Irish Petroleum Industry Association

Biofuels Obligation Scheme

Consultation on 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

Response by the Irish Petroleum Industry Association

15th November 2019

The Irish Petroleum Industry Association (IPIA) has played a critical role in the efficient delivery of biofuels in transport fuels in Ireland and we look forward to continuing to deliver on this scheme as we move towards 2030.

Introduction

As Ireland continues its transition to a low carbon, climate resilient and environmentally sustainable economy, biofuels will play a significant role.

Current blend levels prevent over 300,000 tonnes of carbon being released each year as petroleum products fuel Irish families, businesses and communities. IPIA members have never failed to meet the requirements of the Biofuels Obligation Scheme such that biofuels are projected to contribute over 9% of the 10% renewable energy target in the transport sector by 2020.

While we are confident that liquid fuels will continue to play a role in a net zero-carbon Ireland, our relationship with fossils fuels must change. Our dependence on traditional gasoline, kerosene and diesel will be slashed but liquid biofuels will continue to be essential during the transition phase and beyond.

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The biofuel/petrol/diesel blend fuels are genuine transition fuels as they allow us to continue to enjoy the social, community and economic benefits which traditional fossil fuels offer while cutting carbon and GHG emissions. This can be achieved without requiring massive investment in new fleets, plant and infrastructure. Along with advanced and synthetic fuels, they will reduce carbon and GHG emissions without significantly disrupting daily life while technologies such as fuel cell electric vehicles fuelled by renewable hydrogen develop and take hold in the Irish market.

It is IPIA's firm view that the BOS should apply to all energy sectors equally as there is no one solution to tackle the transport sector. The BOS should not be designed to pick technology winners. All should be subject to the same obligations in the interest of sound public policy and to prevent any potential State Aid issues.

As the representative body of those who will be responsible for delivery on the Biofuels Obligation Scheme, IPIA welcomes policy certainty but cautions that the Scheme cannot become so proscriptive that it fails to recognise the difficulties that suppliers might face in dealing with market conditions and the rapid evolution of biofuels. We will be unstinting in our commitment to meet our obligations and ask that Government continue to involve in the planning and implementation of the Scheme those who ultimately will deliver on its targets.

Acronyms:

BOS:	Biofuel Obligation Scheme
B7:	Diesel containing 7vol% FAME
E5:	Gasoline with 5vol% ethanol added
E10:	Gasoline with 10vol% ethanol added
FAME:	Fatty Acid Methyl Ester
FQD:	Fuels Quality Directive
HVO:	Hydrotreated Vegetable Oil
RED:	Renewable Energy Directive
UCO:	Used Cooking Oil
UCOME:	Used Cooking Oil Methyl Ester
TME:	Tallow Methyl Ester

Consultation Questions:

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?

These levels of blending are extremely ambitious and will pose challenges to the industry. The proposed targets are significantly more aggressive than those required by RED II. The overall target for the share of energy in the transport sector in RED II is set at 14% and it is anticipated that Ireland will reduce this to 9% due to the clause in Article 26(1) in RED II. The Climate Action Plan target is greater than 18% in energy terms; significantly higher that the expectations in RED II.

In respect to the proposed blending rates:

- An overall biofuel obligation rate to cover transport fuels should be established rather than fuel-specific rates, as per the existing biofuel obligation rate.
- Once the biofuel obligation is increased beyond 11vol% (or an energy equivalent target), it will be necessary to introduce E10 or blending of renewable diesel such as HVO/HDRD. A B7/E5 blend will not meet the required obligation. IPIA supports the introduction of E10 to the market but cautions that there are issues that need to be addressed before this can happen (see question 2 for details).
- Even when blending at E10/B7 rates the max renewable content that this will achieve on a volume basis is ~12.5%. This takes into consideration that 7% FAME is not achievable all the time, 6.8% is a more realistic blend %, this accounts for downtime and challenging blending conditions during Winter.
- Beyond 12.5vol% obligation rate renewable diesel (otherwise known as HVO) will be required. There are limited supplies of this biofuel available and at a higher cost than

traditional biofuel (FAME). To achieve a B12 diesel product significant quantities of HVO will need to be imported. This will have a significant impact on the cost to the consumer at current rates and potentially even higher if market demand increases across Europe without the matching increase in supply.

