

Biofuels Consultation

Heat & Transport Energy Policy

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26 November 2019

Submission to Consultation¹ on Biofuels Obligation Scheme for period 2021 - 2030

Dear Minister Bruton, and the Department of Communications Climate Action and Environment,

Please find feedback to this consultation. We thank you for the opportunity to comment on the proposed changes to the Biofuel Obligation Scheme.

We look forward to working with you on behalf of our members on the implementation.

Yours sincerely,

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¹ <https://www.dccae.gov.ie/en-ie/energy/consultations/Pages/Public-Consultation-on-Biofuels-Obligation-Scheme.aspx>

Comments and Feedback on Consultation on the Biofuels Obligation Scheme:

Document prepared by:

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Preliminary remarks

1. Seemingly missing the point, the Consultation briefing indicates that Ireland's biofuels scheme is intended for complying with the EU Renewable Energy Directive, and in the most limited manner possible at that. However the renewables Directive has such low targets that it is now essentially redundant in terms of Europe's overall climate programmes. The Directive mandates just 3.5% renewables in transport in real terms by 2030, while Europe seeks a minimum of 32% overall. Ireland's own Climate Action Plan sets 45-50% as the goal for cuts in greenhouse gas emissions in transport, an impossible target without substantial bioenergy deployment. The recent UN science report on climate change states² that 15% is the contribution biofuels will need to make in transport if global warming is to be got under control. Relegating bioenergy in Ireland to an minor EU policy backwater is surely not the government's goal. We believe the government should rethink its intentions for the Biofuels Obligation Scheme, giving priority to climate progress over technical compliance with one specific item of EU regulation.
2. Bioenergy derived from EU farmed crops is the most sustainable, scalable and cost-effective way of reducing the carbon footprint of the road fleet. Ireland has 2.7 million diesel and petrol vehicles, this number is still growing and will likely be over 3 million in 2030. The most economical³ means for cutting carbon emissions today at scale is by crop biofuels and biofuels derived from wastes and by-products. Ireland should maximise its use of biofuels immediately, by moving to increasingly higher blends and using the blend rates to push innovation rather than simply following a trajectory of minimum compliance. There are no substantial barriers to doing so, the climate benefits start accruing immediately and the approach will bring Ireland greater flexibility under EU directives going forward. Ireland has yet to determine how much carbon abatement costs in for each abatement option. There is no time to lose in doing so, as carbon abatement costs are essential to political and policy decision making.
3. Ireland's National Energy and Climate Plan (NECP) is not sufficiently specific in its proposals, to allow stakeholders understand what the government's intentions are, and it contains no discussion of the relative costs of the various climate action options in transport. This is a serious limiting factor for progress in climate action. The Biofuels Obligation Scheme is a key instrument for deploying Ireland's NECP and the two things should be developed in tandem.
4. Ireland should transition to E10 petrol immediately, as the move presents no technical or commercial barriers of significance. E10 in the Irish fuel system represents the same level of climate progress as 100,000 electric vehicles, without the 1.1 billion euro in public funding that is needed to incentivise consumers to purchase 100,000 electric

² IPCC SR1.5 Chapter 4 Supplementary Material Table 4.SM.1 ([link](#))

³ https://www.farm-europe.eu/wp-content/uploads/2019/06/Ecofys2019_Transport-decarbonisation-2030-CEE.pdf

vehicles. While E10 is safe and effective in all petrol vehicles, any car owners that prefer to stick to lower ethanol blends can source it from petrol outlets which stock it.

5. Used cooking oil and tallow based biofuels are the most climate friendly options available for displacing fossil fuel in the road fleet. However there are limits to how much can be generated. The new EU cap of 1.7% on biodiesel made from used cooking oil (UCO) and tallow has been put in place to limit widespread fraud involving virgin palm oil being falsely labelled as used cooking oil, and causing largescale deforestation and biodiversity loss in palm oil regions. Cheap fraudulent imports are also stunting development of Ireland's own domestic system for collecting and processing cooking oil. Under the cap Ireland will have to cut its use of UCO by half or ask Brussels for an exemption. The answer is that Irish government should prohibit UCO imports from sources that fail to prove it is not palm oil. On this basis the government be justified in seeking agreement from the European Commission for an exemption from the cap.
6. Bioenergy in the forms of ethanol, biodiesel and biomethane offer the only realistic options for decarbonising heavy transport and must be embraced vigorously. They must be recognised and incorporated as the most significant technologies for transport and as technologies that can deliver short term, medium term and long-term decarbonisation.
7. The European Commission has failed⁴ to implement effective traceability and life cycle analysis for all forms of renewable energy. Just as Brussels has devolved climate policy to member states by way of the Energy Governance Regulation, it has done likewise with policy for monitoring the quality of renewable energy, by way of the "Voluntary Scheme" honour systems of self-declaration of origin. Ireland, like all member states, must establish its own stringent systems for regulating energy supplies of all forms, if fossil energy is to be displaced sustainably.
8. Ireland must end the practice of "double counting" of used cooking oil biodiesel that comes from regions where UCO is not legally classified as waste. Used cooking oil that isn't legally waste brings the same climate benefit as European crop biodiesel⁵, and should not be given special treatment over crop biofuels. Domestically collected Irish and EU UCO is genuine waste and should be given priority over non-waste UCO.
9. Biomethane is the most flexible form of bioenergy available, being readily produced and deployed across many sectors of the economy. The Biofuels Scheme should include ambitious pathways to significant levels of biomethane use in transport. In this document response we have largely focused on liquid biofuels. In a separate joint response between IrBEA and CRE we have addressed the consultation with a focus on biomethane.

⁴ https://www.eca.europa.eu/Lists/ECADocuments/SR16_18/SR_BIOFUELS_EN.pdf

⁵ <https://epure.org/media/1418/ecofys-2016-low-carbon-biofuels-for-the-uk.pdf>; <https://www.bbc.com/news/science-environment-48828490>

10. References to renewable energy in transport should state real rates and not notional rates. The real rate of renewables in Ireland's transport is 3.9% and not 7.2%. The notional rate includes fossil diesel, misleadingly labelled as renewable, under a distorting technicality of the renewables Directive.

