

4.1 Biofuel Obligation

Question 1:

The Climate Action Plan has identified that blending levels of 10% by volume in petrol and 12% by volume in diesel on average must be achieved by 2030 in order to contribute to

meeting Ireland's emission reduction target.

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

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

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

- (a) Do you consider these blending levels to be a suitable balance of feasibility and ambition?
- (b) Do you consider the approach to increasing the biofuel obligation rate appropriate?

Question 1 answer:

- a) The achievement of the 14% target is dependent upon the ambitious achievement of the targets that are set out for the adoption of EV's. What has become evident since the stating of the governments targets for the adoption of EV's is that the timetable that has been envisaged by the government is somewhat out of step with the manufacturing plans of major manufacturers, coupled with vehicle sourcing difficulties that may be encountered through the possible changes that may occur if a Brexit scenario develops it may leave the country exposed to significant risk if the focus on compliance is shared equally between EV adoption of 1 million vehicles by 2030 and a blending rate that is insufficient to take up the slack if any develops, a more prudent approach would be to over deliver on the blending to ensure that any slack from the EV sector is counter measured.

Regarding feasibility, the technologies available today and the per unit cost will reduce once the proper supports are in place.

It should also be noted that a falling fuel demand because of success in the adoption of EV's could create a surplus in blending stock available it would therefore seem the logical course would be to increase the blending requirements significantly as the scheme progresses to ensure a surplus develops over and above the requirement to achieve the 14% mandated.

- b) As above, the loading of the blending should be sufficient to ensure that an 'all the eggs in one basket' scenario does not develop and as such the advice is to over deliver on the increases in order to accelerate the benefits that accrue in the event of policy success.

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?

Question 2 answer:

- a) 10% blend is currently in use in multiple European jurisdictions with similar logistical and supply chain methodologies to Ireland. Indeed a report by Petroleum Development Consultants <http://www.eerl.com/Uploads/E10-Final-Report.pdf> identifies no major structural issues with the introduction of such a blend, no cost differential has been identified and indeed it can be argued that with a decrease in demand for oil because of a reduced global demand due to climate mitigation policies that the price trend would be expected to be downward upon the fossil part of the blend which would more than adequately offset any upward trend due to any increase in demand for the renewable portion.

From a compatibility viewpoint, similar fuel quality changes did not lead to significant long-term disruptions when lead was removed from the blend in 1986 and by 1989 all new cars were compliant.

- b) It should be noted that in theory a 100% renewable diesel blend that adheres 100% to the fuel quality directive is possible through the use of Fischer Tropsch diesel that is sourced from Syngas derived from biomass, such a fuel is sulphur free and has a Cetane number that is sufficiently high enough to overcome dirty burn issues and which can reduce NOx by a level of up to 95%, it should further be noted that such a fuel would actually benefit the consumer more through reduced maintenance costs and increased fuel efficiencies.

The types of fuel blends that are currently on the market, while adhering to EN 590 typically have a notional percentage of renewable fuel blended due to credits being available for the blend percentage fulfilment, so it is perhaps disingenuous to focus upon the challenges that are perceived when in reality a strongly mandated route to market will distil the good operator from the bad operator and only those that are seeking to make real improvements in both fuel quality and to deliver ease of market access to environmentally conscious consumers, will thrive in an environment that is mandated for an increase in such standards, while penalising operators that are tardy in the adoption of the new fuel delivery landscape reality that is mandated.

- c) The last number of years have seen significant progress and developments in the alternative fuel industry with technological changes now progressing at a stage that is challenging moores law for technological adoption speed, changes to technologies such as catalysts and conversion pathway's either biologically or chemically have delivered the ability to convert, cost effectively at scale, to fossil free alternatives.

Many alternatives have developed, some with specific uses, and some with broader adaption potentiality.

Products such as "Power to X" particularly considering wider spread availability of low-cost renewable electricity and carbon capture technologies have enabled the delivery of lower cost alternatives with the potential to replace fossils entirely once deployed at scale have now emerged.

A distinguishing feature of a lot of these technologies is that they require very little adaption by the consumer for their use in their day to day activities and can be seamlessly integrated into the current supply chain with minimal changes, the energy penalties that were previously experienced by such technologies are rapidly being eroded by advances in conversion efficiencies.

Products such as Biomethane, Fischer Tropsch BioDiesel, BioKerosene, BioLPG, DME, Methanol, Ethanol, Green Hydrogen, Green Ammonia etc. all will have a place to play in the transition along with more exotic alternatives for particular usage and all are currently available on international markets.

