 Where a RFNBO is not the only output of a process, its share of GHG emissions shall be allocated based on its share of the total energy input to the production process or, where the co-products have no energy content, the economic value of the co-products. The methodology for determining the GHG emissions savings is set out in the Annex of

[20] https://energy.ec.europa.eu/delegated-regulation-minimum-threshold-ghg-savings-recycled-carbon-fuels-and-annex_en

2023/1185 – item no. 15 is relevant to allocating GHG emissions where a process yields multiple co-products.

Type of GHG Data (biofuels)

4.39 In addition to reporting the carbon intensity of a consignment of renewable fuel, suppliers must also report whether they used actual data for the cultivation stage or the entire fuel chain.

4.40 It should only be claimed that 'actual data for cultivation' or 'actual data for entire fuel chain' is used in a Sustainability Statement where all the inputs are based on actual data for the cultivation stage or the entire fuel chain, respectively.

4.41 Suppliers may calculate the emissions from the cultivation of a biofuel feedstock either by using regional average data or by using measured data. In such situations it should be claimed that actual data was used for the cultivation stage.

4.42 If a supplier uses the Carbon Calculator to report actual data to NORA, selectable options will appear at the bottom of the module data screen where the supplier should provide information about the type of actual data provided.

Sustainability Criteria (biofuels)

4.43 In the following sub-sections, the sustainability criteria set out in Article 29.2 to 29.7 of RED III are provided – these Articles should be referenced when establishing compliance rather than relying on this guidance alone. The applicability of the individual criterion will depend on the feedstock.

4.44 The sustainability criteria do not apply to renewable electricity supplied via public recharging points to EVs, RFNBOs, nor RCFs.

Soil quality and carbon (RED III Article 29.2 & SI 350 Schedule 3.1)

4.45 Renewable fuels produced from waste and residues derived from agricultural land (excluding forestry) shall not be produced on land where the operators or national authorities do not have monitoring or management plans in place to address the impacts on soil quality and soil carbon.

4.46 It is also necessary to report Information about how the impact on soil quality and soil carbon are monitored and managed (where the previous paragraph applies). This is not a criterion, but a reporting requirement and is addressed in Section 5 (Additional Sustainability Information).

Biodiversity (RED III Article 29.3 & SI 350 Schedule 3.2)

4.47 Renewable fuels may not be made from raw material obtained from land that had a high biodiversity value in or after January 2008. This includes:

- primary forests and other wooded land, namely forest and other wooded land of native species where there is no clearly visible indication of human activity, and the ecological processes are not significantly disturbed;
- highly biodiverse forest and other wooded land which is species-rich and not degraded, or has been identified as being highly biodiverse by the relevant competent authority, unless evidence is provided that the production of that raw material did not interfere with those nature protection purposes;
- areas designated as Special Areas of Conservation and Special Protection Areas; and
- highly biodiverse grasslands.

4.48 The European Commission has provided guidance[21] to voluntary schemes on implementing these requirements. It has also adopted a Regulation (1307/2014)[22] defining the criteria and geographic ranges of highly biodiverse grassland, which applies from 1st October 2015.

Carbon stock & peatlands (RED III Article 29.4 & 29.5, and SI 350 Schedule 3.3 & 3.4)

4.49 Renewable fuels may not be made from raw material obtained from land with high-carbon stock. Carbon stock refers to the carbon that is trapped in the biomass above and below the ground and in the soil itself. This includes land that had one of the following statuses in January 2008:

- wetlands;
- continuously forested areas;
- land spanning more than 1 hectare with trees higher than 5 meters and a canopy of between 10% and 30%;
- peatland.

Sustainable production & LULUCF (RED III Article 29.6 & 29.7, and SI 350 Schedule 3.5 & 3.6)

4.50 Renewable fuel produced from forest biomass shall meet the following criteria.

(a) The country in which forest biomass was harvested has national or sub-national laws applicable in the area of harvest as well as monitoring and enforcement systems in place ensuring:

i. the legality of harvesting operations;

ii. forest regeneration of harvested areas;

[21] https://ec.europa.eu/energy/sites/ener/files/documents/PAM%20to%20vs%20on%20HBG.pdf

[22] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:JOL_2014_351_R_0002

iii. that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected;

iv. that harvesting is carried out considering maintenance of soil quality and biodiversity with the aim of minimising negative impacts; and

v. that harvesting maintains or improves the long-term production capacity of the forest.

(b) when evidence referred to in point (a) is not available, it is necessary to have management systems in place at forest sourcing area level ensuring:

i. the legality of harvesting operations;

ii. forest regeneration of harvested areas;

iii. that areas designated by international or national law or by the relevant competent authority for nature protection purposes, including in wetlands and peatlands, are protected unless evidence is provided that the harvesting of that raw material does not interfere with those nature protection purposes;

iv. that harvesting is carried out considering the maintenance of soil quality and biodiversity with the aim of minimising negative impacts; and

v. that harvesting maintains or improves the long-term production capacity of the forest.

4.51 Biofuels produced from forest biomass shall meet the following land-use, land-use change and forestry (LULUCF) criteria:

(a) the country or regional economic integration organisation of origin of the forest biomass:

i. is a Party to the Paris Agreement;

ii. has submitted a nationally determined contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), covering emissions and removals from agriculture, forestry and land use which ensures that changes in carbon stock associated with biomass harvest are accounted towards the country's commitment to reduce or limit greenhouse gas emissions as specified in the NDC; or

iii. has national or sub-national laws in place, in accordance with Article 5 of the Paris Agreement, applicable in the area of harvest, to conserve and enhance carbon stocks and sinks, and providing evidence that reported LULUCF-sector emissions do not exceed removals.

(b) where evidence referred to in point (a) is not available, it is necessary to have management systems in place at forest sourcing area level to ensure that carbon stocks and sinks levels in the forest are maintained or strengthened, over the long term.

RFNBOs – rules of production

4.52 It is anticipated that the energy content of nearly all RFNBOs will be based on renewable hydrogen produced via electrolysis. The GHG emission intensity of hydrogen produced from fossil-based electricity is substantially higher than the GHG emission intensity of hydrogen produced from natural gas in conventional processes, which is how the majority of hydrogen is currently produced. It is therefore important to ensure that the electricity used to produce RFNBOs is renewable electricity.

4.53 Electricity from a **direct connection** may be counted as renewable for the purpose of producing RFNBOs where:

1. The installations generating electricity and producing RFNBOs are connected via a direct line or take place within the same installation;
2. The installation generating renewable electricity came into operation not earlier than 36 months before the installation producing RFNBOs;
3. The installation producing electricity is connected to the grid, and a smart metering system exists that can verify the quantity of renewable electricity used to produce the RFNBOs.

4.54 For electricity taken from a **grid connection** to be counted as renewable for the purpose of producing RFNBOs, the RFNBOs must be produced:

1. In a bidding zone where the average proportion of renewable electricity exceeded 90% in the previous calendar year; or
2. In a bidding zone where the GHG emission intensity of the electricity was lower than 18 gCO_{2eq}/MJ; or
3. Using electricity produced during an imbalance settlement period; or
4. In compliance with the additionality, temporal correlation, and geographic correlation conditions as set-out in sections 4.55, 4.56 and 4.57 (Articles 5, 6, and 7 of Delegated Regulation 2023/1184).

4.55 For RFNBOs to meet the requirements of **additionality**, the amount of renewable electricity used to generate the RFNBOs must be equivalent to the amount of renewable electricity claimed under a power purchase agreement (PPA) where:

1. The installation generating renewable electricity did not come into operation more than 3 years before the installation generating RFNBOs, or the installation generating renewable electricity had a previous PPA that met the requirements of additionality.
2. The installation generating renewable electricity has not received support in the form of financial aid, excluding financial support for land, grid connections or support that does not constitute net support.

4.56 For RFNBOs to be considered as meeting the requirements of **temporal correlation**, the RFNBOs must have been produced during the same calendar month as the renewable electricity used to produce it under a PPA.

4.57 For RFNBOs to be considered as meeting the requirements of **geographical correlation**, the renewable electricity must be generated from:

1. within the same bidding zone; or
2. an interconnected bidding zone and electricity prices are equivalent to, or higher than in the bidding zone where the RFNBOs are produced; or
3. under a PPA located in an offshore interconnected bidding zone.

4.58 Guarantees of Origin (GoO) issued for renewable electricity used to produce RFNBOs must be cancelled. Article 19 of RED III requires Member States to ensure that the same unit of energy from a renewable source is taken into account only once. Thus, to prevent renewable electricity producers selling or transferring the GoO for the renewable electricity used to produce the RFNBO and it being counted twice, the GoO corresponding to the amount of renewable electricity used to produce the RFNBO must be cancelled.

RFNBOs as Intermediate Products

4.59 RED III Article 25 (2) allows RFNBOs when used as 'intermediate products' to produce biofuels or conventional transport fuels, e.g. diesel, to count towards renewable targets. This means that a fossil or biofuel refinery could replace the fossil-based H_2 used for transport fuel production with RFNBO H_2 and claim RTFO Certificates for the quantity of RFNBO H_2 consumed.

4.60 In a fossil fuel refinery, where RFNBO H_2 is used to remove impurities during hydro treating for example, the H_2 could be treated as an intermediate product.

4.61 In biodiesel production, methanol is used in the transesterification process. Where the methanol is produced from renewable H_2 and then used in the production of biodiesel, the methanol can be counted as an intermediate product.

4.62 RFNBOs that are used in refineries for other purposes, e.g. heating buildings, cannot be awarded Certificates as they would count towards industry renewable energy targets.

4.63 According to the European Commission's *Q&A for the certification of RFNBOs and RCF*[23], the contribution of intermediary products can only be counted towards the RES-T target in the Member State where the RFNBO is used in the production of the fuel and not where the final fuel is consumed. Thus, for Ireland, only those intermediate products consumed in production facilities in Ireland may be awarded RTFO Certificates.

[23] https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en

The RTFO Sustainability Statement

4.64 The RTFO Sustainability Statement is submitted to NORA as a CSV[24] file. The template for an RTFO Sustainability Statement is illustrated in Figure 4 and the contents are described in Table 4.

4.65 An RTFO Sustainability Statement is not required for renewable electricity supplied through public recharge points to EVs – a Statement of Supply shall be submitted with applications for RTFO Certificates instead (see Sections 3.46 and 3.47).

4.66 The RTFO Sustainability Statement illustrated in this example was generated by the RTFO Team using the Carbon Calculator. The data inputs are fictitious and are for illustrative purposes only. When a CSV report is generated, the Carbon Calculator automatically fills the columns with data inputted by the user or with results that were automatically calculated by the tool. It should be noted that all the codes accepted by the RTFO Portal are aligned with those contained in the Carbon Calculator.

4.67 The RTFO Sustainability Statement covers all the sustainability, GHG savings criteria, and rules for RFNBOs, and some additional items of information that are not necessary for compliance with the sustainability and GHG savings criteria but are necessary for national reporting.

Table 4: Content of the RTFO Sustainability Statement

Data field and description	Optional	Required	Comment
Administrative consignment number For the account holder to record its own consignment number, for reference purposes.	✓		
Internal reference number For the account holder to record its own consignment number, for reference purposes.	✓		
Fuel type The main fuel types for biofuels are biodiesel, bioethanol, HVO or biomethane		✓	If supplying other fuel types not available on the Carbon Calculator drop-down, contact the RTFO team.
End use application Either aviation, road, rail, marine or other		✓	To determine additional multipliers. Field appears for some fuel types only (e.g. CHVO)
Quantity of fuel		✓	

[24] Comma separated value. RTFO Sustainability Statements that are generated using the UK & Ireland Carbon Calculator will automatically be saved in CSV format. The default software for opening a CSV file is MS Excel.

Data field and description	Optional	Required	Comment
Expressed in standard litres for liquid fuel or Nm^3 for gaseous fuel.			
Feedstock The feedstock type from which the fuel is made, e.g. used cooking oil and wheat. For RFNBOs the renewable energy used to produce the RFNBO should be reported, e.g. solar.		✓	
Production process The process used for producing the biofuel or RFNBO may be reported. For most feedstocks the process used does not affect the carbon default (unless using actual data); however, for some feedstocks (sugar beet, corn, other cereals, palm, wheat) there are process specific carbon default values provided. Therefore, although this field is optional, for those feedstocks with process-specific defaults available, the process must be known to report the lower carbon default and potentially to meet the relevant GHG saving threshold. The relevant process is dependent on the feedstock, but could be, for example: lignite, natural gas or forest residues as process fuel in CHP plant for bioethanol from wheat.	✓		
Country of origin The country of origin of the feedstock. For RFNBOs, the country of origin of the process energy is given.		✓	Select from drop-down list in the Carbon Calculator.
Place of purchase The country where the finished fuel or energy underwent the last substantial transformation when being produced.	✓		Select from drop-down list in the Carbon Calculator.
Voluntary scheme Three columns are provided to report the voluntary scheme(s) which cover the renewable fuel. More than one voluntary scheme can be selected to demonstrate		✓	If the renewable fuel feedstocks are wastes and residues derived from agricultural land, it should be ensured that the voluntary scheme is approved for demonstrating compliance with Art 29(2)[25]. The soil

[2525] While the majority of voluntary schemes are approved to demonstrate compliance with Article 29(2), some, such as Red Tractor and RTRS EU, are not.

