Biofuel 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.

Irving Oil **26th November 2019**

Irving Oil is pleased to provide a response to the consultation on the development of the Biofuels Obligation Scheme (BOS) for the period 2021 to 2030, including the implementation of the elements relating to renewable transport fuels in the recast Renewable Energy Directive (RED) (Directive (EU) 2018/2001). We appreciate the opportunity to participate as a stakeholder as this is an important policy with impacts to fuel suppliers, terminal and retail operators as well as end consumers. We look forward to working with the Department of Communications, Climate Action and Environment (DCCAE) as an active stakeholder in the development of these future BOS targets.

Background

Irving Oil is an international refining and marketing company with a history of long-term partnerships and relationships. Founded in 1924, Irving Oil operates Canada's largest refinery in Saint John, New Brunswick, along with more than 900 fueling locations and a network of distribution terminals spanning Eastern Canada and New England.

In Ireland, Irving Oil operates the country's only oil refinery in Whitegate, Co Cork and earlier this year the company expanded its presence in Ireland by acquiring Tedcastle Oil Products (TOP). As such, we serve our customers through the full suite of supply, manufacturing, distribution and sale of transportation and heating fuel products. Our operations in Dublin and Cork are already a significant supplier of biofuels to the Irish economy and we look forward to a continued contribution to the objectives of the BOS. We welcome the regulatory certainty on the implementation of renewable fuels policy as it is a key component to our business planning as we look to 2030 and beyond.

Our industry's contribution to meeting the recast RED targets will be an important component to Ireland's Climate Action Plan as we transition to a lower carbon economy. Every country in Europe has its own unique regional strengths and challenges. To this end, Ireland is well placed to utilize indigenous feedstocks (largely from waste streams in the

agricultural sector) for biofuels manufacturing and there are already a number of indigenous companies operating in this sector. Irving Oil believes that the BOS should promote flexibility on the pathway to compliance. This will encourage utilizing different biofuel streams and result in optimizing the contribution from local biofuel supply and production.

At the Whitegate Oil Refinery our company continues to explore opportunities which could utilize indigenous feedstocks in the production of renewable diesel, an alternative advantaged biofuel product which will be required in delivering the 2030 targets called for in this consultation.

As a member company of the Irish Petroleum Industry Association (IPIA) we share in the feedback given in IPIA's response to this consultation especially with respect to the technical and operational aspects of the BOS. This is reflected and included in our responses which follow.

Acronyms:

BOS:	Biofuel Obligation Scheme
B7:	Diesel containing 7vol% FAME
DCCAE:	Department of Communication, Climate Action and Environment
E5:	Gasoline with 5vol% ethanol added
E10:	Gasoline with 10vol% ethanol added
FAME:	Fatty Acid Methyl Ester
FQD:	Fuels Quality Directive
HDRD:	Hydrogenation Derived Renewable Diesel
HVO:	Hydrotreated Vegetable Oil
ILUC:	Indirect Land Use Change
MS:	Member States
OLA:	Online Levy Application
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? **(b) Do you consider the approach to increasing the biofuel obligation rate appropriate?**

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

Irving Oil considers that these levels of blending are ambitious and will require the industry to blend alternative biofuels to meet the renewable requirements. It is noted that the proposed targets are significantly more aggressive than what is required in 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.

However, the targets proposed in this consultation are in line with the Climate Action Plan which sets out to achieve greater than 18% in energy terms. This is significantly higher that the expectations in the RED II.

The following are some comments with respect to the proposed blending rates:

- Irving Oil recommends that an overall biofuel obligation rate should be set to cover transport fuels in general rather than set rates for specific fuels (i.e., as per the existing biofuel obligation rate). This allows for optimisation with regards to meeting

the renewable share of energy in the transport fuels.

- Once the biofuel obligation is increased beyond 11vol% (or an energy equivalent target), the current 'blendwall'[1] will be exceeded and therefore 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.

