

Department of the Taoiseach

Bioeconomy

Discussion Document

National Policy Statement on the Bioeconomy

Submission from

Renewable Gas Forum Ireland



15th September 2017

Introduction

The Renewable Gas Forum Ireland (RGFI) is grateful for the opportunity to put forward our comments and views on the consultation on developing Ireland's Bio economy to inform a policy for sustainable, prudent and circular economy growth plan.

The RGFI is an industry forum representing the interest of those involved in the renewable gas supply chain across Ireland. The RGFI is committed to influencing, supporting and delivering policies and initiatives that promote the development of the renewable gas industry in Ireland as an economically viable and economically sustainable component of the overall energy mix from the utilisation and outputs of the waste streams and residues from agriculture, manufacturing and processing sectors through the development of a Bioeconomy Strategy.

The RGFI has issued its Position paper on the 1st August 2017 outlining the potential for Biogas and Biomethane opportunities in Ireland to 2020 and 2030 by mobilising biomethane gas from sustainable waste, by products, residues from agriculture, manufacturing and processing industries such as the agri-food, beverages, bio pharma sectors.

Policy developments to date have focussed on the 20% demand in electricity and minor import obligations on transport fuels. >60% of Heat energy is in gaseous form (Natural Gas and LPG) and this is >80% in the Industrial / Commercial sectors. To achieve meaningful and significant decarbonisation in the Heat Energy sector and for the primary energy supply for most of Ireland's Industrial sectors (Agri-food, Beverage, Pharma, Medical Devices, etc), the indigenous and sustainable sources for biomethane production need to be mobilised. Gas energy consumers are utilising the highest efficiency heat and combined heat & power equipment on the market, so displacement with a drop-in alternative gaseous fuel is the optimum solution.

A recent EC report on biogas growth projections across Europe, and it highlights Ireland as the highest growth potential per Capita, estimating 13 TWh/annum by 2030 as achievable. Our own analysis falls a small bit short of this; 11.5 TWh by 2030; but this reflects more the difference in timing of starting the mobilisation as the EC expected Irish policy to have been more advanced than it is at this stage.

Mobilising the optimum sources closest to the existing gas network has been the focus of research, strategy development and solution design with Renewable Gas Forum Ireland (RGFI) members, in conjunction with other key stakeholders in the biogas industry and Gas Networks Ireland (GNI). From detailed assessment of the many solutions throughout Europe, the optimum design model for Irish application has been determined to be what is referred to as Hub and Pod Project. This design solution maximises the potential for development of a bioeconomy and circular economy with Anaerobic Digestion (AD) is focussed at co-locating at the sources of waste/residues, and being scaled to available waste/residues acting as AD Pods, with clusters of AD Pods feeding purified gas to central Grid Injection Hubs. As well as being the most cost effective solution, this design model gives maximum benefit to the development of a bioeconomy and circular economy in valorising their waste and residue streams (diversified income stream) and supporting significant decarbonisation of agriculture, manufacturing and processing sectors. This solution also offers development opportunity for areas Ireland that are not serviced by the natural gas network and provides for the development and growth of the bioeconomy in Ireland.

The renewable gas industry can develop to be a significant indigenous gas industry in Ireland, utilising existing agriculture resources and residues, displacing fossil fuels, creating employment in rural Ireland, retaining existing Irish and FDI investment in manufacturing and processing, providing additional competitiveness and sustainability to attract further investment into Ireland. The industry

will also lead to increased exchequer revenues from an indigenous renewable gas industry, significant reduction in EU fines from missed targets in the 2020 RES-T and RES-H. The recent decision by the European Commission on the GHG emissions from agriculture, eliminates the possibility of concessions and now requires real action by the Irish Government in tackling the issue.

Several studies have been completed into the various Renewable Gas (Bio-methane / Green Gas) production capacity in Ireland, with the most recent is a study published by the EU Commission in March 2017 – *“Optimal use of biogas from waste stream, An assessment of the potential of biogas from digestion in the EU beyond 2020”*, highlights that Ireland has the highest potential for biogas production per capita within the EU by 2030, with a realisable potential of 13 TWh/annum highlighted and recognised. This being a report from the Commission itself highlights the concern that Ireland will be unable to claim any special treatment in regard to falling short of GHG emission targets, unless rapid progress commences on harnessing the biogas potential.

