Renewable Gas Forum Ireland

RGFI POSITION STATEMENT IN RESPONSE TO DEPARTMENT OF TRANSPORT PUBLIC CONSULTATION ON RENEWABLE FUELS FOR TRANSPORT POLICY

MAY 2022

Overview – the opportunity to decarbonise the HGV sector

Renewable Gas Forum Ireland (RGFI) welcomes the Department's consultation on the Renewable Fuel for Transport Policy as it sets out the pathway for delivery of a key component within Ireland's Climate Action Plan 2021 for the transport sector, which will deliver significant emissions reduction over the coming decade. The proposed policy refers to the ambition under the National Climate Action Plan as well as the implementation of the transport elements of the recast Renewable Energy Directive ('REDII') and consideration of the EU fit for 55 proposals.

RGFI and its members represent all aspects of the biomethane industry including consumers in the transport sector who are demanding biomethane be applied to decarbonise Heavy Goods Vehicle (HGV) transport. RGFI fully appreciates that there are other more appropriate technologies to decarbonise cars and other private transport.

Many solutions proposed to decarbonise transport are still conceptual and / or uneconomical, particularly when applied to HGVs. The greater the size and weight of vehicle, the greater the challenge of moving to low or zero emissions. These challenges include the fact that electrification, hydrogen and biomethane (bio-LNG) are the only true zero-emissions solutions, as well as the prohibitive costs and battery size and load or range restrictions for battery electric HGV's and the infancy stage and non-economic costs of hydrogen technology. Hydrogen fuels cell technology currently lacks in proof of concept and will require significant investment in the re fuelling infrastructure, which currently does not exist. However, biomethane is ready to be implemented now, subject to necessary Government policy and legislative supports, and capital funding to meet targets to 2030.

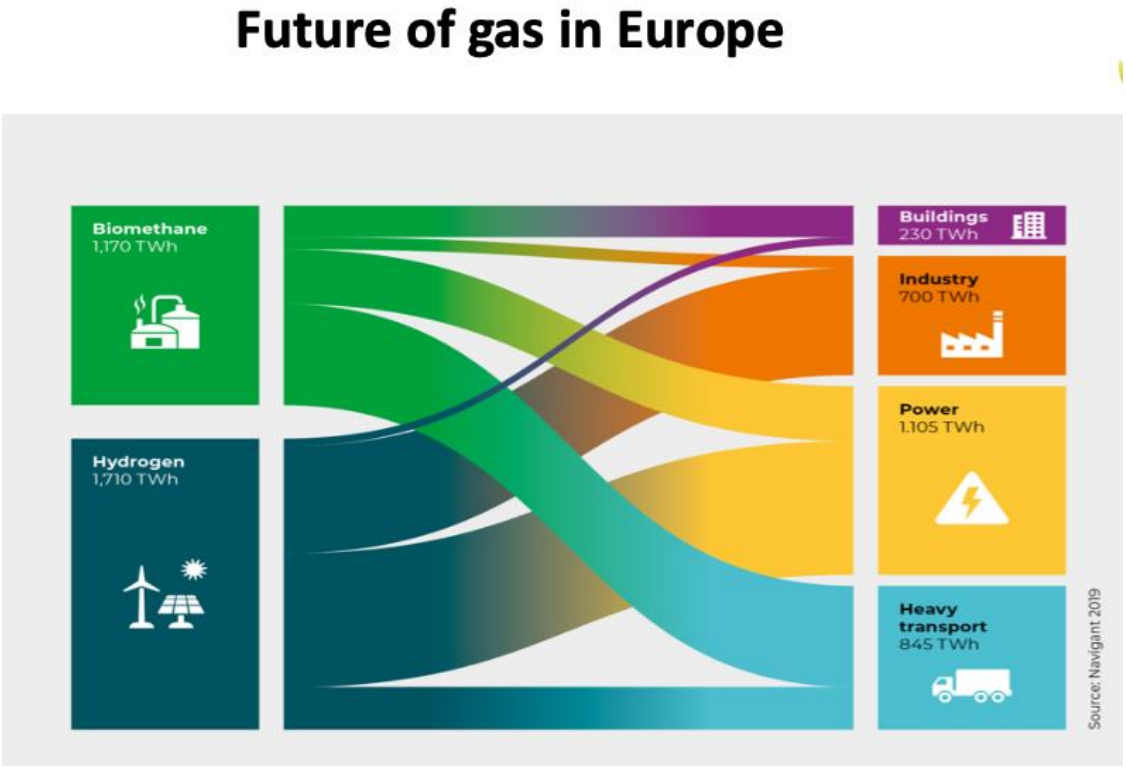
Sustainable biomethane is the most cost effective, scalable and sustainable renewable gas available today. Biomethane has a long-term role to play in the future climate-neutral energy system, to meet the "Fit for 55" reduction of GHG emissions target by 2030 (55% by 2030). Furthermore, biomethane contributes to sustainable agriculture, rural jobs that are hard to displace and recovery of waste streams. Biomethane therefore should be scaled up rapidly in Ireland, this requires increased investment, policy support, cost reductions and optimising overall revenues for producers.