- d) What is noted is that the current blend requirements are being met by fuels that are available in sufficient quantities to meet the current 10% demand rate, in fact there has been very little, if no, recourse to suppliers having to make use of the 'buy-out' option which is the true litmus test of demand inelasticity.

While the challenge may seem large to a small country that is as addicted to fossil fuels as Ireland is, we are constantly being reminded that we are a very small part of the overall global supply chain, therefore using that logic, by definition the amount of global supply that is required to satisfy a further change to the Irish blending requirements is quite small in the global context, a more pertinent question is if the supply is available locally, which the answer to is unfortunately negative seeing as we currently import almost 90% of the blending feedstock that is required.

A concerted cross government action is required to deliver sufficient energy independence and security of supply that can be underpinned by a delivery of renewable blend stock locally from renewable sources.

The blending requirements could therefore be enhanced by requiring that a minimum quantity of blend stock should be sourced from indigenous sources in light of security of supply issues, particularly in view of Brexit and the changes that are being proposed to the Nora structures for offsite storage and levies.

- e) Alongside an intensive communications campaign that extols the levels of achievement that have been delivered through the under the counter approach to incremental change over the last 10 years, a broader communications strategy that creates discourse with suppliers and consumers on alternatives that are already available should be encouraged, particularly in areas that are perceived as hard to decarbonise, such as agriculture and construction, where the specification of new machinery should be encouraged to be alternative fuel friendly.

Specific actions should also be focussed on the locally produced locally used alternatives that encourage the uptake of fuels that are produced locally for local users, schemes such as Biomethane production should become more focussed upon the ability to deliver real change to local consumers at a cost efficient price point which could be encouraged by increasing the attractiveness of locally credited fuel over and above internationally sourced biofuel, such schemes could take account of the overall carbon leakage that is inherent in international supply chains and the leakage could be credited to suppliers that can prove that their product has minimised the carbon footprint by being locally produced and used.

More extensive underpinning of the agronomy could be undertaken to effectively support the sequestration of carbon in the soil by directly auditing the supply chain against the counterfactual and by providing a carbon tax credit directly to the primary producer in the event that the product sequesters a minimum amount.

- f) Current Oil supply trajectories that have been supplied by the IEA recently show an increasing production profile coupled with a weakening demand that continues in the event of no change in global consumption rates, the demand weakens considerably in the event that climate policies are adhered to globally, and in particular demand weakens considerably in Europe with the adoption of the requirements set out in the Renewable Energy Directive Recast (RED2), while there are many caveats and riders that need to be tacked onto this assumption it can be argued that the cost to the consumer will remain relatively static as the supply and demand balance each other, with other factors such as carbon pricing in the mix, combined with falling per unit costs for alternatives once critical tipping points are achieved the overall long term effect for consumers, seen in the light of a significant fuel demand drop due to EV penetration in the decade 2025-2035 should deliver downward pressures on alternatives costs while an upward pressure is delivered through non raw material cost increases on fossil fuels by mechanisms such as carbon and excise taxes.

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?

Question 3 answer:

- a) The move towards an energy basis is, in the longterm, a better basis for the calculation of the scheme requirements, however caution must be exercised in the early part of the transition scheme and in particular the perceived rise in the buyout charge that is envisaged for 2022, in certain circumstances this rise would be negated by the change towards an energy basis, particularly where a higher energy content fuel is being currently supplied which is subject to multiple credits, a full examination of the proposed change suggests that it may be counter productive at the proposed €0.02 buyout cost in 2022 and a more appropriate buyout of €0.025 would be a fairer compensation for the move towards an energy basis for the buyout charge and the loss of credits to certain fuels.

Question 4:

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

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

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

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

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

Question 4 answer:

- a) This seems a reasonable timetable once adhered to; any time slippage should be compensated for by higher annual targets in subsequent years.

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 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?

Question 5 answer:

- a) It is an imperative that advanced biofuels are introduced into the mix as per the RED2, however this introduction needs to be effectively overcompensated in the earlier years of introduction in order to hasten its delivery, It is noted that this is intended as the methodology proscribed in question 14, however a clearer system

overview is needed to ensure that the requirements for advanced fuel development locally is enhanced to its maximum potential.

- b) Biomethane, Fischer Tropsch Biodiesel, DME, Methanol, Green Hydrogen, Green Ammonia, BioLPG, BioKeresene, Lignocellulosic Ethanol, catalytically upgraded Carboxylic acids, BioSyngas derived alternative fuels, Power to X fuels.