Data field and description	Optional	Required	Comment
compliance with one or more of the sustainability and GHG savings criteria. It is a requirement of the RTFO for renewable fuels supplied to the market in Ireland to be certified under a voluntary scheme, or certified under the approved national scheme of another Member State. The schemes must be approved by the European Commission and cover the relevant sustainability and GHG savings criteria.			carbon and soil quality criteria (Art 29(2)) are not checked by other entries in the Carbon Calculator. As is the case with the soil carbon and quality criterion, the forest biomass (Art 29(6)& 29(7)) criteria are not checked by other entries in the Carbon Calculator. It should be ensured that the voluntary scheme covers these criteria if the renewable fuel is produced from a forest biomass.
Land use on 1 Jan 2008 This field is used to report the land-use relevant to the feedstock on 1 January 2008 and can be used to verify compliance with the carbon stock criteria and, in some cases, the biodiversity criteria.		✓	Select appropriate land-use from the Carbon Calculator drop down list. 'Voluntary scheme - met land criteria' is permitted where a voluntary scheme is reported which meets the land criteria and the land-use information was not passed down the chain of custody. Where the land use is known, it should always be reported. If the feedstock is a waste or non-agricultural residue, report it as such. If the fuel is a RFNBO, report 'not applicable'.
Plant in operation This field is used to report whether a renewable transport fuel production plant was in operation on or before 5 October 2015. This determines which GHG emission threshold will apply (see paragraph 4.8).		✓	GHG emission saving threshold is always 70% for RFNBOs.
Soil carbon accumulation This field captures information on whether there has been any soil carbon accumulation due to improved agricultural practice. This is the $\mathbf{e}_{sca}$ factor which can be counted as a credit against emissions of CO_{2eq} when actual values are	✓		Note that this information is not needed to demonstrate compliance, but if it is not provided and verified as part of the application for RTFO Certificates, then it

Data field and description	Optional	Required	Comment
being calculated for carbon intensity – see Annex V of RED II and Annex V of Implementing Regulation (EU) 2022/996 for the calculation methodology.			must be provided on an annual basis - see section 5. Select 'n/a' for wastes, residues and RFNBOs.
Bonus for degraded land This field captures information on whether there has been any soil carbon accumulation due to improved agricultural practice.	✓		Note that this information is not needed to demonstrate compliance, but if it is not provided and verified as part of the application for RTFO Certificates, then it must be provided on an annual basis - see section 5. Select 'n/a' for wastes, residues and RFNBOs.
Carbon intensity This field is used to report the carbon intensity expressed in gCO_{2eq}/MJ. The carbon intensity calculation, and therefore the figure reported, must include the impact of any direct land-use change.		✓	For biofuels, the carbon intensity thresholds depend on the date the renewable fuel production plant came into operation. The carbon intensity shall be reported to one decimal place.
Type of GHG data This field should be completed where actual data has been supplied for: - the cultivation stage; or - for the entire fuel chain.		✓	
GHG threshold Reads from the 'Voluntary scheme', 'Carbon intensity', 'Type of GHG data', 'Plant in operation on or before 5 October 2015' and 'Type of GHG data' fields.		✓	When prepared by the Carbon Calculator, will be automatically generated. Will show a green 'Y' if the relevant GHG savings criteria are met or a red 'N' if not met.
Biodiversity Reads from the 'Voluntary scheme' and 'Land-use on 1 Jan 2008' fields.		✓	
Carbon stock Reads from the 'Land-use on 1 January 2008' and the 'Voluntary scheme' columns.		✓	
RED compliant (indicative)		✓	

Data field and description	Optional	Required	Comment
Reads from the three previous indicators showing whether the consignment may be RTFO compliant.			

Submitting the RTFO Sustainability Statement to NORA

4.68 The RTFO Sustainability Statement (CSV file) must be uploaded when making an application, together with the Independent Verification Report (IVR) – Section 7 describes the verification and auditing requirements, which include preparing an IVR. The RTFO Team recommends RTFO account holders use the following procedure.

1. Use the Carbon Calculator to generate an RTFO Sustainability Statement for each calendar month for which you are applying for RTFO Certificates and carbon savings.
2. The Sustainability Statements should be saved in an appropriate location as CSV files.
3. The Sustainability Statements should be transferred to the independent verifier, together with any evidence from the chain of custody required by the verifier.
4. The verifier should prepare an IVR for each month and append the monthly Sustainability Statement to each report. It should return a PDF copy of the IVR to the RTFO account holder.
5. The RTFO account holder should then upload the Sustainability Statement (in CSV format) and the PDF copy of the IVR with its application for RTFO Certificates and carbon savings.

Figure 4: Sample RTFO Sustainability Statement (adapted from Carbon Calculator)

General Information										Sustainability				GHG Savings					Indicative Compliance			
Internal Ref	Admin Co. No. No.	Fuel type	Quantity of fuel	Feedstock	Production process	Country of origin	Place of purchase	Support provided	Type of support	VS 1	VS 2	VS 3	Land use 1 Jan 2008	Carbon intensity	Type of GHG data	Soil carbon	Bonus degraded land	Plant in operation date	RED GHG	RED Biodiversity	RED C-stock	RED compliant (indicative)
AA–1	01	EtOH	300,000	Wheat	NGCHP	POL	DEU	No	-	ISCC	-	-	CROPNP	76	FullChain	Yes	No	Before 2015	No	Yes	Yes	No
BB-1	02	ME	200,000	UCO	-	IRL	IRL	No	-	ISCC	-	-	W/NAR	14	-	n/a	n/a	Between 2015 and 2021	Yes	Yes	Yes	Yes
CC-1	03	G591	150,000	WMANU	-	IRL	IRL	No	-	REDCER	-	-	W/NAR	16	FullChain	n/a	n/a	Between 2015 and 2021	Yes	Yes	Yes	Yes
DD-1	04	CHVO-Road	100,000	TALL1	-	GBR	IRL	No	-	RSBRED	-	-	W/NAR	15	FullChain	n/a	n/a	After 2021	Yes	Yes	Yes	Yes
EE-1	05	ME	175,000	PALM	MetCap	MYS	NLD	No	-	ISCC	-	-	FST10	52	-	n/a	n/a	After 2021	No	Yes	Yes	No

Fuel types: Ethanol (EtOH), Methyl Ester (ME) (biodiesel), Biomethane (G591)

Feedstocks: Used Cooking Oil (UCO), wet manure (WMANU), Category 1 tallow (TALL1), Palm oil (PALM)

Production process: Natural gas in a CHP plant (NGCHP), process with methane capture at oil mill (MetCap)

Country of origin/place of purchase: Poland (POL), Ireland (IRL), Great Britain (GBR), Malaysia (MYS), Germany (DEU), Netherlands (NLD)

Voluntary scheme: International Sustainability & Carbon Certification (ISCC), REDcert-EU (REDCER), Roundtable on Sustainable Biomaterials (RSB) EU RED (RSBEU)

Land use: Cropland non-protected (CROPNP), Waste/non-agricultural residue (W/NAR), Forest 10% - 30% (FST10)

Type of GHG data: Actual value for the entire fuel chain (FullChain), default (-)

Complying with Mass Balance Rules (biofuels, biogas & RFNBOs)

4.69 Every part of a supply chain must provide evidence of compliance with the sustainability and GHG emissions saving criteria. To ensure that all the relevant renewable fuel properties and related sustainability characteristics are transmitted through the supply chain to the fuel supplier, adequate traceability and chain of custody measures are required.

4.70 The method by which a connection is made between information or claims concerning raw materials or intermediate products and claims concerning final products is known as the chain of custody. The Renewable Energy Regulations specifies that the mass balance method must be used in establishing a chain of custody.

4.71 The traceability of RFNBOs starts at the producer of the renewable electricity and covers the entire downstream supply chain.

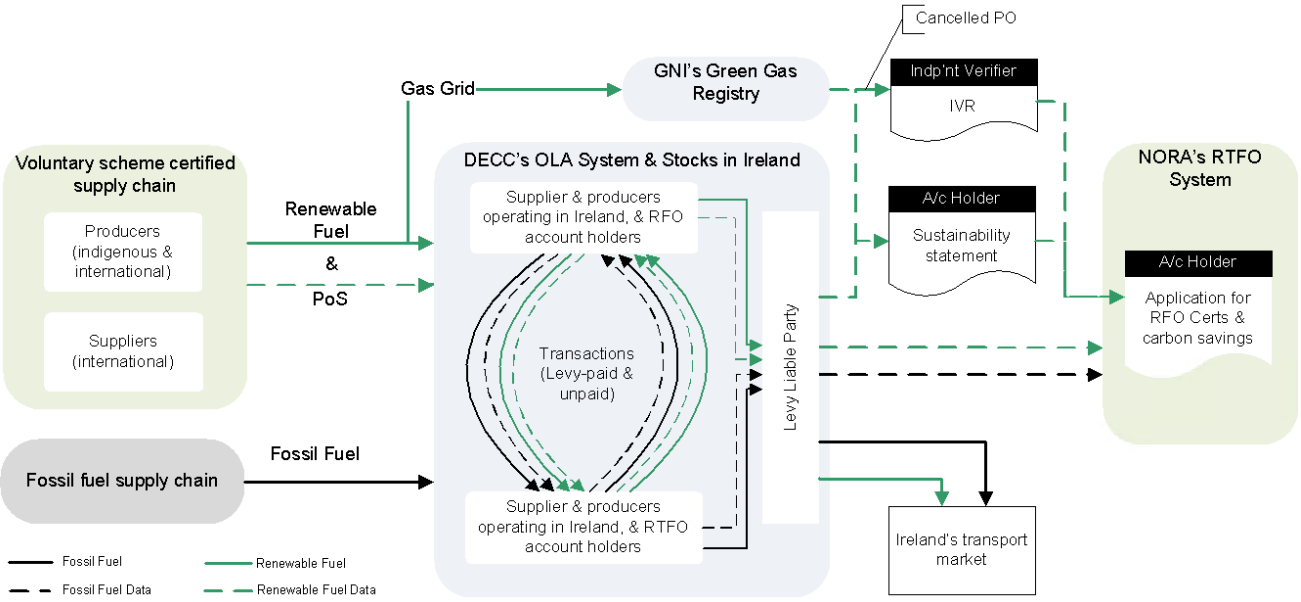
4.72 The mass balance rules do not apply to renewable electricity provided directly to the transport sector via public recharging points.

4.73 Regulation 5 of SI 33 of 2012 sets out the requirements of the mass balance system (it mirrors those contained in Article 30 of RED III). Implementing Regulation 2022/996 sets out further detailed implementing rules, including adequate standards for reliability, transparency and independent auditing that are required to be implemented by voluntary schemes. Article 19 of the Implementing Regulation provides the rules for implementing the mass balance system.

4.74 With the RTFO relying on voluntary scheme documentation to demonstrate compliance with the sustainability and GHG savings criteria, there is consequently a reliance on the voluntary scheme standards, which include rules and requirements for operating a mass balance system. These systems will be audited by Certification Bodies acting on behalf of voluntary schemes.

4.75 Notwithstanding the reliance on voluntary schemes, the following provides supplementary guidance for those companies that are certified under voluntary schemes. It also supports those operators that place renewable fuel on the market in Ireland and that rely on suppliers that are voluntary-scheme certified but are not themselves voluntary-scheme certified. There is no requirement on the company that places the fuel on the market (the one that pays the Biofuel Levy) to be voluntary scheme certified, but the renewable fuel it places on the market must have a proof of sustainability under a voluntary scheme. It is the company that pays the Biofuel Levy that must submit the application for RTFO Certificates and carbon savings. The interaction between the voluntary scheme element of the supply chain, the OLA system, Gas Network Ireland's registry (for biomethane supplied via the national grid), and NORA's RTFO system is illustrated in Figure 5.

Figure 5: Supply chain



4.76 Once the renewable fuel is recorded in OLA and is accompanied by a voluntary scheme proof of sustainability (PoS), the parties subsequently trading renewable fuel within OLA are not required to be voluntary scheme certified.

4.77 There is some flexibility afforded to fuel suppliers that pay the Biofuel Levy. Within the OLA system, companies can sell fuel as 'Levy-paid' or 'Levy-unpaid'. If it is sold Levy-unpaid, the rules of the mass balance system set out in the following paragraphs must be adhered to and this needs to be verified by the Independent Verifier and addressed in the Independent Verification Report (IVR) – see paragraphs 7.52 to 7.59 on what should be contained in an IVR.

4.78 Consignments of raw material or renewable fuel with different sustainability characteristics may be **mixed.** The following sets out what mixed means and where it is permissible[26]:

1. raw material or renewable fuels are part of a mixture if they are mixed in a container, at a processing or logistical facility, or at a transmission and distribution infrastructure or site;
2. different raw materials shall only be considered to be part of a mixture if they belong to the same *product group*[27], except where the raw material is mixed for the purpose of further processing;
3. raw materials or fuels shall only be considered to be part of a mixture if they are physically mixed, unless they are physically identical or belong to the same product group. Where raw materials or fuels are physically identical or belong to the same product group, they must be stored in the same interconnected infrastructure, processing or logistical facility, transmission and distribution infrastructure or site;

[26] Adapted from Article 19 of Commission Implementing Regulation (EU) 2022/996, Article 19.

