End of the project Conference

The Biomethane for Carbon and Community (BCC) Project

(From Apr-2024 to June-26)

WELCOME

Wednesday, 13th May 2026

Presentation By: Biomethane Development Office

The Biomethane for Carbon and Community project is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.



Biomethane for Carbon and Community

The project is Co funded by:

+ **Government of Ireland**
+ **European Union**

Biomethane Development Office will be established at National Bioeconomy Campus, Lisheen

Biomethane for Carbon and Community

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach

Co-funded by the European Union

EMRA

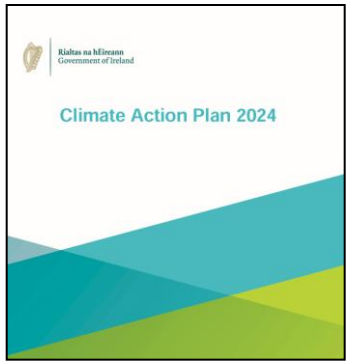
pobal
government supporting communities

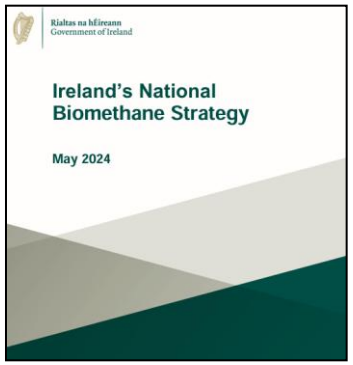
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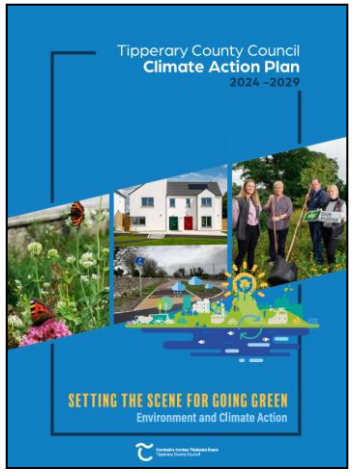
Biomethane for Carbon and Community

Background:

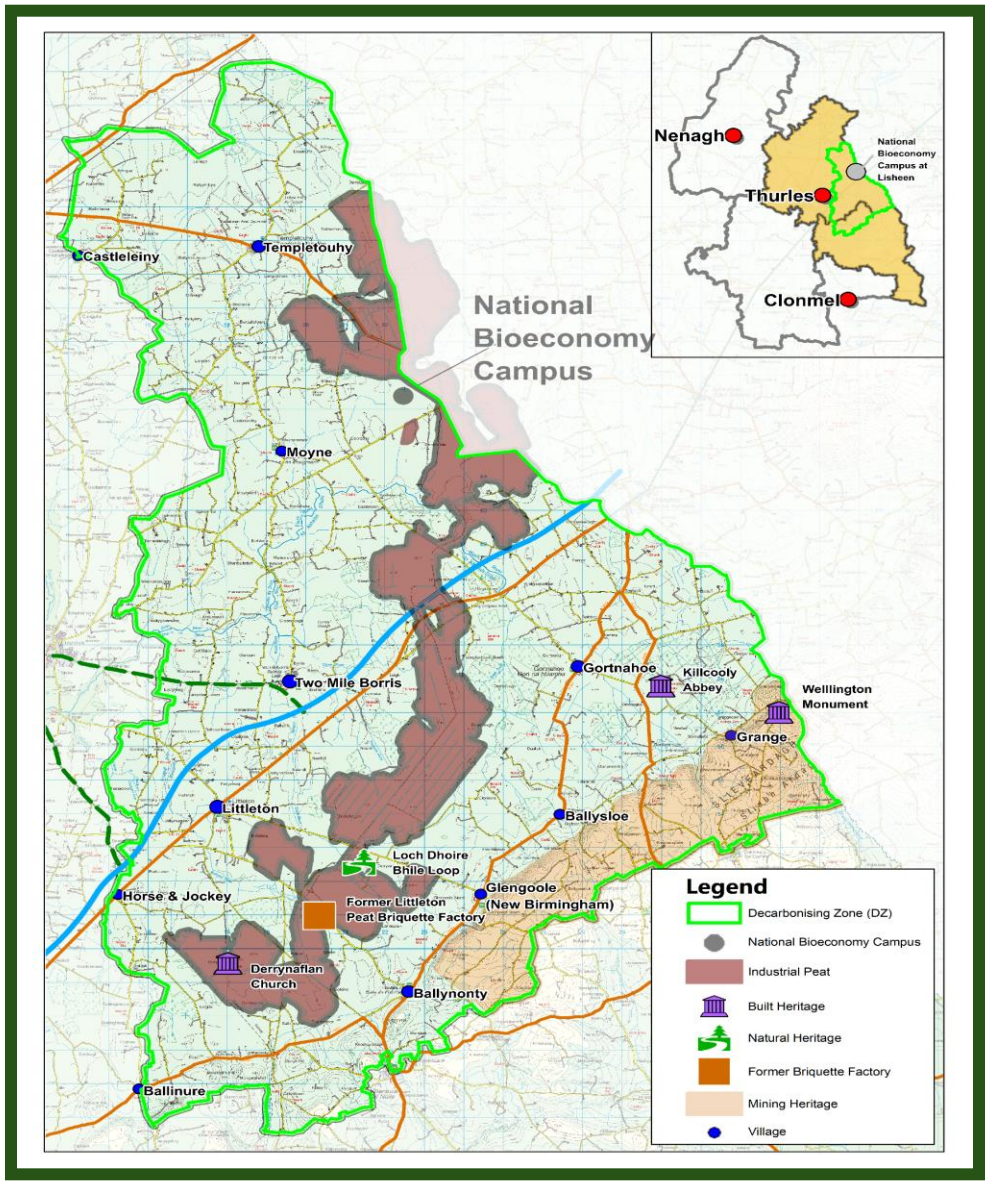
- **Ireland** is recognised as having **one of the largest potentials for biomethane production** in Europe per capita, due to Ireland's substantial agricultural sector
- **Government strategy** as set out in the National Climate Action Plan, and National Bioeconomy Action Plan 2023 – 2025 (DECC and DFAM)
  - ✓ **focus clearly on decarbonisation**
- **Ireland's National Biomethane Strategy**, published on 28 May 2024 (the "Strategy"), sets out the Government's plan to scale up Ireland's indigenous biomethane industry to meet its **production target of up to 5.7 TWh per annum by 2030.**
- The National Heat Study demonstrates capacity within the agriculture sector to provide a variety of feedstocks for AD including grass, grass silage and the use of animal manures.
- While **biomethane production** has been deployed across Europe at significant scale, it is at a **nascent stage** of development **in Ireland**.
- The **volume of biomethane injected into the grid is small**, equating to c. 75 GWh per annum, which is equivalent to 0.001% of Ireland's current gas demand.