Ref: https://ec.europa.eu/energy/sites/ener/files/documents/ce_delft_3q84_biogas_beyond_2020_final_report.pdf

As with other renewable energy technologies, Renewable Gas requires State policy and incentive supports to allow this industry to develop and grow to a long term competitive fuel. Primary benefits of biogas as a sustainable fuel source;

- Can be purified and integrated into the existing gas network.
- 100% Indigenous – displacing fuel imports and enhancing security of supply / energy resilience.
- Can be produced within the highest Sustainability Criteria as proposed in the latest draft Renewable Energy Directive (REDII).
- Can deliver the highest GHG Savings (Irish average expected ~ 140%, i.e. carbon negative), far in excess of the proposed REDII minimum's (70% - 80%).
- Significant sustainable resources available from the Agriculture, and Agri-food & beverage sectors in Ireland.
- Requires no taxpayer expenditure on new energy infrastructure or conversion costs for boilers / equipment.
- Represents a new sustainable economic growth sector for Irish farmers (diversification and security of farm holdings).
- Can deliver GHG savings for multiple sectors; Heat, Transport, Agriculture, Manufacturing Industries and Power Generation.
- Can support and encourage FDI from the increasing range of Multi-National companies with Corporate & Social Responsibility obligations to decarbonise.

There are additional, wider societal and economic benefits to be realised in supporting renewable gas as part of the Bioeconomy Strategy, these are as follows;

- ✓ Improvement of air, soil and water quality.
- ✓ Reduction in GHG emissions and air pollution.
- ✓ Improved citizen's health.

- ✓ Production of biofertilisers
- ✓ Sustainable use and utilisation of residues and waste streams.
- ✓ Development of an indigenous renewable gas industry that will provide a secure supply of biomethane gas.
- ✓ Securing competitiveness and future investment in the manufacturing, processing and agricultural sectors.

The success of a proposed Bioeconomy will be determined by the approach adapted in developing the strategy. The RGFI strongly recommends that a consultative and inclusive approach to a cross sectoral engagement and representation to supporting and responding to the development of the Bioeconomy Strategy. The RGFI is want to be included in any future consultations and any working groups established to engage with stakeholders.

What is Renewable Gas?

Renewable gas is an indigenous, renewable, sustainable and carbon neutral source of energy, that can be produced from any organic waste materials and upgraded to a standard which is identical to natural gas. Renewable gas can be injected into the gas pipeline network or it can be used independently as a fuel for heating, transport or power generation. Renewable gas is also referred to as Biomethane, Biogas or Green gas.

Response to Consultation questions:

1. Does the broad definition outlined adequately encompass the opportunities presented by the bioeconomy?

The RGFI will support this broad definition, furthermore we recommend that the opportunity to develop the principle of security of supply and storage in Ireland through the development of a renewable gas (biomethane) as a least cost option to decarbonisation of heat, transport, and power generation (electricity) for Ireland by an absolute priority.

2. How can a high-level policy statement on the bioeconomy assist in progressing the development of the priority value chains identified?

The RGFI wants to see policy statement to include acknowledgement and inclusion of the potential that Ireland has to produce renewable gas in a recognised and sustainable manner, with the real potential to ne net exporters of biomethane. The RGFI are members of the European Biogas Association (EBA) and European Renewable Gas Register (ERGaR). As previously mentioned the European Commission report issued in March 2017 states that “Optimal use of renewable gas from waste stream, an assessment of the potential of renewable gas from digestion in the EU beyond 2020”.

There is strong potential and opportunity to explore the low hanging fruit in developing a bioeconomy and circular economy in Ireland by utilising the current waste streams, residues highlighted in producing biomethane that can be a significant contributor to the bioeconomy in Ireland.

3. *What lessons can Ireland take from the European approach, including to the Circular Economy?*

The RGFI membership wants to see engagement with the biogas industry, we represent the full supply chain from the biogas/biomethane producers through to technology providers, innovation centres and end consumers.

Observing the European approach, the principles of collaboration and cross-sectoral participation can be seen as a critical factor to the bioeconomy success stories across Europe. Understanding, realising and embracing the circular economy benefits can only be achieved with multi-sectoral engagement and policy support/provisions for pilot testing and demonstration projects. Special provisions and derogations are required for pilot scale field testing, demonstration, and development. This is critical for potential initiatives such as end of waste, by product development, bio-fertiliser development.

The RGFI is very interested and keen to collaborate with Ireland's semi-states and companies working together in accessing EU funds to support circular economy benefits, and propose that the government proactively support pursuing these funds.

Having engaged with DAFM, the RGFI in consultation with other key stakeholders, welcome the opportunity to collaborate on the development of regulatory framework with the DAFM, EPA and other relevant authorities supportive of innovative processes.

4. *Given the cross-sector nature of the bioeconomy, how can a national policy statement best support development?*

The RGFI would strongly support a policy where the development of indigenous renewable gas as a central and critical part of the bioeconomy and developing a circular economy. There needs to be policy support with incentives and/or obligations to move in a progressive manner towards a carbon neutral policy in heat, transport, and power generation. Where possible implement an obligation to use renewable gas as a primary source of energy in autonomous generation, which will deliver high efficient end use of renewable gas.

