

BIOGAS SUPPORT SCHEME

MOBILISING AN IRISH BIOGAS INDUSTRY WITH POLICY & ACTION

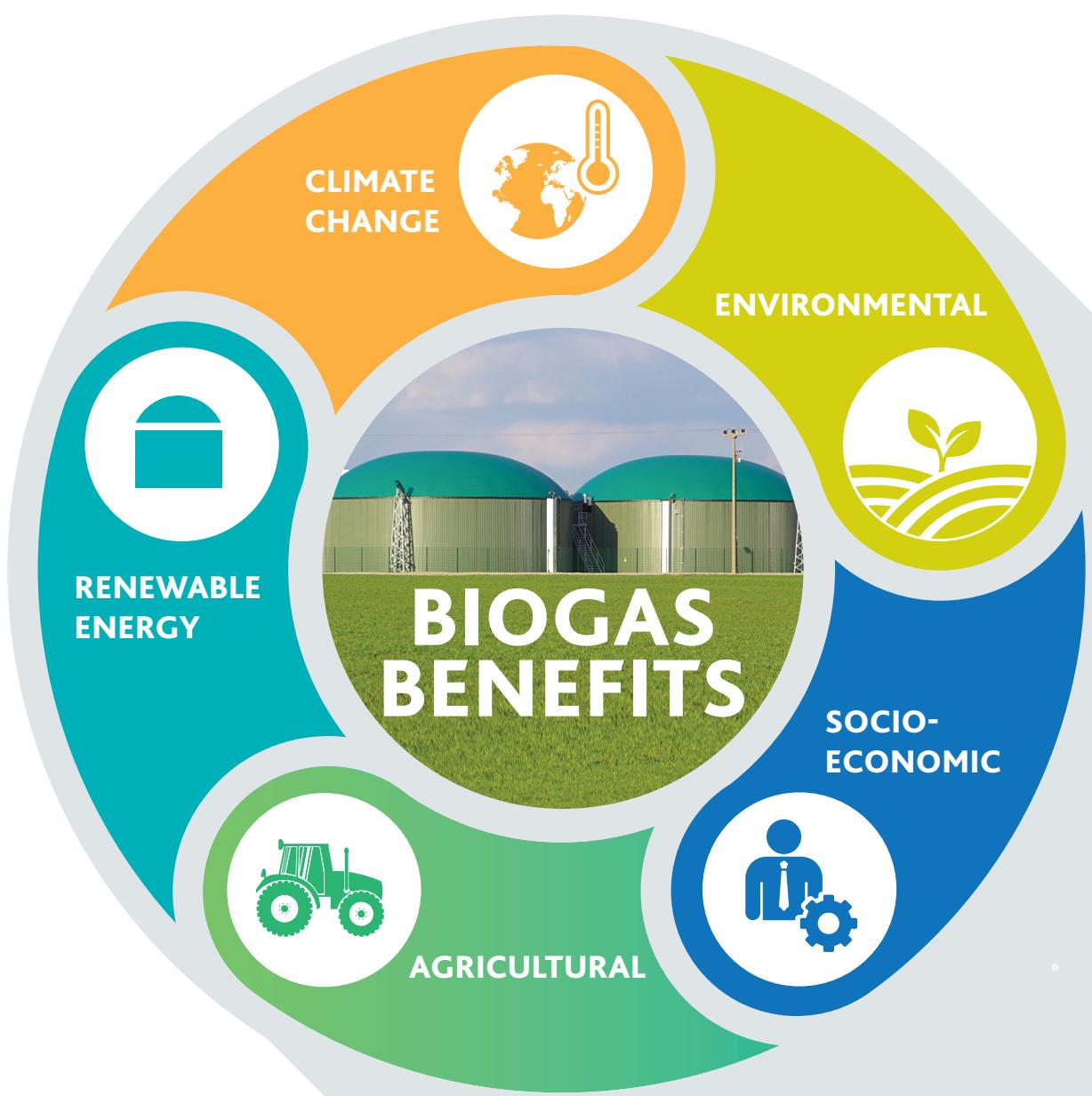




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1 INTRODUCTION / EXECUTIVE SUMMARY

IrBEA & Cré in this policy paper set out our vision for how Biogas, which utilises anaerobic digestion (AD) technology to convert organic waste to energy and fertiliser, can help solve Ireland's Renewable Energy challenge, avoid EU fines, and create a new source of income for farmers.