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

IPIA welcomes the policy certainty that comes with an approach to increase the obligation rate every 2 years. However, the level of increase should be reviewed every two years to ensure that the targets are in line with biofuel market supply. Biofuel production is still evolving; therefore, it would be reckless to set targets for 2024 onwards without reviewing biofuel technology advancement, supply volumes and feedstock availability. There is a concern that demand for biofuels will outstrip supply.

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?**

IPIA supports the introduction of E10 to the market but cautions that there are significant issues that need to be addressed before this can happen:

- Introduction of E10 will need to be a government mandated move as the industry will need to move to this new grade of fuel together.
- Due to infrastructure in import terminals and on the forecourts in Ireland, there will only be one grade of petrol available in the Irish market. As a result, E5 grade petrol will not be available once E10 is introduced onto the market. To maintain a separate grade fuel would be prohibitively costly for suppliers and impossible at a practical level for many independent operators within the market place.
- Considerable controversy exists in relation to compatibility of some older vehicles with E10 fuels. This requires definitive research to establish if/how many vehicles might have issues with increased ethanol in gasoline and a programme to address the issue with consumers.
- Security of supply of BOB imports may be of concern if Ireland moves to E10 ahead of the UK. Approximately 1/3 of Irelands gasoline comes from the UK. E10 BOB would need to be sourced from Rotterdam instead, and any increased cost will be passed on to consumers.

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

EN 590 diesel specification sets a limit on the amount of FAME that can be blended into diesel. This is set at 7vol%. At an obligation rate of 11vol% in 2020, Ireland will be at ~6.8% FAME blend. This is the yearly maximum achievable allowing for operational interruptions. It should be noted that to achieve a blend of 6.8% FAME through the Winter months is challenging. This is due to the cold flow properties of FAME and its tendency to cause filter blocking issues at low ambient air temperatures.

To achieve 12% renewable content in diesel, HVO will be required. Security of supply of HVO will be challenging for the industry. There are few manufacturers of HVO with limited quantities available on the market. Addition of HVO to diesel will result in a significant cost increase to the consumer. (see section (f)).

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

Ethanol will be the biofuel used to meet an E10 grade of gasoline. Currently most of the ethanol available in the market is from food and feed crop, although it would be expected that technologies utilising waste streams will mature. It is difficult to predict what volumes of 2nd generation ethanol will be available at any given time in the future. Bio-methanol has been considered for blending into E5 gasoline, but its use is limited by vapour pressure constraints. When the industry moves to E10 biomethanol will not be an option due to the limit on % oxygenates allowed (max 3.7%).

Regarding diesel blending, it is anticipated that FAME (mainly UCOME and TME) will be used up to the 7vol% limit. Beyond that HVO will be used, also produced from UCO and Tallow.

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

IPIA has no major concerns with regard to ethanol supply for gasoline blending. Regarding diesel blending; HVO is currently available, however even at current market demands it attracts a significant market premium over UCOME. As demand increases it is likely that this premium will increase in line with demand and ultimately lead to higher costs for consumers. It is anticipated that the EU will be short of HVO and therefore will have to bid for available product.

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

As noted previously in (a), consumers will need to be made aware of the change to E10 prior to market entry. This will need to happen through a government led information programme as previously alluded to.

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

A number of factors will inevitably result in consumer prices increases:

- Increasing costs of biofuel supply. The FAME market is very erratic with prices fluctuating by 80% within a short timeframe (3-4 months).
- HVO is in high demand and with limited supply, resulting in a high cost/litre.
- In the event a fuel supplier cannot meet its obligation, the fuel supplier will need to pay a higher buy-out charge coupled with an increased carbon tax (due to the higher level of fossil fuel on the market in place of the biofuel shortage). This will mean the end user will be paying increased taxes – carbon and biofuel buy-out.
- Advanced biofuels are also in short supply. If the fuel supplier cannot place the required volume of advanced biofuel on the market due to a shortage of supply the buy-out will be passed through to the consumer.
- As noted earlier, consumers in some cases may need to replace vehicles which are considered incompatible with new biofuel blend levels.
- Infrastructural costs in upgrading fuel pumps, fuel tanks etc. are also likely to be reflected in the price charged for fuel as retailers cover the costs of their investments.