[27] Implementing Regulation 2022/996: 'Product group' means raw materials, biofuels, bioliquids, non-gaseous biomass fuels with similar physical and chemical characteristics and similar heating values or gaseous biomass fuel, and LNG with similar chemical characteristics that are all subject to the same rules and set out in Articles 7, 26 and 27 of Directive (EU) 2018/2001for determining the contribution of biofuels, bioliquids and biomass fuels towards achieving the targets for renewable energy.

4. fuels that are introduced into a logistical facility or a transmission and distribution infrastructure such as the gas grid or a pipeline network for liquid fuels, or stored in LNG or other storage facilities shall only be considered to be part of a mixture pursuant to point (c) where that infrastructure is interconnected.

4.79 Consignments of raw material with different energy contents may be mixed for the purpose of further processing, provided the size of consignments is adjusted according to their energy content.

4.80 Information about the sustainability and GHG emissions characteristics and sizes of consignments referred to in paragraph 4.78 must remain assigned to the mixture. Thus, the sustainability and GHG emission characteristics of a consignment of raw materials or fuel shall be considered as fixed.

4.81 The sum of all consignments withdrawn from the mixture shall have the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture. Consequently, individual consignments withdrawn from the mixture may have different sets of sustainability and GHG emission characteristics.

4.82 Separate mass balances need to be maintained for raw materials and fuels that cannot be considered part of the mixture. Note, however, this is not required at biofuel production facilities where raw materials (feedstocks) are combined to produce a single fuel type.

4.83 For economic operators co-processing biomass with fossil fuel in a common process – to produce co-processed HVO, for example – a mass balance method may be used to determine the share of biofuel and biogas produced. The Commission's Delegated Regulation '*on the methodology to determine the share of biofuel and biogas for transport, produced from biomass being processed with fossil fuels in a common process*' sets out the rules to be followed[28]. In addition to a mass balance approach, an energy balance and two yield methods may also be used. In all cases, regular radiocarbon (^{14}C) testing is required to measure or verify the production outputs.

4.84 Information on whether support has been provided for the production of the fuel (or fuel precursor) and the type of support shall be included in the mass balance.

4.85 Where a consignment of fuel is used to comply with the RTFO (or an equivalent obligation in another Member State), it shall be considered to be withdrawn from the mass balance.

4.86 Where renewable fuels are blended with fossil fuels, the information about the sustainability and GHG emissions savings characteristics assigned to the blend shall correspond to the physical share of the biofuel in the blend.

4.87 For renewable and fossil fuels that are physically blended and recorded in OLA, where proofs of sustainability are not issued under a voluntary scheme, and it is not biomethane supplied via the national gas grid, the following rules shall be observed:

1. The mass balance operates over the period of one calendar month.

[28] Commission Delegated Regulation (EU) 2023/1640

2. Over this period, and taking into account opening and closing stocks, the sum of the renewable fuel and fossil fuel reported as imported and purchased must equal that reported as sold, consumed and exported.
3. Some fossil fuels and renewable fuels may be transformed within OLA from one product to another – the matrix provided in Attachment No. 1 identifies where fossil and renewable fuels (blended and unblended) may be transformed. For example, 'Blended diesel, biodiesel component – road' may be transformed to 'Blended diesel, biodiesel component – rail' where the biodiesel is supplied to trains rather than to road transport. This may occur where fuel is purchased/imported as one fuel type but it is sold to a different end-use sector.
4. Where a fuel is initially reported as 'blended' it cannot be transformed into an unblended product. For example, 'Blended diesel, biodiesel component – road' cannot be transformed into 'Unblended biodiesel – road'.
5. Nor can a renewable fuel product group be transformed into another product group; for example, biodiesel cannot become HVO, nor bioethanol become bioLPG.
6. Notwithstanding that biodiesel, HVO and CHVO may be transformed into several different OLA products, where renewable fuel is reported as being contained in a gasoil blend, a maximum 80:20 split between transport and non-transport (excluding marine) can be reported in the OLA Return (see also paragraph 3.70 for how fossil gasoil should be reported). For example, where biodiesel is blended with gasoil and becomes biogasoil, a maximum 80:20 split may be reported between 'Biodiesel for use as gasoil (other transport)' and 'Biodiesel for use as gasoil (non-transport)'.
7. Where the RTFO account holder knows that the renewable fuel blended with gasoil is supplied for non-transport purposes, it shall be reported as being supplied for non-transport and Certificates cannot be claimed in respect of such disposals.
8. Where renewable fuel is sold to the marine sector, an application for RTFO Certificates and carbon savings may be submitted for the entire quantity of renewable fuel supplied (see also paragraphs 7.84 and 7.85 and for evidence requirements).
9. Please note that the payment of the Biofuel Levy dictates the party that must apply for the RTFO Certificates and carbon savings.

4.88 Where an <u>unblended</u> renewable fuel is sold directly to the non-transport sector, RTFO Certificates and carbon savings cannot be claimed for such fuel.

4.89 Where the previous paragraph does not apply and the end-use of the renewable fuel supplied as gasoil is not known, the OLA return must reflect the 80:20 split between transport and non-transport (excluding marine), as required for blended renewable fuel (see paragraph 4.87) and for fossil gasoil (see paragraph 3.70).

4.90 The rules and requirements set out in the preceding paragraphs will be subject to audit by the RTFO team (see paragraphs 7.66 to 7.89).

4.91 To support the mass balance system and ensure its transparency, it is a requirement of RED III that Member States require economic operators to enter information on transactions made and the sustainability characteristic of the fuel into the Union database (not for RFNBOs).

Union database

4.92 The Sustainability Regulations (SI 33 of 2012), as amended, place a requirement on obligated parties to enter information into the Union Database (UDB). The Union UDB is a platform developed and operated by the European Commission. It will ensure the tracing of liquid and gaseous renewable fuels and recycled carbon fuels that are eligible for being counted towards the share of renewable energy in the transport sector[29].

4.93 When it is operational, the UDB will form an integral part of the mass balance system for renewable fuels, ensuring transparency and traceability. In addition to the renewable fuel producers and suppliers, Member States, voluntary schemes and certification bodies will have a role in verifying information entered in the UDB. For example, it is a requirement of Implementing Regulation 2022/996 that voluntary schemes ensure '*economic operators correctly enter all relevant information in the Union database*' (Article 19.2 (m)), and that audits are carried out by certification bodies on behalf of voluntary schemes to verify '*the accuracy of data recorded by the economic operators or their representatives in the Union database'* (Article 10.2 (g)).

4.94 The sustainability and GHG emissions saving characteristics and other information describing raw materials or fuel, together with transaction data, needs to be thoroughly documented and passed on from economic operator to economic operator through the supply chain. Such information needs to include data to be transmitted through the whole supply chain as well as data that is specific for individual transactions.

4.95 When the UDB is fully operational, only PoSs that are accessible on the platform will be accepted as confirmation of the sustainability and GHG savings information provided in the Sustainability Statement.

4.96 The sustainability and GHG savings information that needs to be reported in the UDB is set out in Annex I of Commission Implementing Regulation (EU) 2022/996 and includes the following, the majority of which is also required for inclusion in Sustainability Statements (see paragraph 3.4 of the RTFO Certificate and Carbon Savings Application Procedure):

(a) name of the voluntary or national scheme;

(b) proof of sustainability (PoS) number;

(c) sustainability and GHG emission characteristics, including:

(i) statement on whether the raw material or fuel complies with the criteria set out in Article 29(2) to (7) of RED II

[29] https://eur-lex.europa.eu/eli/dir/2023/2413/oj/eng

(ii) GHG emission data, calculated in accordance with the RED II Annex V or VI methodology or that of the Delegated Regulation (EU) 2019/807[30]

(iii) description of when the installation started operation (for fuels only)

(d) name of raw material;

(e) waste or animal by-product permit number;

(f) fuel type;

(g) country of origin of raw material;

(h) country of fuel production;

(i) statement on whether the raw material or fuel complies with the criteria set out for low indirect land-use change-risk biofuels;

(j) information on whether support has been provided for the production of that consignment, and if so, the type of support scheme.

4.97 The transaction data needs to include the following:

(a) supplier company name and address;

(b) buyer company name and address;

(c) date of (physical) loading;

(d) place of (physical) loading or logistical facility or distribution infrastructure entry point;

(e) place of (physical) delivery or logistical facility or distribution infrastructure exit point;

(f) volume (for fuels, the energy quantity of the fuel must also be included).

4.98 The frequency with which data needs to be entered into the UDB is not yet established. This guidance will be updated when further information is available.

4.99 The information to be transmitted through the supply chain should be included in the documentation accompanying the physical shipments of raw material or renewable fuels. The UDB public wiki can be found here[31].

Renewable fuels transported via interconnect infrastructure (biomethane, for example)

4.100 In case of liquid or gaseous fuels introduced into an interconnected infrastructure and subject to the same mass balancing system, the sustainability and GHG emissions characteristics shall

[30] Commission Delegated Regulation (EU) 2019/807 supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council as regards the determination of high indirect land-use change-risk feedstock for which a significant expansion of the production area into land with high carbon stock is observed and the certification of low indirect land-use change-risk biofuels, bioliquids and biomass fuels (link)

[31] https://wikis.ec.europa.eu/display/UDBBIS/Union+Database+for+Biofuels+-+Public+wiki

be maintained across consignments entering and exiting the interconnected infrastructure. In effect, the interconnected infrastructure, a gas grid, for example, is treated as a single site, so the requirements of the mass balance that are applicable at a site level are equally applicable to an 'interconnected infrastructure' (see paragraph 3.11 of the RTFO Application and Sustainability Procedure). According to Implementing Regulation (EU) 2022/996, recital 5: 'In the case of gaseous fuels, the EU interconnected grid is considered as one single mass balancing system'.

4.101 Once the UDB is fully operational, to trace consignments of renewable fuel in an interconnected infrastructure, the sustainability and transactional information described in 4.96 and 4.97 shall be registered in the UDB at the first entry point and registered out as consumed at the point of final consumption.

4.102 If gaseous fuels are withdrawn from an interconnected infrastructure and further transformed into gaseous or liquid fuels, the point of final consumption is the point of final consumption of the final gaseous or liquid fuels. In such a case, all intermediary stages from the withdrawal of the fuels from the interconnected infrastructure until the point of final consumption of the final fuels must be registered in the UDB.

4.103 To ensure gaseous fuels are only counted in one end-use sector in Ireland, suppliers of gaseous fuels to the transport market via the national gas network operated by Gas Networks Ireland (GNI) shall supply cancellation statements for Proofs of Origin (PO) from GNI's renewable natural gas registry[32].

4.104 Subject to satisfying GNI's requirements, producers of renewable gas that are injecting it into the national gas network are issued with a PO for every kilowatt hour of renewable gas injected. A PO cancellation statement generated within GNI's registry confirms the mass balancing of the renewable gas through the network, from injection to withdrawal.

4.105 Similar to indigenous producers, shippers of renewable gas from abroad may apply to GNI for a PO for renewable gas produced elsewhere and injected into the EU interconnected gas grid. The shippers will need to satisfy the requirements of GNI's registry in order to generate Pos.

4.106 The quantity on the PO cancellation statement must correspond to the amount of fuel supplied to the transport sector and for which RTFO Certificates are being claimed.

4.107 The PO cancellation statement must be included in the independent verification report (IVR), which forms part of an application for RTFO Certificates and carbon savings.

4.108 Cancellation statements issued by GNI's Renewable Natural Gas Registry cover biomethane transported via the interconnected gas infrastructure. There are other means, however, of supplying biomethane, and other renewable gases. For example, CNG trucks supplied directly

[32] GNI was appointed under SI 350 of 2022 as the body responsible for issuing Guarantees of Origin (GO) in accordance with a supervisory framework established by the Commission for Regulation of Utilities. It is the responsibility of the Commission for Regulation of Utilities to ensure that GOs are accurate, reliable and fraud-resistant, and that the renewable gas complies with the standard CEN - EN 16325 (to the extent that it is applicable to gas from renewable sources). Under this remit established by SI 350, GNI established the renewable gas registry (https://www.gasnetworks.ie/business/renewable-gas/registry/).

from the biomethane production facility will not utilise the national gas grid and, therefore, will not generate POs. In such cases, the requirements that apply to liquid renewable fuels shall be employed by recording the quantities in OLA, along with any intercompany transactions, and maintaining voluntary scheme proofs of sustainability to verify the quantities and compliance with the sustainability and GHG savings criteria.

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5 Additional Sustainability Information (biofuels)

5.1 There are five items included as additional sustainability information:

1. whether the bonus for degraded land has been used in the GHG savings calculation (Regulation 6 (1) (e));
2. whether the factor for emissions savings from soil carbon accumulation from improved agricultural management has been used in the GHG savings calculation[33] (Regulation 6 (1) (f));
3. where biofuels are produced from waste and residues derived from agricultural land (excluding forestry) and the operators or national authorities have monitoring or management plans, it is a requirement to report information about how the impacts on soil quality and soil carbon are monitored and managed (Schedule 3.1 of SI 350 of 2022);
4. The name of the supplier of the PoS;
5. The unique voluntary scheme ID number of the supplier.