We propose the introduction of a biomethane support scheme on a phased basis over the short to medium term. The initial phase would support 65MW of biomethane in 2020. This biomethane would be produced in 25 centralised and strategically located medium to large scale biogas plants spread across the country in proximity to the gas grid. Feedstock would vary but primarily focus on agricultural products & residues supplied by farmers and wastes from agriculture industry and catering / food production facilities also incorporated in larger sized plants.

This policy paper advocates that the biogas industry would be developed on a phased basis over a 2-10 year period, through a Government biogas support scheme. Subsequent phases of the scheme would incentivise more biomethane up to a production capacity of 1.6TWh equivalent to 200MW of biomethane production, equivalent to 1.5% of Irelands overall consumption, in the medium term.

This plan when implemented will avoid millions of euros of EU fines imposed on Ireland by closing the 600MW gap in our renewable energy commitments by providing 200MW of renewable gas into the national gas grid¹ through a phased approach over the next number of years.

Our phased approach involves rapidly upgrading our capacity in AD/Biomethane from almost zero to 1.6TWh through development of several medium to large scale production facilities.

Anaerobic digestion technology involves significant capital investment, and substantial ongoing operating costs. The economics of this technology only make sense with increasing scale. There are also technical challenges associated with biogas including the energy required for compression and decompression to transport renewable gas. The costs associated with incorporation of this technology into a larger scale biogas model will be more justifiable in a medium to larger scale installation close to the gas grid compared to a smaller scale facility situated on farm and off grid.

Our figures and costings illustrate in simple terms what is needed to provide a significant level of renewable gas in a reasonable timescale. The technology is proven, and in widespread use across the EU, with one plant (2MW) operating in Kildare, which has capacity to commence gas injection into the grid when a support scheme becomes available.

Each 1.25MW Slurry / Grass biogas plant will require feedstock supplied by farmers equivalent to 240 hectares of grassland per plant per year. In addition to silage and grass, agri industry wastes and food wastes will be utilised in larger biogas plants. The operator of the plants will be paid the market price for natural gas, currently around 3¢/kwh. In addition, a government support payment will be necessary to bridge the gap between the market price for natural gas and the cost of production of biogas. This support will vary from 6c/kwh to 9c/kwh dependant on the scale. The support payment will ensure the biogas operation is financially and economically viable. Similar supports are currently available in the UK and in France³. A significant portion of any Government biogas support payment will return to rural Ireland and the pockets of the farmers supplying the grass and silage feedstock with a grass feedstock base price of €35/ per tonne fresh weight used in the economic analysis and costings.

Concerns over the availability of feedstock are misplaced. We have had a fodder shortage in recent years. A key principle of this document is that the Irish biogas industry needs to be a complementary rather than competitive industry to mainstream agriculture and food production. Ireland has a historical low average yield of grass / hectare compared to the potential which exists for grass production in Ireland that is underutilised today. Teagasc has published figures on how much the average yield could be increased (at least 50%)⁴, and University College Cork (UCC) researchers have published detailed information on how underutilised hectares could be brought into production, particularly in the less intensively farmed areas in the west of Ireland and the midlands⁵. We are satisfied that the

biogas plants proposed will meet the new sustainability criteria in the Renewable Energy Directive 2 (RED II) adopted by the EU⁶.

Currently our agri-food sector is threatened by its GHG emissions, which represent 32% of Ireland's total GHG emission⁷. This plan could reduce this burden⁸, and support Ireland's continuing government commitment to growth in dairy and livestock production.

Our best information indicates that private investors are ready and willing to invest in these facilities, if the appropriate tariff is in place, over a 15-20-year period, as in the rest of the EU. A comprehensive SEAI study on biomethane deployment, published in 2017, supports the need for a support scheme in the scenario we outline⁹.

