
Biofuels Obligation Scheme

**Consultation on the development of the Biofuels
Obligation Scheme for the period 2021 to 2030
including the implementation of the elements
relating to renewable transport fuels in the recast
Renewable Energy Directive**

Response from



November 2019

1 Context & Recommendations

Bord na Móna welcomes the opportunity to make the enclosed submission for consideration by the Department to the consultation on the development of the Biofuel Obligation Scheme from the period 2021–2030 including the implementation of the elements relating to renewable transport fuels in the recast Renewable Energy Directive. Bord na Móna recognises the important contribution the Biofuel Obligation scheme has made to date in driving Ireland toward reaching its 10% Renewable Energy in Transport (RES-T) target by 2020 and the role it will play towards 2030.

Bord na Móna recognises the increased challenge set by both the 2030 targets, the additional requirements under the recast Renewable Energy Directive and the need to conduct this transition to low and zero emission vehicles while ensuring a vibrant economy is maintained. Less disruptive measures such as fossil fuel blending and utilising existing infrastructure will assist this transition. The electricity sector is one of the most successful sectors at decarbonising and electrification of transport offer deeper decarbonisation opportunities. Likewise, Compressed Natural Gas (CNG) as a pathway to biomethane and ultimately hydrogen can play a significant role in decarbonising of the Heavy Goods Vehicle (HGV) fleet where alternative options are proving technically challenging.

Bord na Móna would welcome the change to an energy-based calculation approach as it simplifies the scheme and is consistent with a move to a wider set of fuel types. Bord na Móna considers the application of multipliers as an appropriate lever to recognise the greater sustainability of certain fuels.

Ireland has significant potential to generate indigenous biomethane without the risk of supply disruption or the long-term storage issues associated with liquid biofuels. While biomethane is not currently available in quantity, experience in other Member States demonstrates the ability of the industry to quickly deliver fuel and necessary infrastructure once initial market support and investment signals have been provided.

We welcome the introduction of an advanced biofuel obligation as a key incentive for the production and use of biomethane in the transport sector.

Bord na Móna broadly supports the proposed changes to the scheme while also highlighting issues and making the following associated recommendations:

- Electrification and fuel switching investments have longer payback periods. A long-term price signal must be sent to the market regarding future ??? the obligation costs of and potential revenues available from the Biofuels Obligation Scheme. Bord na Móna recommend a roadmap for the scheme to 2030 is published.
- Exemptions granted electricity, CNG and LNG to 2030, while encouraging necessary fuel switching, will in time reduce the quantities of advanced biofuels obligated due to the decline in diesel and petrol usage. Future revenue uncertainty would impact advanced biofuel investments. Bord na Móna recommend a balanced approach whereby CNG and LNG are obligated but only under the advanced biofuels obligation element of the scheme.
- Bord na Móna also propose the advanced biofuels obligation element of the scheme is fixed for any given calendar year and failure to meet this obligation is subject to the associated compliance costs.

2 Response to Consultation Questions

Question 1

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

Any decision based on future transport fuels or energy sources must be based on sound and detailed impact analysis covering all vehicles, powertrains and infrastructure challenges as well as on globally sustainable biofuels with a high level of security of supply for a free trading island nation such as Ireland. While blending of diesel and petrol are currently the most feasible short-term options to meeting our obligations, Bord na Móna would welcome greater ambition in the area of advanced biofuels over the lifetime of the scheme.

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

To achieve our transport targets by 2030, will be challenging as no one technology will achieve this target and the technologies themselves and infrastructure will continue to evolve between now and 2030. There will be winners and losers in this changing landscape. Ireland, as a technology taker in this sector, needs to be flexible to meet our transport targets. In addition, a wider discussion is required on how the technology we choose relates to the circular economy and the benefits it brings to our society, both economically and in terms of sustainable development. This issue is often sidestepped as it is challenging and hard to quantify.

