Department of Communications,
Climate Action & Environment

Biofuels Obligation Scheme

Consultation on future increases in the biofuels obligation rate

Response from

Renewable Gas Forum Ireland (RGFI)

Introduction

The Renewable Gas Forum Ireland supports this initiative and welcomes the opportunity to submit a response to the consultation on future increases in the biofuels obligation rate published by the Department of Communications, Climate Action and Environment (DCCAE).

The Renewable Gas Forum Ireland (RGFI) is an industry forum that represents the interests of the biogas industry in the whole island of Ireland. The RGFI represents the full supply chain of the biogas industry from the biogas producers, technology providers, academia, innovation and research centre to the end gas consumer seeking a carbon neutral solution. The RGFI is consumer lead and an advocacy for all gas consumers, seeking engagement with government departments on a consultative, proactive and solution based approach to providing carbon neutral pathways to decarbonising gas as a primary energy.

Renewable Gas:

- **Biomethane (Renewable Natural Gas)** is one of the most cost effective, versatile and indigenous renewable energy sources available in Ireland that can utilise the existing National Natural Gas Network without any need for infrastructure investment. Biomethane production provides a double benefit of contributing significant Green House Gas (GHG) savings from avoided GHG emissions in Agriculture and Waste processing.
- **Bio-LPG** is one of the most cost effective and versatile renewable energy sources available in Ireland for existing LPG and off the gas grid customers.
- **Biomethane and Bio-LPG** offer the same secure supply, high efficiency, on-demand heat or combined heat & power (CHP) for the customer, and require no investment, risk or change to the customer's equipment or facilities.
- There are significant indigenous resources such as biowaste, agricultural residues, rotation and catch crops which can be used to produce large quantities of biogas, while diversifying farming incomes, supporting rural economies and employment. A recent European Commission Report- Optimal use of biogas from waste streams, An Assessment of the potential of biogas from digestion in the EU beyond 2020. https://ec.europa.eu/energy/sites/ener/files/documents/ce_delft_3g84_biogas_beyond_2020_final_report.pdf
- When biogas is purified to 98% methane (referred to as biomethane) it can be used in the same manner as natural gas and can be injected into the gas grid to provide "green" gas for energy consumers.
- Biomethane injection to the natural gas grid has been supported in many EU countries and has proven to be an effective and economic renewable energy technology.
- Renewable Gas can also be produced from non-biological sources such as hydrogen from power to gas and synthetic gas, this emerging technology in the early stages of development.

We would be pointing to the use of sustainably produced renewable gas, the current mature technology and biological sources are highly sustainable and have significant environmental benefits in reducing GHG emissions in transport. The renewable gas production has significant environmental benefits in the reduction of GHG emissions in agriculture, improving air, water and soil quality.

Benefits of using Renewable Natural Gas (RNG) – Biomethane/BioLPG

In using CNG with a 20% mix of RNG, CNG vehicles can offer cost savings and compete against the conventional fuelled vehicles. Pursuing a low carbon vision for transport in Ireland will result in the following benefits:

- Contribute to Ireland achieving climate change commitments;
- Benefit society in terms of lifestyle and the provision of more livable communities, particularly in the Greater Dublin Area where public transport usage is high;
- Improved mortality and morbidity rates from reduced exposure to harmful pollutants;
- Economic benefits from a healthier population from reduced sick days resulting in increased productivity;
- Aligns with the EU Climate and Energy Package targets for smart, sustainable and inclusive growth;
- Significant benefits to people from a travel cost, local environment and air quality perspective; and
- Improved public perception of public transport.

The promotion of CNG vehicles using RNG will contribute to a greener, low carbon future.

The RGFI membership have a strong capability in biogas (RNG) production capacity with the ability to supply in excess of 200Gwh of biogas by mid-2019 to fuel a potential public transport demand from 1,000 RNG buses. Renewable gas is a carbon neutral biofuel for use in heavy goods vehicles and public transport fleet.

The current projects and growth plan being developed have the ability and capacity to deliver 200Gwh per annum of biogas, which is very achievable from 10 averaged sized AD plants.