Consumer acceptance of the higher costs of fuel may result in a negative reaction, particularly from the road haulage industry. If the BOS targets are set ambitiously high such that they trigger a buyout by the industry, consumers will be paying more for their fuel, fuel that is not 'greener' therefore making it more difficult to justify the increased costs.

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?

IPIA recognises that the move to an energy-based system for BOS aligns Irelands energy targets with respect to the Renewable Energy Directive (RED), where targets are specified in energy terms. IPIA also understands that this simplifies reporting from a government perspective. However, moving to an energy-based system for fuel suppliers increases the level of complexity required to meet the BOS targets. Unlike the RED the fuel industry in Ireland operates on a volume basis, levies and taxes, sales contracts and the OLA system are all based on litres @15. In order to manage the biofuel injection at terminal level it will be necessary for fuel suppliers to continue to operate the BOS scheme on a volume basis. It is impractical to operate on an energy basis at terminal level.

IPIA recommends that if the BOS targets move to an energy basis then the conversion should be carried out within the BOS operating system. This is to ensure there is consistency in the way all fuel suppliers convert from volume to energy. Fuel suppliers would continue to report their data in volumes – consistent with OLA. Fuel suppliers would be required to convert their energy targets over to volume targets in order to ensure compliance. An online calculator to assist fuel suppliers convert the energy targets into an equivalent volume target would greatly assist the industry in ensuring compliance.

With regards to converting to energy targets, it is recommended that the equivalent energy target is set using the split of fuels on the market in the prior year. For example, if the diesel/gasoline split on the market in 2021 is 75%/25% then this needs to form the basis of the calculated energy targets for 2022.

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 to 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?

IPIA considers the timing of the changes to the BOS scheme in 2022 as appropriate. Prior to further changes to the scheme post 2022, a consultation with industry would be necessary to ensure targets are set in line with technology development and evolving markets. In order to respond to any change in the BOS the industry needs to be given enough time to ensure any additional measures required to meet the changes are implemented, i.e. infrastructure changes, new supply contracts etc.

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 biofuels[22] 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?**

IPIA agrees that the advanced biofuel obligation should be set as a sub target within BOS and its contribution should be included in the overall obligation. However, IPIA recommends caution regarding implementation of the advanced biofuel targets. The level of the obligation should be set relative to the availability of the advanced biofuels on the market. Currently there is very limited supply of Annex IX Part A biofuels on the market.

IPIA supports setting the advanced biofuel obligation at 0.2% in 2022, however increasing this to 1% in 2025 without consultation with the industry is not advised. Prior to increasing this target, a review of the commercial availability of suitable feedstocks needs to occur. IPIA would welcome a consultation prior to 2025 regarding this target.

If the obligation is to increase through the period to 2030 it would be recommended to ensure the increases are conservative at first, allowing technology development, increasing towards the latter part of the period, i.e. 2027 onwards. If the targets are set at a value that cannot be achieved by the fuel suppliers, this will only increase costs to the consumer due to the proposed high buy-out charge for non compliance with the advanced biofuel targets.

IPIA supports the opportunity that this advanced biofuel target creates for biomethane injection into the gas grid. Fuel suppliers placing this biomethane on the gas grid for use in transport should be obligated in the same manner as liquid fuel suppliers (see Question 7 for further discussion)

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

Biofuels produced from feedstocks listed in Part A of Annex IX, RED II – subject to their being sufficient supplies of this product at a commercial level. Presently there are very limited volumes of these biofuels on the market. Ireland is unlikely to be producing indigenous biofuels from feedstocks within Annex IX, Part A and therefore will be reliant on technology development and commercial deployment in other jurisdictions, importing the quantities of advanced biofuels required.

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?

IPIA agrees that rail transport should be included as obligated parties. In order to meet the ambitious targets set out in the Climate Action Plan all forms of transport will be required to work together to achieve the targets.

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. Members 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?

IPIA agrees that the approach to exempting certain fuels is appropriate. There is merit in having no initial obligation on fuels such as hydrogen in order to allow the fuel technology reach commercial maturity. IPIA agrees that the technology for hydrogen production is not at commercial scale yet. This should be reviewed periodically between 2021-2030 to determine when the fuel should join the BOS.