Signalling of future increases to obligations well in advance reduces regulatory uncertainty and allows the industry to justify longer term investments in the supply chains required to deliver a policy's desired outcomes. Therefore, such increases and their future trajectory should be flagged to the market as early as is practicable. This will provide price signals to those currently considering longer terms investments such as fuel switching of their existing fleets.

Question 2

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

Ireland is a technology taker in the automotive sector and to protect the consumer we should align our practices with the experience gained in other EU Member States to ensure smooth transition to higher biofuel blends.

Compressed Natural Gas (CNG) fuelled vehicles do not experience the issues above associated with biodiesel and bioethanol blends. Furthermore, CNG acts as a pathway to the use of biomethane and ultimately hydrogen. Investment in new infrastructure may be better spent on enabling fuel switching to CNG and electric powered vehicles which have a greater potential for decarbonisation.

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

As answered in a) immediately above.

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

Ireland is neither a large producer of vehicles nor a large producer of liquid fossil fuels. The advantage of this is that it allows us to be technology and fuel agnostic to the benefit of our emissions and air quality targets. Bord na Móna would therefore consider measures which encourage fuel switching to using gaseous fuels and electrification in transport vehicles a more sustainable long-term alternative.

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

Biofuels are traded internationally and therefore the price Ireland is prepared to pay, as influenced by Irish Government policy, will be the key determinant in securing a supply.

Electricity, natural gas and renewable gases represent a more secure energy sources where investment in refuelling and recharging infrastructure would encourage consumer adoption.

Both biomethane and green hydrogen can be supplied in significant quantities from indigenous resources to the benefit of the circular economy. While not currently available in quantity, experience in other Member States demonstrates the ability of the industry to deliver fuel and necessary infrastructure once initial market support has been provided.

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

Communication should not just focus on consumers directly but also on a wider group of stakeholders. For example, there are 16,000 licensed haulers in Ireland, based mainly in rural areas, who will need assistance in making this transition. Infrastructure development in rural areas can often be unpopular and public representatives have a key role to play in communicating the importance of such development to the rural economy. This needs all stakeholders to be involved, informed and have greater appreciation of each other.

In addition, imaginative targeting is required of exchequer incentives for short periods to encourage those changing their vehicles choose a low emissions alternative. For example, 45% of the Irish Heavy Goods Vehicle (HGV) fleet is 10 years or older according to the CSO Road Freight Survey 2018*. This presents an opportunity to use imaginative targeted incentives to encourage fuel switching to lower emission vehicles or zero emission vehicles (e.g. gaseous fuels) through a vehicle scrappage scheme.

The percentage of registered vehicles classified as HGVs is 4%; however, the Sustainable Energy Authority of Ireland (SEAI) 2017 Energy Statistics in Ireland 2017 estimates that they were responsible for 30% of road traffic CO₂ emissions (18% of total transport emissions). EU regulation 443/2009, requires that by 2021 average emissions for the new light commercial vehicle fleet fall to a target of 147g CO₂/km. This again opens the opportunity for the light commercial fleet to electrify or use gaseous fuel.

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

As mentioned in (d) above, biofuels are traded internationally and according to analyst's Platt and Argus, Biodiesel can be 80% more expensive than diesel. Previous increases led to increase prices in both diesel and petrol and Bord na Móna see no reason as to why this trend would not continue.

*Response Rate by age and unladen weight of Vehicle, 2018.

Question 3:

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

Bord na Móna would welcome the change to an energy-based approach as it simplifies the scheme and is consistent with a move to a wider set of fuel types.

Consideration will need to be given to the increased efficiency and reduced carbon intensity of certain fuels when used in vehicles. For example, a fuel cell vehicle is up to 50% more efficient than an equivalent combustion vehicle resulting in more renewable kilometres driven compared with an equivalent unit of biodiesel or bio-ethanol energy. Furthermore, in the case of green hydrogen, its carbon intensity would be significantly less.

Bord na Móna believe that agreed methodology for the conversion consistency across all industries and applied to all fuels that are applicable. (maybe reword slightly?)