- To meet the proposed targets, an obligation rate beyond 12.5vol% renewable diesel (otherwise known as HVO/HDRD) will be required even with E10 on the market. Currently, HVO is in short supply and the expectation is that increased volumes of HVO will be required to satisfy demand as all Member States look to increase renewable blending levels.

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

Irving Oil welcomed the Biofuel Policy Statement in 2018 which gave the industry greater certainty and allowed for better long-term planning. In this statement, government made a commitment to carry out public consultations on all future obligation rate increases (every two years post 2020). This periodic consultative process is critical to the future success of the biofuel obligation scheme.

The proposed BOS volume increases must 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 remiss to set targets for 2024 onwards without reviewing the biofuel technology advancement, supply volumes and feedstock availability. The proposed linear increase in the BOS should be an indicative trajectory for planning purposes only. The BOS volume increases should be set based on periodic reviews, as noted above, rather than an indicative trajectory.

[1] The concept of a blendwall is an important part of this discussion. A blendwall represents the point at which a limit is reached on the physical quantity of biofuels that can be blended to petrol and diesel while meeting the required fuel specifications. For example, the EN590 specification for diesel permits blending of up to 7vol% FAME. For petrol, the EN228 specification (updated in 2012) allows blending of up to 10% v/v ethanol in petrol (referred to as E10 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?**
- ***(b)*** **What do you view as the technical and consumer challenges associated with a blending level of 12% by volume in diesel on average?**
- ***(c)*** **What types of biofuel would you expect to be used to meet these increased blending levels?**
- ***(d)*** **Are such fuels available in sufficient quantities to meet the needs of the Irish market?**
- ***(e)*** **What actions are needed (outside of the Biofuels Obligation Scheme) to support the increase in blending levels (e.g. consumer communication)?**
- ***(f)*** **What is the expected cost to consumers associated with increasing the blending levels?**

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

Irving Oil supports the introduction of E10 to the Irish market. There are no technical issues with blending 10% ethanol into petrol. Refineries produce a Blendstock for Oxygenated Blending (BOB) to which ethanol can be blended. This would result in the market switching to an E10 BOB. This is a different product from the current E5 BOB but is compatible with most vehicles in the current Irish fleet. However, it is noted that E10 represents a blendwall which cannot be exceeded under current fuel specifications.

However, some issues would need to be addressed in advance of introducing an E10 product to the Irish market. As outlined below, these include actions for both industry and consumers.

Industry will need to move to this new grade of fuel together. Due to existing infrastructure in import terminals and forecourts, there is only room for one grade of petrol in the Irish market. To maintain a two separate grades of fuel would be extremely costly and

prohibitive for many independent operators within the market place. As a result, E5 grade petrol will not be available once E10 is introduced into the market.

Consumers will need to be made aware of any potential issues surrounding their vehicle suitability for E10. There is a possibility that a scrappage scheme may be required for older cars deemed unsuitable for E10. Government would need to liaise with the relevant stakeholders regarding this matter.

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

HDRD will be required to achieve 12% renewable content in diesel. There are no technical issues with blending HDRD into diesel. It would be anticipated that fuel suppliers will blend up to 6.8% FAME into diesel with the remaining 5.2% blended from HDRD.

Indigenous supplies of HDRD are currently not available. Security of supply of feedstock to produce HDRD will pose a challenge as these feedstocks will also be in demand by FAME producers. In short, HDRD will be required to achieve a 12% blending level in diesel. However, HDRD and feedstock supply are key issues that may challenge Ireland's ability to meet a 12% target in diesel.

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

In gasoline, it is anticipated that ethanol would be the biofuel used to meet an E10 grade. Currently, most of the ethanol available in the market is from food and feed crop. Newer technologies utilising waste streams will mature (e.g., waste starch slurries) which may provide 2nd generation ethanol products over time. However, 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. Blending of bio-methanol into E10 will be more challenging due to the oxygenate limit on E10. Also, bio-methanol has a low calorific value (~16MJ/l) when compared with ethanol (21MJ/l) or gasoline (32MJ/l). To this end, Ireland would rely on E10 from 1st generation (initially) and 2nd generation sources in gasoline.