Biomethane has been recognised as a zero emissions biofuel under Ireland's Climate Action Plan 2021 and it has an important role to play as a renewable fuel for transport, and decarbonising other sectors such as agriculture and industry thermal demand.

HGV transport has been identified as a main market and an economically viable use of biomethane to decarbonise the transport sector. In the last decade, the number of CNG/LNG trucks on the European road network has increased sharply, as the level of blending of renewables is not limited by the engine manufacturers and allows HGVs to run on 100% biomethane or bio CNG or bio LNG.

(Green hydrogen technology is still in early-stage development and has a future potential role in an Integrated Energy System that is designed and structured to decarbonise the economy by 2050.)

The Navigant Gas for Climate Report of 2019 shows the increasingly important role that biomethane will play in heavy transport. The Chart below, from that report, has been presented by the European Biogas Association to an RGFI REGATRACE[1] workshop. Note that the figures should be updated but the trend remains the same.



Across Europe 25% of CO_2 emissions are from road transport - 6% of total EU emissions.

The aim to reduce by 15% by 2025 is being reviewed this year with a view to substantially increase this target. This target is proposed to be reviewed in light of REFuelEU and REPowerEU strategies and plans to improve energy security and supply of gas and oil from indigenous sources across the EU member states.

Benefits of Biomethane

Recent work has determined that, with appropriate Government policy and legislative supports, AD biomethane, utilising sustainable agricultural feedstock, has the potential to replace natural gas in a way that is technically feasible and commercially viable, with associated bio-fertiliser produced and other bio economy and socio economic benefits. This would have tremendous environmental and economic benefits in terms of reducing carbon emissions in HGV transport as vehicles can run on 100% biomethane, a zero emissions fuel.

A national network of AD plants would support diverse farm income and activities, promote organic farm practices and land management, capturing carbon in soil (carbon farming), and improving biodiversity, air and water quality (reducing nitrate run-off).

The EU Commission incentive for industry to do more via carbon trading across the EU ETS sector companies. The increase in the price of carbon, which continues to rise, strengthens the AD biomethane business and acts as a central enabler to climate neutral farming.

This approach would, at the same time, provide farmers with a diverse, reliable sustainable income stream, support the development of a circular, rural bio-economy with opportunities to diversify into sustainable biomethane , bio-fertiliser production, and support the commercial sustainability and competitiveness of the Irish food and drinks industry. It is projected to create 3,000 sustainable jobs across rural Ireland.

It aligns with the Paris Agreement, EU Green Deal, Farm to Fork Strategy, national agricultural and climate action strategies, and will be underpinned by an AD Charter to ensure the responsible delivery of environmental commitments.

To reduce Scope 3 emissions (supply chain), industry is required to address how to decarbonise the transport sector. To do this in a meaningful and economic way, biomethane can be applied as a zero emissions fuel in HGV transport . Due its scalability, and because there are no restrictions on the level of blended biomethane to CNG fuel, the required levels of emissions reduction can be achieved.

This approach also supports the *NPS on the Bioeconomy* and carbon neutral farming.

There is a national requirement to recycle carbon from biodegradable materials, from sustainable sources of biomass or from sustainable agri feedstock , to use it to replace fossil carbon in relevant sectors of the economy. The circular economy and the sustainable bio-economy sectors can address this objective and promote innovative technology solutions for carbon capture, storage, use and the production of sustainable advanced biofuels or other non-fossil based carbon products.