5.2 None of these items are necessary for demonstrating compliance with the sustainability and GHG savings criteria in the Carbon Calculator when preparing Sustainability Statements, and the awarding of Certificates is not contingent on these items being reported. However, if this information is not contained in the Sustainability Statement or it is not addressed in the IVR, it will be required to be reported annually, in an Annual Information Report (AIR) – see Section 7. Therefore, account holders applying for Certificates should ensure its supplier(s) can provide this information in PoS or in other supporting documentation, where applicable.

5.3 In relation to bullet no. 1 of paragraph 5.1. the GHG savings methodology set out in Part C of Annex V of RED II provides the option for a GHG savings bonus if degraded land is restored (e_B= 29 g CO_{2eq}/MJ).

5.4 The bonus can only be applied if evidence is provided that the land was not in use for agriculture or any other activity in January 2008, and is severely degraded land, including land that was formerly in agricultural use.

5.5 The bonus applies for a period of up to 20 years from the date of conversion of the land to agricultural use, provided that a steady increase in carbon stocks as well as a sizable reduction in erosion phenomena for land falling under severely degraded land are ensured.

5.6 'Severely degraded land' means land that, for a significant period of time, has either been significantly salinated or presented significantly low organic matter content and has been severely eroded. This can be characterised by soil erosion or significant loss of soil quality or biodiversity.

[33] It is acknowledged that both clauses in Regulation 6 refer to the Fuel Quality Directive (98/70/EC) and that the methodology set out in Annex IV of the FQD is no longer fully aligned with that of RED II For example, the bonus for degraded land applies for a period of up to 10 years in the FQD whereas it applies for 20 years in RED II; also, the FQD refers to 'heavily contaminated land' whereas RED II does not. It is the RTFO Team's position that, notwithstanding the differences and the references to the FQD, the objective of the legislation is to understand where these emission savings have been applied and to capture this data, where it has been applied.

5.7 In relation to bullet no. 2 of paragraph 5.1, the GHG savings methodology of RED II allows the use of emissions savings (e_{sca}) due to carbon accumulation in soil driven by the adoption of improved agricultural management.

5.8 The methodology for calculating e_{sca} is set out in Annex V of the Implementing Regulation (EU) 2022/996 (rules to verify sustainability and greenhouse gas emissions savings criteria and low indirect land-use change-risk criteria)[34].

5.9 According to the methodology, improved agricultural management refers to practices that may increase carbon content in soil:

- shifting to reduced or zero-tillage;
- improved crop rotation;
- the use of cover crops, including crop residues management; and
- the use of organic soil improver (e.g. compost, manure fermentation, digestate, and biochar).

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[34] https://eur-lex.europa.eu/eli/reg_impl/2022/996/oj

6 Using the UK & Ireland Carbon Calculator – Renewable fuels (excluding renewable electricity)

Getting Started

6.1 The carbon calculator may be downloaded from NORA's website[35]. Click on Carbon Calculator and follow the installation instructions.

6.2 Full details on how the UK and Ireland Carbon Calculator functions are provided in the User Manual, which is available on the RTFO section of NORA's website.

6.3 It is important that RTFO account holders use the most recent version of the Carbon Calculator. The User Manual describes how the software tool itself can be used to check that the version in use is the most recent one.

6.4 Data in the Carbon Calculator is sourced from RED III and it relies on the methodology set out in Annex V of RED III (and Annex VI for biomethane). This is discussed in Section 4 of this guidance.

Using Default Values from RED to Report GHG Emissions Savings

6.5 RED III, Annex V provides GHG emissions savings and carbon emissions for several biofuel chains (Annex VI contains GHG savings and carbon emissions for biomethane). For each biofuel chain a 'typical' and 'default' carbon intensity emission value is provided, as well as a breakdown of the emissions from each of the three main stages of the supply chain (cultivation, transport and processing) which are referred to as 'disaggregated defaults'.

6.6 If account holders intend to rely on default values for GHG emissions (see Schedule 3 of the 2022 Renewable Energy Regulations[36]), they need to follow the procedure described in Chapter 2 of the Carbon Calculator User Manual. NORA anticipates that the majority of RTFO account holders will report default values or actual values that have been provided in a voluntary scheme proof of sustainability by their supplier (which do not need to be calculated by the account holder).

6.7 Instructions on how to use the Carbon Calculator to create a 'fuel chain module' are contained in Chapter 2 of the Carbon Calculator User Manual.

6.8 Wastes, processing residues and agricultural residues are attributed zero GHG emissions up to the process of collection of those materials (see Paragraph 18 of Annex V). The process of collection may involve transportation of the material and any emissions of this transport step should therefore be included.

[35] https://www.nora.ie/online-software-resources

[36] https://www.nora.ie/_files/ugd/b984d0_b350e38202d84c818218bbf90dc7c663.pdf

6.9 For partially renewable fuels, the sustainability and GHG savings criteria apply to the renewable part of the fuel. Therefore, it is permitted to report an appropriate carbon default for the volume of the partially renewable fuel that has been reported as renewable.

Using Actual Input Data to Report GHG Emissions Savings

6.10 Default values for carbon intensity may not meet the targets for GHG emissions savings that are specified in the Renewable Energy Regulations, in which case would be necessary to calculate the actual carbon intensity values to confirm that the latter values do meet the targets. There will also be renewable fuels for which there is no default values, e.g. RFNBOs.

6.11 The Carbon Calculator may be used to construct fuel chains and calculate actual carbon intensity values.

6.12 For instruction on how to use a default fuel chain to add actual data, refer to paragraphs 2.10 to 2.11 of the Carbon Calculator User Manual.

6.13 To modify a default fuel chain, refer to paragraphs 2.12 to 2.13 of the Carbon Calculator User Manual.

6.14 To construct a completely new fuel chain, refer to paragraphs 2.17 to 2.22 of the Carbon Calculator User Manual.

6.15 Instructions for entering actual data into a fuel chain are provided in Chapter 3 of the Carbon Calculator User Manual.

6.16 The lifecycle calculation methodology is set out in Annex V of the RED, and Schedules 3 and 4 of the Renewable Energy Regulations.

Generating the RTFO Sustainability Statement

6.17 Once all the data for all disposals in a given month are entered, the Carbon Calculator can be used to produce monthly sustainability reports. These can be submitted to NORA as the RTFO Sustainability Statements.

6.18 The Carbon Calculator can be used to generate this report/statement irrespective of the way in which compliance with GHG savings is reported – whether using default values, actual values, or a combination of both. All this information will be recorded in the project file created when the Carbon Calculator file is set up for the first time.

6.19 Instructions on how to generate the monthly sustainability report (the Sustainability Statement) are provided in paragraphs 4.1 to 4.7 of the Carbon Calculator User Manual.

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7 Requirements for Verification & Auditing

Introduction

7.1 This section describes the key responsibilities of the parties involved in verifying and auditing processes for renewable fuels (including RFNBOs and SAF), renewable electricity, fossil fuels and UERs.

7.2 It specifies the standard to which verification must be carried out, the competences expected of the verifier and the requirement that verifiers be independent.

7.3 It clarifies the requirements for the reporting, verification and auditing of information relating to the sustainability of renewable fuels, including:

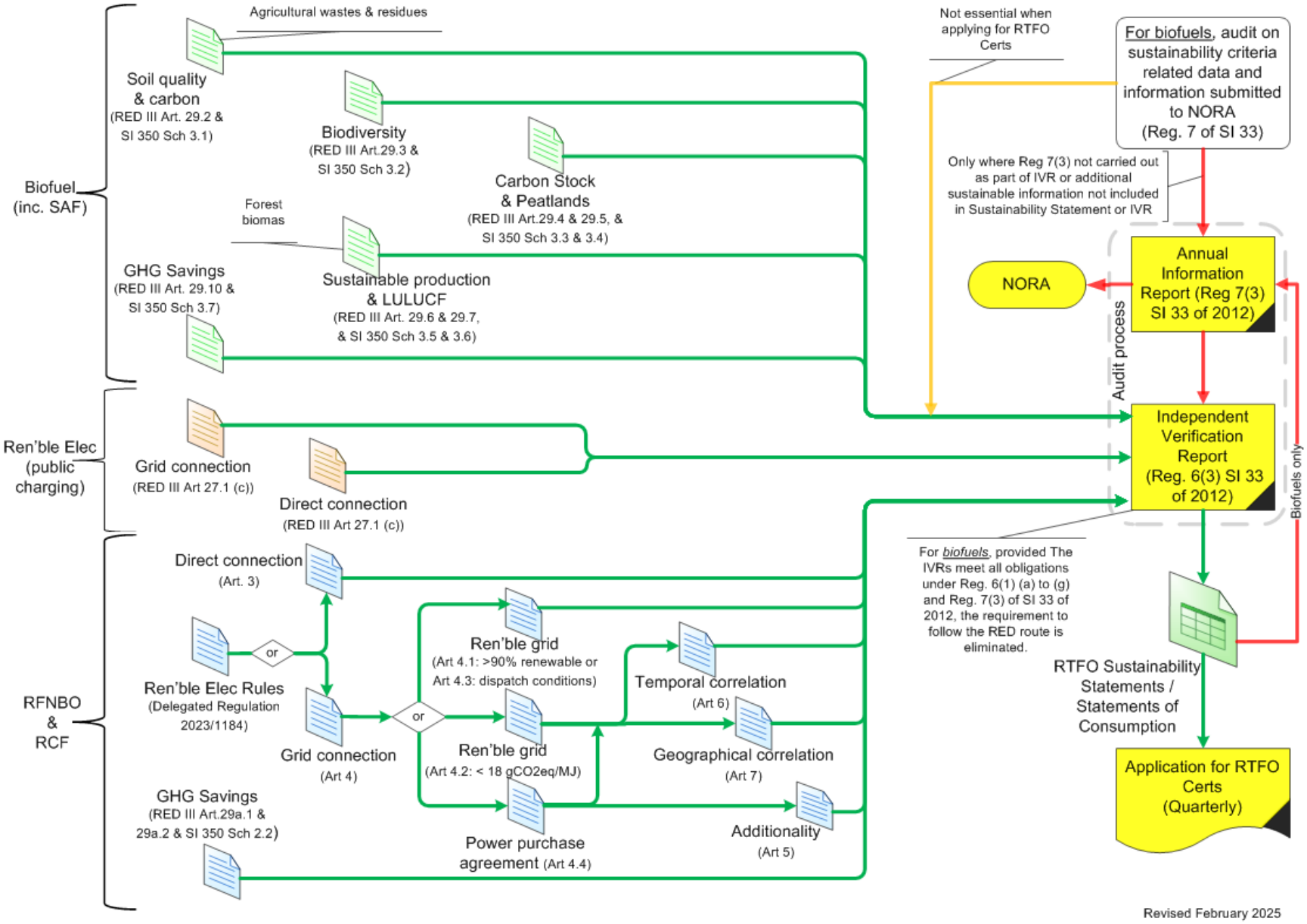
1. the data and information that must be submitted to NORA, and independently verified, when an application for RTFO Certificates is being made;
2. the requirement for independent verification as specified in Regulation 6 (3) of SI 33 of 2012;
3. the information that may need to be submitted on an annual basis, at the end of the obligation period; and
4. the requirement for an independent audit of data as specified in Regulation 7 (2).

7.4 It also illustrates how, under certain circumstances – which are essentially within the control of the RTFO account holder – it may not be necessary to provide any additional sustainability information to NORA at the end of an obligation period and, consequently, there would be no need for the independent audit that is referred to in bullet no. 4 above.

7.5 The RTFO process for reporting, verifying & auditing data and information relating to the carbon and sustainability criteria for biofuels is illustrated schematically in Figure 6.

7.6 The guidance also covers the annual auditing activities carried out by the RTFO Team. These activities include examining sustainability data and data reported in the monthly Levy Returns (OLA Returns) that are submitted to DECC and which are relied upon to calculate the renewable fuel obligations of obligated parties.

Figure 6: Reporting and verification of data & information (biofuels, RFNBOs & electricity supplied to EVs via public recharging points)



Obligation to Maintain Records and Report to NORA

7.7 The requirement to maintain and report on information related to the sustainability and GHG savings criteria is set out in RED III Article 30.3, the first paragraph of which is summarised below:

Member States shall take measures to ensure that economic operators submit reliable information regarding the compliance with the sustainability and greenhouse gas emissions saving criteria laid down in Article 29(2) to (7) and (10) [for biofuels] *and Article 29a(1) and (2)* [for RFNBOs & RCFs]*, and that economic operators make available to the relevant Member State, upon request, the data used to develop that information. Member States shall require economic operators to arrange for an adequate standard of independent auditing of the information submitted.... The auditing shall verify that the systems used by economic operators are accurate, reliable and protected against fraud, including verification ensuring that materials are not intentionally modified or discarded so that the consignment or part thereof could become a waste or residue. The auditing shall also evaluate the frequency and methodology of sampling and the robustness of the data.*
The obligations laid down in this paragraph shall apply regardless of whether renewable fuels and recycled carbon fuels are produced within or are imported into the Union. Information about the geographic origin and feedstock type of biofuels, bioliquids and biomass fuels per fuel supplier shall be made available to consumers in an up-to-date, easily accessible, and user-friendly manner on the websites of operators, suppliers or the relevant competent authorities and shall be updated on an annual basis.

