



## Opening statement from PJ McCarthy, CEO of Renewable Gas Forum Ireland (RGFI).

**5 July 2022.**

### **Introduction**

On behalf of RGFI, we would like to thank the Chair, Deputy Leddin, and the Members for inviting us to address the Committee today.

Renewable gas, biomethane, is produced when organic materials, such as slurry and crop residues, are broken down in an anaerobic (oxygen free) environment, such as in an anaerobic digester.

RGFI is a not-for-profit forum which aims to work with government and decision makers on a consultative and constructive basis, with the purpose of establishing suitable market conditions to enable the growth of an indigenous, AD biomethane industry. Our membership includes: scientists; AD operators; community organisations, shippers and industrial gas consumers with high thermal demand for manufacturing and processing, such as the agri food and transport sectors.

As the lead partner for REGATRACE in Ireland, since 2019 we have collaborated with key public and private stakeholders to develop an agreed vision and roadmap for AD biomethane in Ireland, that will inform the REPowerEU plan.

Today we are asking the Committee to support the development of a scalable and sustainable indigenous Anaerobic Digestion Biomethane industry, which we have demonstrated can provide significant environmental, social and economic benefits to the national bio economy, all aligned to the European Green Deal, Farm to fork, REPowerEU as well as the Irish Government's stated climate actions, as well as energy security ambitions.

## Europe

The European Commission announced in March 2022 that it will accelerate the roll-out of renewable gases in its plan to move Europe towards independence from Russian fossil fuels by 2030, and to respond to rising energy prices, storage, and security of supply. The EU target for biomethane production by 2030 will increase to 35 billion cubic metres (bcm) (350TWh), from sustainable feedstocks, such as agricultural biodegradable materials. RGFI, as board members of the European Biogas Association (EBA), has been lobbying for an increased ambition and security of supply across Europe for many years, with recent intensified talks in consultation with EU and national governments. The measures within the REPowerEU plan, could gradually 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. RGFI was recently appointed Chair the EBA National Associations Platform – which is a member of the Biomethane Industry Partnership, the new Joint Secretariat with the EU Commission on AD biomethane and in this capacity, we will continue to represent the Irish interests.

## Irish Context

Ireland lags well behind other EU member states in not having policy and legislation to support the establishment of an indigenous biomethane industry. In recent years RGFI has worked with industrial gas consumers to develop an Integrated business case for biomethane in Ireland, achieve stakeholder and government recognition, policy and legislative support for biomethane, bio-fertiliser production and the Carbon Farming Initiatives.

With our grass based agricultural systems and ready availability of sustainable forage (silage) as well as animal slurry feedstocks, Ireland is particularly suited

Joint Oireachtas Committee on Environment and Climate Action – RGFI 5 July 2022.

to the production of sustainable biomethane and bio-fertiliser production.

Recent research from Teagasc has confirmed the availability of 2 -4m tonnes of sustainable feedstock for AD biomethane and shows how a move to mixed species sward pastures can further improve the sustainability of renewable energy value and environmental benefits, with approximately only 2% of land required for sustainable feedstock supply and 735kHa of under-utilised permanent pasturelands available for use to grow incremental sustainable agri feedstock to supply an indigenous and sustainable AD biomethane industry.

Momentum is gathering in Ireland to embrace sustainable indigenous biomethane and related bio-fertiliser production a zero-carbon product and use, to help meet decarbonisation targets in difficult to decarbonise sectors of thermal demand, agriculture, and transport, within a new policy and legislative framework. We see evidence of strong industrial consumer demand, based on collaboration, - an example being Project Clover, an industry led dairy industry collaboration on AD biomethane, biofertilisers and carbon farming .

Project Clover has reached the conclusion that sustainable agricultural feedstock based, AD biomethane, bio-fertiliser production and Carbon Farming utilising best practices in Renewable Energy Directive III, Paris Agreement, IPCC guidelines in Monitoring, Reporting and Verification (MRV), , is the only commercial, practical, and technically feasible and viable way for industry to decarbonise its food production, and thermal demands for manufacturing and processes. The Project Clover members have stated their commitment to work closely with farmer producers, developers, and key stakeholders to establish a network of national AD biomethane plants utilising sustainable agricultural feedstock, and management of animal slurry. The proposal is to develop a number of AD plants that would pilot the use of sustainable forage such as multi species swards and animal slurries and develop the commercial proposition for bio-fertiliser production and carbon farming based on standardised principles.

Project Clover would also be central to the development of a related AD Charter underpinning biomethane and bio-fertiliser production with environmental and social sustainability principles.

Heavy Goods Vehicles Transport has been identified as the other main market for the economically viable use of biomethane to decarbonise the HGV sector. In the last decade, the number of CNG/LNG trucks on the European road network has increased sharply and the first ships with gas engines have been developed.