It is acknowledged that there is a need to ramp up and accelerate scalable carbon removal solutions that capture CO_2 from the atmosphere and store it for the long term, either in ecosystems through natural protection and carbon farming solutions or in other forms of storage through industrial solutions while ensuring no negative impact on biodiversity or ecosystem in line with the *Precautionary* and *Do No Significant Harm* principles. The development and deployment at scale of carbon removal solutions is indispensable to climate neutrality and requires significant targeted support in the next decade.

Biomethane has a key role to play in supporting the national policy to decarbonise transport and the ReFuelEU policy in relation to transport sector and competitiveness. Hydrogenated Vegetable Oil is emerging as an alternative advanced technology and solution in addressing the need and demand for advanced biofuels. However, it is our opinion that the limited supply of HVO and its application may have limits. Our recommendation would be to apply biomethane to decarbonise the difficult to decarbonise HGV sector, perhaps leaving more capacity for HVO to be used in other sectors such as aviation.

New EC Ambition for Biomethane

The European Commission announced in March 2022 that it will accelerate the roll-out of biomethane in its plan to make Europe independent from Russian fossil fuels well before 2030, and to respond to rising energy prices, storage and security of supply. The target for biomethane production by 2030 will increase to 35 billion cubic metres (bcm) (350TWh), in particular from sustainable agricultural biodegradable materials.

The measures within the REPowerEU strategy and plan, with ambition to displace at least 155 bcm of fossil gas use, which is equivalent to the volume imported from Russia in 2021. The Commission proposes to work with Member States to develop a National Biomethane Plan and identify the most suitable projects to meet these objectives.

The EU has announced a €200bn plan to move away from dependence on Russian gas and oil and improve competitiveness and energy security.

Available Feedstock for Sustainable Production of Biomethane

The Government of Ireland *Climate Action Plan 2021*, recognises and acknowledges biomethane for the first time, as a "*zero emissions gases*" to be "*directed towards hard to abate sectors*".

Biomethane production does not compete with food production, and it supports sustainable, diverse regenerative farming.

Anaerobic Digesters produce bio-fertiliser that can significantly improve the sustainability of growing crops, supporting organic farming, increasing productivity, providing a valid alternative to current farm practices and land management, displacing artificial fertilisers, improving soil health, air and water quality and supporting the enhancement of biodiversity. .

Evidence of biomethane's sustainability can be found in the following reports:

- RGFI commissioned KPMG *Integrated Business Case for Biomethane Production* 2019,
- KPMG/Devenish, GNI, *Sustainable Feedstock Report* 2021.

The KPMG/Devenish, GNI, *Sustainable Feedstock Report* 2021 and recent research from the government agricultural authority and research agency, Teagasc, shows how a move to mixed species sward pastures can further improve the sustainability of renewable energy value and environmental benefits of the agricultural feedstock.

Approximately only 2% of land is required for sustainable feedstock supply and 735kHa of under-utilised permanent pasturelands is available for use to grow sustainable agri-feedstock to supply an indigenous and sustainable AD biomethane industry.

This is in line with the *Principles of Sustainability* and *Food First* within the National Policy Statement (NPS) on the Bio-economy and the *Precautionary Principle* will be applied going forward. AD biomethane production can also support the *Cascading Principle* within the NPS as there is potential to consider grass biorefining to cascade the use of grass, complementing biomethane and bio-fertiliser production. This is also in line with the Communication from the European Commission on *Sustainable Carbon Cycles*. https://ec.europa.eu/clima/system/files/2021-12/com_2021_800_en_0.pdf.

The consultation (P13) refers to how the Department

....is this year carrying out a study on the availability and sustainability of renewable fuels to meet future targets.

As part of this work RGFI recommends that the Department engages and collaborates with industry led initiatives to decarbonise transport and refers to:

Sustainability of Biomethane Production in Ireland GNI, KPMG, Devenish:
https://www.gasnetworks.ie/biomethane-sustainability-report-2021.pdf

RGFI would be pleased to assist the Department with the research that is being commissioned in terms of access to relevant reports and data and/ or developing collaborative approaches and consultation.

