



An Roinn Iompair  
Department of Transport

# Renewable Fuels for Transport Policy Statement November 2021





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## Introduction

This Policy Statement sets out a roadmap for the supply and use of renewable fuels in transport energy, including updates to the Biofuel Obligation Scheme. Obligation rates for biofuels by 2025 and out to 2030 will be subject to analysis and review to best ensure that they continue to contribute meaningfully to Ireland's commitment to reduce greenhouse gas emissions.

This Policy Statement is published against the backdrop of the proposed European Commission *Fit for 55* proposals of 14 July 2021, including increasing the ambition for renewable energy in Europe. It is for the Member States and European Parliament to consider the proposal for a 13% reduction in transport GHG intensity by 2030.

This Statement supports the Department of Transport's strategic goal to ensure that our transport modes are environmentally, economically and socially sustainable<sup>1</sup>.

## Background

In April 2018, a Policy Statement was published, setting out six actions to provide certainty to stakeholders in relation to the future direction of the Biofuels Obligation Scheme which requires fuel suppliers to ensure that biofuels make up a certain proportion of the fuel used in the road transport sector.

In December 2018 the recast Renewable Energy Directive ('REDII') was adopted by the European Union, setting out European renewable energy policy to 2030.

In September 2019, the Department of Communications, Climate Action and Environment held a public consultation seeking views in relation to how Ireland's renewable fuels policy will continue to be developed over the coming decade to assist in addressing decarbonisation in the transport sector, as set out in REDII<sup>2</sup>.

In the Programme for Government, *Our Shared Future*, published in June 2020, the Government identified the need to significantly decarbonise the transport sector within an overall 7% per annum reduction in greenhouse gas (GHG) emissions to 2030. The recently published *Climate Action Plan* sets out the actions to deliver on the Government's commitment.

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<sup>1</sup> Department of Transport Statement of Strategy 2021-2023.

<sup>2</sup> The consultation also proposed an obligation scheme for the heat sector, which is being considered by the Department of the Environment, Climate and Communications and will not be addressed in this policy statement.

## Objectives of this Policy Statement

- To support Ireland's commitment to reduce greenhouse gas emissions in the transport sector and contribute to meeting Ireland's 2030 emission reduction target of 51%.
- To meet and exceed the renewable energy targets set out in RED II for the transport sector in Ireland, in line with the overall EU-wide renewable energy target of 32% and future ambition under the EU Fit for 55 proposals.
- To ensure a shift towards non-crop fuels, more robust sustainability criteria for all renewable fuels and the principle of cascading use of bio-based products, i.e., to promote the efficient use of these resources and that energy recovery should be the last option, only after all higher-value products and services have been exhausted.<sup>3</sup>
- To provide certainty to industry and stakeholders facilitating future planning for compliance.
- To set a framework of obligations to support these objectives.

It will require supporting legislation for the Minister for Transport to give effect to certain changes indicated in this Policy Statement. Until then, changes will be limited to extant legislative provisions - namely providing for a new biofuel obligation rate, under Section 44D; and, an appropriate buy-out charge, under Section 44J of the National Oil Reserves Agency Act 2007, as amended.

## Biofuels Obligation Scheme

The success of the scheme to date can be seen in 2020 when 239 million litres of biofuels replaced c.209 million litres of fossil fuels and avoided approximately 520kt CO<sub>2eq</sub> transport emissions.

This Policy Statement builds upon the actions set in out the 2018 Policy Statement, including:

- To continue to progressively increase the level of obligation to at least 2030, in line with EU energy policy,
- To work with industry and stakeholders to further increase the use of biofuels, and
- To carry out public consultations on future obligation rate increases every two years.

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<sup>3</sup> The concept of cascading use of resources is being referred to in several EU level initiatives and legislations. The exact meaning and application of this principle has not been fixed and depends on specific sectorial conditions.

