

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

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

Yes, OFTEC believes that the proposed blending levels to be a suitable balance of feasibility and ambition and that the bi-annual approach to increasing the biofuel obligation rate is appropriate.

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?

We have limited knowledge on this matter and would respect the views of IPIA.

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

We have limited knowledge on this matter and would respect the views of IPIA.

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

For the next decade we believe the focus will be on the use of wastes and residues from food supply chains, namely: ethanol, UCOME, TMEster and UCOME biodiesel fuels and HVO.

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

We believe so. In GB, the UK government has expressed a concern about the availability of UCOME, TME and HVO from wastes streams into the future given the potential demand increase for surface transport fuel. However, the department for Transport public data shows an anticipated short term increase in demand for such fuels followed by a gradual decline in demand for the future. Discussions with the two largest producers of UCOME and TME derived biodiesel in Europe (Argent Energy and Greenergy) have declared that they would both welcome alternate markets, such as heat, as they see their market shrinking in future as the transport market shifts towards electrification and away from diesel combustion engines.

We believe this will be the same for the ROI market.

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

Our comment would be limited to the heat sector. If the obligation was applied to this sector a consumer awareness campaign to advise consumers of minor adaptations to their existing equipment would be required. This would be done in conjunction with the industry and the many companies currently involved in the home heat market, including distributors.

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

For the heat sector a 10% blend of biofuel into kerosene would add a further 1-2cpl to the cost of home heating.

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.

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

Yes, this seems a reasonable approach.

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?

For the transport sector, yes. For the heat sector we would like to see an obligation to introduce a bio blend from January 2021 as the sector is ready for change.

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.

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

No comment.

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

No comment.

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.

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

If the aim of the obligation is to reduce carbon emissions then yes, the rail sector should be included.

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 nonbiological 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.

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

This approach appears reasonable.

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.

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

Yes, and we would suggest that biofuels used for the heat sector should be included in the credit scheme to encourage suppliers to make them available.

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.

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

Yes, but include the heat sector in same

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

Not if the proper controls are put in place.

Question 10:

Under the recast Renewable Energy Directive and the subsequent delegated act, 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.

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.

- 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, this is appropriate.

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.

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

No comment.

Question 12:

The recast Renewable Energy Directive includes a 1.7% limit on biofuels produced used cooking oil (UCO) and animal fats 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.

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

The heat sector would propose to use UCOME for their bio blend as this is readily available and the easiest product to blend. This should not be included in the transport sector target.

- (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?

No comment.

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.

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?

No comment.

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?

This sounds like a reasonable and pragmatic approach.

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?

We would support the inclusion of the heat sector in the biofuels obligation. OFTEC agrees and fully supports Ireland's transition to low carbon heat and is committed to playing an active role in helping Government achieve its goals for off-grid homes. A step change is required to move homeowners from a 100% fossil based fuel to a renewable product. While Government views heat pumps as a solution, over 90% of Ireland's off-grid properties are below BER C1 and these are not very suitable for moving to ASHP without significant disruption and expense. A simpler and easier solution is to introduce a low carbon liquid fuel utilising existing equipment, thus substantially reducing costs for consumers but giving the massive carbon savings that are required to meet targets.

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

There are no technical barriers that cannot be overcome with deploying Bio/Kerosene blend fuel at scale. Bio blends have been run successfully in domestic and commercial applications at up to 30% in GB with no issues reported. Although longer term fuel storage stability needs to be better understood. Further trials are being currently being planned to consider this area further. All oil fired burners sold into the Irish and UK markets in the last ten years have been bio compatible and only minor adaptations are required to ensure a seamless introduction of a bio blend to the heat sector.

These would include the replacement of;

- *Flexible oil lines.*
- *Filters and/or filter seals.*
- *De-aerators.*
- *Remote acting fire valves.*
- *Lever fuel valves/valves incorporating natural rubber seals.*

The cost of these service items is very small. A bio compatible flexible oil line for example is €15. A modern oil fired condensing boiler is bio compatible and needs minor adaptations at the next service interval to run successfully on a bio blend.

Modern bunded tanks are bio compatible and we would recommend older single skin tanks are replaced.

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

As stated above, a step change is envisaged. We would recommend that the obligation is introduced in 2021 at 10% to get the industry and consumers aware of this new fuel blend. Once this has been established and accepted as industry practice the blend can be steadily increased over a period of years with B30K introduced by 2027 with further increases to a 100% sustainable low carbon liquid fuel by 2035. A B10 blend offers an immediate reduction in CO2 emissions from the liquid fuel sector of c.8% or c. 300,000 tonnes/yr. and by setting out a time line this will allow oil companies to set up infrastructure. The 10% rate will also allow a safe transition and time to inform and educate consumers and installers/service engineers.

OFTEC has a going green guide and Ops 24 – a standard developed for blended liquid fuel – both are available to DCCAE on request.

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