In diesel, it is anticipated that FAME (mainly UCOME and TME) will be used up to the 7vol% limit. Beyond that HDRD 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?

Irving Oil has no major concerns regarding ethanol supply for gasoline blending. Regarding diesel blending, HDRD will be in significant demand by 2030 and may be challenged from an availability of supply perspective.

(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?

It is not possible to predict a cost of blending to the consumer. Costs are market driven and our industry is familiar with the volatility of commodity markets in oil supply. As demand for biofuels increases it is expected that blending costs would also increase (unless supply keeps pace). It is also likely that market events could cause spikes (and drops) in prices for periods. However, it is noted that the 'buy-out' charge currently sets a cap on costs and offers some protection to the 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?

Irving Oil recognises that the move to an energy-based system for the BOS aligns Ireland's energy targets with respect to the Renewable Energy Directive (RED), where targets are specified in energy terms. Irving Oil also understands that this simplifies reporting from a government perspective. However, moving to an energy-based system increases the level of complexity required to meet the BOS targets for fuel suppliers. Unlike the RED, the fuel industry in Ireland operates on a volume basis. Levies and taxes, sales contracts and the Online Levy Application (OLA) system are all based on litres @15C. To this end, it is impractical to operate on an energy basis at the terminal and refinery level. Operationally, fuel suppliers will need to continue to use a volume basis, in order to manage the BOS injection at the terminals.

If the BOS targets move to an energy basis it is recommended that the conversion to an energy basis be calculated within the BOS operating system to ensure there is consistency across all fuel suppliers for the conversion from volume to energy. This would allow fuel suppliers to continue reporting their data in volumes (consistent with the OLA system). Fuel suppliers would be required to convert their energy targets over to volume targets in order to track and ensure compliance. An online calculator to assist fuel suppliers to convert the energy targets into an equivalent volume target would assist with maintaining compliance.

Regarding converting the BOS targets to an energy basis, 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 would form the basis of the calculated energy targets for 2022.

IRVING OIL WHITEGATE REFINERY LIMITED
Whitegate, Midleton, Co. Cork, P25 HD93, Ireland • Tel: (+ 353 21) 462 2200 • Fax: (+ 353 21) 462 2222

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?

Irving Oil considers the timing of the changes to the BOS scheme in 2022 as appropriate. In the Biofuel Policy Statement issued by DCCAE in 2018, the government made a commitment to carry out public consultations on all future obligation rate increases every two years post 2020. This periodic consultative process is critical to the future success of the scheme. This is 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?**

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

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

Irving Oil understands that DCCAE proposes to include a sub target for advanced biofuels within the BOS, in order to align with the recast RED. However, Irving Oil recommends caution in the 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 in the European market.

Irving Oil supports setting the advanced biofuel obligation at 0.2% in 2022, however would recommend that a robust industry/stakeholder consultation process be conducted prior to increasing this to 1% in 2025. Prior to increasing this target, a review of the commercial availability of suitable feedstocks is required. Irving Oil is available to participate in the stakeholder consultation process.

If the advanced biofuels obligation is planned to increase through the period to 2030, a back-ended approach is recommended. This would ensure the increases are conservative at first, allowing for commercial technology development, and increasing towards the latter part of the period (i.e., 2027 onwards). If the initial targets are set at a value that cannot be achieved by the fuel suppliers, consumers will be subject to increased costs as fuel suppliers have no option but to purchase the proposed high buy-out charges for compliance.

(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 having 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. This will result in fuel suppliers importing the required quantities of advanced biofuels.

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?

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

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?

Irving Oil acknowledges that it may be appropriate to exempt certain fuels. There is merit in having no initial obligation on fuels such as hydrogen to allow the fuel technology reach commercial maturity. The technology for hydrogen production is not at commercial scale yet. It is recommended that this should be reviewed periodically between 2021-2030 to determine when these fuels should be included in the BOS. Targets for these fuels could be added during the periodic reviews should the technology mature and reach commercial production.