## Intended Actions Going Forward

This Policy Statement sets out the following actions which the Minister for Transport intends to implement over the next two years while also providing clarity on the actions that must be progressed to increase the level of renewable fuels in the transport sector by 2030.

### 1. Increase the level of evaluation, analysis and enforcement of robust sustainability limits to underpin renewable fuels in Ireland.

Sustainability considerations including impact on biodiversity, Indirect Land Use Change (ILUC), pollution and cascading use of bioenergy resources need to be better understood on existing and new biofuels in Ireland. This is in addition to the potential for preventing fraud in Used Cooking Oils (UCO) and other renewable fuels as raised by the European court of auditors<sup>4</sup>.

The Department will engage with the Industry, Academia and others to ensure that the supply of indigenous and imported biofuels undergoes a rigorous assessment on full life-cycle greenhouse gas emissions reduction to ensure it is consistent with REDII GHG reduction levels. This assessment will also include ILUC, biodiversity pollution and a value assessment in terms of cascading use of bio-materials referred to previously.

***Date to apply: Through late 2021 to early 2022***

The Department will ensure strengthened supervision concerning of the origin of feedstocks for renewable fuels for transport at a national level, to enhance tracking and tracing and as a key mechanism for reducing the potential of fuel fraud, in support of the central database being developed by the European Commission.

***Date to apply: Through late 2021 to early 2022***

### 2. Increase in the level of renewables relating to petrol and diesel

In order to complement the suite of actions set out in the Climate Action Plan 2021, for example, concerning electrification of transport and managing transport demand through modal shift, the continued increase in the level of renewable fuel in transport, in particular blending of biofuels with petrol and diesel will continue to play a role in the medium-term.

Research and analysis and ongoing engagement with industry and stakeholders will be key to policy decision-making concerning how best to introduce and support renewable fuels, including higher proportions of biofuel blends than currently deployed.

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<sup>4</sup> <https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=37264>

Specifically, the Department will set the biofuel obligation to enable a 10% blend of ethanol in petrol (E10) and a 12% blend of biodiesel in diesel (B12) respectively, by 2025. This builds upon the 2019 Climate Action Plan ambition to introduce higher blend rates by 2030 and the National Climate and Energy Plan 2021-2023 commitment to increase the renewable biofuel content of motor fuels.

The further 2030 target biodiesel blend will be subject to review by 2025, involving the output of planned research concerning supply of renewable transport fuels in Ireland.

**Relevant Policy: Climate Action Plan**

### 3. Examine availability of Used Cooking Oil and certain Animal Fats with a view to seeking a higher limit for biofuels made from these feedstocks

Biofuels produced from Used Cooking Oil and Category 1 and 2 Animal Fats currently provide over 3% of the energy used in the transport sector in Ireland. Article 27(1) of RED II limits the amount of energy from biofuels made from Used Cooking Oil and Category 1 and 2 Animal Fats which can be counted towards a Member State's annual renewable energy share in transport (RES-T) to 1.7% (any energy from these biofuels above 1.7% will not be considered as renewable when calculating RES-T or for meeting renewable transport targets).

Member States can seek approval from the European Commission to modify that limit based on the availability of the feedstocks. The Department will examine the availability of the feedstocks in question, including Ireland's share of international stocks, and will consider whether to seek European approval in this regard. Maintaining a robust sustainable certification system for such biofuels will be central to this consideration.

**Date: In 2022**

### 4. Limits on certain biofuels

Subject to enabling legislation, from 1 January 2023, obligated parties will only be allowed to use credit awarded for crop-based biofuels (including those designated as high ILUC risk<sup>5</sup>) to meet a maximum of 2 percentage points of their overall obligation; and only parties who placed high ILUC risk biofuels<sup>6</sup> on the market in 2019 would be permitted to claim credit for them, at 2019 levels.