Obligated Parties

Question 6:

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

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

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

Question 6 answer:

- a) Yes; and to ensure all items are covered it should be expanded to include marked gas oil for use in leisure and domestic marine, construction, backup power and agriculture.

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 nonbiological origin (e.g. hydrogen produced from renewable electricity) from the advanced biofuel obligation.

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

It is intended to categorise fuels as follows:

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

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

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?

Question 7 answer:

- a) It is not appropriate to exclude the fuels identified in the interests of the development of a true local renewable biofuel industry.

The approach of excluding CNG,LNG, Hydrogen and Electricity is counterfactual to the reduction in the carbon intensity that can be delivered through a shift to renewable alternatives, in particular the exemption of natural gas based alternatives, in light of the push to develop an indigenous Biomethane industry, would seem to be disingenuous as it effectively precludes Biomethane from gaining a foothold on the forecourt.

A Biomethane industry that develops in tandem with the CNG/LNG push by the requirements that they have a blend would only serve to accelerate the security of supply post 2027 when indigenous gas supplies are forecast to be diminished,

It should also be noted that there is a significant carbon differential between Power to X based hydrogen and steam reformed Hydrogen from natural gas, to effectively give them the same basis in the marketplace is to accept a higher carbon intensity with very little structural change actually occurring as it does not incentivise the development of this critical part of the transition from fossil fuels, there should be a differentiation between the renewable and non-renewable hydrogen elements.

With the shift towards data centers and the increasing use of diesel powered backup and demand side generation which has a below the line increase in carbon intensity it would be desirable to ensure that there is a clear delineation delivered for electricity through the use of the guarantee of origin system in order to verify that the electricity used for transport purposes is compliant with a minimum blend percentage co equal with what is required from an actual physical blend.

Question 8:

The Biofuels Obligation Scheme currently operates by issuing certificates in respect of volumes of biofuel which are placed on the market. For each calendar year, an obligated party must hold sufficient biofuel obligation certificates to demonstrate compliance.

As set out above, it is intended to amend the scheme to operate on an energy basis. In place of issuing certificates, a credit will be provided corresponding to the level of renewable energy placed on the market. Each credit of energy will be categorised as one of the following based on the feedstock it was produced from:

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

As biofuel (or biogas) is placed on the market, the total level of energy credited to each obligated party (or other entity that places such fuels on the market) will increase in the relevant category. Sufficient balances will be required across all four categories to meet the biofuel obligation and in the first category to meet the advanced biofuel obligation.

It should be noted that although some fuels may not generate an obligation (e.g. CNG, LNG etc.), suppliers who are placing biofuels (or biogas) on the market for use by such vehicles will be credited under the Biofuels Obligation Scheme.

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

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

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

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

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

Question 8 answer:

- b) As stated above it would seem inappropriate to exclude certain fuels and sectors from the obligation and in doing so limiting the potential for local supplies of suitable alternatives to develop while in some cases perversely incentivising the use of a fossil fuel alternative in the case where a biofuel blend is replaced by a fossil only alternative such as blended diesel with CNG or fracked LNG.

It would therefore be logical to ensure that all fuel supply parties are obligated and that a clear and transparent credit mechanism is enacted that allows for a publicly

available price to be developed that ensures transparency for the consumer and suppliers in order to ensure a level playing field is available rather than the opaque nature of what is currently in existence.

Credits for electricity can be calculated and extinguished through the guarantee of origin scheme and the administrative burden is not significantly enhanced by this inclusion particularly if the suppliers of electricity for transport are included as obligated parties.

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?

Question 9 answer

- a) The multipliers are inline with the RED2 guidelines, however it should be noted as above that issues may be encountered with certain fuels through the movement towards an energy based scalar instead of a volume basis and a sensitivity analysis

needs to be completed for this transition in light of the need to give advantage to development fuels.

- b) The risk factor that would most concern is the traceability of international credits, their verification and the proposed scalars that are to be applied to electricity in view of the exemption proposed, the electricity scalars are wide open to fraud unless combined with the extinguishment of GOOs if used for transport.

Question 10:

Under the recast Renewable Energy Directive and the subsequent delegated act, biofuel produced from palm oil is classed as being high risk from an indirect land use change perspective. Further feedstocks may be similarly classed in future.

Until 2023, Member States should not exceed the level of consumption in 2019 of any biofuels considered to be high risk. From 31 December 2023 until 31 December 2030 at the latest, the limit is to be gradually decreased to 0%.

Given Ireland has very limited use of biofuels produced from palm oil and the impacts in relation to indirect land use change, it is intended that a limit of 0% will be implemented for all biofuels considered to be high risk from an indirect land use change perspective.