The Project Clover Feasibility Report has been informed by professional independent advisory services from KPMG and a series of comprehensive Reports since 2019, providing independent analysis of science-based targets, full economic assessment, and cost benefit analysis, in compliance with the Public Spending Code.

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 benefits. This would have reducing carbon emissions (c 700kt CO<sub>2</sub> pa), capture carbon in soil (carbon farming), and improve biodiversity, air, and water quality (reducing nitrates run-off). And as the price of carbon continues to rise, it supports the business case, can only strengthen AD biomethane, as a central enabler to climate neutral farming.

It would, at the same time, provide farmers with a diverse, reliable 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 agri food and drinks, manufacturing and processing industries. It is projected to create 3,000 sustainable jobs across rural Ireland.

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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.

## Policy asks

The key new policy required is the implementation of *Article 23 RED II by 2023*, which would see the introduction of a Renewable Heat Obligation (RHO) scheme to socialise the cost of biomethane production. RGFI / Project Clover industry led collaboration members have been very proactive in urging government to introduce an RHO as early as possible and welcomed the opportunity for public consultation in October 2021 and the inclusion of the RHO within the Climate Action Plan 2021. A Government announcement on the RHO is expected this summer, however timing is of the essence given the imperatives around both sustainability and energy security requirements.

Subject to Government approval, RGFI and Project Clover have secured €24 million in funding from the Ireland Strategic Investment Fund (ISIF) subject to commercial terms and conditions to help finance the development of an initial pilot phase of eight 20-gigawatt-hour anaerobic digester plants.

However capital funding supports are necessary to establish the sustainable agricultural feedstock AD plants and the *Climate Action Plan 2021* presents a number of potential options for capital funding that could be applied, targeted at helping industry to decarbonise, and supporting sustainable, regenerative agricultural practices that will decarbonise agriculture and food production.

Industry is ready, willing, and able to play its part in the proposed Integrated business case for biomethane and in support of the transition to carbon neutrality. However, having the right market conditions to support a scalable, renewable agri based biomethane industry is essential if we are to remain competitive and sustain economic activity

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What we are asking of Government and this Committee is:

- **Declared policy support for the long-term strategy and roadmap of National Biomethane Strategy, e.g. Project Clover.**
- **Implement the Renewable Heat Obligation Scheme by 2023- with a biomethane target of 11% by 2030.**
- **Capital funding of €24m for a pilot scheme to 2025 and capital funding for full roll out to 2030.**
- **Consultation on the optimum economic and environment beneficial structure for a national carbon farming initiative**

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ends

# AD biomethane – Roadmap for Ireland

## July 2022



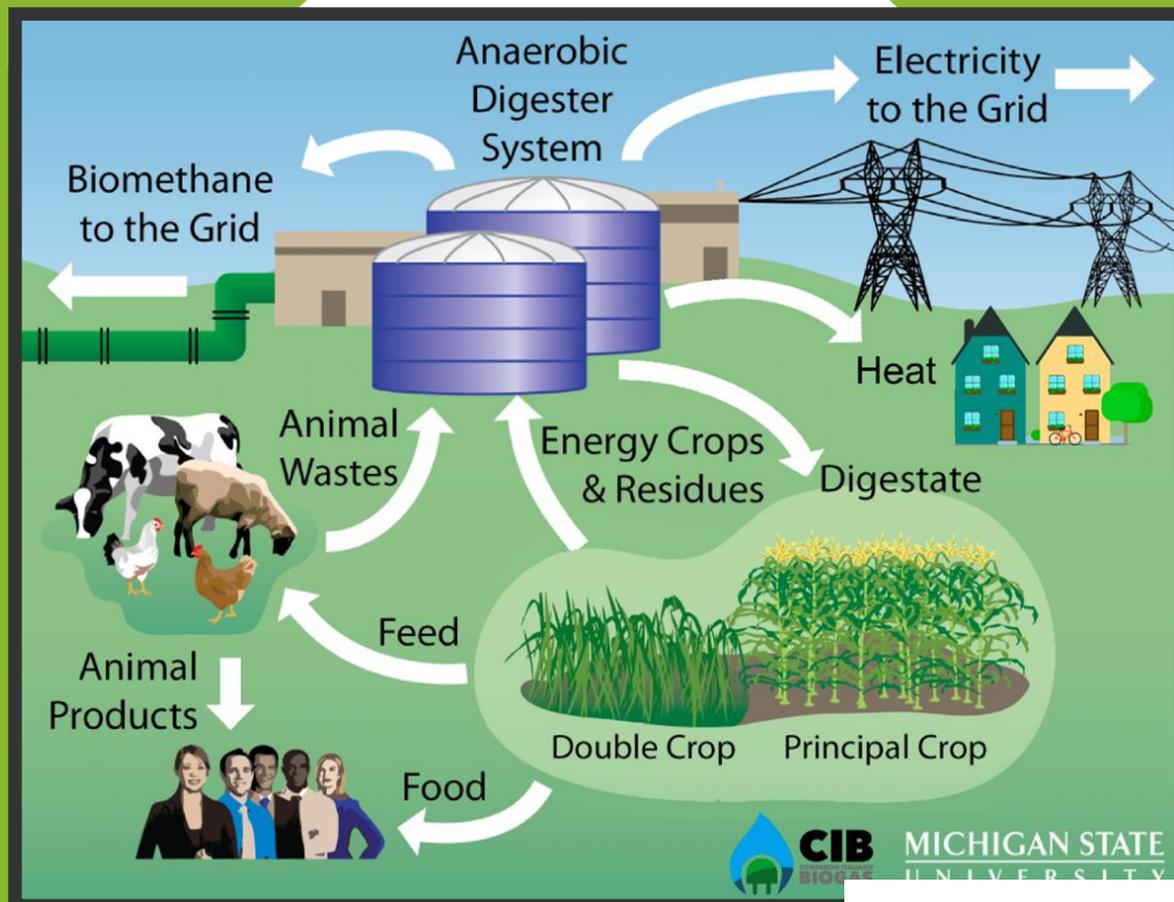
RGFI presentation to the Joint  
Committee on Environment and  
Climate Action