Question 4

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

We would consider this an appropriate and reasonable approach. The roadmap would need to be outlined and agreed prior to 2022, to ensure companies can plan and prepare in anticipation and opportunities beyond 2022.

Question 5

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

We welcome the introduction of an advanced biofuel obligation leading to the introduction of a market support mechanism for the use of biomethane in the transport sector. Biomethane, as a renewable alternative to Compressed Natural Gas (CNG), can play a significant role in decarbonizing of the Heavy Goods Vehicle (HGV) fleet where alternative options are proving technically challenging.

Total primary energy use by the transport sector in 2017 was reported as 5,138 ktoe or c.59 TWh. Applying the advanced biofuel obligation targets to this figure corresponds to a requirement for 0.12 TWh in 2022 rising to 2.1 TWh in 2030 which is low given the potential supply of such fuels (e.g. biomethane). It is proposed not to obligate electricity and CNG use, which, over time, will reduce the overall size of the scheme and the advanced biofuels obligation within it. A balance will therefore be required between encouraging fuel switching in the short term while allowing for greater decarbonisation using advanced biofuels in the longer term.

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

Ireland has a strong and growing agriculture and food processing sector which is under pressure to reduce greenhouse gas (GHG) emissions and become ever more environmentally sustainable. Biomethane produced from the by-products of this sector not only helps Ireland to meet its renewable energy and GHG reduction commitments but also supports an indigenous agri-food industry worth in 2016, 7% of Irish GDP (€13.9 billion), 9.8% of Ireland's merchandise exports and provides 8.5% of National employment.

Ireland is also projected to grow its population to 5 million in the period to 2030. While food waste prevention is preferable to its treatment, this population growth will likely lead to an increase in the quantities of this waste generated. With population growth will also come an increased volumes of sewage sludge with biomethane from this and food waste likely to be the least cost option for the generation of advanced biofuels.

Biomethane from food waste AD require the smallest incentive to allow financial stability and ensure the supply of Biomethane*. Transport is probably the most relevant sector for biomethane as it is the least decarbonised sector and requires the least incentive per tCO₂ avoided*.

The combination of increased renewable electricity and renewable gaseous fuel in Transport, open the opportunity of Green Hydrogen.

Opportunities are now emerging for future HGV electrification through developments in battery electric and hydrogen fuel cell technologies. These already provide a feasible option for reducing emissions from vans and lighter HGVs, particularly those operating to urban and regional duty cycles. However, at present these options are unsuitable for deployment in larger HGVs. Freight Carbon Review 2017. Department of Transport UK.

- According to the Natural Gas Vehicle Association Europe's Statistical Report 2017, 400 CNG vehicles per station is the critical point at which policies should begin to encourage the development of CNG refueling infrastructure rather than increasing the size of the fleet.
- Under examined scenarios, the CNG refueling infrastructure planned for in the National Policy Framework is likely to be adequate to cater for the number of CNG HGVs in operation in Ireland until 2050.
- The completion of the 14 CNG stations under the Causeway Project would meet the refueling infrastructure requirements (i.e. one station for every 400 vehicles) under all CNG growth scenarios except in 2030 under the highest growth scenario (i.e. 10% of all new HGVs are fuelled by CNG).
- A new accelerated capital allowance (ACA) tax incentive relating to CNG was announced as part of Budget 2019. This incentive can support the purchase and installation of CNG vehicles and private refueling equipment.

As large buyers of diesel fuel, hauliers are uniquely placed to have a significant early impact in the uptake of biofuels or Biomethane\Hydrogen. Compared to the private passenger vehicle, which requires a forecourt network, hauliers can refuel at centralised depots.

*The Role of Incentivising Biomethane in Ireland using Anaerobic Digestion EPA research 2016.

Question 6

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

Bord na Móna believe the rail sector, as a significant user of diesel fuel, should be included. Such a measure would be aligned with Project Ireland 2040 by supporting the business case for the electrification of the Drogheda, Maynooth and other suburban lines where practical. Ireland has a small rail network in a European network setting and for intercity rail on the island, hydrogen is one of the more attractive options.