Job creation will be an added benefit, especially in rural Ireland, with approximately 1200 full-time jobs created if the 1.6TWh capacity is installed and operated¹⁰. These jobs could compensate for the job losses anticipated in the midlands as Ireland moves to stop burning peat for electricity generation¹¹.

This plan has many very significant additional benefits for farming and the environment. By mobilising a large market in grass and silage, the stock held at the biogas plants countrywide will act as a buffer to ensure reliable and adequate supplies of fodder to livestock farmers in a short-lived fodder crisis.

In addition, by mobilising slurry and manure residues, peaking in the spring period, when land is less capable of absorbing slurry, it will protect rivers and watercourses from the risk of nitrogen pollution, and relieve farmers of the worry of excessive slurry levels. Directing the relevant quantities of slurry and manure into biogas plants will have a further benefit of lowering emissions and odour levels associated with land spreading. Denmark already processes large quantities of slurry in biogas plants¹².

The proposed level of renewable gas supplied to the national grid from indigenous sources will enhance Ireland's energy security. It will also meet a need of many global investors in Ireland for a supply of renewable gas to help them meet their social responsibility agenda¹³.

This challenge requires urgent attention, and we are providing a response that can be speedily implemented, with multiple benefits. Although there are many variations possible to this plan we caution against over-analysis at the cost of a loss of valuable momentum.

2 ABOUT IRBEA AND CRÉ

2.1 Irish Bioenergy Association

IrBEA was founded in 1999. Its role is to promote the bioenergy industry and to develop this important sector on the island of Ireland. The diverse membership includes farmers and foresters, fuel suppliers, energy development companies, equipment manufacturers and suppliers, engineers, financiers and tax advisers, legal firms, consultants, planners, research organisations, local authorities, education and advisory bodies – anyone with an interest in the bioenergy industry. IrBEA is recognised by Government and agencies as the voice of the bioenergy industry.

The association's main objectives are to influence policy makers to promote the development of bioenergy, and to promote the interests of members. Improving public awareness, networking and information sharing, and liaising with similar interest groups are other key areas of work in promoting bioenergy as an environmentally, economically and socially sustainable energy. The organisation is a self-governing association of voluntary members and is affiliated to Bioenergy Europe and the European Biogas Association (EBA). The organisation's activities are managed by the CEO assisted by a small executive staff team and is governed by a board of Directors which includes an elected President and Vice President. Policy direction is provided by a Management Executive Committee and specific subcommittees. Further information on the association is available at www.irbea.ie

2.2 Cré - Composting and Anaerobic Digestion Association of Ireland

Established in 2001, Cré is the Composting and Anaerobic Digestion Association of Ireland. Cré (which is the Irish word for 'soil'), is a non-profit association of public and private organisations, dedicated to growing the biological treatment sector. Cré supports the production of high-quality outputs, assists the delivery of Government waste diversion and bioenergy targets, and promotes the creation of sustainable indigenous jobs.

Cré has a broad membership base ranging from compost and anaerobic digestion facilities, waste companies, local authorities, technology providers, local authorities, consultants and third level colleges. Cré is recognised by Government and agencies as the voice of the industry in Ireland and Northern Ireland. It is frequently called on to give the industry view on future policy and legislation. Cré is a member of the European Compost Network, the European Biogas Association and the Biobased Industries Consortium. Cré has a Board of Directors, a Carbon Committee, a Technical Committee, a Public Relations Committee and an Anaerobic Digestion Committee. See www.cre.ie

3 CONSULTATION COMPLETED IN DEVELOPING THIS POLICY PAPER

In developing this position paper, both IrBEA and Cré have consulted with many organisations, stakeholders and companies with an interest in mobilising a biogas industry in the country. The opportunities and potential which exist for the development of a biogas industry in Ireland has been strongly articulated by all who were consulted. Those consulted include:

- IrBEA & Cré members which include biogas producers and developers, technology providers, consultancy and services providers.
- Farm organisation representatives.
- Statutory bodies.
- Semi state organisations.