Oireachtas Joint  
Committee  
Environment and  
Climate Action

RGFI

AD biomethane – Roadmap for Ireland



Renewable Gas  
Forum Ireland

# RGFI - EUROPEAN REPRESENTATION

- Board of the European Biogas Association (EBA) + 200 members from across Europe.
- Chair of National Associations Platform – member of the Sustainable Biomethane Alliance, a new Joint Secretariat with the EU Commission on biomethane.
- Board Member of the European Renewable Gas Registry (ERGaR)
- Lead partner for REGATRACE in Ireland, and since 2019 has collaborated with key public and private stakeholders to develop an agreed vision and roadmap for biomethane in Ireland.



**REGATRACE**

Renewable Gas Trade Centre in Europe



**EBA**

European Biogas  
Association



**REPowerEU: Joint European  
action for more affordable,  
secure and sustainable energy**



# Drivers

## **Economic**

- ✓ Decarbonise supply chain and processing, significant contribution to 30% carbon reduction targets by 2030
- ✓ Contribution to sustainable energy security
- ✓ Sustainable organic food production
- ✓ Demand from farmers for policy to support carbon neutral farming
- ✓ Agroecology and Ari Tourism opportunities
- ✓ Regional initiative supported by National AD Biomethane Strategy
- ✓ Decarbonise supply chain and processing, significant contribution to 30% reduction by 2030
- ✓ Sustainable diverse income from bioeconomy for farmers

## **Environmental**

- ✓ Farmers are central to emissions reduction and mitigation
- ✓ Reduce emissions in agriculture
- ✓ Improved air and water quality
- ✓ Enhanced biodiversity
- ✓ Supporting Agroecology

# Project Clover Overview

*Fully integrated, sustainable feedstock to help decarbonise the manufacturing & processing sector*

## Workstream 1

*Development of an indigenous Irish Biomethane Industry*

Development of an industry led scheme to support the establishment of an indigenous biomethane industry in Ireland supplying decarbonised gas into the food supply chain

## Workstream 2

*Organic Fertiliser*

Development of a commercial proposition to monetise organic materials, including the by-products of anaerobic digestion, as an organics fertiliser in line with the Farm-to-Fork objectives including displacement of chemical fertiliser

## Workstream 3

*Soil Carbon Sequestration*

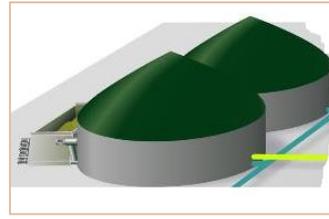
Work alongside existing scientific research into soil carbon sequestration to commercialise the significant, currently unquantified, carbon sequestration benefits of Irish farming and utilise this to offset carbon production in the food supply chain

- **2.5TW biomethane by 2030 – 125 farm AD plants (17% industrial heat demand)**
- **Current level of ambition c. 800 kt CO<sub>2</sub> decarbonisation per annum by 2030**



# Project Clover initiatives include transition to multi-species swards

Demonstrated on Devenish Lands at Dowth, a Global Lighthouse Farm



## Sustainable Feedstock for animal feed and AD systems (co-digestion)

- **Multi-species** grasses, herbs and legumes – natural and complimentary to the Irish environment
- **Flowering** – aids biodiversity of insects and birds
- **Drought and flood resistant** – climate change resilient due to varied root structure
- Requires **c.70% less Nitrogen fertiliser** – reduction in chemical fertiliser demand
- **Up to 80% more T DM/ha output** than average farm production today
- Potential for **higher nutrient and energy value** than ryegrass alone
- **Deep rooting** – enhances soil carbon sequestration and soil biodiversity
- Suitable for **dairy, cattle and sheep** grazing grassland as well as **tillage** crop rotation