7.8 The Sustainability Regulations (SI 33 of 2012) transposed this requirement into National Law. Regulation 6 specifies, in detail, the information that is to be provided to NORA while Regulation 7 obliges the RTFO account holder to hold this information and to have it audited. In the following sections, those items of information that will automatically be included when an RTFO account holder makes a monthly/quarterly application for RTFO Certificates will be teased out, as will those that may be reported on an annual basis.

7.9 The requirement to maintain and report on information related to monthly stock holdings, imports, purchases and sales of oil products (including biofuels) in a Return to DECC is detailed in SI 567 of 2007. The monthly Return, which is reported via DECC's OLA system, is used to calculate the renewable fuel obligations and to verify the quantities of renewable fuels placed on the market in Ireland. The RTFO Team's approach to auditing this information is set out in paragraphs 7.66 to 7.69.

Information to be reported with an Application for RTFO Certificates (biofuels, RFNBOs & RCFs)

7.10 The items of information mentioned at Regulation 6 (1) (a), (b), (c), (e) & (f) are all inputs to the Carbon Calculator. Consequently, if they are all entered in the calculator, whenever an RTFO account holder makes an application for RTFO Certificates it will **automatically** provide

this information to NORA, and this will be reflected in the CSV file (RTFO Sustainability Statement) output from the calculator. These items are:

1. the greenhouse gas emissions savings threshold against which the consignment is being measured (For biofuels, at least 50% GHG savings if produced in installations in operation before 5 October 2015; 60% if produced in installations in operation between Oct 2015 and Dec 2020; and 65% if produced in installations in operation from Jan 21. For RFNBOs, at least 70%)
2. the type of raw material from which the product is made (for RFNBOs this will be renewable electricity);
3. the place of origin of the raw material (for RFNBOs, where the renewable electricity was produced);
4. whether the bonus for biofuel obtained from restored degraded land has been used in the GHG calculation (not relevant where feedstocks are wastes and residues or RFNBOs);
5. whether the factor for emissions savings from soil carbon accumulation via improved agricultural management has been used in the GHG calculation (not relevant where feedstocks are wastes and residues or RFNBOs).

7.11 In relation to Regulation 6 (1) (g) (details of measures taken to comply with the sustainability criteria contained in paragraphs 1 to 6 of Schedule 3 of SI 350 of 2020), under Regulation 4 of SI 33 of 2012, NORA is required to 'establish a procedure by which renewable transport fuel obligation account holders may demonstrate compliance with the sustainability and greenhouse gas emissions savings criteria for renewable transport fuels referred to in Regulation 6 of the Regulations of 2022 in respect of which renewable transport fuels obligation certificates are being applied for'.

The procedure (457-X0066) requires account holders to rely on voluntary schemes or national schemes of other Member States to demonstrate compliance with the sustainability and GHG savings criteria. Thus, reporting the name of the voluntary scheme or the national scheme of another Member State will satisfy this requirement, as long as the scheme covers the sustainability and GHG savings criteria of the renewable fuel reported in the Sustainability Statement and there is a PoS for the renewable fuel. This reliance on the *bona fides* of voluntary schemes is a requirement of Regulation 5 (1A): 'when a renewable fuel account holder provides proof or data obtained in accordance with an agreement or scheme as described … he or she shall not be required to provide further evidence of compliance with the sustainability criteria set out in Schedule 3… '.

7.12 If the Sustainability Statement (CSV file) is accurate and all the data is included, and the Independent Verification Report that accompanies the application is complete, then the obligation to have the information mentioned under Regulation 6 (1) (a), (b), (c), (e), (f) & (g) independently verified **will be fulfilled**[37]. Note: Regulation 6 (2) confirms that the information mentioned at Regulation 6 (1) (e) & (f) are not required where biofuel is produced from waste and residues.

7.13 RTFO account holders are also required to provide some of the items of information mentioned at Regulation 6 (1) (i), (ii), (iii), (iv) and (v) when making its application for RTFO

[37] Independent verification is required under Regulation 6 (2).

Certificates[38]. The items mentioned at Regulation 6 (1) (i) refer to the RTFO Application and Sustainability Procedure (ref. 457-X0060). When an application is submitted through the RTFO Online System and the independently verified RTFO Sustainability Statement is uploaded, the requirements of Regulation 6 (1) (i) will be automatically met[39]. The items mentioned at Regulation 6 (1) (ii), (iii), (iv) and (v) refer to bilateral/multilateral agreements, voluntary agreements and the national schemes of EU Member States. Here again, provided the Independent Verification Report and the Sustainability Statement are accurate and complete, then the obligation to have this information independently verified will also have been met.

7.14 The flow of data and information referred to in paragraphs 7.10 to 7.13 above are represented by the GREEN route in Figure 6.

Key Responsibilities for Verification and Auditing

Renewable fuels (biofuels, including SAF, & RFNBOs) – RTFO account holders

7.15 RTFO account holders are responsible for the following.

1. Preparing data and completing applications for RTFO Certificates and carbon savings.
2. Ensuring they have evidence (or that this evidence exists in the chain of custody) to support the information in the application for Certificates and carbon savings, and the annual audit report (if required).
3. Appointing an independent verifier that is competent to undertake assurance engagements under ISAE 3000 and possesses an appropriate level of understanding of the sustainability criteria. (ISAE 3000 is described in detail in paragraph 7.28.)
4. Notifying NORA of the verifier appointed.
5. Providing supporting information and evidence to the verifier and facilitating any visits.
6. Assisting the verifier in contacting and gaining access to other organisations in the supply chain.
7. Correcting any data that the verifier finds to be misstated or insufficiently supported by evidence.
8. Providing the independently verified RTFO Sustainability Statement to NORA.
9. Advising the verifier on the account holder's approach to its annual auditing requirements: whether it will be following the ORANGE or RED route (see Section 7, paragraphs 7.60 to 7.65)
10. Informing NORA if errors are discovered in the data, after an application for RTFO Certificates and carbon savings or Annual Information Report (AIR) has been submitted.

[38] The number of statements that will have to be provided will depend on how and from where the biofuel was sourced.

[39] Except where there are errors or omissions.

11. Submitting applications for RTFO Certificates and carbon savings on a quarterly basis and no later than the deadline dates determined by NORA.
12. Arranging for an AIR, if the biofuel sustainability data is not audited in accordance with Regulation 7 as part of the assurance engagement carried out by the independent verifier under (iii).
13. Cooperating with NORA to schedule annual RTFO audits and facilitating these audits, which may be on-site or desk-based.

Renewable electricity – RTFO account holders

7.16 RTFO account holders are responsible for the following.

1. Preparing data and completing applications for RTFO Certificates.
2. Ensuring they have evidence to support the information in the application for Certificates.
3. Appointing an independent verifier that is competent to undertake assurance engagements under ISAE 3000 and possesses an appropriate level of understanding of the account holder's public recharging infrastructure and the systems supporting it. (ISAE 3000 is described in detail in paragraph 7.28.)
4. Notifying NORA of the verifier appointed.
5. Providing supporting information and evidence to the verifier and facilitating any visits.
6. Assisting the verifier in contacting and gaining access to other organisations in the supply chain.
7. Correcting any data that the verifier finds to be misstated or insufficiently supported by evidence.
8. Informing NORA if errors are discovered in the data, after an application for RTFO Certificates.
9. Submitting applications for RTFO Certificates and carbon savings on a quarterly basis and no later than the deadline dates determined by NORA.
10. Cooperating with NORA to schedule annual RTFO audits and facilitating these audits, which may be on-site or desk-based.

Fossil fuels – RTFO account holders

7.17 RTFO account holders are responsible for the following.

1. Preparing data and submitting monthly OLA Returns.
2. Ensuring they have evidence (or that it exists in the supply chain) to support the information reported in the Return.

3. Informing NORA and DECC if errors are discovered in the data after an OLA Return has been submitted. RTFO account holders are required to submit OLA Returns to DECC on a monthly basis.
4. Cooperating with NORA to schedule annual RTFO audits and facilitating these audits, which may be on-site or desk-based.

Renewable fuels & renewable electricity – Verifiers

7.18 Verifiers are responsible for the following.

1. Planning and carrying out evidence gathering and testing activities to form an opinion on the data.
2. Informing RTFO account holders of any changes to data which must be made and of any consignments or data which should be withdrawn from verification.
3. Providing an assurance opinion or, if necessary, a qualified opinion or disclaimer of opinion, in accordance with ISAE 3000 or an equivalent standard, to the RTFO account holder.
4. Preparing an Independent Verification Report (IVR) setting out, inter alia, the verifier's opinion and the evidence gathered to inform the opinion. (Guidance on what should be contained in an IVR is provided in paragraphs 7.52 to 7.59.)
5. Carrying out an independent audit of the sustainability related data.

Renewable and fossil fuels – NORA

7.19 NORA is responsible for the following.

1. Specifying the data to be submitted by RTFO account holders.
2. Receiving assurance opinions and reviewing them against the requirements of the procedure.
3. Informing RTFO account holders of acceptance or rejection of applications for RTFO Certificates and carbon savings.
4. Conducting annual auditing on data submitted in applications for RTFO Certificates and carbon savings, and data submitted in the OLA Return on renewable and fossil fuel.

UERs – RTFO account holders

7.20 RTFO account holders are responsible for the following.

1. Preparing the data and completing the applications for carbon savings from UERs.
2. Ensuring the UERs have been estimated and validated in accordance with the principles and standards detailed in ISO 14064, ISO 14065 and ISO 14066.
3. Providing evidence that the UERs have not been used in other Member States or claimed for compliance with any other emission reduction requirements or any other GHG offsetting scheme.

4. Arranging for independent verification of the evidence that the UERs meet the eligibility requirements for carbon savings.
5. Appointing an independent verifier that is competent to undertake assurance engagements under ISAE 3000 and possesses an appropriate level of understanding.

UERs – Verifiers

7.21 There are two distinct verification requirements for UERs.

1. It must be verified that the emission reductions have taken place under the UER project, the project conforms to International Standards for project validation and verification (specifically ISO 14064, 14065 and 14066), and the verification of methods for estimating UERs was carried in accordance with ISO 14064.
2. It must be verified that the UERs meet the eligibility requirements for carbon savings, as set out in paragraph 3.85.

7.22 For item (i) above, the organisation verifying the UER must be accredited in accordance with ISO 14065. UERs assessed by validation and verification bodies that are not compliant with the ISO requirements will not be eligible for carbon savings. It is likely that item (i) will be carried out by the organisation providing the UER.

7.23 For item (ii), NORA requires independent verification of evidence that UERs meet the eligibility requirements for carbon savings. This verification must be carried out in accordance with ISAE 3000. The verifier is responsible for:

1. Planning and carrying out evidence gathering and testing activities to form an opinion on the data;
2. Informing RTFO account holders of any changes to data which must be made;
3. Providing an assurance opinion or, if necessary, a qualified opinion or disclaimer of opinion, in accordance with ISAE 3000 or an equivalent standard, to the RTFO account holder.
4. Preparing an Independent Verification Report (IVR) setting out, inter alia, the verifier's opinion and the evidence gathered to inform the opinion.

7.24 In addition, the verifier needs to provide assurance that the UERs have not been used in other Member States or claimed for compliance with any other emission reduction requirements or any other GHG offsetting scheme.

7.25 It may be the case that the same verifier verifies: (a) the emission reductions have taken place in compliance with International Standards; and (b) the requirements for eligibility as carbon savings have been complied with. However, this does not need to be the case.

UERs – NORA

7.26 NORA is responsible for the following.

1. Specifying the data to be submitted.
2. Receiving IVRs and reviewing them against the requirements.
3. Informing RTFO account holders of acceptance or rejection of applications for carbon savings from UERs.

Assurance Standards – ISAE 3000

7.27 For verification of sustainability and GHG emission savings data for renewable fuels, the Sustainability Regulations state that the verification must meet the requirements of ISAE 3000, or an equivalent standard as may be agreed by the Agency. ISAE 3000 has also been specified by NORA for independent verification of UER data and renewable electricity data.

7.28 ISAE 3000 is an international standard developed by the International Auditing and Assurance Standards Board (IAASB). It is a standard for assurance engagements other than audits or reviews of historical financial information.

7.29 ISAE 3000 defines two levels of assurance: limited and reasonable. Neither the Sustainability Regulations (SI 33 of 2012) nor the GHG Reporting Regulations (SI 160 of 2017) specify the level of assurance required for data submitted under these regulations. NORA has determined that the level of assurance required for applications for RTFO Certificates and carbon savings for renewable fuels and renewable electricity is 'limited' and ‘reasonable’ assurance is required for applications for carbon savings for UERs.

7.30 The level of assurance relates to the level of engagement risk. This is the risk that the verifier expresses in an appropriate conclusion. As limited assurance involves limited evidence gathering activities, the assurance opinion is expressed in the negative form, for example:

"Based on our review, nothing has come to our attention to cause us to believe there are errors in the data."

Reasonable assurance requires a higher level of evidence gathering and as such the assurance opinion is expressed in a positive form, for example:

“… based on our assessment, the data is free from material misstatement.”

7.31 By expressing the conclusion in this manner, the verifier is being clear that the level of confidence which users of the assurance statement place on the conclusion must be taken in the context of the nature and extent of evidence gathering that the verifier has undertaken and described in the assurance opinion.