This will give 2 options of using RNG in the biofuels obligation scheme;

I. A blended CNG/RNG of 10%-30% biogas

II. 100% RNG – biogas.

The CNG/RNG blended mix of 20% Renewable Natural Gas would facilitate the supply to 3,000 buses, while a 100% RNG biogas fuel would supply 600 buses, at an average consumption of 400MWh per bus.

The socio economic benefits of cleaner air, savings in health costs with reduction of NOx, SOx and particulate matter.

- NOx Reduction: 70%
- SOx Reduction: 805
- PM Reduction 99%

Source: Iveco

Question 4a:

Please indicate, using the table provided below, the quantitative CO2 reductions that can be achieved by the use of alternative fuel low emission vehicles. Please state the assumptions used in measuring these reductions.

Alternative Fuel Vehicle Type	Co2 reduction quantified against comparable EURO VI vehicle	Fuel Savings
CNG	9%	66%
CNG/RNG Blend *1	26%	54%
RNG 100%	100% CO2 reduction	5%

Response:

*1 CNG/Biogas Blend: CNG 80% , RNG 20%
Conversion factors provided by SEAI (Diesel:.246,CNG:.2047, Biogas:0) kg CO2/kwh
Diesel Fuel Consumption: 42 L/100kms
CNG Fuel Consumption: 35.41 kg/100kms
Average kms per annum per vehicle: 100,000 km
Conversion factor of Diesel to kwh SEAI: 10.169

SEAI emission factors are a comparison to Euro VI standards.

Competitively priced renewable gas versus diesel prices (wholesale). An additional 3,000 jobs in the renewable gas industry sector, producing indigenous sourced fuel and developing a circular economy in Ireland.

The additional benefits with an obligation for renewable natural gas in CNG vehicles are;

1. Improved security of supply of RNG using sustainable indigenous Biomethane
2. Renewable Natural Gas volume used in the biofuels obligation scheme can be 100% accounted for towards RES-T. There is no calorific differences between CNG and RNG.
3. Decarbonisation of agriculture and potentially area of growth.
4. Increased revenue to the Exchequer.

Question 1:

In order to meet Ireland's 2020 renewable energy target in the transport sector, it is proposed to increase the biofuel obligation rate to 10% from 2019 and circa 12% from 2020.

Q 1 a) Do you support this policy measure?

Response In principle the Renewable Gas Forum Ireland is in favour and supports the proposed policy measure of increasing the biofuel obligation rate. All classes of renewable gas sustainably produced to be included in the biofuels obligation scheme, renewable gas can consist of biological and non-biologically produced gases. There should be different rates of biofuel obligation applied across the different types of biofuels.

In order to have a meaningful impact in addressing the emissions projections published by the EPA and RES-T , the RGFI would strongly recommend that a 20% rate of obligation be applied and be able to retain competitive cost benefit versus competitors.

Q 1 b) What biofuels do you envisage contributing to meeting these increased rates?

Response The Renewable Gas Forum Ireland through business cases and case studies believes that Renewable Natural Gas (RNG) can provide a similar operational performance to that of Diesel, therefore we believe that the biofuels obligation scheme should apply to all transport vehicle fuels to include Renewable Natural Gas (RNG), Compressed Natural Gas (CNG), hydrogen, and others.

Q 1 c) What alternative approaches do you view as being more likely to achieving Ireland's 2020 renewable energy target in the transport sector?

Response The RGFI strongly believes that by including CNG with an obligation of 20% RNG in the biofuels obligation scheme will offer a cost competitive alternative to conventional alternatives. The use of RNG at 100% or a 20% blend in CNG vehicles should be set out as an obligation on public transport vehicles used for public services.

The purchase of alternative fuel low emission CNG/RNG vehicles will contribute to a greener, low carbon future. Significant behavioural change will be required to accrue the above benefits and a cross sectoral approach will be necessary to maximise the significant potential.

Question 2: In order to meet Ireland's 2020 renewable energy target in the transport sector, it is proposed to increase the biofuel obligation rate to 10% from 2019 and circa 12% from 2020.