Responses

4.1 Biofuel Obligation

Question 1

The Climate Action Plan has identified that blending levels of 10% by volume in petrol and 12% by volume in diesel on average must be achieved by 2030 in order to contribute to meeting Ireland's emission reduction target.

The recast Renewable Energy Directive sets out a target of at least 14% renewable energy in transport sector by 2030. These blending levels, together with the expected growth in electric vehicles, will ensure that the 14% target is achieved.

It is intended that the biofuel obligation rate in the Biofuels Obligation Scheme will increase every two years (i.e. in 2022, 2024, 2026, 2028 and 2030). It is intended that the increases will ensure a relatively linear increase in the level of renewable energy used in the transport sector.

Relevant section of the recast Renewable Energy Directive: Article 25(1)

(a) Do you consider these blending levels to be a suitable balance of feasibility and ambition?

See Preliminary remarks.

It is an error and a missed opportunity to align Ireland's climate action with the recast Renewable Energy Directive. The 14% target in the Directive is purely notional and does not translate into real climate action. The real underlying target in the Directive is less than 3.5% when "multipliers" and optional measures are accounted for, and less still when yet-to-be-invented "advanced technologies" are excluded. 3.5% is only a tenth of the ambition required under Europe's overall climate goals for 2030, which include 32% renewables and 40-50% cuts in carbon emissions. The Biofuels Obligation Scheme should be aligned to Ireland's true climate ambition which is expressed in the Climate Action Plan as 45-50% GHG cuts by 2030.

Diesel and petrol fleet still growing

In common with the world fleet, Ireland's fleet of diesel and petrol engine vehicles is still growing quicker than total EV sales. In 2018 the Irish fleet grew by 45,000 units while sales of EVs were just 4,000. It could be 2025 before the conventional fleet stops growing and 2030 before it dips back to today's size. There is no way Ireland can make satisfactory progress in renewables overall without making substantial progress in biofuels for the conventional fleet.

Biofuels to grow to 15%

The 2018 IPCC report on climate change (SR15) states that the bioenergy contribution in transport will still be around 15% even as far out as 2050 when electromobility is a mature sector. In the interim bioenergy will be required to contribute more.

The biofuels blending levels of 10% in petrol and 12% in diesel could and should be achieved today, in 2019, and the target for 2030 should be to double that again through a combination of more ethanol, more biodiesel and biomethane.

Note: The government's official figure of 7.2% renewables in transport energy currently is notional. It drops to 3.9% when diesel (from double-counting) is subtracted and to 2.4% when inadmissible unverifiable imported used cooking oil is taken out of the equation. In 2021, under new EU rules, Ireland will have to restate the figure and it will come to 4%, with even that number still including some diesel under the Directive's misleading double-counting technicality.

(b) Do you consider the approach to increasing the biofuel obligation rate appropriate?

No, as per Preliminary remarks. The Biofuels Scheme, as proposed, will actually bring a reduction in renewable energy in transport, and allow continued absolute growth of diesel and petrol.

Question 2

Increasing the biofuel obligation rate is likely to involve the introduction of fuels with higher concentrations of biofuel (such as petrol blended with 10% bioethanol and diesel blended with 12% biodiesel on average). This may lead to compatibility issues with older vehicles, additional cost to the consumer, the necessity to inform consumers in order to ease its introduction, and potentially a need to develop forecourt infrastructure.

(a) What do you view as the technical and consumer challenges associated with a blending level of 10% by volume in petrol on average?

There are no technical or consumer challenges to the immediate introduction of E10, while the climate benefits would begin accruing immediately.

The only measure needed to accompany the introduction of E10 is a targeted outreach programme to inform suppliers, users and influencers of the benefits and peace of mind associated with it.

E10 is better petrol, it will come at no or negligible cost to the consumer or the exchequer, it can be readily supplied by the current fuel supply chain.

Any car owners preferring to use petrol containing less or no ethanol can do so by filling up in any one of Ireland's network of multiple blend filling stations.

E10 petrol is the standard for petrol in Europe, it is the blend used in official engine emissions testing and it is the reference fuel used when engine makers test new engine technologies. It is a critical factor in protecting our air quality that our petrol engines are fuelled with the reference fuel with which they were certified. Ignoring this fact will impact air quality and could potentially have a significant impact on human health and life expectancy.

E10 has been available for a number of years in the USA, France, Germany, Finland, Belgium, Brazil, the Netherlands and others, with only positive experiences reported. France is now rolling out E85 across its fuelling stations.

Ethanol is a natural fuel oxygenator, allowing engines burn leaner and cleaner and allowing petrol producers use fewer chemical additives. Tailpipe emissions of E10 fuelled vehicles contain fewer particulates and NOx emissions than regular petrol.

Ethanol comes with no risk of adverse side effects on crop prices or land uses, coming as it does from a European farm sector which produces vastly greater quantities of crops than the biofuel sector will require and from a farm sector which in Europe has vast reserves of potential capacity. The land area under tillage in Europe is shrinking by a couple of percent each year. Two or three years "shrinkage" is more than enough to satisfy Europe's entire ethanol demand both today and under conditions of increased policy support. Demand for crop based ethanol in Europe, even at three or four times current volumes, represents a peace of mind option for climate policy makers.

Europe's animal feed system is characterised by an imbalance in the availability of sugar and protein components. There is a surplus of sugar components and an acute deficit of protein. Over 70% of Europe's high protein feed requirement is imported, primarily in the form of GMO soya meal from the Americas. Nearly all of what is produced domestically in Europe is thanks to the domestic biofuels sector, which converts the sugars, starch and oils in grain, beet and seed crops into biofuel, while extracting the protein and fibre and returning them to the feed chain.

Domestic crop biofuels such as ethanol also contribute many billions to tillage farmer incomes, and multiples of that in downstream economic activity.

Car owners wondering about vehicle compatibility with E10 will be reassured by a combination of two measures:

1. Making information available about the success of E10 and higher blend introductions in many other countries⁶ over the last two decades (including the USA, France, Belgium, Finland, Germany and the Netherlands). E10 is now in use in regions with a combined petrol fleet of 500 million vehicles of all ages, makes and models and no incidences regarding engine compatibility have emerged. It is especially important that journalists and opinion leaders be made aware of this. E10 is a better fuel than old standard petrol.
2. Should they prefer for sentimental reasons to use petrol blends containing no ethanol (called “protection grade”) they can source it in network of Irish filling stations which offer more than one grade of petrol.