However, Irving Oil recommends that all alternative fuels have an obligation (no exemptions) where the alternative technology is from proven commercial channels. Irving Oil would consider that CNG and LNG fall into this category as the production of biomethane from anaerobic digestion is an established technology, albeit at the early stage of commercial roll out.

All technologies will be required to play their part to reach the challenging targets outlined in the BOS. The BOS targets should not pick technology winners and losers.

IRVING OIL WHITEGATE REFINERY LIMITED

Whitegate, Midleton, Co. Cork, P25 HD93, Ireland • Tel: (+ 353 21) 462 2200 • Fax: (+ 353 21) 462 2222

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?

IRVING OIL WHITEGATE REFINERY LIMITED
Whitegate, Midleton, Co. Cork, P25 HD93, Ireland • Tel: (+ 353 21) 462 2200 • Fax: (+ 353 21) 462 2222
Incorporated in Ireland, Registration Number 16576 • Registered Office: 70 Sir John Rogerson's Quay, Dublin 2, Ireland
Directors: Ian Whitcomb, Jeff Matthews, Jennifer Beach, Michael King and Brian Dillon.

If the BOS system moves to an energy basis, Irving Oil agrees with the methodology proposed for issuing of energy credits. As per the previous question Irving Oil recommends that CNG and LNG should be obligated and therefore if they are to be issued energy credits then these should be used to cover their own energy obligation, and not as a source of revenue generation for this sector. A review of this system should be carried out every two years to determine if lower carbon/alternative 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?**

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

***(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 feedstocks. Extending the double count to all Annex IX feedstocks, without the requirement for individual determination is supported by Irving Oil, as this will reduce the current burden of seeking approval for new feedstocks placed on fuel suppliers.

Irving Oil agrees with the approach of enabling aviation and maritime fuels to be rewarded for bio energy content, to the maximum allowed under the RED II, as it will ensure alignment with other Member States. These sectors do however, remain challenging to decarbonise as they require international alignment on developing biofuel solutions and the regulatory approach is critical to ensure success.

***(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 public to assure 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 will ensure that opportunities for fraud to occur are mitigated/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 Indirect Land Use Change (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, Irving Oil 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% for gasoline and 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 becomes problematic if the market share of gasoline increases to more than 35% following the introduction of E10. In this scenario, if there is limited supply of waste based (Annex IX, Part A) biofuels available for gasoline blending, then it should 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?

(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?

(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, biodiesel placed on the market in Ireland in 2018 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 is estimated to 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.

Irving Oil 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 an additional 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 diesel and limited advanced biofuel on the market.

(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?**

Irving Oil strongly agrees that it is appropriate to seek the EU approval for removal of the 1.7% limit. 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 Member States (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.

- UCO and Tallow based biofuels have a high GHG reduction intensity (typically 14gCO2eq/MJ), resulting in an 85% reduction in GHG compared to fossil fuel diesel. Limiting their use may inhibit GHG reduction capabilities.

- The 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.

If UCO and Tallow qualify as wastes, following the waste hierarchy directive, then they should be used to produce energy (in the absence of a better alternative use). Limiting the quantities of UCO and Tallow for use in this sector will not complement this directive and may result in non-compliance.

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?

The following comments are provided in regard to the proposed credit carryover approach:

- Irving Oil agrees that energy credits in excess of the 2% crop-based limit cannot be carried forward into the following year. If the conditions regarding this crop-based limit does not support being able to achieve compliance, then flexibility in certificate carry over is required to achieve these targets.

- In order to achieve optimum value in purchasing advanced biofuels, parcel sizes

may be in excess of the quantity required in a single year. Therefore, flexibility to allow for the excess to be carried into the next year is needed. Irving Oil 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. For example, 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.