4 CONTEXT FOR AN IRISH BIOGAS INDUSTRY

Biogas has been a mainstream and mature industry in many European countries for several years. There is great potential for development of a biogas industry in Ireland that would deliver economic, environment and social benefits to the country. Biogas is produced using anaerobic digestion technology to convert organic waste to energy and fertiliser. This energy can be converted to electricity via a combined heat & power unit and exported to the national power grid. Alternatively, the biogas can be upgraded to biomethane which is the focus of this document. This biomethane can be directly pumped into the gas grid and used for heating or as a transport fuel. Biogas plants can be deployed at different scales. Biogas can be produced from a wide variety of feedstock. Feedstock to be used by the industry could include, agricultural residues, domestic & commercial food waste, organic waste from industrial sources, animal manures and grass silage produced for grass grown in less intensively farmed areas. Therefore, AD is a flexible technology which can be deployed at varying scales to suit demand.

The benefits of an Irish biogas industry are clearly articulated later in this document. This document is being developed in the context of the following reports, announcements and policy perspective:

- **National Energy and Climate Plan²⁰ (NECP):** Ireland is mandated to develop and finalise a NECP for submission to the European Commission by December 2019. This NECP will clearly

articulate how Ireland will achieve renewable energy targets by 2030 and sets a target for renewable gas of 1.6TWh.

- **The Renewable Energy Directive²⁴ (RED II)** sets out a target of 32% Renewable Energy by 2030.
- The **National Policy Statement on the Bioeconomy²⁷** was published in February 2018. Biogas has a pivotal role to play in the development of the bioeconomy
- The **Joint Oireachtas Committee on Climate Action: Climate Change - A Cross-Party Consensus for Action²³** report was published in March 2019. Action number 27 calls on the Government to develop a National Strategy for Sustainable Anaerobic Digestion in 2019. Our policy document sets out the strategic roadmap referred to in the committee report and articulates the actions required for the widespread deployment of biogas in Ireland.
- **Agricultural emissions** stand at **32%**⁷ with increasing pressure for this to be reduced.
- The **Government Climate Action Plan²⁵** published in June 2019 sets out a series of actions that will be necessary to reduce emissions and decarbonise all aspects of the Irish economy. This document articulates how the Climate Action Plan target of 1.6TWh of Biomethane injection by 2030 can be achieved on a phased basis. Action 71 in the Climate Action Plan identifies the steps require for biomethane injection.

5 OUR MISSION, VISION AND PRINCIPLES FOR AN IRISH BIOGAS INDUSTRY

This document clearly sets out the mission, vision and principals on which an Irish Biogas industry need to be developed.

5.1 Our Mission

To mobilise a biogas industry in the short term by setting out the clear policy decisions and actions required to realise the potential which exists for an Irish biogas industry.

5.2 Our Vision

In the medium term 1.6Twh / 200MW (biomethane equivalent) of biogas would be incentivised on a phased basis over several years by provision of a biomethane support scheme from government. This document outlines a proposal to support 65MW of biomethane in a first initial phase.

Deployment of 65MW of biomethane supported in a first phase will diversify land use, create 400 jobs, abate 500,000 tonnes of CO₂ annually, develop the agricultural circular economy, develop closed nutrient loops, reduce greenhouse gas emissions across many sectors including agriculture, transport, heat and electricity, sustainably intensify agriculture and sustainable waste management and develop the bioeconomy.

5.3 Our Principles / Values

For a successful biogas Industry to be developed in Ireland there are several key principals which must be considered including:

- That biogas produced fulfils the **sustainability criteria** as set out in the RED II directive.