Tipperary Decarbonising Zone



National Bioeconomy Campus, Lisheen



Strategic importance of the location:

- Historical Peat Industry Hub
- Workforce Transition to sustainable sectors like renewable energy and biomethane production
- Community-Based Renewable Energy Initiatives
- Strategic Location for Biomethane Production
- Creation for rural job creation & community development

Comhairle Contae Thiobraid Árann
Tipperary County Council

TUS

IRISH BIOECONOMY FOUNDATION
Growing Ireland's Bioeconomy Together

TIPPERARY energy AGENCY

Limited or no biomethane development in Ireland & a support system is not yet in place - BCC project will address this:

- **Phase 1:** Research and outreach
- **Phase 2:** Biomethane facility delivery

Biomethane for Carbon and Community

Phase 1 (BCC)

This Capacity Building and Research phase will see a team of dedicated staff working with and developing synergies with the community, famers, the private sector and the Government to enable the development of biomethane in Tipperary and the Region.



Phase 2 (Post BCC)

The project outputs will ultimately lead to the delivery of biomethane processing facilities in County Tipperary and the region.

Biomethane for Carbon and Community

Key outputs of the BCC project:

1. **Feasibility Study** for Biomethane Development
2. Biomethane **Communication Campaign and Capacity Building**
3. Stakeholder Collaboration for **Sustainable Farming Practices**
4. **Community Cooperative Models** for Biomethane Development
5. **Centre of Excellence** for Biomethane in Tipperary
6. Support for **Decarbonising Zone (DZ)**
7. **Investment** in Biomethane Processing Facility
8. **Planning, Licensing, and Construction guidelines** for the Facility
9. **Synergies Between Bioeconomy and Biomethane** Sectors

Governance structure

Biomethane for Carbon and Community

Lead Partner

Tipperary County Council

Partner Organisations

- Irish Bioeconomy Foundation
- The Technological University of the Shannon
- Tipperary Energy Agency

Supporting Structures

- Biomethane Development Office (Manager of the Unit and staff)
- External Advisory Board
- Executive Management Team (TCC/ TEA/ TUS/ IBF)

New BDO Lisheen Office

Biomethane
Development Office





Biomethane Development Office

BDO TEAM:



Ajay Kumar Sutrakar

Manager Biomethane Development Office

TUS



David Mulcahy

Biomethane Community Development Officer

TUS



Kris Anthony Silveira

Biomethane Development Officer

TUS



Alan Walsh

Community & Stakeholder Partnership Officer- DZ

Comhairle Contae Thiobraid Árann
Tipperary County Council



Kevin Ryan

Bioeconomy & Biomethane Synergy Officer

IRISH BIOECONOMY FOUNDATION
Growing Ireland's Bioeconomy Together



Daniel Robinson

Senior Manager Sustainable Energy and Climate Action Projects

TIPPERARY energy AGENCY

Comhairle Contae Thiobraid Árann
Tipperary County Council



Sharon Scully
Senior Executive Officer



Clare Lee
Climate Action Coordinator



Elaine Cullinan
Economic Development Officer

TUS



Seamus Hoyne
Dean of Flexible and Workplace Learning



Mercedes Alonso-Gomez
Director, SDRI

IRISH BIOECONOMY FOUNDATION
Growing Ireland's Bioeconomy Together



Stephen Napier
Chief Executive Officer



Gearóid McDermott
Consultant

TIPPERARY energy AGENCY



Lisa Vaughan
Chief Executive Officer

Biomethane
for Carbon and Community

BDO Steering Group

Biomethane
for Carbon and Community

BDO Advisory Board:



Sean Finan
CEO, IrBEA



John Brosnan
Bioeconomy Executive, ICOS



Dr Anne Marie Henihan
Centre Director, DPTC



Matthew Halpin
Assistant Agricultural Inspector, DAFM



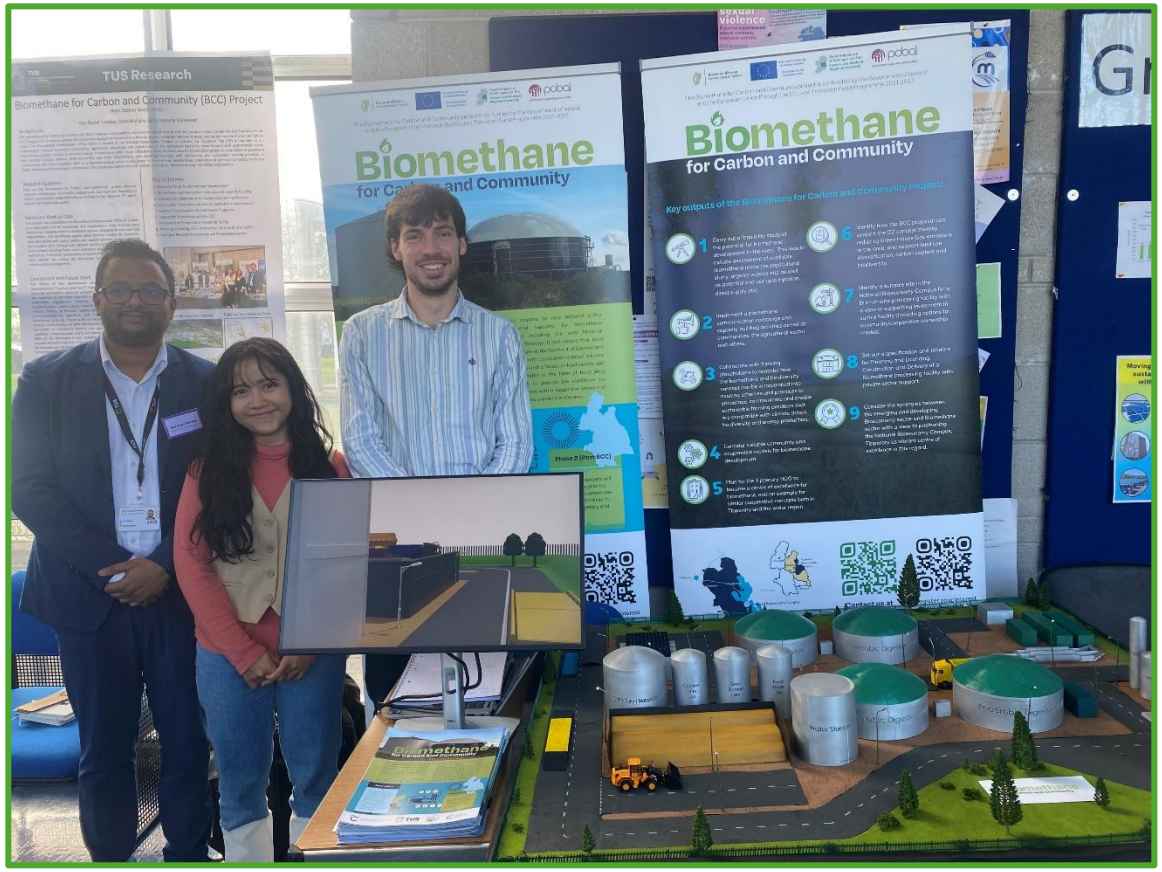
James Claffey
Deputy CEO, IRL



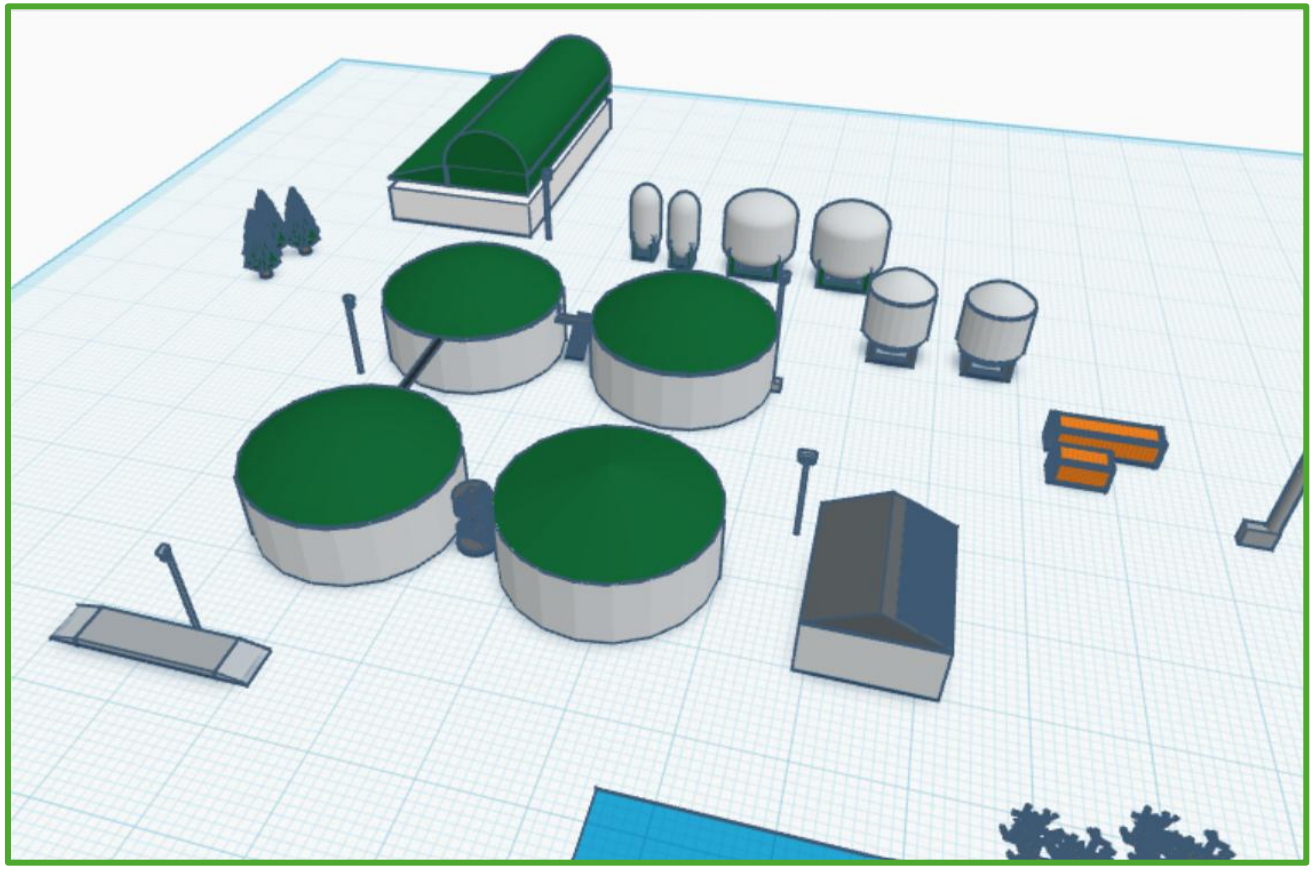
Barry Caslin
Energy & Rural Development Specialist, Teagasc

Community Cooperative Models for Biomethane Development

Biomethane Development Office



3D physical model of a biomethane plant



Virtual reality model (with VR headset)

Biomethane
Development Office

Biomethane and Renewable Gas Development (Certificate, L9, 30 ECTS)

LOCATION: Online

YEARS: 1

FEES: Springboard+ funded for 2026. See Fees Section below

Module 1	Module 2	Module 3
Biomethane Technology and Systems (10 ECTS)	Legal, Planning, and Environmental Aspects of Biomethane Projects (10 ECTS)	Investment and Financial Strategies for Renewable Gas Development (10 ECTS)

https://tus.ie/courses/biomethane-and-renewable-gas-development-certificate-l9-30-ects/