E10 is better quality petrol and allows engines to perform better. France is currently rolling out E85, with 85% ethanol in the blend.

(b) What do you view as the technical and consumer challenges associated with a blending level of 12% by volume in diesel on average?

B7 has been available across the EU for over a decade, regular progression must be maintained to achieve 12% blend volume equivalent. France is currently at B10 and is moving to B12.

The technical limit in blending has always been related to the capability of the vehicle fleet and associated standards. The EU has taken the lead on this by continual movement of engine requirements to accept increasing levels of blend. To date this transition has gone smoothly.

We argue that Ireland should move to B12 as soon as possible. Where this in itself may be difficult in terms of supply of biodiesel the shortfall can be met by biomethane.

(c) What types of biofuel would you expect to be used to meet these increased blending levels?

Crop ethanol from sustainable European supply chains, plus FAME biodiesel from European crops and from traceable European UCO and tallow. Increased bioenergy blend levels will also be supported by biomethane vehicles.

⁶ <https://www.euractiv.com/section/agriculture-food/opinion/e10-safe-in-all-petrol-cars/>

(d) Are such fuels available in sufficient quantities to meet the needs of the Irish market?

Yes. Ireland's fuel needs are very modest in comparison with overall EU demand and capacity. Europe has about significant reserve capacity at present while the capacity of the European farm sector to produce more tillage crops is vast.

As EU countries consolidate their National Energy and Climate Plans it will become apparent to industry and the farm sector what demand will develop over the coming decade, and this will bring about the investment needed in bringing to service the idle capacity⁷ that is there.

(e) What actions are needed (outside of the Biofuels Obligation Scheme) to support the increase in blending levels (e.g. consumer communication)?

Ireland needs a programme management team tasked with supporting the introduction of more renewable energy of all forms into the transport energy system. This appears to be largely absent currently (as far as is visible to the public), with the exception of some small efforts by the SEAI in relation to electric vehicles.

IrBEA is in the process of establishing an Advisory Board to support the increase in blending levels.

Measures that can be considered include

- Communication programme for consumers
- Consultation with obligated parties regarding existing infrastructural ability to provide blends
- Consideration given to going beyond perceived and real "blend walls". France is moving to large scale roll-out of E85 petrol while Sweden operates buses running on 95% ethanol.
- Examination of the new anti-fraud 1.7% cap on FAME (Annex IX Part B), and determination of the ability of each biofuel in terms of first principles (e.g. GHG reduction, low impact on ecology).

(e) What is the expected cost to consumers associated with increasing the blending levels?

⁷ <http://ethanolproducer.com/articles/15588/epure-new-data-shows-record-ghg-reductions-from-european-ethanol> ; <http://www.ebb-eu.org/stats.php>

In the case of E10 (10% ethanol in petrol) there is no cost whatsoever to the consumer, the fuel supplier or the exchequer. While ethanol can cost fractionally more than regular petrol, the difference in one litre of E10 amounts to a fraction of a cent and this fraction of cent is compensated for by the lower cost of the underlying petrol blend used by the refinery when producing the finished product. The introduction of E10 has not led to higher pump prices in countries which have introduced it.

In the case of B12 the cost to the consumer would be negligible. Currently less than 1% of total pump prices are related to biofuels.

In terms of overall costs of climate action in the economy, it is dangerously reductive to speak just in terms just of pump prices. Crop-based biofuels are a low cost measure no matter what way they are analysed. The introduction of E10 in Ireland would achieve the same benefit in terms of carbon reductions as 100,000 electric cars. 100,000 electric cars will cost the government 1.1 billion euro in grants and foregone taxes. E10 comes at no cost to the exchequer or consumer.

Question 3

The recast Renewable Energy Directive sets out that obligation schemes may operate on a volume, energy or greenhouse gas emissions basis. In order to better align the Biofuels Obligation Scheme with the recast Renewable Energy Directive (where targets, limits etc. are based on energy) and to ensure the operation of the scheme is not overly complex, it is intended to move from a volume-based obligation to an energy-based obligation.

The amount of fossil-based energy placed on the market in the transport sector by an obligated party (see below) will be multiplied by the biofuel obligation rate to determine the level of biofuel that must also be placed on the market.

When biofuel is placed on the market, a credit for the level of energy is created. Currently this takes the form of a certificate. When the scheme converts to an energy basis, it is proposed that this will take the form of a level of energy. The energy that is credited will be tradable between obligated parties as is currently the case.

Relevant section of the recast Renewable Energy Directive: Article 25(1)

(a) Do you consider the move to an energy-based obligation appropriate?

Yes. All forms of planning, pricing and taxing of liquid fuels should be energy based rather than volume or weight based. The current system which is based on volume has set up a considerable disparity of cost against Ethanol, which as a result is taxed higher than fossil fuel.

We strongly recommend that GHG savings must be part of any evaluation, and this has been successful in Germany. Care must be taken to have a robust system to accurately calculate GHG savings across all biofuels and all renewable energy forms

Question 4

The recast Renewable Energy Directive must be transposed into law by mid-2021. It is planned to develop and implement the necessary legislative changes in advance of the deadline.

It is important to provide certainty to fuel suppliers to allow them prepare for the changes including sourcing supplies of biofuel. It is also intended to continue to operate on a calendar year basis.

It is therefore intended that the Biofuels Obligation Scheme would continue to operate in its current form until the end of 2021 and the changes set out in this consultation would take place from the beginning of 2022.

It should be noted that some minor changes (such as the reduction of carryover to 15% in 2020) will take place in the period prior to 2022.

(a) Do you consider the timing of changes to the Biofuels Obligation Scheme appropriate?

Targeted as it is, at alignment with the redundant Renewable Energy Directive, and in the most unambitious form possible, the ambition and the timing of the changes to the Biofuels Obligation Scheme are wholly out of line with the demands of climate action under the Paris Agreement.

It will be claimed that the current plan is coherent with industry needs for predictability and consistency, but in the context of a dramatic climate emergency there no longer are expectations of predictability and consistency. The transport energy sector is expecting radical change to kick in soon. The ball is in the government's court.