# Alignment with EU and national policy agendas



Alignment of Project Clover to Farm to Fork goals	
Ensure food production has a <b>neutral or positive environmental impact</b> .	Fully aligned
<b>EU Carbon Farming Initiative</b> . Implement new green business models that remove CO <sub>2</sub> from the atmosphere.	Fully aligned
Promote a <b>circular bio-based economy</b> .	Fully aligned
Reduce <b>pesticide use</b> and <b>excess nutrients</b> in the environment by 2030. Includes a <b>50% reduction in nutrient losses</b> without reducing soil fertility and a <b>20% reduction in fertiliser use</b> .	Fully aligned
Increase the proportion of <b>organic farming</b> to 25% by 2030.	Fully aligned
Implement a <b>sustainable food labelling framework</b>	Partially aligned

Alignment of Project Clover to Programme for Government goals	
Seek reforms to CAP to reward farmers for <b>sequestering carbon</b>	Fully aligned
Continue to support farmers to embrace farming practices that are <b>beneficial environmentally</b> , have a lower carbon footprint and better utilise and protect natural resources	Fully aligned
Encourage investment in <b>renewable infrastructure</b> on farms	Fully aligned
Explore opportunities for farmers from <b>anaerobic digestion</b>	Fully aligned
Deliver an incremental and ambitious reduction in the use of <b>inorganic nitrogen fertiliser</b> through to 2030	Fully aligned

Alignment of Project Clover to Ag-Climate	
<b>Action 1</b> reduce chemical nitrogen use to 325,000 tns by 2030	Fully aligned
<b>Action 9</b> - Increase organic production to 350,000 ha by 2030	Fully aligned
<b>Action 12</b> – promote a sustainable bio-economy in agri-food	Fully aligned
<b>Action 17:</b> Develop a pilot scheme in relation to on-farm carbon trading	Fully aligned
<b>Action 20:</b> : Engage with stakeholders to maximise the potential opportunities from Anaerobic Digestion for the agriculture sector	Fully aligned