- Biogas is the **only full dispatchable renewable energy** that can assist in addressing our **RES E, RES H and Res T renewable energy targets**.
- Biogas can assist in **addressing the climate change challenges** we face by **decarbonising** and **improving the environmental sustainability** of transport, energy production, and agriculture with green gas.
- Everyone along the **supply chain** must **benefit** and receives a **fair return** from the industry. This includes everyone from the supplier of agriculture-based feedstock to the biogas producer.
- That a biogas industry is a **complementary industry** rather than a **competitive industry** to mainstream productive **agriculture and food production**.
- That **biogas plants** supported through a government biomethane support be **geographically and strategically spread** around the whole country. The deployment of manure/grass silage plants must initially focus on farming areas where the feedstock required is more readily available, typically in less intensively farmed areas.
- **Biogas technology is expensive** when compared to other renewable energy technologies. **Comparison** of biogas with other renewable energy technologies must consider the multiple **economic, environmental and social benefits** of biogas.
- Biogas as a **fully dispatchable renewable energy** delivers more than just energy. The **cost benefit analysis** should incorporate **these additional benefits** which when spread across **many government departments** reduce the overall cost **significantly**.
- **Training and upskilling** of all stakeholders will be a key component and requirements in the role out of the industry.
- That **reliable, proven, certified and tested technology** will be used with a proven track record of existing plants operating.
- That there would be **clarity around the planning process** for biogas developments to minimise any **disconnect** that may exist between a **local authority climate change / renewable energy policy** and the **concerns of the general public**.
- That planning best practice be promoted through a **planning guidelines document** which sets out minimum standards.
- Need to improve the **knowledge, awareness and understanding** of biogas amongst the **general public and local elected representatives** to dispel some of the myths which currently exist about biogas.
- That appropriate **community engagement** takes place and mechanism be identified to support **local community** and **community facilities**.
- That any **supports** to biogas would be dedicated to those in the **Non ETS emissions sector**.
- That the **national resource** that is the **national gas grid be utilised** more through increasing the amount of **biogas injected** into the **gas network**.

6 VISION FOR THE SIZE AND SCALE OF THE INDUSTRY

IrBEA and Cré promote and articulate a vision for two distinct sizes and scales of biogas industry in Ireland in the short to medium term.

6.1 Small scale - Farm Scale (20KW - 1.0MW biomethane output)

IrBEA recently secured a Department of Agriculture Food and the Marine (DAFM) European Innovation Partnership (EIP)²¹ Project. This small biogas demonstration project will determine over the next 4 years if small scale on farm AD is viable in Ireland where feedstocks and an energy demand exist on the farm. This project will provide capital grants for up to three farmers to develop small scale AD facilities on their farms. The objective is also to show the reduction in the carbon footprint and improvements in overall sustainability of each farm by using the on-farm feedstock to produce energy which would have been produced originally from fossil fuel derived sources. Specific policy provisions will need to be made to support small scale farm level AD. Small farm scale biogas is not the focus of this policy document.

6.2 Medium to Large Scale (≥ 1.25 MW biomethane output)

This document clearly articulates a model for medium to large scale biogas plants to be developed in Ireland. The size and scale of the plants developed would be from 1.25MW-biomethane and above depending on feedstock. These plants would be developed by the private sector or existing or new Co-operatives. They would be centrally and strategically located across the country for widespread use of renewable gas in the electricity, heat and transport sector. The agricultural feedstock and residues could be mobilised and supplied through the existing Co-operative network or through private company structures which contract with the farmers and industry to collect feedstock for supply to the biogas producers and return the digestate as an organic fertiliser to the farms located nearby.

7 BIOGAS COMPLEMENTING FOOD PRODUCTION AND ADDRESSING AGRICULTURE EMISSIONS

Ireland is a renowned food producing country and an Irish biogas industry would act as a complementary industry to food production rather than a competitor. Initially we believe that the manure/slurry biogas plants should be established in the less intensively farmed. There is more scope for increase in grass production in these areas compared to more intensively farmed regions.

Grass feedstock would be produced from increased grass production and improved soil fertility on farms and not compete for existing grass supplies.

Biogas offers significant potential for less intensive farmers to improve their overall farm profitability. There are currently approximately 80,000 beef farmers and 20,000 dairy farmers in the country, the Teagasc farm survey shows only the top 3rd are sustainable with a high proportion not sustainable. Biogas is the best renewable energy option for greening and reducing the carbon footprint of Irish agriculture.

Biogas assisting farmers in a fodder shortage.

- A biogas industry can act as a reserve for grass silage feedstock and in times of a short-lived fodder shortage part of this reserve could be re-sold back to farmers to assist in times of a fodder shortage with the biogas facility reserve regenerated by farmers once the crisis has passed.

Feedstock through increased grass production.²²

- The average grass production in the country is 7.5 tonnes (dry matter) / hectare. The top farmers in the county are achieving over 14 tonnes (dry matter) / hectare. The supply of grass required for a biogas industry would come from this potential increase in grass production and not from existing stocks.
- Slurry is widely available across the country.