**Anticipated date to apply: From 1 January 2023**

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<sup>5</sup> Currently only certain palm oil is considered a high-risk feedstock, though other feedstocks may be added in the future

<sup>6</sup> It will be assumed that all biofuel from palm oil placed on the market in 2019 was high ILUC risk

## 5. Amend how the Biofuels Obligation Scheme operates

Significant changes will be made to the scheme to ensure it can provide a robust mechanism to contribute towards climate and renewable energy objectives. These are set out below.

## 6. Operation of the Biofuels Obligation Scheme on an Energy Basis

Targets and limits set out in REDII are on an energy basis. Furthermore, different fuels have different energy contents. For example, gasoline has an energy content of 32 megajoules (MJ) per litre whereas bioethanol has an energy content of 21 MJ per litre. The energy content of fuels (including gasoline and fossil diesel) is set out in Annex III of REDII.

Subject to enabling legislation being in place, it is expected that from 1 January 2023, certificates will be awarded based on the energy of the renewable fuel placed on the market as set out in Annex III of RED II.

Biofuel certificates carried forward from 2021 and 2022 would be converted to credit on the basis of the energy densities of the biofuels they were awarded for. For example, credit of 33MJ will be awarded for each certificate awarded for biodiesel and credit of 21MJ for each certificate awarded for bioethanol.

The principle of double counting or other multiple counting for this conversion would still apply.

As, currently is the case, certificates carried forward could be used to meet up to 15% of a biofuel obligation in the future calendar year.

The consideration of the future accounting basis for operation of the biofuel obligation scheme out to 2025 and to 2030 will give due regard to the outcome of proposals under the RED III in the EU Fit for 55.

***Anticipated date to apply: From 1 January 2023***

## 7. Increase the Overall Biofuel Obligation

The operation of the Biofuels Obligation Scheme will transfer from a volumetric basis to an energy basis, in due course.

Article 25 of RED II places limits on the contribution of certain feedstocks towards the minimum share of renewable energy within the final consumption of energy in the transport sector. This creates a significant challenge as it impacts on the level of biofuels from used cooking oil and tallow that can be counted towards Ireland's overall target for renewable energy in transport. The Department will continue to analyse and review how best to address this, with the intention of setting out a position on this matter in the next iteration of the renewable fuels policy statement.

The biofuels obligation has a mandated overall obligation rate. It was designed in this way to provide flexibility to obligated parties to choose the optimal path in meeting this.



To achieve a sufficiently high decarbonisation in line with the Climate Action Plan, i.e., of an approximate blend of E10/B12 by 2025 will require the obligation rate to be increased on a graduated basis with effect from 1 January 2022.

The obligation will be increase from 11% to 13% by volume from 1 January 2022, subject to the required statutory consultation.

An indicative trajectory from 2023 to 2030 will be set out for consultation in 2022. Indicative increases are, 16% by volume from 2023, 19% by volume from 2024, and 23% by volume from 2025; and possibly up to 38% by energy from 2030.

The consideration of the indicative trajectory out to 2025 and to 2030 will give due regard to domestic obligations under the Climate Action Plan and possible future obligations under the EU Fit for 55 proposals.

***Date to apply: From 1 January 2022, and consultation in 2022 concerning the increase for 1 January 2023 and indicative rates out to 2030***

## 8. Incentivise the transition to E10

Suppliers are encouraged to supply a higher blend of bioethanol in meeting the biofuel obligation.

In order to ensure an early transition to E10 as set out in the Climate Action Plan (i.e. by 2025), the Department will review the options to further incentivise its supply. For example, to consider the extent to which its supply can be enabled under the obligation scheme and increase in the buy-out charge; or, whether a legal mandate for E10 supply is warranted - with a view to implementing additional measures in this regard by 2023.

There will be a parallel public communications strategy concerning the transition to E10, within the context of the high-level objectives of the Climate Action Plan.