However, fuels where the technology is from proven commercial channels should not be exempted from the obligation. CNG and LNG to both fall into this category. Production of biomethane from anaerobic digestion is an established technology, albeit at the early stage of commercial roll out. Injection of biomethane into the gas grid should be obligated, as to have no obligation could be deemed to be anti-competitive, distort the market and thereby raise State Aid issues.

The onus to contribute towards the biofuel obligation targets should not pick technology winners. In order to reach the challenging targets of decarbonising, all technologies will be required to play their part.

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)

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

If the BOS system moves to an energy base, IPIA agrees with the methodology proposed for issuing of energy credits. As per the previous question IPIA does not agree that CNG and LNG should be 'non-obligated' and therefore if they are to be issued energy credits then these should be to cover their own energy obligation, not as an additional source of revenue for companies in this sector. A review of this system should be carried out every two years to determine if a technology has reached maturity and therefore should be obligated (e.g. hydrogen).

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?**

The application of multipliers has already proved successful in encouraging the use of waste derived biofuels over crop. Extending the double count to all Annex IX feedstocks, without the requirement for individual determination is supported by IPIA, as this will reduce the current burden of seeking approval for new feedstocks placed on suppliers.

Enabling aviation and maritime fuels to be rewarded for bio energy content, to the maximum allowed under the RED II is welcomed, as it will ensure alignment with other Member States. These do, however, remain challenging sectors to decarbonise and international alignment on developing biofuel solutions and approach to regulation is critical.
Renewable electricity will have an increasing role in decarbonising transport, with already ambitious 2030 targets set in the National Development Plan further increased in the Climate

Action Plan (2019). Reward for renewable electricity, as outlined is appropriate, provided that this is in addition to the baseline of renewable generation.

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

It is critical to the biofuel industry, obligated fuel supplying parties and to the trust that the public has in carbon reduction measures that any level of fraud is not tolerated. Fuel suppliers must be able to rely upon the integrity processes of the certification bodies, throughout the entire supply chain. The further strengthening of these schemes is the best way to ensure that opportunity for fraud to occur is removed. Due to the global nature of supply chains any solutions, including central databases would need to extend beyond the EU.

Question 10:

Under the recast Renewable Energy Directive and the subsequent delegated act[23], 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?

The approach supports and is fully aligned with the requirements of the recast RED for high risk ILUC feedstocks. It is noted that the directive does introduce an exemption from these restrictions for bioliquids and biomass fuels certified as low ILUC-risk, where production is considered as beneficial, even where these feedstocks are predominantly high ILUC.

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?**

Based on the current market conditions in Ireland IPIA does not have any objection to the limit of 2% by energy on food and feed crop biofuels. Currently the market is operating with ~0.75% by energy of food and feed crop biofuels, predominantly from 5 vol% ethanol blended into gasoline (based on a market split of 25%/75% gasoline/diesel). If the market moves to 10vol% ethanol blending with the same gasoline/diesel split, then there would be ~1.5% by energy from food and feed crop biofuels.

The 2% limit only becomes problematic if the market share of gasoline increases to >35% when on E10. In this scenario if there is limited supply of waste based (Annex IX, Part A) biofuels available for gasoline blending, then it could be considered to use the 2% food and feed crop based biofuels to meet the 9% (RED) energy target, with any excess food and feed crop based biofuels contributing to the overall DCCAE BOS target, i.e. the higher target in excess of 9%.

Question 12:

The recast Renewable Energy Directive includes a 1.7% limit on biofuels produced used cooking oil (UCO) and animal fats[24] 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?

As indicated in the consultation, in 2018 biodiesel placed on the market in Ireland represented over 3% in energy terms of the energy used in the transport sector. As the BOS obligation increased from 8 vol% to 10 vol% in 2019, biodiesel placed on the market in 2019 looks like it will represent over 4% in energy terms of the energy used. In 2020 the BOS obligation will increase further to 11 vol%, resulting in the biodiesel share of the market increasing to over 5% by energy terms. This is considerably higher than the 1.7% allowed under the recast RED.