Fully aligned

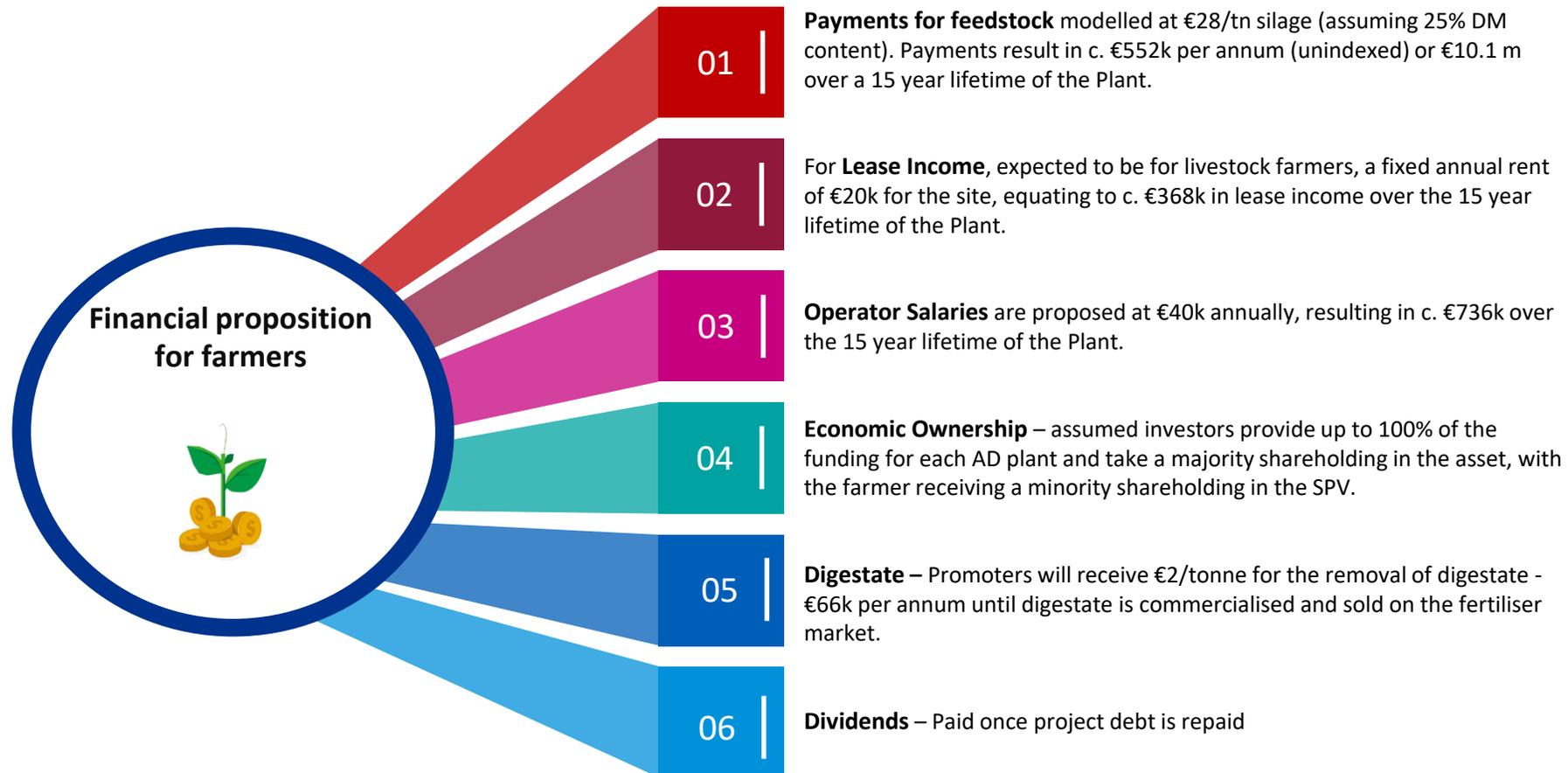
Partially aligned



# Project Clover - Farmer Economics



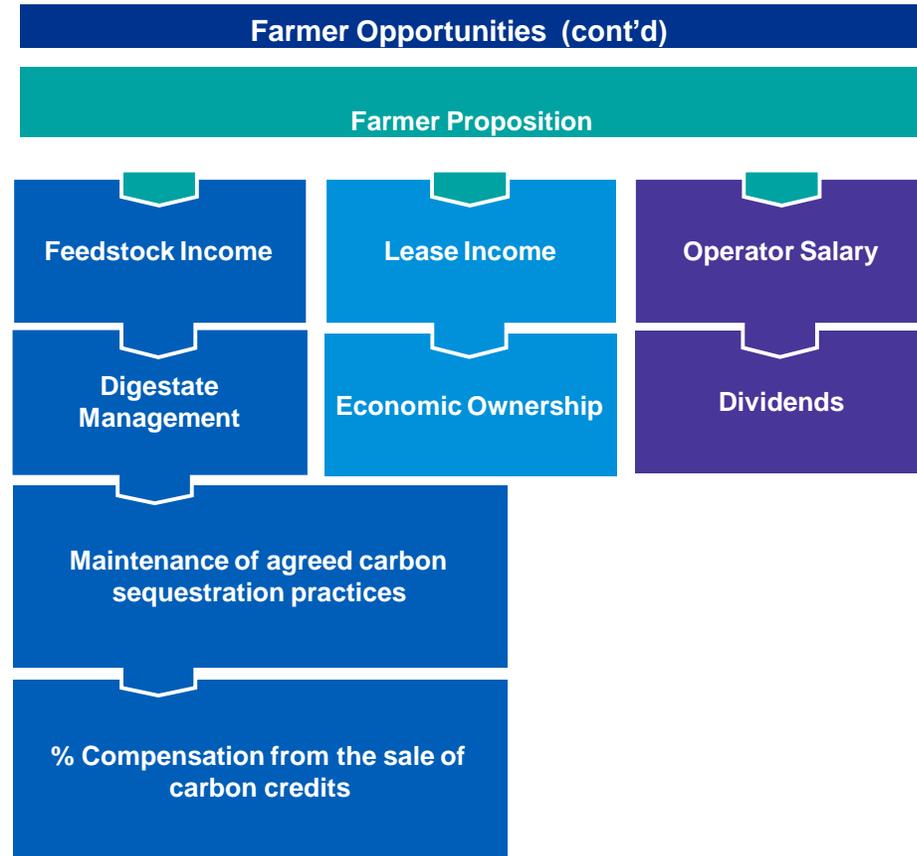
A key finding from engagements with Promoters and feedback from AD projects in NI, is the need for the farmer/ Promoter to be incentivised in the Project. As such, the commercial structure outlined below will allow the farmer/ Promoter to have 'skin in the game' which should help support a high performing AD plant.