Availability and mobilisation of grass/manure feedstock

- Feedstock to be used by the industry could include agricultural residues, domestic & commercial food waste, organic waste from industrial sources, animal manures and grass silage. The agricultural sourced feedstock can be mobilised through special trade centres operated by existing businesses or the existing co-operative movement at their facilities which are geographically spread across the country. These existing Coop facilities include livestock marts, dairy processing coops or agricultural retail outlets. In the medium term new private business or new Co-operatives could be established to service the biogas industry with feedstock through dedicated biomass trade centres. These centres would contract with farmers to source feedstock and act as an intermediary between the feedstock source and the biogas facilities for the supply of feedstock and return of digestate to the farmers for land spreading.-

Promoting the agricultural circular economy.

- The spreading of digestate back on land that has produced grass offers the potential for a closed loop system.
- The digestate produced can substitute for chemical fertiliser thus further improving the emissions reduction potential a biogas industry has for the agriculture sector.

8 BENEFITS OF A BIOGAS INDUSTRY TO IRELAND

A biogas Industry can deliver many cross-sectoral environmental, economic and social benefits. These benefits are spread across many government departments including: Department of the Taoiseach, Department of Agriculture, Food and the Marine, Department of Communication, Climate Action and the Environment, Department of Rural and Community Development, Department of Transport, Tourism and Sport, Department of Business, Enterprise and Innovation and the Department of Housing, Planning and Local Government. This section outlines the many benefits a biogas industry can deliver including:

8.1 Economic Growth and Jobs.

- Mobilisation of an Irish biogas Industry would provide jobs and economic growth and activity in rural Ireland.
- A 2014 European Biogas Association Report shows 68,500 jobs in the EU biogas industry and the sector produces 11,539 MW of biogas. This means that for every MW 5.9 jobs are created.¹⁷

8.2 Abate CO₂ Emissions.

- The proposed 65MW of biomethane support in an initial phase will result in the abatement of 500,000 tonnes of CO₂. ¹⁵ This figure was calculated by Dr Jan Stambasky in a report¹⁵ commissioned by IrBEA and Cré in 2017. A more detailed study will be required in the Irish setting to fully validate his assumption.
- A biogas industry in Ireland should be acknowledged as a climate mitigation technology where an amount of CO₂ equivalent savings increases approximately 6× quicker compared to other renewable energy options.¹⁵

8.3 Renewable Energy Targets.

- Biogas is the only renewable energy that can assist in meeting all our renewable energy targets across electricity, heat and transport.
- Provide a stable baseload to the transmission network.
- Assist to diversify the fuel mix.

8.4 Decarbonisation of the gas grid and energy security.

- By using biogas, the gas grid could be decarbonised through the injection of biomethane onto the grid to displace fossil fuel gas.
- Biogas when incorporated into the gas grid can assist with helping Ireland's energy security.
- Many FDI companies and large corporates require access to renewable gas from 2020 onwards.

8.5 Agriculture and Farming

- Reduction in agriculture greenhouse gas emission through improved use of slurry resources.
- Production of a bio fertiliser (digestate) produced in the biogas production process.
- Provide a land use option for currently unproductive land to grow grass for incorporation as a feedstock.
- Reduction in the use of chemical fertiliser, emissions of ammonia and phosphate and its replacement with digestate.
- An abundance of feedstock is available from agriculture residues which would provide a better return to the farmer to complement existing farm enterprises.
- Improved nitrogen availability through the digestion of livestock slurry will typically increase availability of the nitrogen in the slurry, improving the value of the material as a fertiliser. This can be particularly beneficial in organic farming where inorganic fertilisers are not used and recycling of nutrients in farm waste materials is therefore at a premium.¹⁴
- Improved biodiversity and biosecurity due to the lower pathogen loading in digestate compared to slurry.¹⁴
- Reduce odours from slurry spreading as the concentration of odour in the air is significantly lower when digestate, instead of untreated slurry, is applied on the fields.¹⁴

8.6 Transport Emissions.

- Biomethane can be used as a transport fuel.
- Biomethane can be recognised as a biofuel and receive incentives.
- Assist in the decarbonisation of our transport fleet using biomethane for our major transport fleets.
- Biomethane used in Transport with a carbon intensity of 18 grams of carbon dioxide (CO₂) equivalent per megajoule (MJ), represents a greenhouse gas (GHG) saving of 78 percent due to the replacing fossil fuels.¹⁹

8.7 Sustainable Waste Management

- Ireland has onerous EU and national waste management and recycling targets. Biogas can help achieve these targets by offering an environmentally sustainable outlet for organic wastes that might otherwise be directly land spread or disposed to landfill.