7.32 At the time of writing, NORA is not aware of any equivalent standards to ISAE 3000. If an RTFO account holder or a verifier wishes to use an alternative standard, they should contact the RTFO Team to discuss this as soon as possible.

7.33 Verification shall be carried out in accordance with the most recent issue of ISAE 3000 or equivalent standard as may be agreed by the Agency.

Independence of Verifiers

7.34 ISAE 3000 requires that 'The practitioner should comply with the requirements of Parts A and B of the Code of Ethics for Professional Accountants, issued by the International Ethics Standards Board for Accountants (the IESBA Code)'. This Code provides a framework of principles that members of assurance teams, firms and network firms use to identify and safeguard against any threats to independence.

7.35 Although the IESBA code does not, of itself, preclude a qualified person within the RTFO account holder's organisation (such as an internal auditor) from providing assurance, this is not sufficient to satisfy the requirements of Regulation 6 (3) or 7 (2) of the Sustainability Regulations.

7.36 The Sustainability Regulations require that the assurance provider is 'independent' and as such for the purposes of the RTFO, verification by a person within the RTFO account holder's organisation is not considered to be independent assurance. This requirement for independence also applies to Verifiers assuring applications in relation to renewable electricity.

7.37 The assurance provider may not be a 'connected person' of the RTFO account holder, as defined in Section 10 of the Taxes Consolidation Act 1997.

7.38 Threats to independence may also exist where a verifier is independent of the RTFO account holder but has been engaged by them in another capacity relating to the sustainability information. For example, if a verifier has worked with an RTFO account holder to design or implement controls over that information.

Professional Competencies

7.39 The verifier's assurance opinion must be produced by a person with appropriate expertise.

7.40 ISAE 3000 requires that 'The practitioner should accept (or continue where applicable) an assurance engagement only if the practitioner is satisfied that those persons who are to perform the engagement collectively possess the necessary professional competencies'. This includes both the work of the practitioner themselves, and any expert that they may engage to assist with the assurance.

7.41 Competence to undertake assurance engagements under ISAE 3000 or such equivalent standard as may be agreed by NORA is a requirement of the procedure.

7.42 The extent to which expert skills and knowledge relating to sustainability information for renewable fuels, renewable electricity and UER data is required will depend on the complexity of the fuel supply chain and the UER project. For example, in the case of an RTFO account holder which only disposes of renewable fuel made from locally-sourced used cooking oil (UCO), and which reports the default value for the carbon emissions, a significantly lower level of expertise would be needed than for verification of data relating to a supply chain

sourcing multiple feedstocks from multiple countries and relying on land use and actual carbon emissions information being accurately passed through the chain of custody.

7.43 RTFO account holders should ask verifiers to demonstrate their competencies as part of the appointment process. For example, in selecting a verifier, RTFO account holders may require that the assurance provider to demonstrate that it:

1. Is independent of organisations involved in the production of renewable fuels or UERs;
2. Has established and maintains personnel records which demonstrate that the verification personnel are competent;
3. Has effective procedures for the training and recruitment of competent staff (employees and contractors);
4. Ensures that the personnel involved in verification are competent for the functions they perform including experience of carrying out ISAE 3000 assurance engagements and appropriate understanding and experience of the type of sustainability information they will be reviewing;
5. Has systems to monitor the performance of verifiers and reviewers, which are reviewed regularly;
6. Keeps up with verification best practice.

7.44 NORA does not accredit or recognise verifiers. It is the responsibility of RTFO account holders to ensure that the appointed verifier is independent, suitably qualified and possesses the appropriate understanding of sustainability, GHG emission savings and UERs.

Preparing for Verification

7.45 It is good practice to engage a verifier as early as possible in the process to establish what evidence the verifier will require and to help identify any difficulties early on.

7.46 Common verification practice is for data to be supplied to the verifier in an organised evidence pack. For verifying the sustainability and GHE emissions savings of renewable fuels, this would be expected to include the following.

1. A copy of the data in the application for RTFO Certificates and carbon savings.
2. A high-level description of the supply chain.
3. All supporting evidence held by the RTFO account holder, such as voluntary scheme proofs of sustainability.
4. Any audit reports that the RTFO account holder has relied upon in making its application for RTFO Certificates and carbon savings.
5. Certification and supporting assurance opinions held by the RTFO account holder.
6. Periodic inventory records for the RTFO account holder’s mass balance system.
7. Calculation spreadsheets (preferably supplied electronically so that verifiers can test the formulae).

8. Contact details of the organisations in the previous stages in the supply chain (where available).

If this data is not provided in an ordered fashion, the verifier may need to request information that may increase the verification effort required.

7.47 Assurance is to be provided on the RTFO account holder's reported data, not the systems and processes used to generate the data. Nonetheless, these controls will be examined, and the greater the confidence that can be placed on them, the less effort that needs to be given to verifying the data for the same level of assurance. Evidence of the effectiveness of controls can come from internal sources, such as management reviews and internal audits, as well as from external audits.

7.48 There is no requirement to pass physical evidence (such as copies of invoices etc.) from farms, processors or other suppliers along the supply chain. The party which generates the carbon and/or sustainability and GHG emission savings data can retain this evidence. In verifying the data on sustainability criteria reported by an RTFO account holder, the verifier may expect to work back up the supply chain to the source data using the chain of custody records. The co-operation of those in the supply chain is therefore important.

7.49 The verifier will use a risk-based approach; therefore, it is unlikely that every organisation in the supply chain will be contacted. The exact approach may vary with each verifier and supply chain.

7.50 It is not necessary to verify information which has already been subject to independent assurance, including that given by voluntary schemes.

7.51 If the verifier finds evidence that information has been incorrectly reported, the RTFO account holder may correct the data or withdraw the consignments in question from the verification process.

The Independent Verification Report (IVR)

7.52 Verifiers need to ensure that their IVRs comply with the ISAE 3000 standard. The minimum requirements for assurance reports are set out in ISAE 3000 and some examples are provided in the Appendices.

7.53 The following are the additional requirements for IVRs submitted to NORA as part of an application for RTFO Certificates and carbon savings:

1. A statement that the engagement was performed in accordance with ISAE 3000 and the assurance level provided.
2. A copy of the Sustainability Statement and/or Statement of Supply on which the engagement was carried out shall be appended to the report.
3. The assurance criteria against which the data has been assessed. For verification of the sustainability and GHG savings data, this should be, at a minimum, the latest version of the RTFO Guidance. (No GHG savings data is required for renewable electricity.)

4. A statement that the verifier is not a 'connected person', as defined in Section 10 of the Taxes Consolidation Act 1997.
5. For biogas supplied though the national gas grid, a copy of the cancellation statements for Proofs of Origin from GNI's Renewable Natural Gas Registry corresponding the quantity.
6. Where fuel is purchased 'Levy-unpaid', confirmation that the rules of the mass balance system (set out in sections 4.69 to 4.91) have, within the context of a limited assurance engagement, been adhered to.
7. Where the fuel is certified as low indirect land-use change (ILUC)-risk[40], confirmation that the voluntary scheme is recognised by the European Commission to demonstrate compliance with the low ILUC-risk criteria.
8. In the event of resubmission of an application for RTFO Certificates and carbon savings, a statement within a revised IVR that the verifier has taken the changes into account in providing a new assurance statement for an application that has been the subject of a prior application.

7.54 IVRs that fail to adequately address all the above requirements will not be accepted as providing an adequate level of assurance. Where evidence is not available for a particular requirement, a statement explaining the reasons for its absence should be provided.

7.55 The following additional items shall be complied with when applicants are following the ORANGE route set out in Figure 6.

7.56 The IVR shall note that the independent verifier has carried out the following activities:

1. evaluated the frequency and methodology of sampling and the robustness of the sustainability criteria related data;
2. verified that the systems used by the RTFO account holder are accurate, reliable and protected against fraud.

7.57 Where applicable, the IVR shall include information about how the impacts on soil quality and soil carbon are monitored and managed (applies to renewable fuels made from waste and residues derived from agricultural land where the operators or national authorities have monitoring or management plans in place) – see paragraphs 4.45 and 4.46.

7.58 Where applicable, the IVR shall confirm that where the bonus for degraded land or emission savings from improved agricultural management are applied in the GHG emission savings calculation, they have been reported in the Sustainability Statement – see Section 5 and paragraph 4.67.

7.59 RTFO account holders are responsible for ensuring that the verifier's IVR is submitted to NORA via the RTFO Portal. However, the content of the IVR is the sole responsibility of the verifier.

[40] ILUC can occur when land previously used food or feed production is converted to produce biofuels, bioliquids and biomass fuels. In that case, the food and feed demand still needs to be satisfied, which may lead to the extension of agricultural land into areas with high carbon stock such as forests, wetlands and peat land, causing additional greenhouse gas emissions.

The Annual Information Report

7.60 Regulation 7 (1) of SI 33 of 2012 requires that an RTFO account holder '… shall maintain records of sustainability criteria related data for each disposal of renewable transport fuel'. Regulation 7 (2) requires that an RTFO account holder that has made a disposal of biofuel '…shall arrange for an independent audit of the data referred to in paragraph (1) and the information submitted to the Agency under these Regulations on an annual basis'.

7.61 The Annual Information Report requirements are not applicable to renewable electricity Certificate applications.

7.62 These activities will only be required whenever an IVR provided to NORA during the obligation period has not complied with Regulation 7 (3) in respect of all the information provided, or the account holder has not included the additional sustainability information in the Sustainability Statement. That is to say, the IVR will have been deemed to satisfy the requirements of Regulation 7 of SI 33 of 2012 where the follow three conditions are satisfied.

1. The independent verifier has carried out the following activities when preparing an IVR:
    a. evaluated the frequency and methodology of sampling and the robustness of the sustainability criteria related data;
    b. verified that the systems used by the RTFO account holder are accurate, reliable and protected against fraud;
    c. meet the requirements specified for assurance engagements as set out in ISAE 3000, or an equivalent standard as may be agreed with the Agency.
2. The information being verified include all the items listed in Regulation 6 (1) (e) and (f) of SI 33 of 2012, in other words, the 'additional sustainability information':
    a. Whether the bonus for improved agriculture was used in the GHG calculation;
    b. Whether emission savings from soil carbon accumulation via improved agricultural management (Esca) was applied in the GHG calculation.

3. Information is reported about how the impacts on soil quality and soil carbon are monitored and managed (applies to waste and residues derived from agricultural land where the operators or national authorities have monitoring or management plans in place)[41].

If the three items above are carried out when preparing an IVR, an additional annual audit is <u>not</u> required and the RTFO account holder is deemed to be following the ORANGE route.

7.63 If paragraph 7.62 does not apply (i.e. if the independent verifier has <u>not</u> carried out the activities listed when verifying the data submitted in an application for RTFO Certificates, or the additional sustainability information has not been included in the Sustainability Statements), the RTFO account holder must arrange for an annual independent audit to be carried out, and an Annual Information Report (AIR) to be prepared and submitted to NORA. This implies that the RTFO account holder is following the RED route illustrated in Figure 6.

[41] Schedule 3.1 of SI 350 of 2022, which transposes the soil quality and carbon sustainability criterion of Article 29.2 of RED II, requires information about how the impacts on soil quality and soil carbon are monitored and managed to be reported.

7.64 The annual audit shall, with respect to all the sustainability related information, if not covered in the IVRs:

1. evaluate the frequency and methodology of sampling and the robustness of the sustainability criteria related data;
2. verify that the systems used by the RTFO account holder are accurate, reliable and protected against fraud;
3. meet the requirements specified for assurance engagements as set out in ISAE 3000, or an equivalent standard as may be agreed with the Agency.

7.65 An RTFO account holder that is required to prepare an AIR must send this report to NORA within 3 months of the end of the calendar year.

Annual Auditing by RTFO Team

7.66 RTFO account holders may be subject to annual audits carried out by the RTFO Team. The audits generally take two forms:

1. Desk-based audits;
2. Onsite audits.

Both forms of audit will be carried out following a review of account holders' performances during the previous obligation period, which will include, *inter alia*, an examination of the OLA data reported to DECC, where applicable, discrepancies in data submitted in applications for RTFO Certificates and carbon savings, data submitted in Sustainability Statements and data submitted in Statements of Consumption.

7.67 Account holders will be notified by letter of the intention to perform an audit and a proposed date – this will be subject to agreement and is typically carried out in Q2 or Q3.

7.68 The purpose of the audits is to verify:

1. the data contained in the monthly OLA Returns made by an obligated party to DECC in respect of the quantity of fossil and renewable fuels placed on the market in the previous calendar year;
2. the data submitted to NORA in respect of the disposal of transport fuels against which RTFO Certificates and carbon savings were claimed and received;
3. the electricity data provided by CPOs supplying renewable electricity via public recharging points

The RTFO Team may consult with other Government Departments, agencies and bodies, such as Department of Agriculture and GNI, to verify information reported in applications for RTFO Certificates and in the OLA Return.

7.69 In preparing for an on-site audit, RTFO account holders that are supplying liquid and gaseous renewable fuels should ensure that the person(s) responsible for making the application for

RTFO Certificates **and** for completing the monthly OLA Returns are available for the entire duration of the audit and that the following information is available for the Audit Team.