RGFI's Transport sector representation, an industry led collaboration, includes transport logistics companies who are significant national and global players in the transport market and this position paper is a reflection of industry collaboration with the sectoral representatives.

The consultation (P13 final para) describes how the Department

> *.... will also be engaging with the European Commission this year regarding a possible derogation to ensure compliance with the future European requirements in renewable transport energy*

Biomethane can 100% decarbonise the HGV sector, which is a difficult to decarbonise sector by any other means. The switch to biomethane is also welcomed by gas engine manufacturers as warranties are not affected, providing confidence and reassurance to the logistic companies.

The KPMG/RGFI integrated business case shows how biomethane, as a renewable advanced biofuel, is scalable, technically and economical viable and sustainable. The Green Gas Certification Scheme is designed to comply with RED II sustainability criteria.

This approach also supports the *NPS on the Bioeconomy* and carbon neutral farming.

Biofuels Obligation Scheme and limits to biofuels derived from feedstocks

RGFI asks that biomethane be included under the Biofuels Obligation Scheme as it

- can 100% decarbonise HGVS.
- is a zero emissions biofuel, as recognised in the Climate Action Plan 2021
- can be delivered sustainably, economically and at scale
- apply the multiple of 4 x the credits

The consultation (P13 para 4) refers to limits and caps on biofuels derived from feedstocks in the context of RED II.

> *Ireland will seek to align the current biofuel obligation with the European approach as set out in the Renewable Fuel for Transport Policy Statement, and subject to the transposition of the Renewable Energy Directive this year. In particular,*
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> *In the context of RED II, Ireland will seek to comply with the 1.7 limit to biofuels derived from feedstocks set out in Annex IX Part B, these are UCO and tallow. In line with the provisions of the Directive, double counting would apply to all biofuels produced from Annex IX listed feedstocks.*
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> *A 2% cap on biofuels produced from crop-based feedstocks will be applied for biofuels supplied for use in transport in Ireland.*

Ireland will provide for the phasing out of biofuels based upon high-risk indirect land-use change (ILUC) feedstocks, with reference to palm oil in this category

RGFI asks the Department to not finalise its position on this policy on crop-based feedstocks and land use, until the review of Annex 9 of RED II on feedstocks for the production of advanced biofuel biomethane is complete. Currently the RED III is in place, being revised in light of the REPowerEU and REFuelEU strategies, plans being finalise, with further announcements scheduled for July '22. RED III will be superseded by RED IV which is expected to be finalised this year, to reflect the ramping up and acceleration of security of supply of gas and oil for European member states.

The plans under REPowerEU and ReFuelEU will take account of scientific research on the sustainability of biomethane, the availability of feedstock for energy production and will also take into account the substantial increase in Europe's ambition for biomethane production in response to concerns for energy security, storage and pricing stability, under REPowerEU

Funding support

The consultation (P..) states that preliminary input from stakeholder workshops suggested that cost is one of the key perceived barriers to increasing the level of advanced and development renewable fuels supply and use in transport in Ireland. It states that

There were mixed views ..., but there was slightly more support for higher national targets relating to increased renewable fuel supply for emission reduction in road, aviation and maritime transport than the current targets set or proposed at an EU level.

There were also mixed views among stakeholders concerning whether credits alone would be enough to incentivise the supply of development renewable fuels and promote their use.

Credits are important but alone are not enough to incentivise the development of renewable fuels and promote their supply and use.

RGFI strongly recommends that Biomethane be allocated a x4 credit multiplier given its important role in decarbonising the HGV sector that is difficult to decarbonise by any other means, has the full support of the RGFI transport industry led collaboration and is achievable now in a way that is sustainable and economically viable.

Green hydrogen should also have a x4 credit multiplier but note that the capacity to produce it at scale is many years down the road. Consultation with the RGFI transport sectoral representation confirms the demand for biomethane as a solution to decarbonise the HGV sector and cannot wait for hydrogen to become commercially viable and available at scale.

Biomethane is scalable and not only can it be blended, but it can also fully replace natural (fossil) gas entirely using gas engines in HGV trucks, commonly used across Europe and growing number of gas engine HGV's are in use in Ireland. But its production at scale requires investment and capital funding in AD biomethane plants, public and private infrastructure, including fast fuelling stations and the gas network.