IPIA does not agree that there should be a 1.7% limit on the use of UCO and Tallow imposed on the industry. There is already a cap on the food and feed crop volumes that can be placed on the market. To add another cap on the Tallow and UCO allowed would greatly reduce the operational flexibility required by the industry to meet the challenging biofuel targets set out. The 1.7% limit will be problematic if introduced immediately in 2022 as there will be limited alternative biodiesel feedstocks available to blend into fossil diesel and limited advanced biofuel on the market.

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?

IPIA not only agrees that it is appropriate to seek the EU approval for removal of the 1.7% limit, but also consider it to be necessary. The basis of this argument would be the following:

- Ireland is heavily reliant on biodiesel to meet its renewable energy targets due to the significant share of the transport market that diesel commands (>75% for the last 5 years, 2014-2019). This is unlike most other MS where E5 or E10 plays a significant role in meeting their renewable targets.
- Indigenous biofuel production is based on utilising UCO and Tallow, both having an established supply chain within Ireland. Ireland has significant quantities of indigenous tallow available due to a well-established agricultural sector in the country. There are no other indigenous feedstocks available in sufficient quantities to produce FAME or HVO.
- At B7 blend rates UCO/Tallow represents over 5% in energy terms of the energy used in transport. To achieve an ambitious B12 target would require UCO/Tallow biodiesel at ~ 9% in energy terms, greatly exceeding the 1.7% allowable rate. Currently there is no other feedstock available in sufficient quantities to substitute for UCO/Tallow.
- Cost of fuel to the consumer would increase greatly if the 1.7% limit was not increased, as fuel suppliers would need to pay the buy-out charge due inability to meet the targets.
- It should be noted that if UCO and Tallow qualify as wastes then they should be used to produce energy if there is no better use for them, following the waste hierarchy directive. Limiting the quantities of UCO and Tallow for use in this sector will not complement this directive.

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 energy[25].**

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

IPIA has a few comments to make regarding the approach to carryover certs

- IPIA agrees that energy credits in excess of the current 2% crop-based limit cannot be carried forward into the following year
- In order for optimum value in purchasing advanced biofuels, parcel sizes may be in excess of the quantity required in a single year, therefore there needs to be flexibility to allow for the excess to be carried into the next year. IPIA does not agree that the excess credit carried forward can only be used to meet the biofuel obligation and not the advanced biofuel obligation. If there are advanced energy credits in excess of the advanced energy target for that year, then these should be carried over and allowed

to contribute to the advanced energy target for the following year (e.g. if there is greater than 0.2% advanced biofuel placed on the market in 2022 by a fuel supplier, then the additional energy credits applied to the advanced biofuel should be allowed to be carried over and go towards the advanced biofuel target for 2023).

- IPIA does not agree that there should be a limit on the energy credits carried over into a given year. While IPIA accept that only 15% of the obligation in a given year can be met by carry over credits, there should not be a restriction on the number of credits that can be carried into a year. There needs to be operational flexibility to allow fuel suppliers to over-blend in a given year to cater for future planned tank outages, unforeseen downtime and potential economic opportunities regarding biofuel purchase. Limiting fuel suppliers to 15% of the current year obligation does not consider an increasing obligation in the following year. Fuel suppliers should be able to manage their balance of energy credits within the BOS system and not be restricted in their operations.
- IPIA recommends that energy credits can be maintained for a 2-year period – as per the current BOS certificates.
- Limiting fuel suppliers to 15% carryover based on 2021 obligation does not equate to 15% of an increased obligation in 2022. This undermines the ability of fuel suppliers to meet 15% of their 2022 obligation with carryover credits. This situation will occur every 2 years if the obligation is set to increase accordingly. This 15% restriction also makes it more challenging for a supplier to meet its obligation if there is growth in their market share.
- IPIA recommends allowing 25% of the advanced biofuel target to be met by carryover certificates from the previous year. This should be considered for a period to allow the advanced biofuel market to develop.
- Regarding the value of the carryover certificate, IPIA would recommend that the carryover certificate is converted to energy based on the actual split of fuels per fuel supplier. For example, at the end of 2021 each fuel supplier will have red, orange or green certificates recorded in their BOS account. These certificates are associated with specific fuels placed on the market, whose calorific value is known. The certificates should be converted to energy based on actual data, not on a market average value of 30MJ/litre.