8.8 Water Quality.

- Improvements in water quality through the utilisation of digestate²⁸, which is an easier absorbed product for the plant rather than raw slurry.
- This will result in less leaching to groundwater and lower runoff to watercourses particularly in the spring period when slurry volumes are large and land absorption capacity is at a minimum, thereby reducing nutrient enrichment of streams, rivers and lakes.

9 BIOGAS SUPPORT REQUIRED

There are a number of possible actions required by the Government to stimulate a phase approach to develop a biogas sector in Ireland. The proposed level and deliverables are outlined in the table below.

65MW biomethane (Equivalent to 25MW electrical AD- 50% of budget for REFIT 3)

Type of Plant	Size of Plant (MW)	Number of Plants Over Next 5 years	Rate (x cents) Support Required
Manure/Grass Silage	1.25*	17	9
Agri Food Industrial	4	5	7
Food Waste	8	3	6

Job Creation	c. 400
Budget Required	40 million
Potential Carbon Dioxide Savings per Year	c. 500,000 tonnes

10 IMPLEMENTING A BIOGAS SUPPORT THROUGH A PHASED APPROACH

This document proposes the development and support of 1.6 TWh (200MW Biomethane) of biogas over the medium term through a phased approached.

The Initial phase would begin in 2020 with 65MW of biomethane incentivised.

This support would require a budget of €40 Million.

This support is based on the deployment of 25 plants of various size and feedstock as outlined in the table in section 9 including:

- 17 number 1.25MW plants taking slurry/manures and grass/silage.
- 5 number 4MW Agri Food industrial style plants taking ag industry waste, food waste, slurry/manures and grass/silage.
- 3 number large scale 8MW plants taking food waste.

Future delivery will be required through a number of additional phases to reach the 1.6 TWh biogas target which will be achieved by 2030 but could be achieved by 2025 with the necessary supports.

** for the manure/grass plants the approximate grassland needed is 240 hectares per plant/year.

11 GOVERNMENT OPTIONS FOR FUNDING A BIOGAS SUPPORT

Funding Option - Public Service Obligation Levy on Fossil Gas to create a Biogas Fund:

The Public Service Obligation (PSO) levy, is a Government levy that is currently charged to all electricity customers in Ireland. The money collected from the PSO levy is mainly used to subsidise and support renewable and indigenous electrical energy generation in Ireland. A PSO levy on fossil fuel-based gas could be used to provide a budget for the rollout of a renewable gas support scheme.

Funding Option - Whole of Government Approach to create a Biogas Fund:

Considering the multiple benefits of a biogas industry across many government departments a biogas tariff could be funded through whole of Government approach with a financial contributions from the budgets of the following seven Government Departments: Department of the Taoiseach, Department of Agriculture, Food and the Marine, Department of Communication, Climate Action and the Environment, Department of Rural and Community Development, Department of Transport, Tourism and Sport, Department of Business, Enterprise and Innovation and the Department of Housing, Planning and Local Government.

Funding Option - Ring fencing Carbon Taxes for a Biogas Industry:

Carbon tax is a topical issue at present. Incremental increases in carbon tax will generate revenue for the Government over the next number of years. Some of this tax revenue could be ringfenced to create a budget to fund a support scheme for renewable gas.