Q 2 a) What impact do you believe this will have on fuel prices?

Response The Renewable Gas Forum Ireland believe that CNG vehicles can offer cost savings and compete compared to conventionally fuelled vehicles. As shown in the figures and tables above that with a blend of 20% Renewable Natural Gas could provide a cost savings of 54% on fuel.

Q 2 b) What alternative approaches could provide a more cost-effective method of achieving Ireland's 2020 renewable energy target in the transport sector?

Response As outlined above the use of CNG vehicles with a blend of RNG at 20% can provide a more cost effective method of achieving Ireland's 2020 renewable energy target in transport.

In addition to the use of RNG in CNG vehicles at the recommended blend, setting different obligation targets for the various biofuel types and uses in vehicles could provide a more achievable chance of reaching the RES-T 2020 target.

The RGFI believes that there is an opportunity for the public transport sector to lead the initiative of using 20% RNG in CNG public transport vehicles, supporting the bioeconomy and developing a circular economy, generate further support from the citizens of Ireland and tourists to use the public transport.

Question 3: In order to maximise the contribution of the Biofuels Obligation Scheme to Ireland's renewable energy target in the transport sector, it is proposed to restrict / reduce the current level of use of carried over certificates in 2020.

Q 3 a) Do you support this approach?

Response. The Renewable Gas Forum Ireland would not be in support of this approach. We would only support the position of treatment of certificates or guarantees of origin that is in line with European and Global practices in accounting for carbon credits. It is critical that Ireland is transparent and fully accountable for certificates in line with WRI, CDP, and GHG Protocol and in line with Renewable Energy Directive II should be allowed to count towards the Biofuels Obligation Scheme in line with the biogas registry, and are valid.

Currently, the RGFI is on behalf of the biogas industry and consumers, participating in the development of a Green Gas Certification Scheme for Ireland that will be a pan European certificate, recognised and accredited by WRI and CDP, adhering to the RED II, WRI and GHG Protocol guidelines, criteria and sustainability criteria. On completion we expect that the Green Gas Certificates can be fully utilised to obligations, such as the Biofuels Obligation Scheme and reporting of Carbon Neutral Policies/Carbon Displacement Projects.

Q 3 b) What would be the appropriate level of carryover for use in 2020 and beyond?

Response See response to question 3 A) above, and no comment

Q 3 c) If you feel the current level should be maintained, please provide reasoning including an alternative approach to maximising the contribution from biofuels to achieve Ireland's renewable energy target in the transport sector.

Response See response to question 3 A) above, no comment.

Question 4: The recently amended Fuel Quality Directive (Directive 98/70/EC) places obligations on suppliers to reduce emissions – specifically the reduction in carbon intensity of at least 6% to be met by 31 December 2020 compared to 2010.

Q 4 a) How do you envisage this requirement being met?

Response No comment

Q 4 b) Are there any measures that Government could take to assist obligated parties reach the Fuel Quality Directive target?

Response No Comment

Question 5:

Increasing the biofuel obligation rate is likely to involve the introduction of fuels with higher concentrations of biofuel (such as E10 which is petrol blended with 10% ethanol and B7 which is diesel blended with 7% biodiesel). This may lead to compatibility issues with older vehicles, consumer cost, and the necessity of consumer awareness in order to ease its introduction, and potentially the development in forecourt infrastructure.

Q 5 a) What do you view as the technical and consumer challenges associated with increasing the biofuel obligation rate (including introducing fuels such as E10 and B7)?

Response No comment on introducing fuels such as E10 and B7. Worth pointing out that there are no technical or consumer challenges with increasing the biofuels obligation rate of 20% RNG to CNG for use in transport. This initiative would provide significant savings to the Irish citizen and government.

Q 5 b) Can fuels such as E10 and B7 be brought to the market in Ireland by 2020?

Response No comment. The supply of RNG can be brought to the market in Ireland by 2020, as it is an indigenous industry, utilise existing waste streams and residues, help develop a bio economy and circular economy.

Q 5 c) Are there technical barriers to achieving 7% conventional biodiesel blend (B7) averaged across the full year, including the winter months?