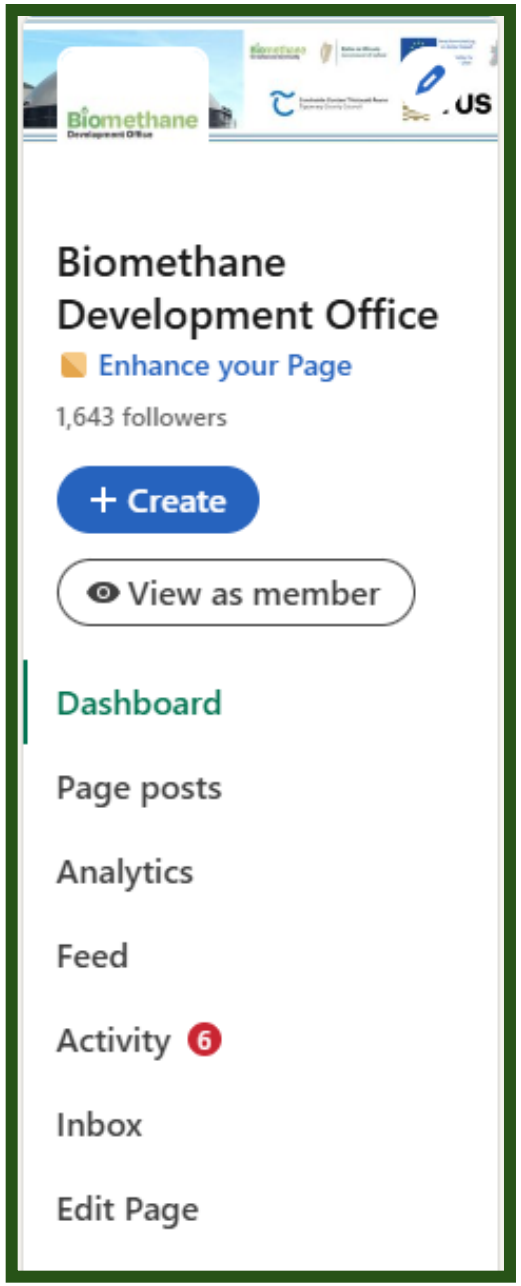
Biomethane information webinar

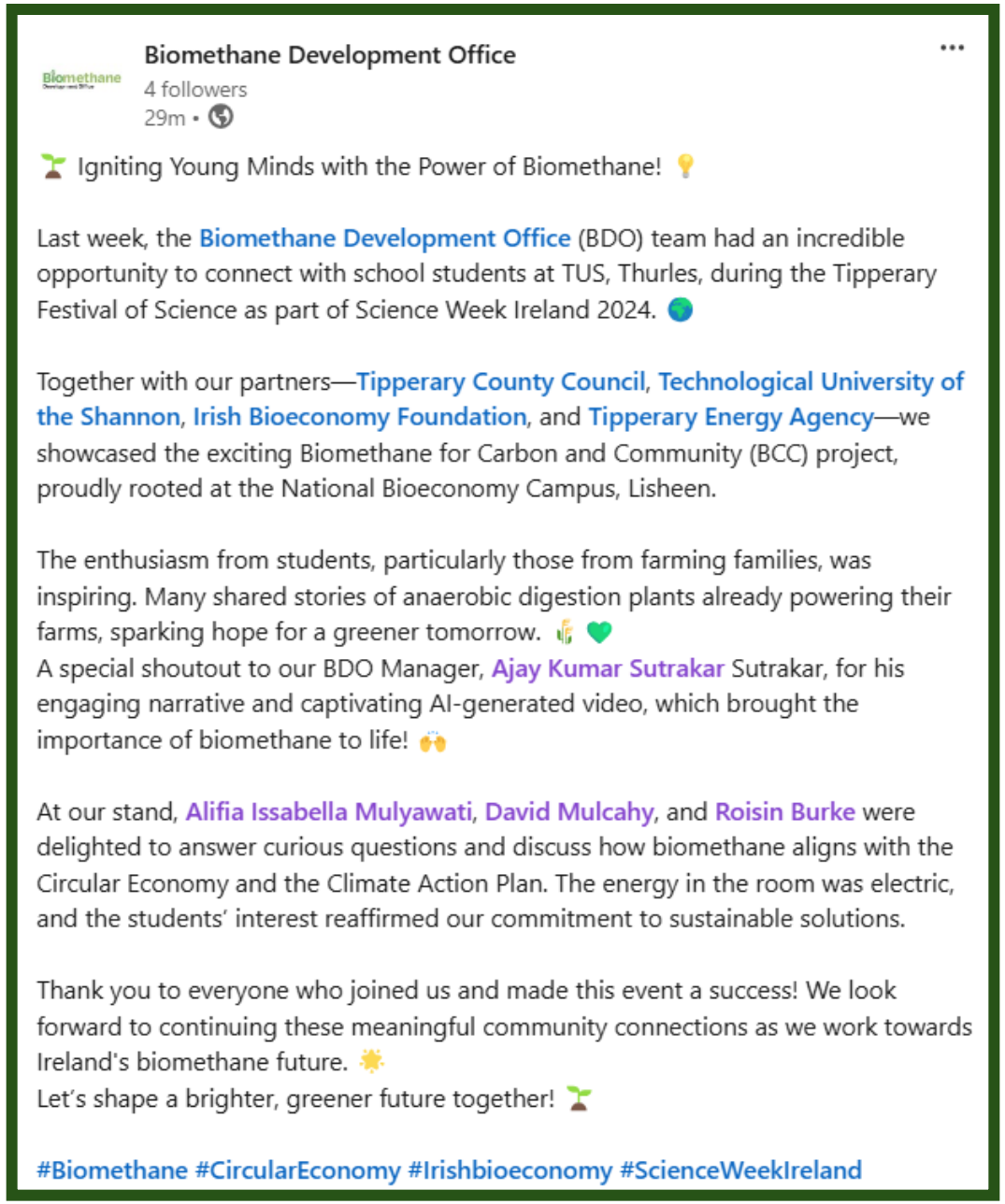
Biomethane Development Office

- Biomethane information webinar on 23rd June 2025
  - Run by Tipperary Energy Agency & Donegal Co Co
- Audience: members of local authorities
- 29 external attendees

Biomethane Planning webinar

Available at https://biomethanedevelopmentoffice.ie/





Biomethane Development Office
4 followers
29m •

Igniting Young Minds with the Power of Biomethane!

Last week, the Biomethane Development Office (BDO) team had an incredible opportunity to connect with school students at TUS, Thurles, during the Tipperary Festival of Science as part of Science Week Ireland 2024.

Together with our partners—Tipperary County Council, Technological University of the Shannon, Irish Bioeconomy Foundation, and Tipperary Energy Agency—we showcased the exciting Biomethane for Carbon and Community (BCC) project, proudly rooted at the National Bioeconomy Campus, Lisheen.

The enthusiasm from students, particularly those from farming families, was inspiring. Many shared stories of anaerobic digestion plants already powering their farms, sparking hope for a greener tomorrow.
A special shoutout to our BDO Manager, Ajay Kumar Sutrakar Sutrakar, for his engaging narrative and captivating AI-generated video, which brought the importance of biomethane to life!

At our stand, Alifia Issabella Mulyawati, David Mulcahy, and Roisin Burke were delighted to answer curious questions and discuss how biomethane aligns with the Circular Economy and the Climate Action Plan. The energy in the room was electric, and the students' interest reaffirmed our commitment to sustainable solutions.

Thank you to everyone who joined us and made this event a success! We look forward to continuing these meaningful community connections as we work towards Ireland's biomethane future.
Let's shape a brighter, greener future together!

#Biomethane #CircularEconomy #Irishbioeconomy #ScienceWeekIreland

Please click to explore more

Media Outreach

Launch
of
The Project reports



Biomethane
Development Office

Tipperary Decarbonizing Zone Report



About the Report:

- Presents the Tipperary Decarbonising Zone as a rural testbed for achieving Net Zero.
- Supports a just transition through locally tailored climate action.
- Integrates bioeconomy, nature restoration, place-making, job creation, and community benefits.
- Aligns with national, regional, and local policy and governance frameworks.
- Highlights the role of Tipperary County Council and partners in enabling community-led climate action.
- Emphasises stakeholder engagement, co-production, and local ownership.
- Demonstrates a place-based approach to delivering climate, biodiversity, economic, and social outcomes.
- Captures learning and evidence to support future policy, scaling, and replication in other regions.

Note: We are requesting you to submit your feedback/ remarks on this report by 22.05.2026