Other Funding Options which could be considered:

- **Tax breaks** could be offered to biogas plant developers to offset the capital investment costs involved in constructing a biogas plant.
- The **Biofuels Obligation Scheme** which insists on the mandatory inclusion of biofuels in fossil fuel petrol and diesel mixes could be extended to incorporate biogas inclusion in gas used in the transport system. Biomethane for transport will qualify for a double or triple factor. This cannot be confirmed until an application is made to the National Oil Reserve Agency (NORA). For biomethane to be used in the Transport industry – fuelling infrastructure will have to be greatly increased. Gas Networks Ireland have plans as part of the Causeway project to roll out 70 Compressed Natural Gas (CNG) refuelling stations²³.
- The **Support Scheme for Renewable Heat (SSRH)** tariff system could be extended to accommodate larger scale plants who produce heat for large scale users.
- Government support for a **low interest loan scheme** similar to what has been rolled out in agriculture to assist in reducing the capital cost and interest rates associated with the capital development.
- Provision in the **Renewable Electrical Support scheme (RESS)** for biogas through a biogas specific technology specific target.

12 ROADMAP AND KEY ACTIONS REQUIRED TO MOBILISE AN INDUSTRY

Number	Action Required	Responsible
1	Support scheme require to support the roll out of a biogas industry on a phased based over the short to medium term.	Whole of Government approach required to fund this support considering the cross departmental benefits a biogas industry presents.
2	Connecting to the gas grid or electricity grid will be an essential consideration for widespread deployment of a biogas industry.	ESB Networks for electricity connections. Gas Networks Ireland for the gas network. GNI to confirm their proposal including timelines and locations for construction of the proposed 17 gas grid injection points.
3	Access the high cost of finance to fund biogas developments by working with the European Investment Bank to develop a low interest loan scheme for the industry to reduce the cost of borrowing and interest rates payable. This would reduce the overall capital investment cost in developing a biogas plant.	Government, Strategic Banking Corporation of Ireland (SBCI) and European Investment Bank (EIB) in Ireland.
4	Mobilisation of feedstock - Industry and stakeholders to come together to discuss how feedstock can be mobilised for a biogas Industry.	Industry including – IrBEA, Cré, waste companies, farm organisations, biogas developers, ICOS, Teagasc and the existing Co-operatives.

13 CONCLUSION

The development of a meaningful biogas Industry offers Ireland the opportunity to plan our journey towards decarbonising the Irish economy, improving the environment and economic sustainability of Irish farming and making the transition from fossil fuels to more renewable energy sources. Our document focuses on the untapped potential which exists through the development of the Irish biogas Industry. We believe that renewable bioenergy sources such as biogas offers huge opportunity and potential in the drive towards reducing carbon emissions and addressing climate change and renewable energy targets.

This document provides a roadmap for the deployment and mobilisation of an industry in the short term. We identify further measures that need to be implemented to reduce non-ETS emissions and achieve ambitious renewable energy targets.

Many EU members states have embraced the use of biogas many years ago and Ireland need to urgently follow suit. Ireland needs to use the best practice and knowledge available from other EU member states to drive the biogas sector here. Meaningful policy interventions at a government level that support investment and production of biogas is immediately required.

Climate action is not only a challenge but also a considerable opportunity for Ireland to become a leader in this space. We are in real danger of losing our green image with the lack of action by the government over the past 15 years. Many long-term plans and targets have been set and missed. Biogas can play its part in RES targets for 2030 if the industry is mobilised now.

The skills & resources needed for the mobilisation of the biogas industry here offer immense potential in terms of jobs and economic activity. The skillsets and personnel required to advance the industry are closely matched to those that will become available from scaling back on fossil fuel reliance. Ireland has a natural advantage in its people and in its resources, none more-so than our ability to grow feedstock for biogas better than most other countries around Europe or the World. There are real opportunities to develop the full potential of Ireland's biogas sector by local job creation, fuel cost reductions, enhancing Irelands energy balance of trade as well as the obvious and vital reduction in carbon emissions in Agriculture and Transport.

IrBEA and Cré as the representative bodies for the biogas sector in Ireland, look forward to working with the Government in removing the roadblocks which exist in the development of the Irish biogas sector. We want to ensure Ireland becomes a leader in responding to renewable energy generation, climate change and reducing emissions by developing and realising the potential of the Irish biogas sector and lobbying for the policy changes that are needed to allow this potential to be realised.

14 REFERENCES AND SUPPORTING DOCUMENTATION

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