# Farmer Benefits

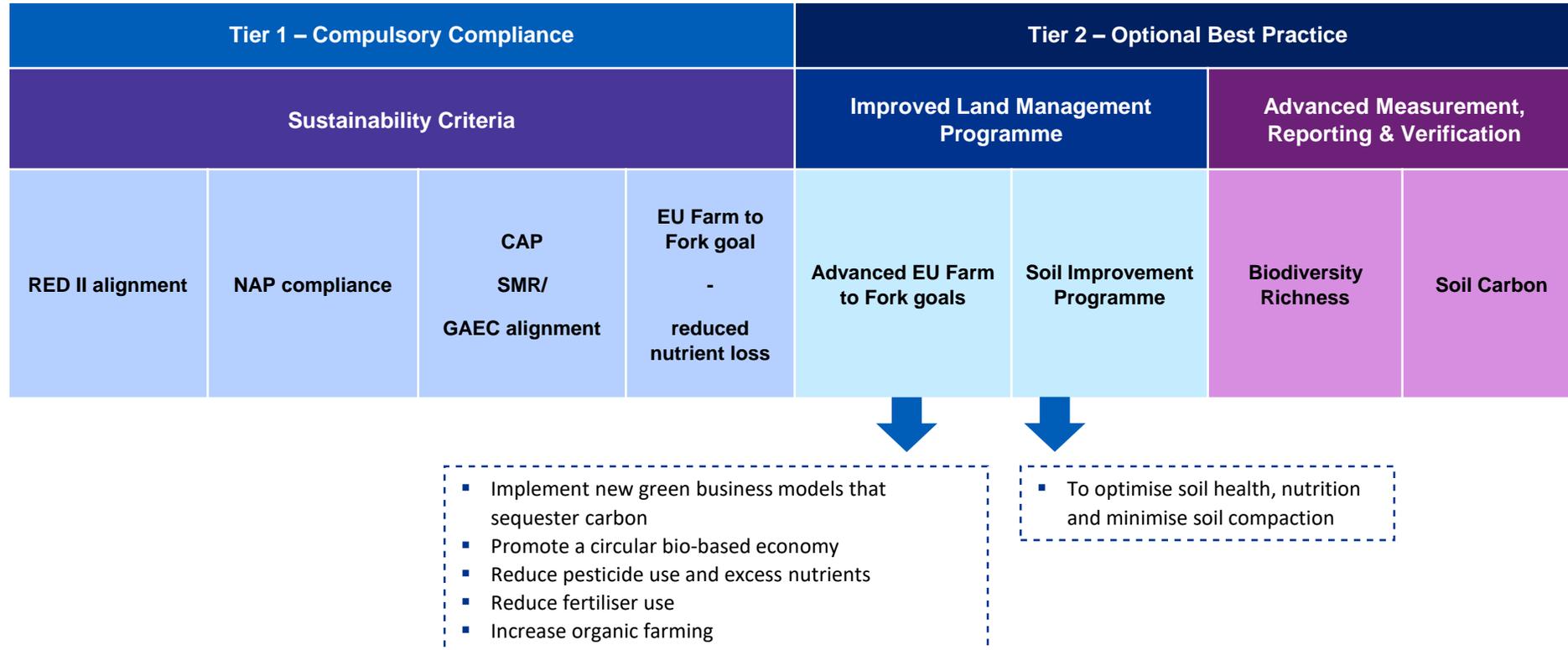
	Farmer Opportunities
<b>Feedstock Income</b>	<ul style="list-style-type: none"> <li>The farmer enters into a medium-long term agreement to provide up to 100% of the feedstock requirement for the AD plant.</li> <li>The farmer guarantees feedstock obligations to a reasonable cap.</li> <li>The farmer may be required to provide financial guarantees over the performance of the feedstock contract.</li> </ul>
<b>Lease Income</b>	<ul style="list-style-type: none"> <li>The farmer provides the AD plant site.</li> </ul>
<b>Operator Salary</b>	<ul style="list-style-type: none"> <li>The farmer will be responsible for the day to day operations of the plant, supported by a third party maintenance and support company.</li> </ul>
<b>Digestate</b>	<ul style="list-style-type: none"> <li>The farmer will be responsible for managing digestate produced by the AD plant.</li> </ul>
<b>Carbon Sequestration</b>	<ul style="list-style-type: none"> <li>The farmer implements agreed practices to enhance soil carbon sequestration.</li> <li>% compensation from sale of carbon credits.</li> </ul>
<b>Economic Ownership</b>	<ul style="list-style-type: none"> <li>A core finding of research conducted is the need for farmers to have “skin in the game” to deliver a high performing AD plant.</li> <li>Farmers should have equity ownership.</li> </ul>
<b>Dividends</b>	<ul style="list-style-type: none"> <li>The farmer carries out the required tasks and ensure the plant is performing optimally.</li> </ul>





# AD Charter

- Project Clover will implement an AD Charter to ensure land use is appropriate, meeting practical, sustainability and biodiversity requirements



# REPowerEU: 8 years to scale up biomethane capacity



Strasbourg, 8.3.2022  
COM(2022) 108 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

REPowerEU: Joint European Action for more affordable, secure and sustainable energy