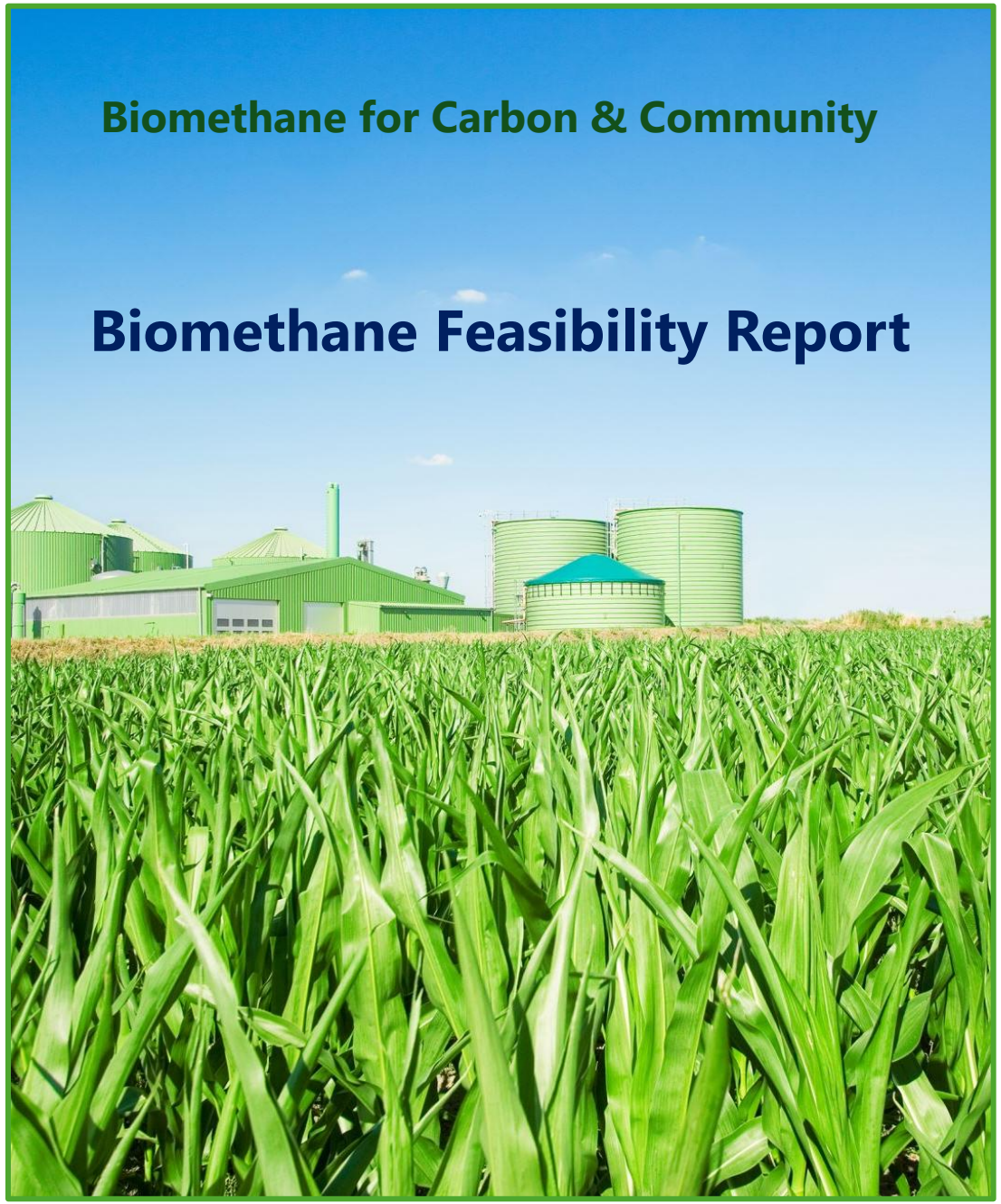
Kindly send the feedback/ remarks to bdo@tus.ie

Biomethane
Development Office

Feasibility Study Of Biomethane Potential in Tipperary

About the Report:

- Introducing the feasibility study
- Anaerobic digestion feedstock analysis
- Agricultural and non-agricultural feedstocks
- Potential feedstock suppliers within Co. Tipperary



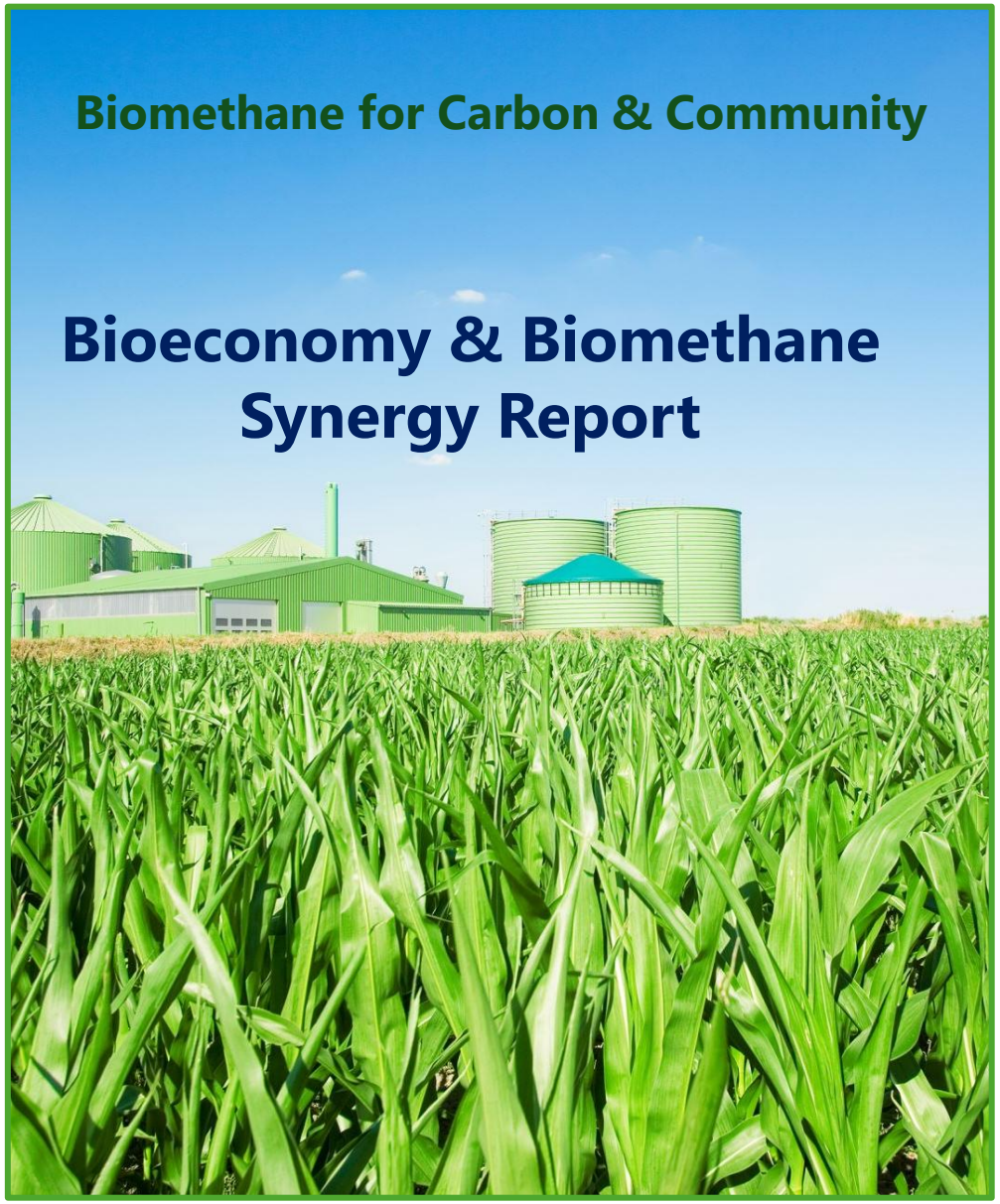
Note: The final report shall be available soon.