There is a need for capital grant aid to ensure infrastructure roll-out and costs are shared equally between industry and government eg 50 % capital grant aid for infrastructure to deploy biomethane at scale for HGV transport to public and private fast fuelling stations.

While Ireland has one of the most advanced gas networks in Europe, new infrastructure is required for fast fuelling stations. Large transport companies require private fuelling stations at their main depots and there is also a requirement at public forecourts.

Planning and Permitting

Safety is, of course, paramount in deploying advanced biofuels and it will be in the public interest for the Commission for Regulation of Utilities (CRU) to proactively work with industry to:

- Ensure the CRU respects and applies efficiencies in business practice
- Avoid becoming an administrative burden to the roll out of biomethane in transport.
- Work in the interest of transport sector consumers demand for biomethane
- assist them in expediting the safety case, project commissioning and operation
- work together to achieve Climate Neutrality and meet energy security and climate action imperatives.

Certification

Ireland is a leader within the EU, in that it already has a Green Gas Certification Scheme designed to comply with REDII sustainability criteria and the Renewable Gas Registry, operated by Gas Networks Ireland (GNI). Its blueprint was developed in 2018 by the German expertise in this area , DENA and DBFZ, co-ordinated by the International Energy Research Centre and supported by the Centre for Marine and Renewable Energy Research, University College Cork, GNI and RGFI. The licence is jointly owned by RGFI, as an industry forum and Gas Networks Ireland, gas network operator– one of the most modern gas networks in Europe

The Green Gas Certification Scheme is already certifying biomethane produced in Ireland, currently consumed in transport overseen and operated by Gas Networks Ireland as the gas authority. It complies with the sustainability criteria set out in the Renewable Energy Directive II, and is in line with best practice, fully accountable and transparent, green gas certificates and accepted for carbon offset accounting principles. It provides confidence and assurances to biomethane gas consumers, with certificates issued by accredited bodies, recognised and accepted by the EU commission biomethane and global authorities in validating and verifying, in a fully accountable and transparent manner, that biomethane is sustainably produced.

Conclusion

RGFI transport industry led collaboration and sectoral representation, seek to mobilise the biomethane supply chain to highlight the benefits and opportunities related to biomethane and to partner with public stakeholders to ensure support for large, nation-wide scale up and use of sustainable biomethane. We collectively have the ambition to scale up biomethane application in Ireland.

This scale up can be achieved through collaboration along the full supply and value chains, partnerships on large and innovative investment plans, funding structures, capital funding and reducing production costs, making such projects visible. We wish to collaborate with Department of Transport, DECC, DAFM, DETE and DPER to optimise the role of sustainable biomethane in achieving climate targets and remove regulatory, funding, planning and authorisation barriers.

We look forward to cooperating and collaborating with all interested stakeholders to ramp up biomethane as a renewable fuel of choice for the transport and in particular the HGV sector in Ireland.

References

An Integrated Business Case for Biomethane in Ireland, RGFI / KPMG, 2019 https://www.renewablegasforum.com/library/

Cost Benefit Analysis, RGFI / KPMG 2019 https://www.renewablegasforum.com/library/

2nd Regatrace workshop "The vision for Biomethane in Ireland presentations :https://www.renewablegasforum.com/collaboration-on-the-vision-for-renewable-gas-biomethane-as-rgfi-hosts-2nd-regatrace-workshop/

Sustainability of Biomethane Production in Ireland: https://www.gasnetworks.ie/biomethane-sustainability-report-2021.pdf

NPS on the Bioeconomy: https://assets.gov.ie/2244/24101811573-41d795e366bf4000a6bc0b69a136bda4.pdf

Navigant, Gas for Climate Report 2019, https://ec.europa.eu/info/sites/default/files/energy_climate_change_environment/events/presentations/methane_biogas_stakeholder_event_presentations_-_merged_17072020.pdf

[1] *REGATRACE (Renewable Gas Trade Centre in Europe) is a European collaboration which aims to create an efficient cross border trading system based on the trading of biomethane and issuing of Guarantees of Origin (GoO). RGFI is the lead partner for REGATRACE in Ireland that commenced in 2019, and since then has worked with key stakeholders in a public and private collaboration to develop an agreed vision and roadmap for biomethane in Ireland.*

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