The RGFI would strongly recommend a single point of responsibility and be accountable for the development of a truly sustainable bioeconomy from early stage establishment of policy and engagement with stakeholders, clear policy for enabling and deployment of innovative technologies, establish a centre of excellence for bioeconomy research, implementation and demonstration with strong policy and ethos of engagement with industry participants to ensure deployment by removing restrictive barriers and/or regulatory constraints.

5. *Can we identify a common set of principles, including in particular the application of the cascading principle, which will assist in the development of both the bioeconomy and circular economy?*

The RGFI recommend that there is more emphasis on regional development and deployment of both the bioeconomy and circular economy, to ensure sustainability in the full life cycle to include the supply chain from the original location of source, waste and residue management and energy supply. Extensive state support for initiatives and policies should not be progressed without clear market research demonstrating market demand and commercial value.

Any State policy and supports should be directed by the principles to give priority and consider the projects which deliver the greatest sustainability, most employment, reduce energy imports and the deployment at least cost.

6. *How can a national policy statement support local and regional cooperation around the use of renewable biological resources?*

It is the view of the RGFI membership that early engagement with community, local and regional stakeholders can enhance cooperation, establish buy-in with better understanding of the potential for the socio-economic benefits, e.g. supporting the agri-sector to produce biomethane, reducing emissions, improving air, soil and water quality, reduce health costs from air pollution, use of biofertiliser and increasing economic benefits, to inject biomethane into the gas grid for end use by the manufacturing and processing sectors such as the agri-food, beverages, bio pharma and biomedical devices.

7. *How can waste policy, including an examination of the definition of waste, best support developments in the bio and wider circular economy?*

The RGFI recommends the following:

- RHI recognition and support for renewable gas to be injected directly into the gas network.
- Support the levelised cost of dispatchable heat.
- Policy development within DAFM and EPA to give more appropriate recognition and incentivisation for use of indigenous bio-fertilizers.
- Simplify the regulatory requirements and reclassification of processes where a process can demonstrated viability and acceptance will avoid duplication of regulatory process, decrease costs in administration and facilitate rollout of initiatives.

8. *How can we stimulate market demand for bioeconomy products? What is in it for the consumer?*

The RGFI recommends the following actions:

- Policy supports or obligations for migration to renewable gas in order to decarbonise primary energy in key energy sectors of Heat, Transport, and Power Generation, including high efficiency distributed and autonomous generation. Socialisation of the costs to decarbonise must be balanced with competitiveness to prevent distortion of the markets and ensure value for the taxpayer. Ensuring competitive energy market for manufacturing industries is key to attracting and retaining foreign direct investment and for Ireland to be competitive in the export markets.
- Information, reliable research and data to improve the general awareness of benefits; environmental, economic and societal; arising from Circular economy approach along with identifying tangible short and long term benefits, to the

stakeholders and communities.

- Collaboration across sectors and technology competencies is essential to enhance and secure maximum value .
- Focus on collaborative, integrated and full life-cycle solutions to address national targets for carbon reduction.
- Addressing misconceptions effectively as they are identified through positive messaging via stakeholder engagement using acknowledged experts and active engagement rather than adopting a defensive approach.
- Develop greater awareness through education and information on alternative waste disposal e.g. exporting and incineration.
- Developing a quality assurance brand for bioeconomy deliverables aimed at boosting consumers and market confidence.

9. *What is the most appropriate mechanism to coordinate development and monitor progress?*

The RGFI would strongly recommend a single point of responsibility and be accountable for the development of a truly sustainable bioeconomy from early stage establishment of policy and engagement with stakeholders, clear policy for enabling and deployment of innovative technologies, establish a centre of excellence for bioeconomy research, implementation and demonstration with strong policy and ethos of engagement with industry participants to ensure deployment by removing restrictive barriers and/or regulatory constraints.

The Marine & Renewable Energy Ireland in UCC, Cork is very competent, well established and internationally respected research and innovation centre ideally suited to the role as a single entity for responsibility in coordinating the development and monitoring progress of the bioeconomy in Ireland.

Early engagement and representation with industry participants essential to the smooth success in gaining support and proactive involvement in the bioeconomy and circular economy.

The RGFI for and on behalf of our members who are key stakeholders in the development of a successful bioeconomy strategy, wants to reiterate our interest and commitment to be proactively engaged and involved in supporting this important initiative.

10. *Are there any other issues to be addressed through a national policy statement?*

The RGFI recommends that emphasis is placed on the socio-economic benefits displacement of fossil fuels through the bioeconomy strategy and circular economy, such as clean air, improved water and soil quality, reduction in health costs associated with air pollutions, sustainability, competitiveness and future proofing our manufacturing & processing industries.