RGFI LEADING ROLE IN SHOWING THE WAY TO THE 2.5TWh by 2030 and 9.5TWh by 2050

REPOWER EU TRACK	FOCUS	FF55 AMBITION BY 2030	REPOWER EU MEASURE	REPLACED BY THE END OF 2022 (BCM EQUIVALENT) ESTIMATE	ADDITIONAL TO FF55 BY 2030 (BCM EQUIVALENT) ESTIMATE
<u>GAS DIVERSIFICATION</u>	NON-RU NATURAL GAS	-	LNG DIVERSIFICATION	50*	50
		-	Pipeline import diversification	10	10
	MORE RENEWABLE GAS	17 bcm of biomethane production, saving 17bcm	Boost biomethane production to 35bcm by 2030	3.5	18
		5.6 million tonnes of renewable hydrogen, saving 9	Boost hydrogen production and imports by 20mt by	-	25-50

## EUCO - Conclusions

III. ENERGY [p.m. provisional text to be adapted based on proposals from the Commission]

14. The European Union will phase out its dependency on Russian gas, oil and coal imports as soon as possible. Therefore, the European Council looks forward to the comprehensive and ambitious plan, elaborated in close coordination with Member States, that the Commission will submit to this effect by the end of May 2022.

# RePowerEU Policy Paper – 4 Dimensions



Planning

Attaining the achievement of the objective through national trajectories embedded in NECPs and National Strategic Plans.

Ensure biomethane capacity is ramping up in Just Transition Territories.

Governance Energy Union CAP Strategic Plans JTF



Financing

Ensure adequate public and private funding to scale up biomethane capacity.



## Feedstock Mobilisation

Increasing supply security, while reducing emissions from energy use can be boosted by accelerating production and use of environmentally sustainable, socially acceptable and cost competitive biomethane.

RED III



## Market

Ensure EU market conditions are advantageous for prompt scale up of biomethane capacity.

Gas Package

Integration in Gas Network

EC Guidance on Authorisation

Swift Authorisation Process

RED III

GOs

ETD

No Excise Duty levied on Sustainable Biomethane

Taxonomy

Sustainable biogas/ biomethane practices reflected in DA on Circularity and Biodiversity

GBER

Increase block exemption threshold



## 15. Develop Energy Diversification Opportunities

Discussed at the third meeting of the Food Vision Dairy Group.

### *Impact on Inventory – Enabling Factor/ Direct Impact*

Enabling at farm level and Direct Impact across all national CO2 reduction targets

A range of viable energy diversification options are emerging that can be deployed at dairy farm level. Micro-Generation electricity technologies on farms such as rooftop solar, Photovoltaic (PV) and wind turbines should be promoted. Carbon-mitigation benefits of these energy diversification technologies are attributed to the Energy sector budget and not the agriculture sector and thus are not relevant to this report.

Biomethane production via Anaerobic Digestion (AD) has the potential to be a key option to decarbonise heat/thermal demand within dairy processing. For example, there have been multiple business cases put forward by the Project Clover industry group. According to the KPMG Report commissioned by Project Clover, a co-ordinated approach, involving industry and Government to the development of an indigenous, agri-based biomethane industry has considerable potential in economic and environmental terms.

Electricity and/or heat feed-in tariffs need to be more favourable for small-scale anaerobic digestion, but interest in such technologies is increasing in the current climate of rising input costs.

*The representatives of farmers on the Group, it should be noted, were not in favour of directing potential agriculture funding towards projects where the mitigation benefits are not retained within the sector.*

### *Recommendations*

- Biomethane production should be considered a potentially important diversification option given rising input costs.
- Carbon Farming using a farmer-centric approach presents opportunities for diversification of farm enterprises; and supported uptake of these opportunities for farmers is recommended.
- The Group recommends that an integrated business case for sustainable biomethane production as the basis of a national biomethane strategy should be developed based on a private sector Carbon Farming initiative.
- Consider the potential to deliver a long-term roadmap for an indigenous biomethane industry based on sustainable feedstocks.
- Work with policy makers to ensure that Irish farmers are credited with emissions reduction efforts on their land and financially rewarded.