While it will still be permitted to supply these biofuels, no credit will be given in the Biofuels Obligation Scheme and therefore there will be no incentive for suppliers to provide such fuels.

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?

Question 10 answer:

- a) Yes, and this should be required to be reviewed annually to identify any risks that are not known at this stage.

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?

Question 11 answer:

- a) Yes, it is in line with the RED2 guidelines, however it should not limit the ambition and it would be more appropriate to set the target at 14% as opposed to 9% for national accounting purposes, traceability concerns would remain and a more robust and transparent auditing mechanism to ensure compliance should be developed and made publicly available.

Question 12:

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

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

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

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

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

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

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

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?

Question 12 answer:

- a) The limit of 1.7% is an appropriate limit and by a greater overall blend requirement the level of volume versus the level of blending should not be too out of synch, it should be noted that the primary volume of UCO is derived from far eastern sources and as such does not contribute to local secure supplies, alternative local supplies should be encouraged and credited accordingly to encourage their production locally.

- b) It would not be appropriate to seek any higher limit as to do so would undermine any attempts to deliver a local industry, in fact to even suggest such a move would be retrograde and counter to the ideals set out in the RED2 structural guidelines.

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.

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

Question 13 answer:

- a) The approach outlined seems reasonable, however it should be noted that only by ensuring that carryover is minimised prevents a supply market failure point. If it is found that excessive carryover is being utilised it suggests that there is ample opportunity for expansion of the obligation to higher target percentages and this should be annually reviewed and the 15% adjusted if it is found to be counter intuitive.

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?

Question 14 answer:

- a) The limited recourse to the buyout option suggests that the market is constantly in an over supply scenario where product can be cost effectively sourced and blended.

This leads to questions regarding the overall targets and the ability to achieve them much quicker than mandated, however for the purposes of this paper cognisance must be given to the potential disincentive that could develop in the period 2022 to 2025 with the proposed change from a volume based obligation to an energy based obligation.

With regards to the advanced biofuels, in order to deliver this at pace and in light of the guidance that is required from financial institutions a robust framework should be enacted as early as possible before 2021 with as long a timeframe as possible to ensure mobilisation.

Anecdotal evidence suggests that in the UK, because of the rapid introduction, with a retarded policy having been in place prior, there is very little recourse other than to pay the buyout charge for advanced fuels as the delivery of the facilities required needs time to catch up with the policies, therefore careful and coordinated policy approaches are needed to ensure a success in this area.

Question 15:

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

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

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

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

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

Question 15 answer:

- a) The consequence of such a systemic shock would reverberate throughout global marketplaces and the ability to 'catch up' as it were would have significant consumer knock on effects for a number of years, if such a scheme were in place it would have to be cost effective and only utilised to the point that it makes sense for it to be suspended rather than a higher buyout percentage endured.

More appropriate suggestions would seem to be that a minimum locally sourced mandate be included to enhance security of supply and that the National Oil Reserve be expanded and mandated to carry 50% of its stocks as a locally sourced biofuel alternative by 2022 rather than a fossil fuel, this could be graduated towards 100% over a period up to 2030.

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?

Question 16 answer:

- a) There is a very large potential for an obligation scheme to be enacted for renewable heat in Ireland, a graduated scheme introduced over a period which offsets the additional carbon costs while incentivising the investment required in new technologies would in the current climate gain rapid deployment.
- b) By incentivising the correct advanced fuel types such as BioKerosene, Fischer Tropsch BioDiesel, BioLPG, or Biomethane there is zero technical barrier to be encountered.
- c) Such a scheme would be appropriate to shadow the development of the advanced biofuels scheme up to 2027 and to be increased by at least 2% per annum towards 2050 following the banning of new oil/gas devices in the home.

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

Question 17 answer:

There are specific challenges that will occur in the adaption of the scheme to deliver the overall outcome that is being desired by the scheme, in particular with the changes proposed in order to deliver one item that will need to be more fully addressed is the actual volume of product that is required to deliver the targets and to ensure that there is an actual increase in the amount of biofuel consumed rather than a movement of figures in the columns. This is commented upon in light of the proposal to reduce the overall target to 9%

by energy rather than 14% by volume by using the mechanisms that have been proposed in question 12.

The scheme has significant potential, but only if it is effectively managed and enhanced continuously over the proposed period and flexible target increases should be adopted to deliver assurances to consumers and producers that there is a stable environment available for the length of the scheme and to ensure that real change occurs on the forecourt.