***Date to apply: By 2023***

## 9. Enforcement of Carbon Intensity Requirements

Article 7A of the Fuel Quality Directive requires fuel suppliers to achieve a 6% carbon intensity reduction and this was subsequently extended by the European Commission to an annual requirement. In 2020 less than half of the fuel suppliers in Ireland met this target. <sup>7</sup> NORA is responsible for enforcement of supplier compliance with this target.<sup>8</sup>

The Department of Transport will review the current compliance framework and penalties with a view to a more robust enforcement regime for non-compliance with the Fuel Quality Directive requirement and taking into account the higher GHG intensity target for renewable energy in transport anticipated by the EU Fit for 55.

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<sup>7</sup> Biofuels Obligation Scheme Annual Report 2020,

<sup>8</sup> Under S.I. 160 of 2017, European Union (Greenhouse Gas Emission Reductions, Calculation Methods and Reporting Requirements) Regulations 2017

***Date to apply reviewed by the Department in 2022, with a possible graduated introduction from 1 January 2023 to end 2024.***

## 10. Introduce an Advanced Biofuel Obligation

Advanced biofuels are produced from feedstocks set out in Part A of Annex IX of RED II.

Subject to enabling legislation, from 1 January 2023 obligated parties will be required to place a proportion of advanced biofuel on the market as part of their overall obligation. From 2023, the obligation rate will be an indicative rate of 0.3% by energy. The indicative trajectory for advanced biofuel obligation rates for the period from 2023 to 2030 will be set out for consultation in 2022.

Advanced biofuels would qualify for double credits (or other multiples of credit if used in certain sectors).

***Date to apply: From 1 January 2023 subject to consultation in 2022 concerning the rate of advanced biofuels for 1 January 2023 and indicative rates out to 2030***

## 11. Expand the biofuel obligation to the rail sector

Currently, the biofuel obligation only applies to fossil fuels supplied into the road transport sector. From 2024, the obligation will be expanded to include fossil fuels supplied to the rail sector.

***Date to apply: From 1 January 2024 or earlier subject to readiness of the rail sector***

## 12. Treatment of Alternative Fuels

The Energy in Ireland Report 2020<sup>9</sup> found that, in 2019, fuels produced from oil accounted for 96.1% of the energy in the transport sector. Also, in 2019, transport was responsible for 41% of energy-related CO<sub>2</sub> emissions in Ireland (up from 40% in 2018).

Fuels such as electricity, compressed natural gas (CNG), liquefied natural gas (LNG), liquefied petroleum gas (LPG) and hydrogen can be used as lower emitting alternatives to oil in transport.

In 2020, 42% of electricity produced in Ireland was from renewable sources. The Climate Action Plan 2019<sup>10</sup> set a target of 70% renewable electricity by 2030.

The EU Fit for 55 also includes proposals to foster the further development of electromobility. Electrification of transport will assist significantly towards increased renewable energy and reduced emissions in the sector.

Currently, however, it is expected that electrification will be mainly limited in the road sector to smaller vehicles such as passenger cars and light goods vehicles in the earlier half of the decade. Electrification of the vehicle fleet offers a pathway to zero tailpipe emissions, with several co-benefits such as improved air quality, reduced noise pollution and less fossil fuel dependence.

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<sup>9</sup> <https://www.seai.ie/publications/Energy-in-Ireland-2020.pdf>

<sup>10</sup> <https://www.gov.ie/en/publication/ccb2e0-the-climate-action-plan-2019/>

There are currently c. 45,423 EVs registered on Irish roads. Subject to technological advances, it is expected that by the mid-2020s EVs (cars and vans) will reach total cost of ownership (TCO) parity with conventional vehicles.

Though there have been developments in the bus sector, full electrification will remain a challenge for heavy vehicles. CNG, LNG, LPG and hydrogen vehicles may present a cleaner alternative to diesel and petrol, including light and heavy goods vehicles and the bus and coach sector. These are fuels which can be significantly replaced with renewable fuels (which could be produced indigenously) when vehicles and infrastructure are in place.