Biomethane
Development Office

Bioeconomy & Biomethane Synergy Report

About the Report:

- Explores how biomethane can support Ireland's wider bioeconomy transition.
- Positions biomethane as part of an integrated circular bioeconomy, not just an energy solution.
- Connects agriculture, renewable energy, nutrient recovery, rural enterprise, and sustainable industry.
- Examines technologies such as anaerobic digestion, green biorefineries, nutrient recovery, and bio-based processing.
- Highlights multiple value streams including renewable gas, biofertilisers, bio-based products, and resource recovery.
- Draws learning from international best practice



Note: We are requesting you to submit your feedback/ remarks on this report by 22.05.2026

Kindly send the feedback/ remarks to bdo@tus.ie

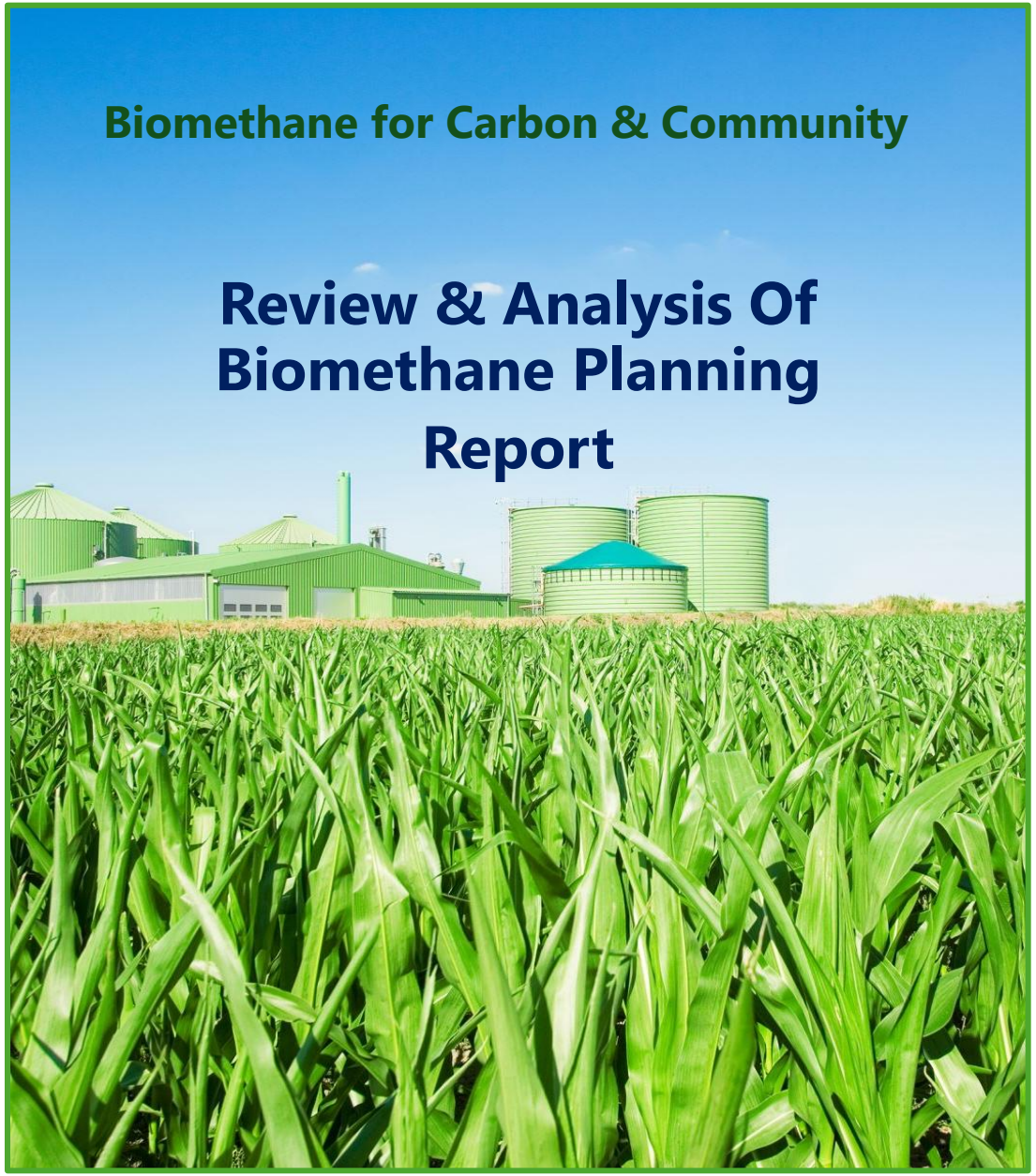
Biomethane Development Office

KPMG

Review & Analysis Of Biomethane Planning

About the Report:

- Provides an evidence-based review of how AD and biomethane projects are moving through Ireland's planning system.
- Analyses of planning applications nationwide.
- Uses CIS datasets, Local Authority planning files, OCR processing, and AI-supported document analysis.
- Highlights differences in how biomethane projects are assessed across Local Authorities.
- Identifies common factors influencing planning approval, delay, refusal, or appeal.
- Aims to improve transparency, consistency, and confidence in Ireland's future biomethane development.



Note: We are requesting you to submit your feedback/ remarks on this report by 22.05.2026

Kindly send the feedback/ remarks to bdo@tus.ie

Biomethane
Development Office

Planning, Permitting & Guidelines for Biomethane Project

About the Report:

- Local authority perspective and common FI themes
- Planning Consenting guidelines
- Environmental Safeguards/Emissions etc.
- Movement & Roads
- Utilities & Energy
- Materials, Waste & ABP
- Biodiversity, Heritage & Landscape
- Health, Safety & Construction Operation
- Other Site Specific Permits



Note: We are requesting you to submit your feedback/ remarks on this report by 22.05.2026