Response No comment on biodiesel. The RGFI wants to point out that there is no technical barriers to a RNG blend at 20% of CNG.

Q 5 d) For biodiesel blend rates higher than 7%, are drop-in biofuels a viable solution for Ireland?

Response No Comment on biodiesel/ethanol. However a higher rate of 20% of RNG belnded with CNG can deliver and exceed the RES-T targets for 2020 and do so in a most cost effective manner.

Question 6:

Since the publication of A European Strategy for Low Emission Mobility in July 2016, the European Commission has designated that food based biofuels have a limited role in decarbonising the transport sector due to concerns about their actual contribution to the decarbonisation. It is envisaged that a gradual reduction of food based biofuels and their replacement by more advanced biofuels will realise the potential of decarbonising the transport sector and minimise the overall indirect land-use change impacts. The EU Commission has signalled that the trajectory of biofuels is away from first generation biofuels towards advanced or second generation biofuels. This is primarily to be achieved through the introduction of a cap on first generation biofuels and the incentivisation of advanced biofuels.

Q 6 a) How should the development of increased levels of advanced biofuels be supported in Ireland?

Response The development of increased levels of advances biofuels could be supported through the use of sustainable RNG and supporting the Green gas Certification Scheme that accounts for the full life cycle assessment in line with RED II requirements and guidelines, while observing the guidelines from the WRI, CDP and GHG Protocol. The GGCS will deliver comprehensive, fully accountable and transparent details of the full life cycle from the origin through to the end use/utilisation, giving the carbon intensity savings of using RNG.

A stronger emphasis and weighting towards incentivising the Advanced Biofuels in any Biofuels Obligation Scheme, along with an emphasis on using indigenous fuels and advanced biofuels, satisfying the sustainability criteria of the biofuel or advanced biofuels.

Question 7:

Currently, the Biofuels Obligation Scheme is limited to the transport sector. In the heating sector, there is a high use of fossil fuels (including oil) and a target 12% of energy consumption from renewable sources by 2020.

Q 7 a) What is your opinion on the potential for an obligation scheme (similar to the Biofuels Obligation Scheme) in the heat sector?

Response RGFI as an industry forum does not and will not support this position. The Renewable Gas Forum Ireland believes that an obligation scheme should only apply to mature markets. As the renewable gas heating sector market is in its infancy, non-existent due to lack of Government policy and supports, requires the support of Government in order to develop and get established as a market over a period of at least 10 years, it would be appropriate at that stage once the market is established to introduce an obligation scheme.

The RGFI is concerned at the level of barriers and perceived reasons for blocking the support of renewable heat/thermal. Provided that there is fair and equal treatment across all technologies under the renewable heat sector, apply and account for actual savings in carbon, GHG emissions and utilisation of the heat itself, i.e. the heat is not spent or dumped.

The Government are collecting a carbon tax from gas consumers on consumption of natural gas and have collected €120 million in 2016. The RGFI have requested that this carbon tax be ring fenced and utilised towards supporting the development of renewable gas, in line with practices implemented by other EU member states. In ring fencing this carbon tax for the funding of a Renewable Natural gas Support Scheme is the most appropriate way to supporting the industry and meeting the RES-H targets for 2020 and beyond. The Irish Government's Climate Change Advisory Council is projecting that Carbon Tax will double, at the current carbon tax rate, this tax would provide funding for 7% Renewable Natural gas supply, approximately 6 TWh.

The RGFI strongly recommends to the Irish Government support and incentivise the development Renewable Natural Gas to a meaningful level by rolling out the RHI of substance to kickstart the large scale development of the renewable natural gas industry. The RGFI has an ambition to have 20% or 13 Twh of RNG in the CNG network by 2030.

Q 7 b) What do you see as the technical barriers to introducing such a scheme?

Response The RGFI as outlined in response to previous question, that there are no technical barriers to introducing an obligation scheme, however the renewable heat market is not a mature market, therefore due to commercial and market reasons an obligation scheme at this point would not be in the best interest of the citizens and consumers of gas.