The implementation of the Clean Vehicle Directive 2019/1161 will afford the opportunity to move our bus fleet to low emissions to zero emissions.

The National Transport Authority has vital role to ensure the movement to decarbonisation, through the tendering process of the Public Service Obligation Contracts and look at the total cost of ownership, from Well to Wheel, this should ensure low emission and zero emission vehicles to be considered only.

There is an opportunity for Ireland to remove fossil fuel from both rail and bus fleet that are either publicly owned or publicly funded, which would be a signal to the nation and the world about the seriousness with which it takes its climate emergency obligation.

Question 7

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

Ireland is highly dependent on liquid fossil fuels in the transport sector and therefore exempting fossil gaseous fuels and electricity would have little effect in the short term on a recast Biofuels Obligation Scheme. In the longer terms, as electrification and fuel switching to gaseous fuels progresses, the size of the scheme and the number of energy credits available within it will reduce significantly. Therefore, the energy credits available under the advanced biofuel obligation would likewise reduce and disincentivise investment in highly sustainable indigenous production (e.g. biomethane from waste).

A reasonable case can be made for exempting electricity from the scheme due to its carbon intensity and potential to reduce this further with the greater penetration of renewable sources. Likewise, as the adoption of hydrogen will likely be in its infancy in the period to 2030, it may be appropriate to encourage its usage regardless of GHG savings. We therefore consider it premature to differentiate between green renewable hydrogen and brown (i.e. fossil derived) hydrogen and support its exemption from this obligation scheme.

Bord na Móna supports increased CNG usage in transport, particularly in the HGV fleet, where it can act as the pathway for the increasing usage of renewable alternatives (i.e. biomethane and hydrogen) and have public health benefits due to their reduced emissions. However, as these are also fossil fuels, increased blending levels with a renewable alternative should be mandated in the longer term. Bord na Móna would therefore propose a balanced approach whereby these fuels remain obligated but only under the advanced biofuels obligation element of the scheme.

As currently proposed the advanced biofuels obligation element of the Biofuels Obligation Scheme would be entirely reliant on a share of an ever-decreasing number of energy credits linked to the declining use of petrol and diesel.

Bord na Móna ask that careful consideration is given to long term affects the proposed exemptions.

Question 8

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

Bord na Móna consider, in general, the approach to issuing energy credits appropriate. We recommend that no limit be placed on the relative contribution of the advanced biofuels category, warranted by its greater sustainability, as obligated parties should not be limited to other options were this their least cost option.

As recycled carbon fuels are typically based on fossil feedstocks, releasing carbon dioxide on combustion, we would question the long-term sustainability of and reasoning in crediting such fuels.

Bord na Móna would also propose that, following a period to allow for early adoption, only renewable hydrogen or that produced from natural gas with carbon capture and storage (CCS) would receive credits.

As outlined in our response to Question 7 above, the exemption of certain fuels may have an unintended consequence on reducing the viability of delivering indigenous advanced biofuels.

Question 9

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

Bord na Móna considers the application of multipliers appropriate as a lever to recognise the greater sustainability of certain fuels and in different applications, such as waste food.

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

Bord na Móna considers the risk of fraud a natural consequence of a differentials applied to a market where alternatives, which are chemically very similar, can be substituted and hard to detect. Indigenous produced biofuels, whereby the production facility is within the Irish jurisdiction and readily auditable, would reduce this risk.

Question 10:

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

Bord na Móna consider this approach proposed to be appropriate.

Question 11:

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

The RED II provides greater flexibility to member states on implementation choices concerning the transport mandate and sustainability criteria compared to the 2020 RED.

Each Country can distinguish between different types of conventional biofuels and set different limits for each category (for example, setting a lower cap on oil crops than other types of food and feed crops. It can set lower limits on food and feed-based biofuels than prescribed in the RED II and may also reduce the 14% renewable energy in transport target by the same amount (for example, a country choosing to set a food and feed crop cap at 0% could set the transport target as low as 7%).