Kindly send the feedback/ remarks to bdo@tus.ie

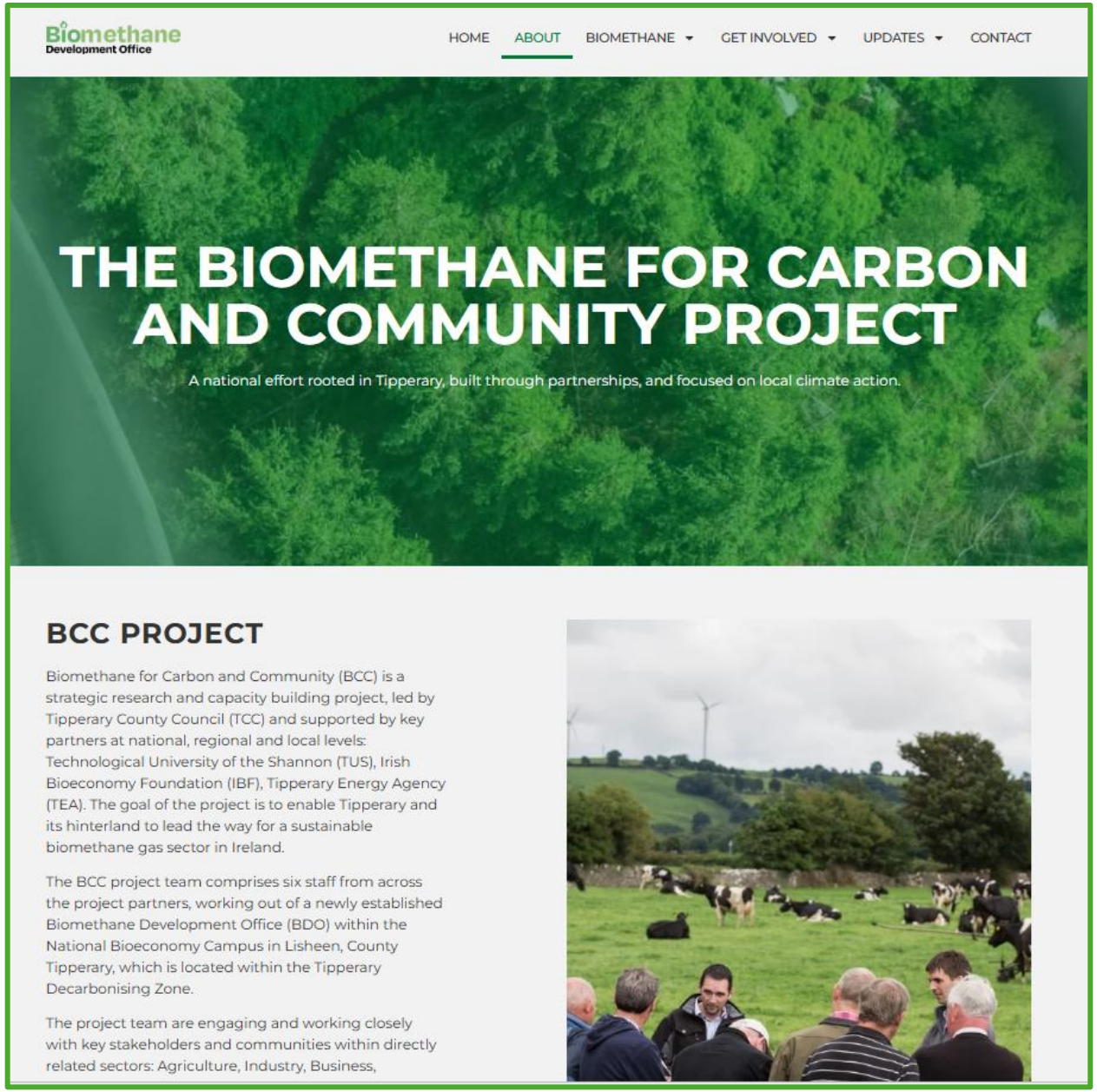
Launch
of
The Project website



Biomethane
Development Office

https://biomethanedevelopmentoffice.ie

BDO Website



Comhairle Contae Thiobraid Árann
Tipperary County Council

TIPPERARY DECARBONISING ZONE
Wednesday 13th May 2026



Mid-Tipperary
Low Carbon Community

SETTING THE SCENE FOR GOING GREEN
Environment and Climate Action

Alan Walsh,

Stakeholder & Community Partnership Officer,

Decarbonising Zone

Presentation Overview

- Decarbonising Zone Context
- Policy and Governance Framework
- DZ Vision and Actions
- Progress to date
- Learnings
- Future Direction / Conclusions



"Sustainability is not only about cutting emissions and adapting to change, it's also about building places that are pleasant to live in."

Ursula von der Leyen,

President of the European Commission

Speaking at the EU Covenant of Mayors Ceremony, October 2025, Brussels

What is a Decarbonising Zone (DZ)?

Biomethane for Carbon and Community

- A place chosen to lead the transition to clean energy and lower emissions, acting as a demonstrator site for replication and scale-up.
- Integrated approach to climate action and biodiversity enhancement measures.
- A testbed for place-based innovation and targeted emissions reduction.
- Communities and stakeholders co-producing local solutions.
- Ensuring a just transition
  - Local communities and sectors.

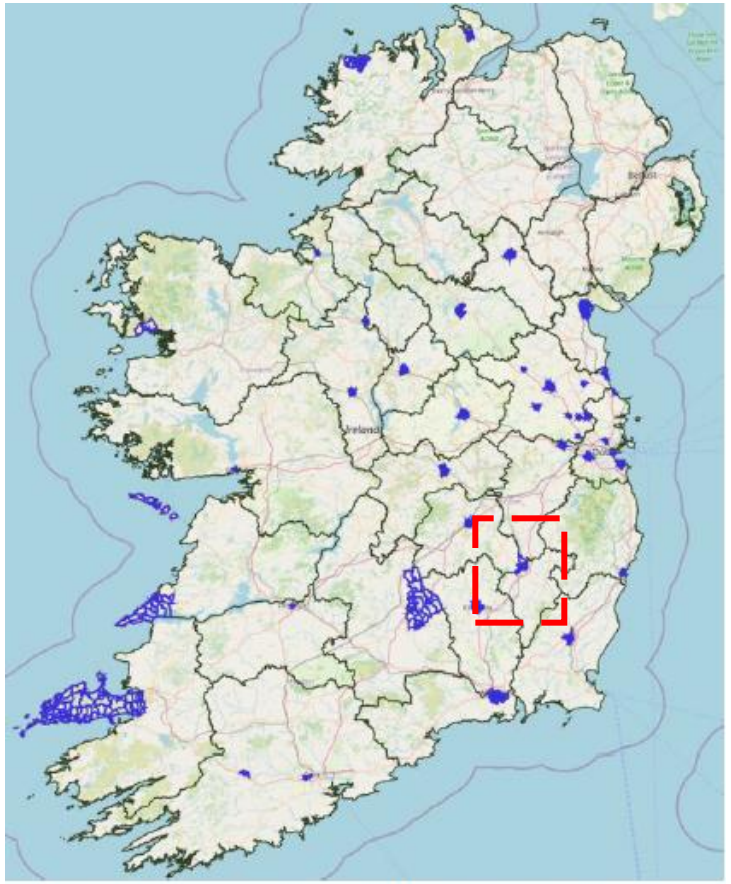
Mid-Tipperary Low Carbon Community



What is a Decarbonising Zone (DZ)?

Biomethane for Carbon and Community

- Coherent policy and governance framework.
  - ➢ *National, Regional, Local*
- Climate Action and Low Carbon Development (Amendment) Act 2021.
- National Climate Action Plan (2019)
  - ➢ *31 Local Authorities (LAs) to designate a DZ.*
- DZs Embedded in LA Climate Action Plans (LACAPs).
- Supported and Coordinated by the Climate Action Regional Offices.
  - *Eastern and Midlands CARO*