It is Government and EU policy to support the deployment of alternative fuels<sup>11</sup>. This is reflected in the Causeway and Green Connect projects for the roll-out of the CNG fuelling network, policy advice for projects looking at the development of green hydrogen infrastructure, the introduction of the Alternatively Fuelled Heavy-Duty Vehicle (AFHDV) grant in March 2021, and the Budget 2022 announcement of the expansion of the Accelerated Capital Allowance scheme for natural gas propelled vehicles and related equipment to include hydrogen vehicles and equipment.

However, the infrastructure for deployment of these alternative fuel technologies in Ireland is in early development. Placing a renewable fuel obligation on suppliers of these fuels may act as a barrier to further development at this juncture notwithstanding the importance of incentivising renewable fuels such as bioCNG, bioLNG, bioLPG and green hydrogen. Therefore, suppliers can avail of credit under the Scheme (subject to sustainability requirements being met). We must ensure the switch to alternative fuels to avoid fossil fuel lock-in. This policy concerning alternative fuels will be reviewed in 2022 to ensure this lock-in is avoided.

***Date to apply: In 2022***

### **13. Inclusion of Renewable Fuels of Non-Biological Origin**

Renewable Fuels of Non-Biological Origin (RFNBOs) are renewable fuels which are not produced from biomass and are not therefore biofuels. Fuels such as green hydrogen (produced using renewable electricity) and synthetic fuels produced from green hydrogen will be eligible for credits. Subject to enabling legislation, from 2023, RFNBOs will become eligible for credit under the scheme. These fuels are in the early stage of development, and it is anticipated that they will become more widely available during the decade.

***Anticipated date to apply: From 1 January 2023***

### **14. Treatment of Development Renewable Fuels**

A category for certain renewable fuels called 'Development Renewable Fuels' will be added to the scheme and multiple credit will be awarded to incentivise their deployment. These fuels are in the

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<sup>11</sup> <https://www.gov.ie/en/press-release/0c575f-minister-publishes-national-policy-framework-on-alternative-fuels-in>

early stages of development or in short supply internationally. Subject to enabling legislation, the fuels in question and the multipliers to apply from 1 January 2023 are set out below.

Fuel	Multiple Credit
1. Green Hydrogen	4x
2. Biomethane	1.5x
3. Hydrotreated Vegetable Oil <sup>12</sup> /Hydro processed Esters and Fatty Acids <sup>13</sup> (HVO/HEFA); and other approved sustainable aviation fuels listed in ASTM D1655 <sup>14</sup>	1.5x
4. RFNBOs and certain other renewable fuels used in the aviation or maritime sectors	1.2x

Green Hydrogen can also be produced through electrolysis which extracts hydrogen from water using renewable electricity. It will be supported through quadruple credits.

*Biomethane* can be imported or produced indigenously from the anaerobic digestion of organic material including brown bin waste and wastes from the food production and agriculture sectors. It offers the potential to significantly replace CNG and LNG. Biomethane can be used with or as a substitute for natural gas in any application which uses natural gas including transport. Government is committed to developing a new investment framework for the growth of sustainable forms gas and as a transport fuel in the transport sector.

HVO can be blended in significantly higher proportions with fossil diesel than the more commonly used biodiesel, FAME (fatty acid methyl esters). However, demand for this fuel is high and supply is very limited. The cost of the fuel is therefore high. HVO can also be further processed into HEFA which can be used as a sustainable aviation fuel.

This category will be kept under review. The list of fuels may be extended or reduced. Multipliers may also be adjusted.

**Anticipated date to apply: From 1 January 2023**

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<sup>12</sup> Hydrotreated Vegetable Oil (HVO) is a form of renewable diesel that can be used as a replacement fuel or used in higher concentrations in diesel than fatty acid methyl esters (FAME)

<sup>13</sup> Hydro processed esters and fatty acids (HEFA) are a form of HVO which has been approved for (up to 50%) blending with aviation fuel

<sup>14</sup> <https://www.astm.org/Standards/D1655.htm>

## 15. Treatment of renewable electricity used in transport

RED II has provisions set out to incentivise the use of renewable electricity in transport. It allows renewable electricity supplied to road transport to be counted 4 times towards RES-T and renewable electricity supplied to the rail sector to be counted 1.5 times. When electricity is sourced from the grid, the renewable element is calculated based on the renewable share in the electricity sector over the two previous years.