- Irving Oil does not agree that there should be a limit on the energy credits carried over into a given year. While Irving Oil does 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 for the purposes of future planned tank outages, unforeseen downtime and potential economic opportunities regarding biofuel purchases. 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.

- Irving Oil recommends that energy credits can be maintained for a 2-year period which is in keeping with 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 contradicts the ability for fuel suppliers to meet 15% of their 2022 obligation with carryover credits. This situation would 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.

- Irving Oil 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 until the advanced biofuel market is fully developed commercially.

- Regarding the value of the carryover certificate, Irving Oil 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?**

As 2020 approaches our industry has delivered on the expectations of the existing BOS as demonstrated by the level of compliance within the scheme. Irving Oil would agree that a 'buy-out charge' is a necessary safety net in the event of disruption to supply of the appropriate biofuels. Disruption and non-availability are different concepts. Advanced biofuels are not yet available in sufficient quantities to meet the trajectory of compliance envisaged in this consultation. As such setting a 'buy-out' cap or limit may not be effective in achieving compliance.

Irving Oil would recommend one 'buy-out' charge benchmarked against other European levels so that supply of the appropriate biofuels is linked to an international market value and incentivizes suppliers to produce the biofuel. The effectiveness of this 'buy-out' should be tested versus compliance at the end of each BOS reporting period.

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?**

Irving Oil does not agree with this approach. In the event of a significant emergency that interrupts operational blending at terminal level, the oil industry should not be obligated to accept the additional burden of the regulated/ mandated 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, relying on the buy-out, etc.

Irving Oil recommends that an emergency should be treated as a force majeure scenario and that 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?**

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

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

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

Irving Oil recognises that the most cost-effective measure to increase the renewable content in the heat sector is to introduce renewables into the liquid fuel market (e.g., kerosene and marked gasoil). By introducing a decarbonised fuel, households across Ireland will not have to complete major renovations to their home or install new, expensive technology. The current heating systems can be adapted very easily (and cheaply) to run on a cost-effective biofuel solution.

However, the timing of an obligation in this sector needs to be considered. Introducing an obligation presently would compete with the same feedstocks required to meet RES-T targets, which are already in great demand. It would be prudent to allow HVO supply establish itself before being introduced to another sector. This could be reviewed again in the next public consultation.

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

There are several technical concerns with regards to introducing an obligation in the heat sector:

- The BOS 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 use, 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.

- Blending of traditional biofuels such as FAME would not be recommended in the heating sector. This is due to the nature of the storage in this sector – heating oil can often lie 'dormant' in tankage for weeks or months before being required. Heating oil is often the back-up fuel for emergency generators or heating systems, as an example, that remain dormant for periods of time (e.g., turned off for summer months). Layering can occur in tankage due to density differences between the heating oil and FAME, causing blocking of the burners. This may result in service disruptions to the public and business.

- The only potential for renewable fuel in the heating sector is HVO, because this product is indistinguishable from fossil diesel or kerosene. Two types of HVO would be required – one to meet the gasoil specifications (this would be HDRD) and one to meet the kerosene/JetA1 specifications. However, as noted above, the same feedstocks, which are in high demand, would be required to meet the transport sector BOS targets.

- HVO is in significant demand in the market today and any volumes secured presently would be used to meet the RES-T target. Until there is an increase in production of HVO, specifically to meet the JetA1/Kerosene grade, then a biofuel obligation in the heating sector would not be advised. This could be reviewed again in the next public consultation.

(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 HVO is the only realistic solution for a liquid biofuel solution in the heat sector. Demand is expected to exceed supply, so its premature inclusion in heating fuels could prove both expensive and may not increase (at a macro level) the amount of blended biofuel on the market.

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 expire post December 31, 2020.

It is noted that should the 6% GHG reduction target extend beyond 2020, this BOS consultation would need to be re-visited. The targets set out in this consultation would not align with FQD. Further consideration would need to be given to whether the BOS should operate on a GHG basis and not energy and FQD non-compliance would need to be reviewed.