We strongly state that the transition requires significant private investment. There is a need for transparency and certainty to allow investors consider the long term direction and properly appraise and finance new plant. Changes to the BOS must be visible over the medium term time period to allow some predictability.

4.2 Advanced Biofuel Obligation (including Biomethane)

Question 5

The recast Renewable Energy Directive sets out a target of at least 0.2% renewable energy in transport sector to come from advanced biofuels²² in 2022, increasing to 1% in 2025 and 3.5% in 2030.

It is intended to create a secondary obligation for advanced biofuels. This will operate similar to the biofuel obligation. The amount of energy placed on the market in the transport sector by an obligated party (see below) will be multiplied by the advanced biofuel obligation rate to determine the level of advanced biofuel that must also be placed on the market.

The advanced biofuel obligation will be a sub-obligation and therefore advanced biofuels will contribute to meeting both the advanced biofuel obligation and the biofuel obligation.

When advanced biofuel is placed on the market, a credit for the level of energy is created. This will be recorded separately and will contribute to meeting both the biofuel obligation and the advanced biofuel obligation. This energy will also be tradable between obligated parties.

The increases in the advanced biofuel obligation rate will be as set out in the recast Renewable Energy Directive – i.e. 0.2% from 2022, increasing to 1% in 2025 and 3.5% in 2030.

The implementation of an advanced biofuel obligation is considered a key incentive for the introduction of biomethane as a fuel in the transport sector. This could lead to the production of biomethane from relevant feedstocks (such as the biomass fraction of mixed municipal waste and animal manure) and its use in CNG/LNG vehicles. Meeting the advanced biofuel obligation in this way would provide a market support for the introduction and use of biomethane in the transport sector.

Relevant section of the recast Renewable Energy Directive: Article 25(1); Part A of Annex IX

(a) Do you consider the approach to introducing an advanced biofuel obligation appropriate?

Yes and no. It is appropriate to strongly incentivise emerging forms of bioenergy from new feedstocks and employing new technologies, vehicles, fuelling infrastructures and supply chains, but:

- a. It is not appropriate to do so on the basis of simple lists of biomass types. The Scheme should incorporate means by which actual GHG savings are calculated, and not apply default values. There should be strict traceability and sustainability criteria in order to assure real climate progress, without adverse side effects.
- b. Reliance on a target of 3.5% for climate progress by 2030 must be based on evidence and data that show that this target can be achieved. Currently the

evidence suggests that an achievable target is considerably less than 3.5% and perhaps as little as 0.5%. Meeting the 3.5% target with these unproven technologies would require 100 medium size factories to be planned, financed and built across Europe in the coming few years. Currently there are no such plans in the pipeline, because the costs are high, the technologies early stage and the Brussels regulators ill-prepared to devise and apply the real GHG and life cycle based policy that is needed for stability and confidence.

- c. Biomethane by comparison is a proven technology and can contribute in a significant way to meeting and exceeding targets. To meet the 3.5% target there would be a requirement for the equivalent of 90 1MWe biogas plants. This we consider to be very achievable.

(b) What biofuels do you envisage contributing to meeting this obligation?

Only biomethane is capable of scaling in the timeframe envisaged. There are no technology or cost unknowns. It is only a question of political will.

It is therefore essential that Ireland greatly amplify and accelerate its support for biomethane deployment in transport. Biomethane is the only solution that can assure any real achievement in the advanced category.

4.3 Obligated Parties

Question 6

The recast Renewable Energy Directive sets out that the target for renewable energy use in the transport sector includes road and rail transport. Currently, under the Biofuels Obligation Scheme, the obligation only applies to road transport. In order to align the scheme with the recast Renewable Energy Directive, it is intended to extend the scope of the obligation to include rail transport.

Relevant section of the recast Renewable Energy Directive: Article 27(1)(a)

(a) Do you consider the approach to include both the road and rail transport as obligated parties appropriate?

Yes.

Question 7

The recast Renewable Energy Directive provides for Member States to exempt, or distinguish between, different fuel suppliers and different energy carriers when setting the obligation on the fuel suppliers, ensuring that the varying degrees of maturity and the cost of different technologies are taken into account. Member States may also exempt fuel suppliers in the form of electricity or renewable liquid and gaseous transport fuels of non- biological origin (e.g. hydrogen produced from renewable electricity) from the advanced biofuel obligation.

It is intended, in order to incentivise the use of alternative fuels, to apply a reduced or zero obligation to specific fuels. This means there would be no, or a reduced, biofuel obligation and advanced biofuel obligation on specific fuels.

It is intended to categorise fuels as follows:

- No obligation: CNG, LNG, hydrogen, electricity
- Half obligation (i.e. an obligation is generated based on half the energy content of fuels placed on the market): No fuels
- Full obligation: All other fossil-based transport fuels

As technologies mature and costs reduce, fuels may have the level of obligation increased.

Relevant section of the recast Renewable Energy Directive: Article 25(1)

(a) Do you consider the approach to exempting certain fuels from the obligation to be appropriate?

CNG should be subject to biomethane targets, in the context of an ambitious biomethane development programme.

As a general consideration, in the absence of a comprehensive and coherent plan for cutting carbon emissions in transport in Ireland it is difficult to comment on modes of transport and forms of energy which do not yet exist in the Irish system to any material extent.

4.4 Meeting the Obligation

Question 8

The Biofuels Obligation Scheme currently operates by issuing certificates in respect of volumes of biofuel which are placed on the market. For each calendar year, an obligated party must hold sufficient biofuel obligation certificates to demonstrate compliance. As set out above, it is intended to amend the scheme to operate on an energy basis. In place of issuing certificates, a credit will be provided corresponding to the level of renewable energy placed on the market. Each credit of energy will be categorised as one of the following based on the feedstock it was produced from:

- Advanced biofuel (Annex IX Part A)
- Used cooking oil and animal fats (Annex IX Part B)
- Food and feed crops
- All other

As biofuel (or biogas) is placed on the market, the total level of energy credited to each obligated party (or other entity that places such fuels on the market) will increase in the relevant category. Sufficient balances will be required across all four categories to meet the biofuel obligation and in the first category to meet the advanced biofuel obligation. It should be noted that although some fuels may not generate an obligation (e.g. CNG, LNG etc.), suppliers who are placing biofuels (or biogas) on the market for use by such vehicles will be credited under the Biofuels Obligation Scheme.