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?**

A stated key aim of the buy-out charge is to protect the end consumer from unforeseen price rises due to a biofuel market shortage. While IPIA considers it appropriate that there are buy-out charges rather than fines for non-compliance with BOS, IPIA cautions the government regarding the level at which this buy-out is set.

The buy-out for advanced biofuels is 'heavy handed'. As stated previously there are limited supplies of advanced biofuels available on the market currently. IPIA feels that it is unreasonable to expect the industry to agree to a high buy-out charge when the cost to meet the target in future is impossible to assess. Fuel suppliers have no insight into what the availability of advanced biofuels will be in 2022.

If a fuel supplier is in a position where they are non-compliant and therefore need to pay the buy-out, this will result in a significant cost increase to the consumer. Not only will the fuel supplier need to pay the buy-out, but the carbon tax paid by the fuel supplier will be higher due to the increased volumes of fossil fuel in the mix.

IPIA recommends that the buy-out for advanced biofuels be set at the same level as the main biofuel obligation and not increased until there is a secure supply of advanced biofuel available.

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 supplies 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?**

IPIA does not agree that the approach is correct. In the event of a significant emergency that interrupts operational blending at terminal level it should not be up to the oil industry to shoulder additional burden of achieving biofuel targets.

Once a product is released to the market unblended it cannot be undone. In the case of an emergency where product is released to the market without biofuels then it is impossible for the oil industry to catch up without the imposition of significant cost to the consumer by blending HVO, to get around blend walls etc.

An emergency should be treated as a force majeure and all product released to the market during these defined periods should not fall under the obligation.

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?**

It is recognised that the most cost-effective measure to increase the renewable content in the heat sector is to introduce renewables into the liquid fuel market (kerosene and marked gasoil). By introducing a decarbonised fuel, households across Ireland will not have to renovate their home or install new expensive technology. The current heating systems can be adapted easily (and cheaply) to run on a cost-effective biofuel solution. However, the timing of an obligation in this sector needs to be considered.

The Biofuels Obligation Scheme relies upon the duty point, typically the truck loading rack at primary fuel terminals, as both the point at which a fossil obligation is incurred and where biofuels are credited. This would not be a feasible approach where the obligation is set for a specific end used, such as heating.

Liquid fuel types used in the heat sector can broadly be split into two, kerosene in the domestic sector and gasoil (marked diesel) for commercial. These fuel types are not solely used for heating and it would not be possible to provide separate, dedicated infrastructure to support additional heat specific product grades. Only when the fuel is supplied to the final customer storage tank, or where such a tank supports different end uses when the fuel is supplied into the boiler, can end use obligation and biofuel award be determined.

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

As outlined above designing a scheme that does not place significant burden on those covered by it or those administrating it will be difficult. Fuel suppliers are unlikely to know the end use

of the product. A significant amount of kerosene sold in Ireland is sold as Dual Purpose Kerosene (DPK), serving the Jet A1 market also.

Technical challenges with the ongoing use of liquid biofuels has been highlighted in responses to the previous consultation. The initial introduction of FAME/UCOME can itself lead to problems for fuel systems, even where good housekeeping measures are in place. Particulates and other residues can be dislodged, blocking filters (where fitted), fuel lines and burners.

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

The inclusion of any percentage of FAME/UCOME within the heating market will bring with it risk. Potentially, this could be mitigated using biofuel which has been further processed, such as HVO (Hydrotreated Vegetable Oil), resulting in a more stable bio-kerosene and bio-gasoil. As highlighted in the consultation document, HVO can enable diesel blends to exceed 7% biofuel content and it is also likely providing a route to produce bio-jet fuel. Demand is expected to exceed supply, so its inclusion in heating fuels could prove both expensive and may not increase (at a macro level) the amount of blended biofuel.

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.

Fuels Quality Directive

At the time of writing of this submission there is a lot of uncertainty around FQD and whether the 6% GHG reduction target will actually expire post Dec 31st 2020. If the 6% GHG reduction target is extended to beyond 2020 then this BOS consultation will need to be re-run. The targets set out in this consultation would not align with FQD, consideration would need to be given to whether BOS should operate on a GHG basis and not energy, FQD non-compliance would need to be reviewed.