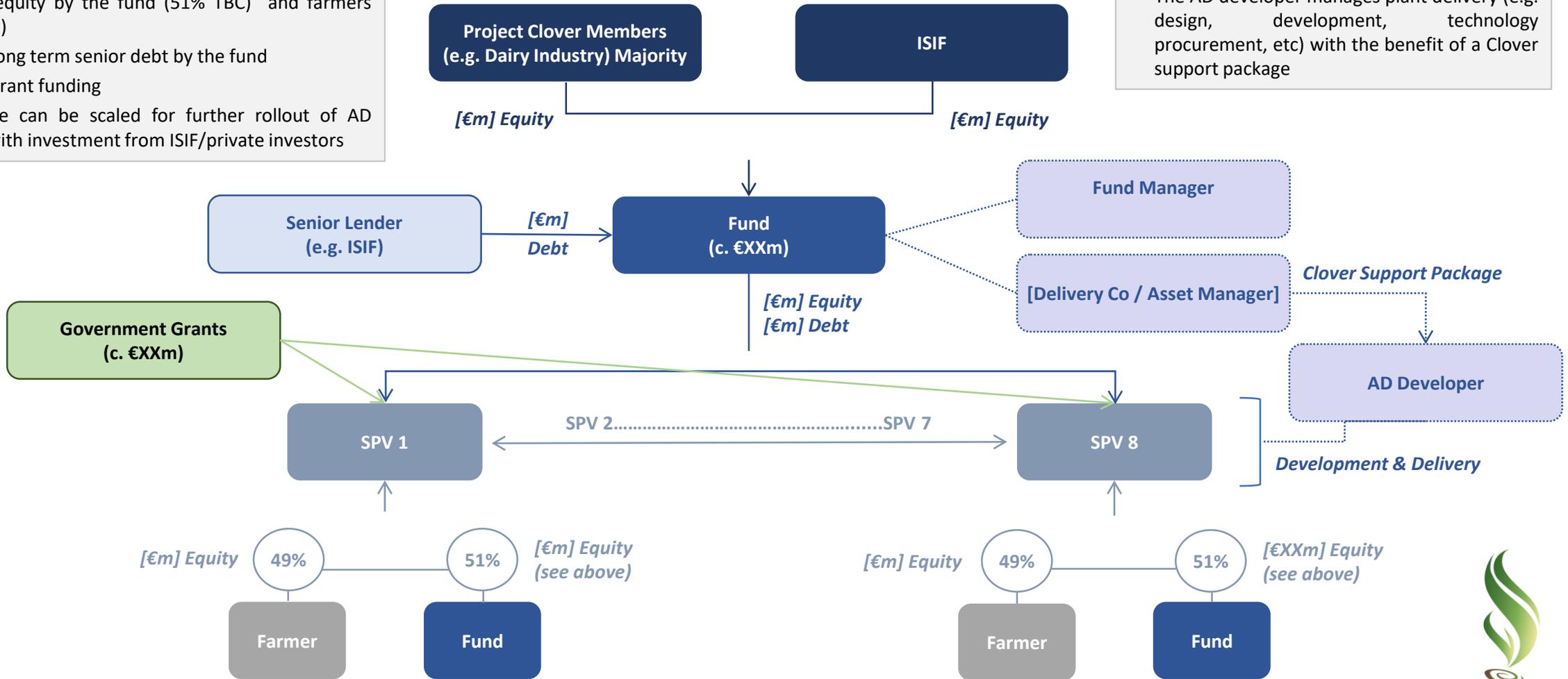
### *Key Challenges*

- Defining production as an economic activity to inform agriculture inventory.

# Project Clover – Proposed Structure – Phase II

- Project Clover members and ISIF/invest equity into a fund (e.g. limited partnership)
- A senior lender (e.g. ISIF) provides long term senior debt to the fund (c. 10 – 15 year term)
- Each SPV is capitalised as follows:
  - €m equity by the fund (51% TBC) and farmers (49%)
  - €m long term senior debt by the fund
  - €m grant funding
- Structure can be scaled for further rollout of AD plants with investment from ISIF/private investors

- A fund manager is appointed to manage the day-to-day operations of the fund
- Delivery Co (or third party asset manager) procures an AD developer and sets out a project delivery programme
- The AD developer manages plant delivery (e.g. design, development, technology procurement, etc) with the benefit of a Clover support package





## Support Structure & Framework

- Farmer centric and community focused solutions
- Key stakeholders involved and represent full supply chain
- Fund of €200m available
- Solution to rapidly deploy and deliver
- Integrated Business Case for AD Biomethane

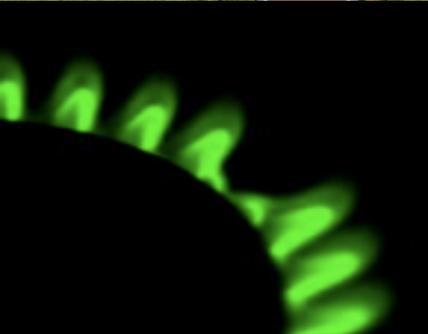
# OPPORTUNITIES AND NEXT STEPS ?

## 1. Alignment with National Policy

- Introduction of the Renewable Heat Obligation scheme (“RHO”), targeting between 3% and 10% inclusion of renewable fuel in the heat market by 2030.
- National Development Plan 2021 – 2030 listed capital funding for an “*AD pilot project to supply biomethane*”.
- Sustainable Biomethane, from agricultural feedstocks - included in the Climate Action Plan.
- Ask of Government –
  - 1) Implement RHO
  - 2) 50% capital funding (minimum)
  - 3) AD biomethane Projects – planning under Strategic Infrastructure Development
  - 4) Carbon Farming – support voluntary trading scheme.

## 2. Opportunity for alignment with EU policy

- Ambition – a scalable biomethane industry to 1.6 TWh by 2030, possible to review and increase this target
- Strategy - EU Commission "RePower EU" plan announced 18 May '22
- Structure - Biomethane Industry Partnership - Joint Secretariat



Thank you