To incentivise the use of renewable transport fuels in aviation and maritime, it is intended to credit biofuels supplied for use in the aviation and maritime sector .

To incentivise the use of alternative fuels, it is intended that renewable fuels of non-biological origin (including renewable hydrogen) and recycled carbon fuels will also be eligible for energy credits.

As the supply of electricity for suppliers will not generate an obligation and the measurement of such supplies would create a significant administrative burden, it is not intended to be obligated parties, it is not intended to provide any energy credit for the supply of renewable electricity to road or rail transport.

Relevant section of the recast Renewable Energy Directive: Article 25(1)

(b) Do you consider the approach to issuing energy credits appropriate?

We agree with the intention to amend the scheme to operate on an energy basis.
We disagree with the suggestion that CNG and LNG would not generate an obligation – we can see no justifiable reason to exempt these fossil fuels from being obligated.
We agree with the intention to credit biofuels supplied to aviation and marine.

We agree with the intention to credit alternative fuels, as long as these fuels provide appropriate GHG savings and do not impact adversely on other environmental areas (e.g. biodiversity).

We agree with the intention not to credit renewable electricity with BOS certificates for the reasons outlined.

We wish to caution against the continued goal to meet RED II requirements when these requirements themselves have been superseded by the Paris Agreement. The Paris Agreement sets more stringent requirements to mitigate climate change and all policy measures must take cognisance of same.

Question 9:

The recast Renewable Energy Directive sets out that multipliers can be applied to biofuels produced from specific feedstocks. Multipliers can also be applied to renewable electricity supplied to road and rail transport when calculating compliance with the recast Renewable Energy Directive.

The multipliers allow biofuel from specific feedstock to be preferred. They also allow adjustment for the greater efficiency of electric road and rail vehicles compared to fossil fuel equivalents. There may be an increased risk of fraud in the market in assigning multipliers to biofuels from specific feedstock which needs to be considered.

It is considered appropriate that biofuels (and biogas) for transport produced from feedstock listed in Annex IX of the recast Renewable Energy Directive (i.e. advanced biofuels and those produced from used cooking oil and animal fats) shall be considered to be two times their energy content. This is intended to apply when credit is provided in the Biofuels Obligation Scheme and when calculating compliance with the recast Renewable Energy Directive.

It is intended that, with the exception of fuels produced from food and feed crops, biofuels supplied for use in the aviation and maritime sectors shall be considered to be 1.2 times their energy content. Where such fuels are produced from feedstock listed in Annex IX, the 2 times multiplier shall also apply (i.e. a 2.4 times multiplier would apply). This is intended to apply when credit is provided in the Biofuels Obligation Scheme and when calculating compliance with the recast Renewable Energy Directive.

It is intended to apply a multiplier of 4 times and 1.5 times the energy content for renewable electricity supplied to road and rail transport respectively when calculating compliance with the recast Renewable Energy Directive.

Relevant section of the recast Renewable Energy Directive: Article 27(2)

(a) Do you consider the approach to applying multipliers to be appropriate?

We do not consider that the proposed multipliers are appropriate as proposed above. Multipliers must be designed to take account of the following:

1. Qualitative criteria should be included.
2. Multipliers applied to waste products should be restricted to waste products produced in trusted jurisdictions where they are actually legally classed as waste, e.g. in Europe. Where not classed as waste these products have value for other uses and hence should not attract double-counting.
3. Multipliers applied to waste products must offer greater controls to prevent fraud, much concern is centred around the potential for palm oil being included in the supply chain – we would consider that the multipliers (and indeed all acceptance of biofuel feedstock) must possess adequate protection against the inclusion of products of questionable origin.
4. While we agree and strongly support that certain feedstocks do need multipliers, we caution against these multipliers being used to boost the overall declared figures. Currently Ireland claims 7.2% biofuel usage, although the actual figure is approximately half of this figure. Ireland must declare its overall usage in actual terms to ensure we maintain a clear view of our progress towards meeting our Paris Agreement targets.
5. Ireland should establish a system for GHG accounting and life cycle analysis for renewable energy based on bottom up analysis and not on the arbitrary lists and multipliers created in Brussels ten years ago.

(b) Do you consider the approach to applying multipliers impacts the risk of fraud?

Yes, greatly. Multipliers without verification of source, or of actual GHG savings, of the biofuel has created a massive incentive for fraud.

As much as a third of Ireland's UCO biodiesel is derived from virgin palm oil fraudulently labelled as UCO, albeit outside Ireland's jurisdiction. This has suppressed the development of genuine UCO collection systems domestically.

Multipliers mean a lower cost of compliance. UCO has a market price above⁸ that of virgin vegetable oils, yet still low enough to make the cost of compliance lower than using virgin vegetable oils alone without multipliers.

⁸ <https://www.thestar.com.my/business/business-news/2018/10/11/european-biofuel-producers-clamouring-for-used-cooking-oil>

Almost uniquely in Europe, Ireland has based its entire strategy for transport climate action on multipliers, with the consequence that Ireland's progress in the sector is (a) very low in real terms, (b) based mostly on notional rather than real progress, (c) highly contaminated by fraud where imports are concerned and (d) detrimental to the development of indigenous waste collection and processing.

It is important to note that the fuel importers are not responsible for fraud. It is the weakness in the European Commission designed policy for certifying the origins of the UCO, combined with there being no calculation of actual GGH savings, which make fraud so endemic. The European Commission appears not to have any intention to rectify the situation so it is now in the hands of members states to rectify it.

We note that within the waste based biodiesel industry specific measures are being taken both within the industry, with increased auditing requirements under the approved voluntary schemes, a database and technical works on a scientific test to identify specific biofuel composition and through the recast Renewable Energy Directive, with the establishment of a pan EU member state database by 2021 which is designed to directly address any potential fraud from alleged scheme hopping and misstating volumes of sustainable waste based biofuels. We strongly insist that Ireland assures these new measures are effective before approving and accepting them.

4.5 Limits on Specific Biofuels

Question 10

Under the recast Renewable Energy Directive and the subsequent delegated act²³, biofuel produced from palm oil is classed as being high risk from an indirect land use change perspective. Further feedstocks may be similarly classed in future. Until 2023, Member States should not exceed the level of consumption in 2019 of any biofuels considered to be high risk. From 31 December 2023 until 31 December 2030 at the latest, the limit is to be gradually decreased to 0%.