- Evidence in support of the import data reported in the monthly OLA Returns submitted to DECC, for example: bills of lading or invoices.
- Evidence in support of data submitted to DECC in the monthly OLA Returns in relation to purchases and sales with exchange partners, such as bills of lading or invoices.
- Mass balance calculations underpinning applications for RTFO Certificates.
- Provenance of raw materials claimed to be Annex IX Part A and B.
- Evidence in support of the data contained in the Sustainability Statements and in the Annual Information Report, if provided.
- Procedures or systems used to ensure that the independent RTFO verifier is suitably qualified to perform the verification, is independent and is supplied with data to enable a limited assurance review to be carried out.
- Procedures or systems used to ensure the correct data is submitted to DECC in the monthly OLA Return and that the number of RTFO Certificates applied for corresponds to the quantity of renewable fuel on which the Levy has been paid.

Evidence in support of the data submitted to the RTFO Portal in applications for certificates for renewable electricity supplied through public regarding points to EVs.

Evidence Requirements

7.70 Each party in the chain of custody must keep records relating to the feedstock or renewable fuel that they have received and supplied, as well as records for diesel and gasoline supplied to the road transport market, and those fuels within the scope of SI of 2017.

7.71 To ensure that a full chain of custody is in place for renewable fuels, records for both the sustainability and GHG savings data, and the physical product, are required to be maintained. This information may need to be made available for a verifier to review whilst undertaking an assurance engagement on a supplier's application for RTFO Certificates and carbon savings, or for the RTFO Team when carrying out annual audits.

7.72 The following paragraphs describe the types of evidence which may be available to demonstrate compliance with the sustainability criteria, and with substantiating data reported to NORA via OLA.

7.73 Reporting that a renewable fuel meets a voluntary scheme which has been recognised by the European Commission as meeting the sustainability and GHG savings criteria is proof of compliance with those criteria.

7.74 A voluntary scheme may not cover all the sustainability and GHG savings criteria. In such a case, a scheme can only be accepted as evidence for the sustainability and GHG savings criteria it has been recognised for. Thus, evidence from two or more schemes may be required.

7.75 Reporting that a renewable fuel meets the sustainability and GHG savings criteria of an approved national scheme of another Member State as is also accepted as proof of compliance with the sustainability and GHG savings criteria.

7.76 A proof of sustainability (or equivalent) generated by the scheme must exist for the fuel reported in the Sustainability Statement. Additional evidence is not required to substantiate the sustainability and GHG savings information included on the proof of sustainability (PoS). However, the claim of compliance with the scheme and the PoS must be legitimate, the recognised version of the scheme must be used, and the quantity of renewable fuel must be reported accurately.

7.77 A PoS issued under the scheme is the only acceptable form of evidence that the renewable fuel meets the sustainability and GHG savings criteria. Neither membership of a voluntary scheme or an audit of an individual supplier to a scheme's requirements is acceptable.

7.78 Suppliers should ensure that the PoS includes the necessary information to support the information submitted in a Sustainability Statement or an IVR. Where mandatory or other reported information is not included in the PoS, a cancelled proof of origin from GNI's renewable natural gas registry, for example, then other evidence will need to be obtained to cover the missing information.

7.79 Each voluntary scheme has its own system for tracing registrations and any PoSs issued. Some are numbered and can be cross-checked using an online database. Some have strict rules on the claims that can be made, such as a requirement for all parties in the chain of custody, including the reporting party, to be registered and certified for a claim to be legitimate. Certificates issued outside of scheme rules are not legitimate and cannot be relied upon.

7.80 For renewable fuels covered by a recognised national scheme of another Member State, account holders should contact the RTFO Team to discuss the evidence that may need to be provided.

7.81 Physical shipments do not have to contain the same information as the sustainability and GHG savings data under a mass balance system, but a physical quantity must have been transported between the two entities to comply with the rules. For example, it may be legitimate to have a physical shipment of biodiesel produced from rape seed which has sustainability data for UCO.

7.82 Bills of lading should be available for all fuels that have been shipped into Ireland. Feedstocks produced within Ireland may not have bills of lading, but there should be equivalent transportation documentation that provides evidence of product type, quantity, delivery route and date of delivery. Renewable fuel volume data from bills of lading need to be consistent with the data in Sustainability Statements and reported in OLA; fossil fuel volumes also need to be consistent with data reported in OLA.

7.83 Purchases and sales invoices will set out the quantities purchased and sold by exchange partners – this data, which may be recorded in CRM systems, should be consistent with that reported in OLA.

7.84 It is a requirement of DECC's 'NORA Levy Returns Guidelines and Online Levy Application (OLA) User Manual' that companies retain Revenue's C&E 1132 forms where NORA Levy refunds are claimed on marine bunker sales. If the C&E 1132 form cannot be provided at an audit, the Levy refund will be cancelled.

7.85 Where renewable fuels are supplied as marine bunkers, the renewable fuel should be part of the C&E claim. In addition, to confirm that renewable fuels are sold to marine customers, documentation (e.g. contracts, physical testing reports) needs to be retained confirming renewable fuel formed part or all of the contracted sales quantity.

7.86 For companies handling waste materials, waste transfer notes or the movement of animal by-products, appropriate documents should be available. Such suppliers should also be able to provide documentation to prove their status as an 'approved' handler of waste materials.

7.87 Reporting parties should be able to provide contract documentation that describes the renewable fuel that the supplier was contracted to supply, and which links to the invoices and bill(s) of lading that demonstrate that the specified renewable fuel was supplied.

7.88 Contract documentation may also set out requirements on the supplier to provide data, results of analytical testing, assurance to a particular standard or access to evidence.

7.89 On receipt of deliveries, reporting parties may perform tests of the renewable fuel for conformity with required physical and chemical properties.

7.90 In the case of renewable electricity supplied through public recharging points to EVs, appropriate evidence of electricity supplied through the rechanging point, e.g. monthly usage data, electricity bills, meter readings, data on electricity supplied from the individual charge points

Supervision of Certification Bodies

7.91 Under regulation 7G (1), NORA is responsible for supervising Certification Bodies that conduct independent auditing under voluntary schemes.

7.92 Regulation 7G (2) requires NORA to establish and maintain a process for the supervision, and to supervise the operation of Certification Bodies.

7.93 NORA's supervision of Certification Bodies is focused on the activities carried out by Certification Bodies – it is not an audit of RTFO account holders, as described in Sections 7.66 to 7.69.

7.94 Notwithstanding this, NORA's supervision of Certification Bodies will require the cooperation of account holders that are subject to audits by Certification Bodies, to facilitate supervision activities when Certification Bodies are conducting on-site certification (or re-certification) activities. Account holders are requested to advise the RTFO Team whenever on-site certification audits by Certification Bodies are scheduled, so the Team can plan supervision activities.

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8 ReFuelEU Aviation Compliance

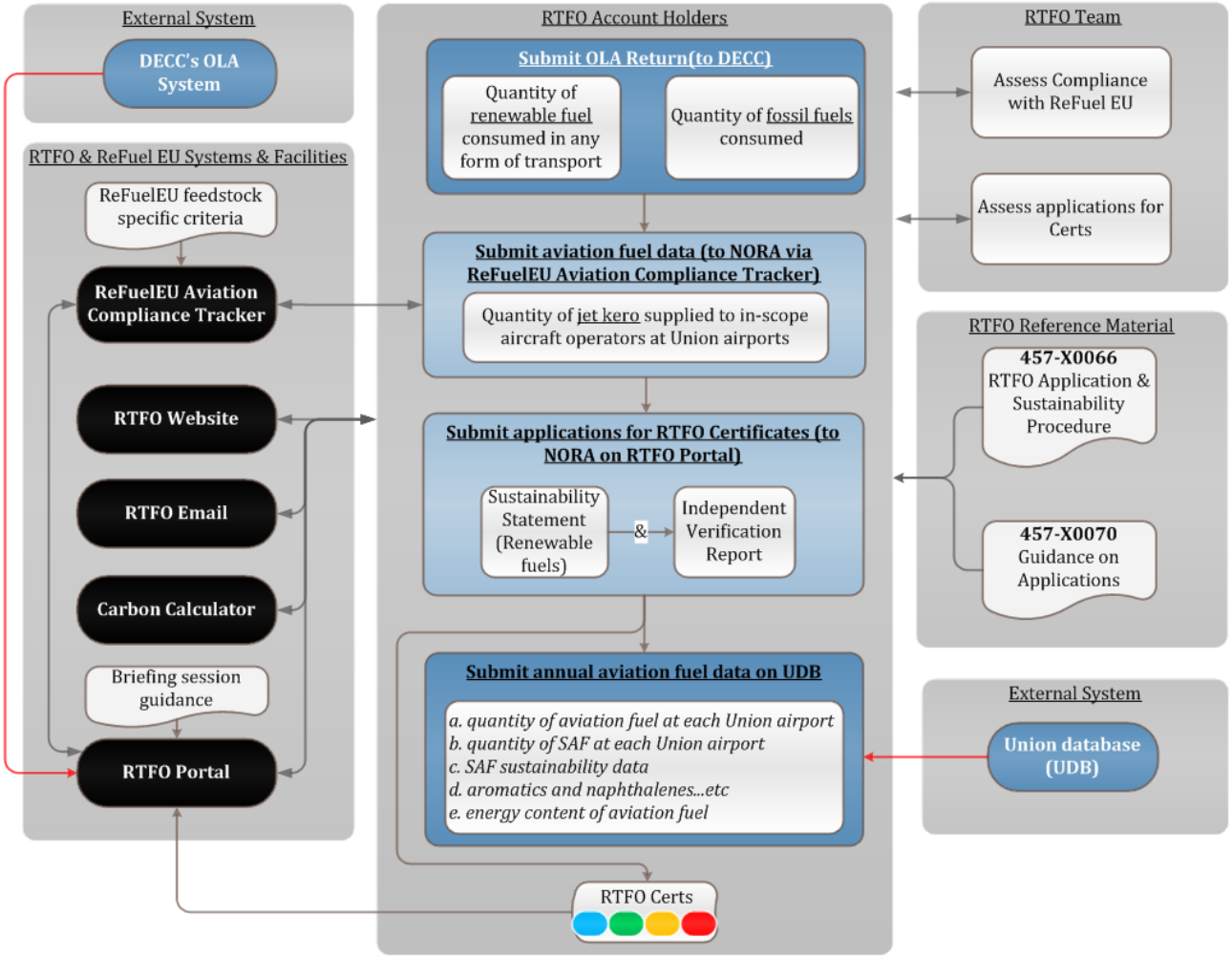
Overview

The ReFuelEU Aviation Regulations (2023/2405) require aircraft operators, Union airports and aviation fuel suppliers to increase the share of renewable energy in aviation. This guidance covers the obligations placed on fuel suppliers by the Regulations, and NORA's requirements to demonstrate compliance. The guidance does not address the obligations placed on aircraft operators or Union airports.

8.1 Figure 7 illustrates how compliance with the requirements of ReFuelEU Aviation have been integrated into the existing RTFO systems. It outlines the links between the IT systems (both external and RTFO systems), the actions required to generate RTFO Certificates, the necessary supporting documentation, and the specific criteria that must be met to demonstrate compliance with the Regulations.

1. DECC's OLA system, via which the total quantities of fossil jet kerosene and SAF placed on the market in Ireland are reported, is described in Section 2.
2. The Union database (UDB), which fuel suppliers will report relevant data to demonstrate compliance, is detailed in Section 8.
3. The RTFO systems, which fuel suppliers shall rely upon when applying for RTFO Certificates, are detailed in Sections 3 & 6.
4. The Sustainability Statement and Independent Verification Report (IVR), which must be submitted as part of the application for RTFO Certificates, are detailed in Table 4, and Section 7.
5. The ReFuelEU Aviation specific criteria and IT systems are detailed in this Section 8.

Figure 7 Overview of ReFuelEU Aviation Compliance



8.2 Aviation fuel suppliers shall ensure that they comply with Article 4 of the Regulations. This includes the requirement to supply the minimum shares of SAF at Union airports to in-scope aircraft operators, as outlined in Table 5.

Table 5: Minimum annual share of SAF

Period (start of year to end of year)	SAF - annual share (minimum)	of which, synthetic – annual share (minimum)	Synthetic (average over period)
2025 – 2029	2%	-	-
2030 – 2031	6%	0.7%	1.2%
2032 – 2033	6%	1.2%	2.0%
2034 – 2034	6%	2.0%	
2035 – 2039	20%	5%	-
2040 – 2044	34%	10%	-
2045 – 2049	70%	35%	-

8.3 Only jet kerosene provided at Union airports to in-scope aircraft operators shall be used to calculate compliance with the Regulations. Jet kerosene supplied at non-Union airports, or that supplied to 'out-of-scope' aircraft operators at Union airports is not counted.

8.4 There are four Union airports in Ireland: Cork, Shannon, Ireland West Airport (Knock), and Dublin. A list of in-scope aircraft operators can be found at this link. This list is maintained by the European Commission and is updated annually.

8.5 As illustrated in Figure 7, there are four distinct reporting systems via which jet kerosene and SAF data are reported to demonstrate compliance with the Regulations:

1. OLA
2. RTFO Portal
3. ReFuelEU Aviation SharePoint
4. UDB

These systems capture different aspects of the aviation fuel data and are summarised in the following table.