Electricity supplied to road and rail transport does not currently qualify for credit under the Biofuels Obligation Scheme. While electricity suppliers can apply for carbon savings for electricity supplied to road transport under Article 7a of the Fuel Quality Directive, there is a need to look at how electricity for transport can be integrated into the overall reporting system for renewables in transport. In this regard it would be prudent to include electricity in the Scheme.

However, an appropriate system will have to be developed to accommodate these changes in terms of reporting and monitoring but also to ensure a sustainable approach is taken with respect to how the allocation of credit would be implemented. This work will take place over the course of 2022 with the intention of including renewable electricity into the Scheme from 1 January 2023.

***Anticipated date to apply: 1 January 2023***

## 16. Award of double credits based on Annex IX of the recast Renewable Energy Directive

The 2009 Renewable Energy Directive, as originally adopted, allowed Member States to count the energy from biofuels '*produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material*' twice towards their renewable transport targets. However, in RED II the qualifying feedstocks are more explicitly defined in Annex IX of the Directive.

Since the introduction of the Biofuels Obligation Scheme, two certificates have been awarded per litre of sustainable biofuel if determined by NORA to have been produced from wastes, residues, non-food cellulosic material, and ligno-cellulosic material.

Subject to enabling legislation, from 1 January 2023, the award of double credit will be based on Annex IX of REDII. This could mean that a small proportion of biofuels which received two certificates under the volume-based system may not receive double credit under the energy-based system.

***Anticipated date to apply: From 1 January 2023***

## 17. Implement a new Buy Out Charge regime

As stated above, in line with the increase in the biofuel obligation rate on 1 January 2022, the current buy-out charge<sup>15</sup> will be amended for the 2022 obligation period. This will be further amended for the 2023 period to reflect the transition to an energy based obligation.

It is anticipated that the new level of buy-out charge will further incentivise meeting the biofuel obligation rate.

***Date to apply: From 1 January 2022***

## 18. Use of Emergency Supplies

Subject to enabling legislation, from 1 January 2023, petrol or diesel released by NORA from emergency stocks when stock is being replaced may be exempt from the biofuel obligation if it cannot be blended with biofuels.

Any petrol or diesel released in the event of a supply emergency may also be exempted where blending would cause an unacceptable delay within an emergency context.

***Anticipated date to apply: From 1 January 2023***

## 19. Review and Consultation on the next Policy Statement

A public consultation will be undertaken in 2022 to seek views on the focus of next Policy Statement, including:

- Proposed obligation, scope, and rates from 2023, including for advanced biofuels and alternative fuels
- Proposals for the phasing out of high-ILUC feedstocks
- Assess the potential to use a resource availability target framework for future policy direction<sup>16</sup>
- Potential for innovation in renewable energy in the transport sector, including the development of advanced biofuels and RFNBOs
- Treatment of Development Renewable Fuels going forward
- Proposals set out in the EU Fit for 55, including the potential to change the obligation rate to a carbon intensity target

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<sup>15</sup> Currently, the buy-out charge paid by an obligated party who does not meet its biofuel obligation is €0.45 for each biofuel certificate below the required level.

<sup>16</sup> <https://onlinelibrary.wiley.com/doi/pdf/10.1002/bbb.2164>

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# Sustainable Development Goals

This Policy Statement is informed by the UN sustainable development goals. To ensure delivery on climate action commitments for renewable energy in transport that is sustainable, with reference to use of natural resources, land and clean water, and contributing to good health and well-being and sustainable cities and communities.





An Roinn Iompair  
Department of Transport