Given Ireland has very limited use of biofuels produced from palm oil and the impacts in relation to indirect land use change, it is intended that a limit of 0% will be implemented for all biofuels considered to be high risk from an indirect land use change perspective. While it will still be permitted to supply these biofuels, no credit will be given in the Biofuels Obligation Scheme and therefore there will be no incentive for suppliers to provide such fuels.

It is proposed that this limit would take effect from 2022 along with the other intended changes to the Biofuels Obligation Scheme.

Relevant section of the recast Renewable Energy Directive: Article 26(2)

- (a) Do you consider the approach to biofuels produced from feedstocks that are considered a high risk (from indirect land use change perspective) appropriate?

Yes, but it does not go far enough.

Yes, Ireland should continue to exclude explicitly labelled palm oil from our energy system.

But Ireland's UCO also contains some percentage of palm oil. There is evidence to suggest that as much as third of the used cooking oil (UCO) used in biodiesel in Europe is actually virgin palm oil fraudulently labelled as UCO. This would amount to around 40 million litres of palm oil annually, or nearly 10 litres per head of population. This firmly places imported UCO in the category of being "high risk from an indirect land use change perspective".

Ireland should argue for an exemption from the 1.7% cap (see Q 12) only on the basis that it will apply strict traceability and GHG savings criteria to the UCO that it does allow to qualify for climate action.

Palm oil expansion to supply Europe's biodiesel sector – both labelled as palm oil and falsely labelled as UCO – has grown to about 5 million tonnes per year, absorbing more palm oil than all other markets in Europe combined and resulting in GHG gas emissions several times worse than fossil diesel, by way of deforestation and wetland oxidation.

Ireland cannot ignore the palm oil and UCO question.

Question 11

The recast Renewable Energy Directive includes a limit on biofuels produced from food and feed crops. The maximum limit in energy terms which is likely to apply for Ireland for these biofuels is 2% based on current use of these biofuels.

The majority of biofuel currently supplied to petrol vehicles is produced from food and feed crops. It is intended that the level of biofuel use in petrol vehicles would double from 5% to 10% and therefore it is intended to set the limit at 2% to provide for this growth. As the limit set will be five percentage points less than the maximum of 7%, the overall target that applies to Ireland of 14% will reduce to 9%. This reduction only applies when measuring compliance with the recast Renewable Energy Directive. As set out above, the obligation will be set to ensure the overall 14% target is achieved.

When a biofuel produced from food and feed crops is placed on the market, a credit for the level of energy is created. This will be recorded separately to other biofuels or advanced biofuels. While this energy will contribute to meeting the biofuel obligation, it will be limited to 2% of the energy placed on the market (i.e. the energy used to calculate the obligation).

The energy credit for biofuel produced from food and feed crops will be tradable between obligated parties. However, the classification will remain and it will be counted within the 2% limit for the purchaser of the credit.

Relevant section of the recast Renewable Energy Directive: Article 26(1)

- (a) Do you consider the approach to biofuels produced from food and feed crops appropriate?

It is wrong to design the Biofuels Obligation Scheme only for compliance with the recast Renewable Energy Directive which is effectively redundant, by dint of its very low targets compared to Paris Agreement commitments. The Biofuels Obligation Scheme should raise its aim to 15% of transport energy, from the current 3-4% of the new RED.

It is wrong to adopt an arbitrary cap on crop-based biofuels. Just as caps haven't worked in preventing bad biofuels such as palm oil and fraudulent UCO from flooding Europe's biofuels market (5 million tonnes and counting), arbitrary caps do not foster the development of sustainable, effective and scalable crop biofuels such as European ethanol and rapeseed biodiesel. Europe has large "untapped reserves" of safe, effective crop-biofuels which will remain untapped for as long as the policy is based on caps instead of qualitative criteria. This represents an unacceptable lost opportunity for lowering the carbon footprint of the diesel and petrol fleet.

Ireland can and should go above the 2% crop biofuels immediately, by way of E10, B12 and higher blends in certain fleets. France, Sweden, Austria, Belgium, Luxemburg and many other countries already have crop biofuels contributing 5% or more to transport energy today, and Ireland, as an agricultural nation, should aim for that level too (up from its current 0.7%).

It is wrong to delay the increase blending of safe effective climate-friendly biofuels such as E10, when they could be going to work immediately.

We note that in Ireland heat and energy are a requirement to meet basic human welfare, therefore the ideology to restrict land use to food only is ill advised. Farming traditionally produced most (all) transport fuels (grass, hay, oats etc...), as well as producing the primary mover (horses), this position has changed over the past 60-80 years with the introduction of fossil fuels and automation of vehicles. While automation will continue we note that the widespread use of fossil fuels is a practice that will be limited to only a few short generations of human history. Agricultural land has in the past and will in the future provide a vital portion of the transport fuels and energy required by society. On this basis we do not agree with limits on food/feed being congruent with the transition to a low carbon society.

Ireland's minimalist and reluctant attitude to climate action has surely got to change.

Question 12

The recast Renewable Energy Directive includes a 1.7% limit on biofuels produced used cooking oil (UCO) and animal fats²⁴ that can be counted for compliance with the target of at least 14% renewable energy in transport sector by 2030. A multiplier of 2 can apply to such biofuels (see below) which would lead to a maximum contribution of 3.4% towards the target of 14%.

It should be noted that the recast Renewable Energy Directive does not appear to place any restriction on the contribution such biofuels can make to the overall level of renewable energy in Ireland or emission reduction from the transport sector.

As set out above, Ireland can comply with the transport sector target in the recast Renewable Energy Directive by achieving a level of 9% by 2030. Advanced biofuels are expected to contribute 1.75% on an energy basis (equivalent to 3.5% with a multiplier of 2 applied), biofuels from food and feed crops could contribute up to 2%, and UCO and animal fats could contribute up to 1.7% (equivalent to 3.4% with a multiplier of 2 applied). That would lead to 8.9% of the 9% target before electric vehicles and electric rail are counted.

Given the restriction only applies to the transport sector target, how such a limit will be included in the Biofuels Obligation Scheme will need to be considered carefully.