Can set a different cap level for biofuels produced by feedstocks in Part B of Annex IX if justified by the local availability of such feedstocks; and can define additional sustainability criteria for bioenergy but not for biofuels. Ireland have abundance?? wealth in terms of agriculture production, in conjunction with the National Policy statement on the Bio economy, and can develop strong supply chain to meet our biofuel and advanced biofuel obligation.

Question 12

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

Currently the percentage of UCO blended varies throughout the year with higher blend rates in the summer than in the winter. At cooler temperatures there is potential for technical problems with biodiesel produced from UCO. To avoid this issue the industry blends more biodiesel in between March and October however, if the obligation were to increase, this would result in higher blending levels all the year round. UCO is limited supply on Island of Ireland, with the majority sourced in the UK and from other countries around the globe.

With the ability to produce biomethane and green hydrogen, there is opportunity for Ireland to reduce its dependence on imported energy, including biodiesel, and strengthen our security of supply. Bord na Móna note that for the HGV fleet electrification, technology is not sufficiently advanced to make this a feasible option in the medium term. This sector will require support for fuel switching which is already provided for electrification within other sectors.

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?

The Irish motor vehicle has a higher proportion of diesel vehicles*. However, such a derogation may act as a disincentive to fuel switching to gaseous fuels\electrification with a much greater potential for future decarbonisation. Bord na Móna proposed that such a derogation would be time limited and reviewed regularly.

*DTAS, various years, Irish Bulletin of Vehicle and Driver Statistics 2017.

Question 13

a) Do you consider the approach to carryover appropriate?

Bord na Móna consider the approach to carryover appropriate and welcome the differentiation between biofuels and advanced biofuels as we feel this is necessary to secure certainty of demand for these biofuels in any given year.

Question 14

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

Bord na Móna consider the approach to setting the level of compliance fee appropriate. We welcome the differentiation between biofuels and advanced biofuels and feel the compliance fees are set at a level that can support the introduction of biomethane injection into the gas grid for use as a transport fuel. Any increase should be appropriately indexed linked.

Question 15

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

Ireland has significant potential to generate biomethane using waste materials derived from agriculture, food processing, municipal waste and wastewater treatment. Such biofuels generated in Ireland from readily available indigenous waste materials are highly unlikely to experience supply disruptions. Furthermore, the market support mechanism, and any risk associated with revenues from it, will be a key factor in securing investment in such an industry.

Bord na Móna propose, for the reasons outlined above, that the Advanced Biofuels Obligation element of the scheme is fixed for any given calendar year and failure to meet this obligation is subject to the associated compliance costs.

Question 16

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

Bord na Móna supports the objective of such a scheme which is the decarbonisation of the heating sector and that a level of market support will be required to achieve this. We note the need for careful alignment between such a scheme with the existing Emissions Trading scheme (ETS), Carbon Tax and Energy Efficiency Obligation Scheme (EEOS) to ensure the consumer do not suffer undue pass through costs.

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

Biomethane, prior to being injected into the natural gas network, must meet strict technical standards to ensure that, to the end user, it is not different than using natural gas. Furthermore, when delivered through the gas network it neither requires long term storage nor does it experience the degradation issues associated with storing bioliquid fuels.

Obligated parties, supplying heating oil, can meet their obligations by blending fossil fuel with bioliquids but alternatively this obligation could also be met through purchasing credits from the market. Use of bioliquid blends is therefore a commercial decision for these parties and it does not constitute a technical barrier as their obligation can be met by alternative means.

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

Bord na Móna, while not proposing a specific level, recommend that detailed costings and modelling which be carried out to demonstrate that such an obligation would be 'least cost' to the consumer. We support the implementation of such a scheme in relation to the oil and gas. In the absence of a detailed impact analysis, it would be sensible to introduce it at a modest rate given the social implications, including exposure of the least well off in society (i.e. the Fuel Poor) to additional costs.

Question 17

Bord na Móna thanks the Department for the opportunity afforded by this consultation process and does not have any further inputs to make.

For and on behalf of Bord na Móna

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