Table 6: Summary of reporting systems

System	ReFuelEU Aviation Purpose	Data	Frequency of reporting	Operator	Comment
OLA	Gather data on total quantity of jet kerosene and SAF supplied in Ireland	Total quantities of jet kerosene and SAF supplied in Ireland	Monthly	DECC	Long established system for gathering oil data from fuel suppliers to determine *inter alia* NORA's stock holding obligation, the NORA Levy liabilities, and fuel suppliers' obligations under the RTFO.
RTFO Portal	To ensure the sustainability of the SAF	Total amount of SAF supplied in Ireland	Quarterly	NORA	Used for assessing the sustainability of all renewable fuel quantities placed on the transport market in Ireland. RTFO Certificates are used for complying with the RTFO and to demonstrate the renewable fuel is sustainable.
RefuelEU Aviation SharePoint	Means of submitting data on jet kerosene supplied to in-scope aircraft operators at Union airports. Show level of compliance.	Jet kerosene supplied to in-scope aircraft operators at Union Airports	Monthly (along with OLA)	NORA	Established to capture the jet kerosene supplied to in-scope aircraft operators at Union airports, which is a sub-set of the data submitted via OLA.

System	ReFuelEU Aviation Purpose	Data	Frequency of reporting	Operator	Comment
UDB	Compliance with Article 10	At each Union airport: (a) quantity of jet kerosene (mass & energy), (b) quantity of SAF (mass & energy), (c) the conversion process, characteristics and origin of the feedstock, and the lifecycle carbon intensity of the SAF. The composition of each batch supplied to each Union airport, and at Union level, and the test methods employed.	Annual, by 14th February of the following year	European Commission	Requirement of Article 10. It is a requirement on NORA to ensure the data entered in the UDB is accurate and has been verified and audited. With the exception of the composition of each batch supplied to each Union airport, and at Union level, and the test methods employed, the data entered into the UDB is ensured by fuel suppliers' compliance with the RTFO application procedure and guidance. For the 2024 reporting period, SAF data is to be provided through the CIRCABC platform, which is also managed by the European Commission and can be accessed through the UDB portal.

OLA

8.6 Aviation fuel suppliers shall report the quantity of jet kerosene and SAF placed on the market in Ireland in DECC's OLA system monthly (see Section 2.18). The monthly OLA return must be completed before an application for RTFO Certificates can be made.

8.7 OLA is managed by DECC and is relied on for RTFO compliance, management of the NORA Levy and energy statistics. It does not, however, distinguish between sustainable and non-sustainable renewable fuel, between jet kerosene supplied to Union and non-Union airports, and between jet kerosene supplied in-scope aircraft operators and out-of-scope aircraft operators.

RTFO Portal

8.8 To ensure that SAF supplied in Ireland meets the RED III sustainability and GHG emissions savings criteria, an application for RTFO Certificates shall be submitted. Only SAF that meets the RED III sustainability and GHG emissions savings criteria can be counted towards compliance with the ReFuelEU Aviation requirements.

8.9 The process of applying for RTFO Certificates is detailed in Section 2. In summary, an RTFO Sustainability Statement must be uploaded when making an application, together with the Independent Verification Report (IVR). Section 7 describes the verification and auditing requirements, which include preparing an IVR. The RTFO Team recommends RTFO account holders use the following procedure:

1. Use the Carbon Calculator to generate an RTFO Sustainability Statement for each calendar month for which you are applying for RTFO Certificates and carbon savings. (Table 4 in Section 4.67 outlines each section of the RTFO Sustainability Statement.)
2. The Sustainability Statements should be saved in an appropriate location as CSV files.
3. The Sustainability Statements should be transferred to the independent verifier, together with any evidence from the chain of custody required by the verifier.
4. The verifier should prepare an IVR for each month and append the monthly Sustainability Statement to each report. It should return a PDF copy of the IVR to the RTFO account holder.
5. The RTFO account holder should then upload the Sustainability Statement (in CSV format) and the PDF copy of the IVR with its monthly application for RTFO Certificates and carbon savings.

8.10 Compliance with the Sustainability and GHG emissions savings criteria is outlined in Section 4 and Section 7.

8.11 Awarding RTFO Certificates does <u>not</u> confer compliance with the Regulations. While it forms part of the process for demonstrating compliance, compliance is calculated based on the volume of jet kerosene and compliant SAF supplied to in-scope aircraft operators at Union airports.

ReFuelEU Aviation SharePoint

8.12 To ensure SAF for which RTFO Certificates have been awarded is compliant with the ReFuelEU Aviation Regulations, it must also adhere to additional feedstock rules:

1. The maximum contribution from feedstocks that are not listed in Annex IX of RED III is 3%.
2. Food and feed crops are excluded from the annual minimum share and cannot count towards the obligation, unless these feedstocks are:
    a. residues;
    b. wastes;
    c. ligno-cellulosic material;
    d. intermediate crops, such as catch crops and cover crops, provided that the use of such intermediate crops does not trigger demand for additional land). Intermediate crops that do not meet the Annex IX description are excluded.
3. Palm fatty acid distillate is excluded.
4. Palm and soy-derived materials are excluded, unless the material is explicitly listed on Annex IX of RED III, e.g. Palm Oil Mill Effluent (POME). Annex IV42 of Implementing Regulation 996/2022 also lists:
    a. '*Shells/husks and derivatives:, soy hulls*' as being RED III Annex IX Part A (p)
    b. '*Palm fronds, palm trunk*' as being RED III Annex IX Part A (q)
    c. '*Palm sludge oil (PSO)*' as being RED III Annex IX Part A (g)
5. Soap stock and its derivatives*.

    *Please note that *'soap stock acid oil contaminated with sulphur'* has been determined to meet the description of Annex IX Part A (b): *Biomass fraction of industrial waste not fit for use in the food or feed chain, including material from retail and wholesale and the agro-food and fish and aquaculture industry.*

8.13 Aviation fuel suppliers shall report monthly jet kerosene volumes (in standard litres) supplied to in-scope aircraft operators at the Union airports directly to NORA. This data shall be submitted in a Compliance Tracker that is hosted on the ReFuelEU Aviation Compliance SharePoint site.

8.14 NORA shall use the information reported in the Compliance Tracker, in conjunction with data reported in OLA and in applications for RTFO Certificates – where the SAF is supplied to Irish airports – to determine compliance with the Regulations.

[42] Non-exhaustive list of waste and residues currently covered by Annex IX to Directive (EU) 2018/2001.

8.15 Where an aviation fuel supplier sells fuel in another Member State and NORA is the competent authority for determining compliance with the Regulations, this must also be reported in the Compliance Tracker.

8.16 The Compliance Tracker provides an overview of:

1. The quantity of jet kerosene supplied to in-scope aircraft operators at Union airports.
2. A comparison between jet kerosene data reported in DECC's OLA system and (i). (The quantity reported in the Compliance Tracker should not exceed that reported in OLA.)
3. The quantity of compliant SAF and co-processed SAF (sourced from data provided in approved applications for RTFO Certificates).
4. The quantity of non-compliant SAF and co-processed SAF (sourced from data provided in approved applications for RTFO Certificates).
5. The quantity of non-Annex IX SAF and co-processed SAF (sourced from data provided in approved applications for RTFO Certificates).
6. The SAF blend rate.
7. The shortfall/excess in meeting the minimum share (only the annual value is relevant when measuring compliance).
8. An estimate of potential penalties (see Sections 8.20.1 and 8.20.2).

8.17 Irish aviation fuel suppliers that supply aviation fuel to in-scope aircraft operators at Union airports in **other** Member States must also provide NORA with the relevant data to demonstrate compliance with the Regulations. The following must be submitted:

1. The total quantity of jet kerosene supplied to in-scope aircraft operators at Union airports in other Member States. This information shall be reported in the Compliance Tracker.
2. A Sustainability Statement and IVR (see Section 8.9) for SAF supplied at Union airports in other Member States. This shall be distinct from any Sustainability Statements and IVRs submitted via the RTFO Portal for SAF supplied to Irish airports. These documents shall be emailed to bosaccounts@nora.ie. The quarterly deadlines outlined in Table 1 apply.
3. The independent verifier shall ensure that the jet kerosene quantities reported to NORA are correct and report on this in the IVR. NORA may verify the jet kerosene quantities reported with the competent authority of the other Member State.

UDB for aviation fuel

8.18 By 14 February of each reporting year, and for the first time in 2025[43], aviation fuel suppliers shall report in the Union database (UDB) the following information relating to the reporting period:

a. The amount of aviation fuel supplied at each Union airport, expressed in tonnes. (We understand this to be the amount of fuel supplied to in-scope aircraft operators and not the total amount of fuel supplied).

b. The amount of SAF supplied at each Union airport, and for each type of SAF, as detailed in point (c), expressed in tonnes. (We understand this to be the amount of SAF supplied to in-scope aircraft operators).

c. The conversion process, the characteristics and origin of the feedstock used for production, and the lifecycle emissions of each type of SAF supplied.

d. The content of aromatics and naphthalenes by percentage volume and of sulphur by percentage mass in aviation fuel supplied per batch, per Union airport and at Union level, indicating the total volume and mass of each batch and test method applied to measure the content of each substance at batch level.

e. The energy content for aviation fuel and SAF supplied, for each type of fuel.

8.19 As the competent authority, NORA shall ensure that information entered by aviation fuel suppliers in the UDB is accurate and has been verified and audited pursuant to Article 31a of RED III. Table 7 outlines how this information shall be verified and audited.

Table 7: Verification of data reported in the UDB

	Information entered in the UDB by fuel suppliers	Verification, by NORA
1.	The quantity of aviation fuel supplied to in-scope aircraft operators at each Union Airport, expressed in tonnes	Checked against the quantity of jet kerosene reported in OLA and the Compliance Tracker.
2.	The quantity of SAF supplied to in-scope aircraft operators at each Union Airport, expressed in tonnes	Checked against the quantity of SAF reported in OLA and the Compliance Tracker and verified in the IVR.
3.	For each consignment of SAF, the conversion process, the characteristics and origin of the feedstock used for production, and the lifecycle emissions	Checked against the information reported in Sustainability Statements and IVR.

[43] Noting that the 14th February deadline in 2025 was extended until the 28th February due to operational delays with the UDB.

	Information entered in the UDB by fuel suppliers	Verification, by NORA
4.	The content of aromatics and naphthalenes by percentage volume and of sulphur by percentage mass in aviation fuel supplied per batch, per Union Airport and at Union level, indicating the total volume and mass of each batch and test method applied to measure the content of each substance at batch level	This has yet to be agreed.
5.	The energy content of jet kerosene and SAF supplied at each Union Airport	Shall be assessed against the energy content for aviation fuel and SAF provided in RED III.

Compensation & Fines

8.20 There are two distinct penalty mechanisms that come into effect if a fuel supplier fails to meet the SAF blend target.

8.20.1 Fuel suppliers are required to compensate for missing a target by placing the quantity by which the minimum share target was missed on the market in the following year (or years). For example, if a fuel supplier missed its target by 100 litres in 2025, it will be required to place the 100 litres of SAF on the market in 2026, along with the minimum share of SAF for 2026. Shortfalls will be carried forward to the subsequent year (Y+1) and must be met before the minimum share of Y+1 can be met.

8.20.2 A fine shall also be imposed on fuel suppliers that fail to meet their annual obligation. The fine amount is at least twice the annual average price difference between jet kerosene and SAF and is levied on the quantity of aviation fuels not complying with the minimum shares of SAF. For example, if the annual average price difference between jet kerosene and SAF is €1 per litre, and a fuel supplier misses its minimum share target by 100 litres, the minimum fine would be €200 (100 litres x €1 x 2).

Mass Balance

8.21 Aviation fuel suppliers may demonstrate compliance with the obligation contained in Table 5 by using the mass balance system referred to in Article 30 of RED III. For the purposes of ReFuelEU Aviation compliance, this:

a. allows consignments of raw material or fuels with differing sustainability and greenhouse gas emissions saving characteristics to be mixed for instance in a container, processing or logistical facility, transmission and distribution infrastructure or site;
b. allows consignments of raw material with differing energy content to be mixed for the purposes of further processing, provided that the size of consignments is adjusted according to their energy content;

c. requires information about the sustainability and greenhouse gas emissions saving characteristics and sizes of the consignments referred to in point (a) to remain assigned to the mixture; and
d. provides for the sum of all consignments withdrawn from the mixture to be described as having the same sustainability characteristics, in the same quantities, as the sum of all consignments added to the mixture and requires that this balance be achieved over an appropriate period of time.

8.22 From 1 January 2025 until 31 December 2034, for each reporting period, an aviation fuel supplier may supply the minimum shares of SAF as a weighted average over all the aviation fuel it supplied across Union airports for that reporting period. This allows fuel suppliers to supply a higher or lower percentage of SAF at one Union airport than another, providing the total amount of SAF supplied across all Union airports meets the combined annual minimum share. For example, if a fuel supplier sells an equal amount of fossil jet kerosene at Dublin and Shannon airports, it could supply 1% SAF at Dublin, and 3% at Shannon, and meet its 2% minimum share obligation in 2025.

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Attachment No. 1

| Fuel Category | OLA Product Name | Gasoline | | |