In addition, Member States (where justified) can modify the 1.7% limit taking into account the availability of feedstock. Any such modification shall be subject to the approval of the European Commission.

In 2018, of the 216 million litres of biofuels placed on the Irish market, 162 million litres were biodiesel produced from UCO or animal fats. This represented over 3% in energy terms of the energy used in the transport sector in 2018 and thus is in excess of the 1.7% limit.

Given the level of biofuel used from these feedstocks in Ireland, consideration is being given to seeking the European Commission's approval for a higher limit. Such a request to the European Commission would need to be evidence-based and focus on the availability of feedstock.

Relevant section of the recast Renewable Energy Directive: Article 27(1)(b)

(a) What approach do you think should be adopted in relation to the 1.7% limit on biofuels produced from UCO and animal fats?

Caps and mandates don't work. The goal of climate legislation should be to reduce fossil oil use while assuring the replacements are safe and effective.

There should be no cap or mandate on any kind of biofuels BUT ALL BIOFUELS AND ALL RENEWABLE ENERGY SHOULD BE SUBJECT TO GHG SAVINGS CRITERIA BASED ON ACTUAL LIFE CYCLE ANALYSIS.

Ireland should seek approval from the Commission to not apply the cap, on the basis that Ireland will apply strict and effective traceability and actual GHG savings criteria to used cooking oil biodiesel.

Ireland should remove double-counting from used cooking oil which comes from regions where used cooking is not legally waste and it should disallow all used cooking oil from supply chains which are not easily monitored.

The European Commission is creating a biofuels database which is expected to be launched in 2022-23. However they have not yet decided the scope of the database and may not include in it the source data of supply chains for used cooking oil. Hence this database cannot yet be presumed to present a solution for improved UCO fraud detection.

(b) Do you consider it appropriate to seek the European Commission's approval for a higher limit and, if so, what evidence would you suggest be used to support such a request?

Ireland can only justify seeking approval for a higher limit on the basis of having an improved system for detecting and deterring fraud. Ireland does not have such an improved system.

Ireland should focus on maximising use of traceable domestic and EU biofuels while avoiding those supply chains which present a high risk of fraud.

The following evidence should be used to support a request to increase the "soft cap" to the EU Commission.

- Availability: no accepted definition of availability: local or global?
- Local: does not stand up to scrutiny, if limited to local feedstocks only then it will not enable targets to be reached.
- Global: part B, Annex IX feedstocks are globally traded, therefore this should be the definition used, provided the feedstocks are fully sustainable and shown to be so.
- In 2018, 162 million litres of waste-based biodiesel were consumed in Ireland, 97% from outside Ireland and two thirds from outside the EU, and as such this indicates availability, however strict traceability should be enforced
- Applying the cap of 1.7% will result in less waste-based biofuels being consumed and replaced with options which will reduce the overall GHG savings in transport. The ideal approach is to apply strict traceability, to assure genuine product.
- UK legislation currently applies no cap on waste biofuels and promotes them through to 2032.

- Fraud: The 1.7% cap was introduced until such time as an EU wide database was established, which will be rolled out in 2021 by the Commission. Ireland should apply its own strict traceability assurance system in the meantime, and once satisfied that this EU database assures strict traceability then Ireland can cease to apply its own system.
- Industry measures being put in place to mitigate fraud, namely:
 - The EWABA Standard of Transparency
 - Pan-Industry work on a single EU database
 - Development of a UCO testing method

4.6 Carryover of Credits

Question 13

The Biofuels Obligation Scheme allows for up to 25% of the obligation in any one year to be met using certificates carried over from either of the previous two years. This limit is in the process of being reduced to 15% from 2020.

It is intended to retain this carryover system in order to provide suppliers with a level of flexibility, and support the creation of new supplies of biofuels. However, changes will be necessary due to the intention to move from a volume-based obligation to an energy-based obligation. The introduction of a target for advanced biofuels and limits on biofuels produced from food and feed crops will need to be catered for.

It is intended that where an obligated party has, after trades with other parties, an excess credit of energy over and above the level required to meet its obligation, it can be transferred to the following year provided that:

- the excess credit of energy does not include any energy in excess of the 2% limit on biofuels produced from food or feed based crops (i.e. if an obligated party exceeds the 2% limit, this credit of energy cannot be carried to the following year);
- the excess credit carried into the following year can only be used to meet the biofuels obligation and not the advanced biofuels obligation; and
- the excess credit carried from a given year cannot exceed 15% of the obligation for that year.

The treatment of carryover of energy from biofuels produced from used cooking oil and animal fats will need to be examined in the context of the 1.7% limit (see above).

At the end of 2021 it is intended that obligated parties will be permitted to carryover certificates as follows:

- a maximum of 15% of the certificates that a supplier was required to have in 2021 may be carried into 2022; and
- each certificate will be credited with 30 MJ energy²⁵.

(a) Do you consider the approach to carryover appropriate?

No comment

4.7 Compliance

Question 14

There has been a very high level of compliance with the Biofuels Obligation Scheme. This is ensured through the requirement to pay a compliance fee (referred to as a 'buy-out charge' in legislation) when an obligated party does not meet its obligation. Currently, the fee paid by obligated parties who fail to meet the obligation is €0.45 for each certificate (equivalent to a litre of biofuel) below the required level. This is equivalent to €0.015 per MJ of energy (assuming an average of 30 MJ per litre/certificate as above). There have been very limited examples of this fee being paid to date due to the high level of compliance.

The level of the fee has been set to ensure it is more cost effective for an obligated party to increase the level of biofuels as opposed to paying the compliance fee. Given the future increases in the obligation rate, the marginal cost of supplying more biofuel to the market is expected to increase. It is therefore intended to increase the fee to €0.02 per MJ in 2022, €0.03 per MJ in 2025 and €0.04 in 2030.

The cost of supplying advanced biofuels is expected to be greater than that of other biofuels. Accordingly, it is intended to see the fee for non-compliance with the advanced biofuel obligation to be twice that for the biofuel obligation (i.e. two times the monetary levels set out above for each MJ of energy).

(a) Do you consider the approach to setting the level of compliance fee (or 'buy out charge') to be appropriate?

We agree with the approach to increase the "buy-out charge".

We believe the increases should be implemented sooner, to €0.03 per MJ in 2021, as in the event that some HVO is required the cost of it is higher than the charge, thus some obligated parties may decide to pay the "buy-out charge" rather than comply, which will not result in any GHG savings.

Question 15

In the event of a significant oil/biofuel supply disruption, the requirements under the Biofuels Obligation Scheme continue to apply. If such a disruption lasted for a prolonged period, it is possible that obligated parties may not be able to meet the requirements of the scheme.

There is currently no scope for any adjustment to the Biofuels Obligation Scheme to take account of such a situation. Fuel suppliers would therefore be liable for compliance costs in not meeting the obligation.

Therefore, there is some merit in providing the Minister scope to adjust the obligation under the scheme in the exceptional circumstances. However, any such adjustment, while providing flexibility to obligated parties, should not impact the overall obligations of the scheme.

It is therefore considered appropriate that the Minister may, in the event of a significant disruption that prevents the supply of biofuels to the market, provide obligated parties flexibility in compliance. This would be achieved by allowing obligated parties the option to make up for any shortfall in a specified calendar year in the following calendar year in place of paying compliance costs.

(a) Do you consider the approach to dealing with a potential supply disruption appropriate?

Yes. In any case, the Minister will soon be required to intervene more heavily and more frequently in the transport energy system, as EU climate action ramps up and as the gap between high level ambitions and on-the-ground progress becomes apparent.

In the context of the climate emergency, transport energy stakeholders no longer expect or demand predictability or continuity. They simply demand good leadership and quality regulation, as the energy revolution takes place.

4.8 Heat Sector

Question 16

The Biofuels Obligation Scheme is currently limited to the transport sector. In the heating sector, there is a high use of fossil fuels, including oil and natural gas, which could potentially be blended with renewable fuels to reduce emissions in the heat sector. Responses to the previous consultation of the Biofuels Obligation Scheme highlighted a number of technical challenges to using bioliquids in the heat sector (e.g. a large amount of oil used in the heat sector is stored in tanks outside homes and businesses over long periods of time which may cause issues). Notwithstanding the input received to date, the introduction of such fuels in the heat sector can bring significant decarbonisation benefits and therefore continues to be kept under consideration.

(a) What is your opinion on the potential for an obligation scheme (similar to the Biofuels Obligation Scheme) in the heat sector?

There should be an ambitious bioenergy scheme for heating. It should learn from the failures of the Renewable Energy Directive and Biofuels Obligation Scheme in transport which brought only a fraction of the desired effective, brought major undesired side effects and allowed the unfettered growth of fossil energy to continue.

The heat sector scheme should be based on targets for reducing and displacing fossil energy with safe and effective bioenergy which has been subjected to life cycle assessment to determine actual greenhouse gas savings.

The government should assess the cost of carbon abatement options in both transport and heating, and favour those options which offer low cost and scalability.

The government should go back and reassess crop based energy options and favour those such as ethanol and oilseed biodiesel which bring climate progress without adverse side effects.

With respect to the general policy to electrify heating (through heat pumps) we would note that heat pumps currently have a poor effect on carbon emissions. Heating fuels should be measured in terms of grams of carbon per kwh of heat provided, indeed SEAI publish set values for same on their website. Heating oil produces 76g/kwh, fossil (natural) gas produces 56.9g/kwh, electricity produces 121.3g/kwh. The effect of heat pumps with a respectable COP of 3 (generally taken as the seasonal average COP) is to reduce this to 40.4g/kwh.

If we are to seriously work to reduce carbon emissions we must concentrate on this figure as the primary measure. We can consider that Irish electricity is reducing in carbon intensity, however a massive effort is required to reduce electricity to a level that will allow heatpumps to match the carbon reduction potential of fuels such as UCO biodiesel (19.5g/kwh) and wood fuels (3-9g/kwh).

A BOS for heating must reward the use of fuels that produce the maximum savings.

(b) What do you see as the technical barriers to introducing such a scheme?

We would consider that the main technical barriers centre around the processes for evaluating and recognising the ability of the full variety of heating technologies available.

There appears to be an over reliance on electrification of heat without any due consideration to the limited potential to reduce GHG emissions. An obligation scheme must fully recognise the potential of all available technologies.

We consider that applying simple caps, lists and mandates offer little incentive for regulators to develop the necessary knowledge and skills in life cycle assessment, costs assessment, scalability assessment, etc.

(c) If a heat obligation scheme was to be introduced, what level of obligation (e.g. in percentage or energy terms) would be appropriate?

Ireland has a significant advantage in that it has ample volumes of forestry by-product available today and becoming available over the coming decades. Ireland's State and private land owners have invested heavily in forestry since 1990, with almost 5% of the entire country being planted in these three decades. Total cover now stands at near 11%.

These substantial investments are now starting to come to maturity, and there is considerable opportunity for Ireland inc to now reap the rewards of this investment. Coford estimates show that the harvest of timber is expected to rise from 4 million cubic meters to 6 million cubic meters per annum between now and 2030. Considering that 40% of the harvested tree is suitable for lumber, a large portion of the remaining 60% will be available for heating fuels. Coupled with new techniques to harvest otherwise uncounted material (brush) for heating, the volume of material available for heating is considerable.

The level of obligation should be based on available fuel levels, taking into account transition periods to allow adoption of same.

4.9 Additional Input

Question 17

In addition to the specific questions asked in this consultation, your input is invited in relation to the development of the Biofuels Obligation Scheme for the period 2021 to 2030 including the implementation of the elements relating to renewable transport fuels in the recast Renewable Energy Directive.

Europe and Ireland have lost a decade of opportunity for developing renewables in transport. The Biofuels Obligation Scheme is one of the core instruments for the regulation of climate action in transport in Ireland. The approach of “more of the same” for the next decade surely cannot be the right answer. The Biofuels Obligation Scheme should be redesigned from scratch to reorientate its goals towards the Paris Agreement, and to take it from an unsmart “lists and caps” measure to a smart “life cycle assessment” measure.

Ireland should embrace the opportunity to produce indigenous renewable fuels displacing the circa €7bn of imported fossil fuels. Ireland should consider the conversion to a low carbon economy to be a significant opportunity in economic terms and in terms of meeting our obligations under the Paris Agreement. Ireland should not view the transition simply in terms of being an administrative burden to comply with RED II.