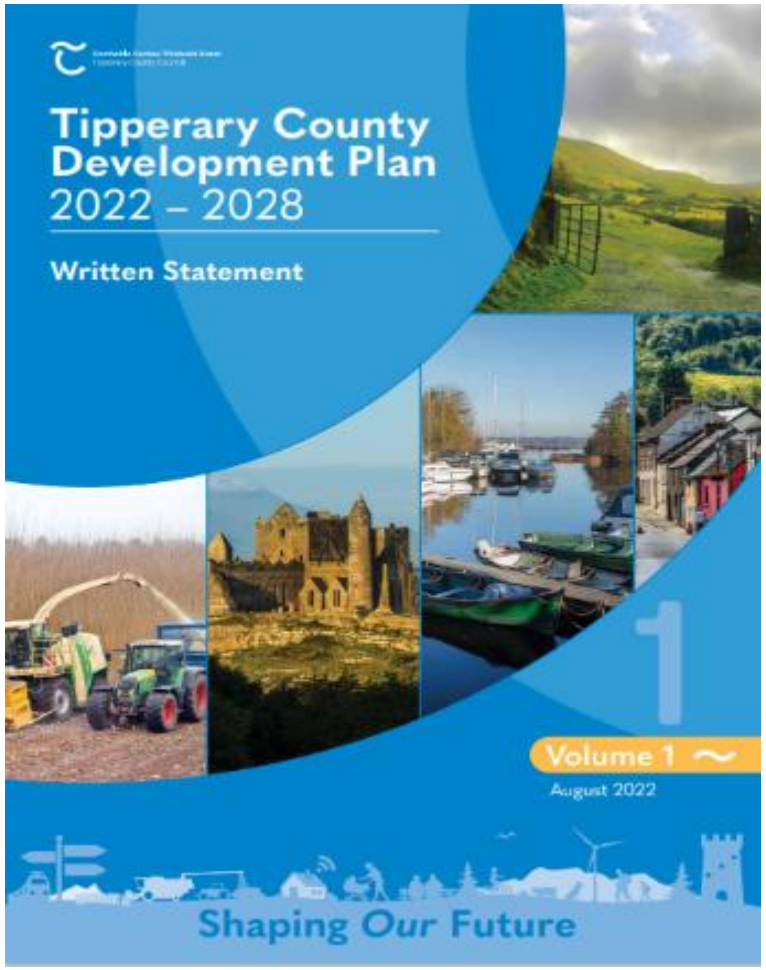


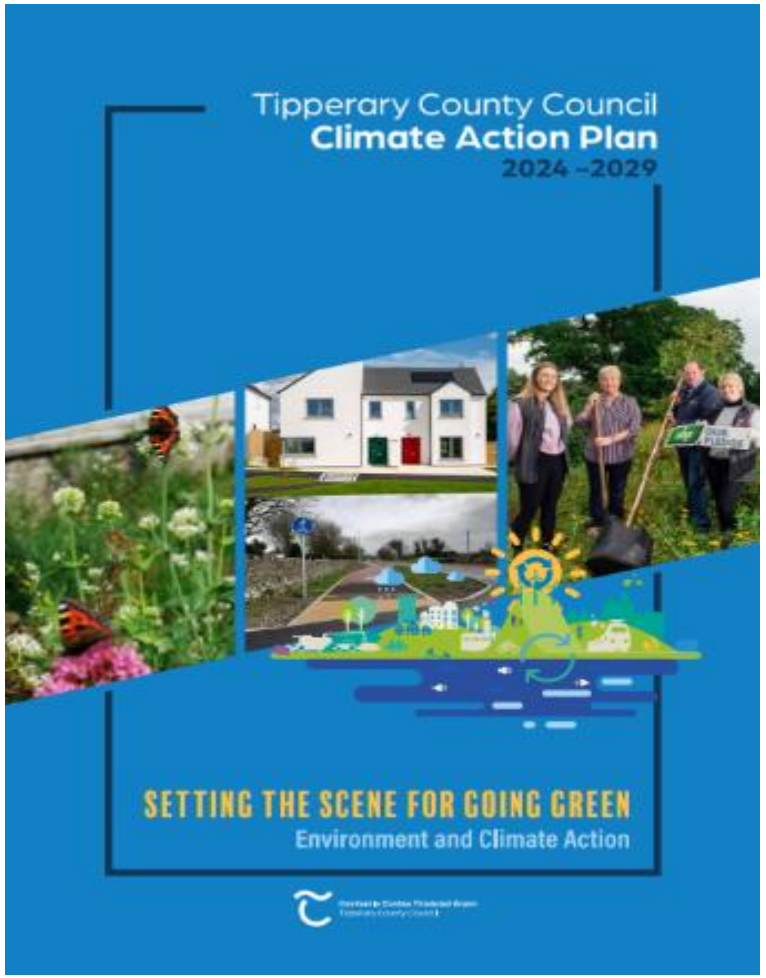
Spatial representation of the DZs in Ireland.
Source: O'Keeffe Social Research

ESPON: Dr Shane O'Sullivan, TUS

Tipperary County Council's
Policy Commitments to Climate Action

Biomethane for Carbon and Community









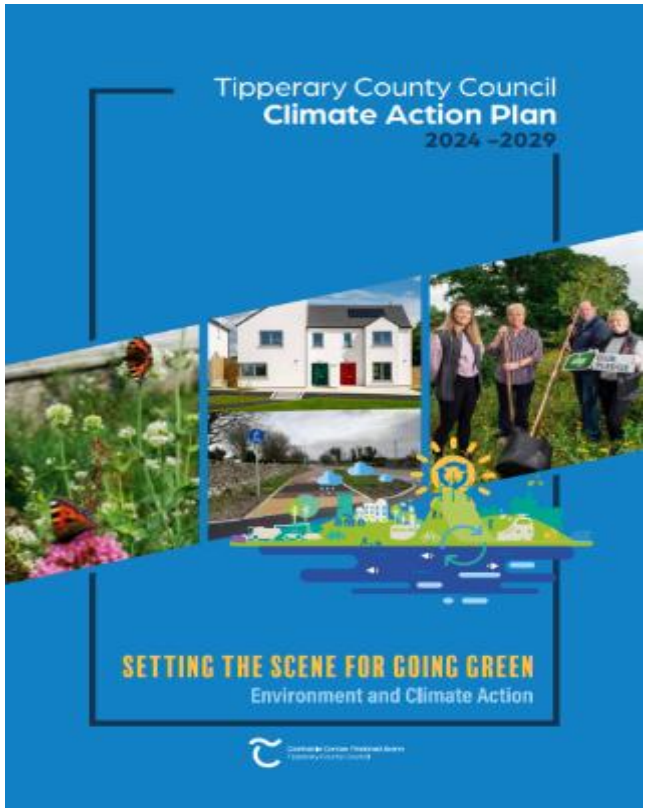


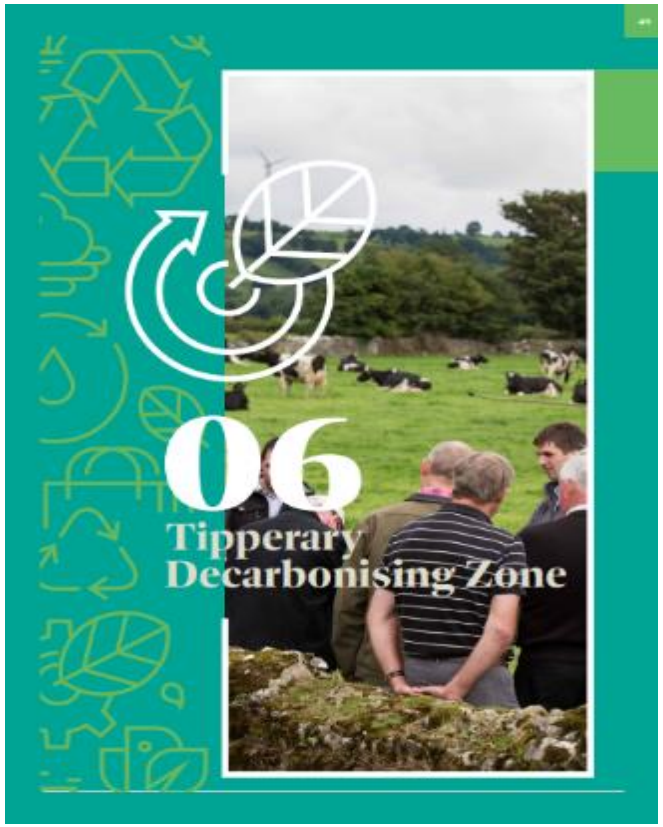


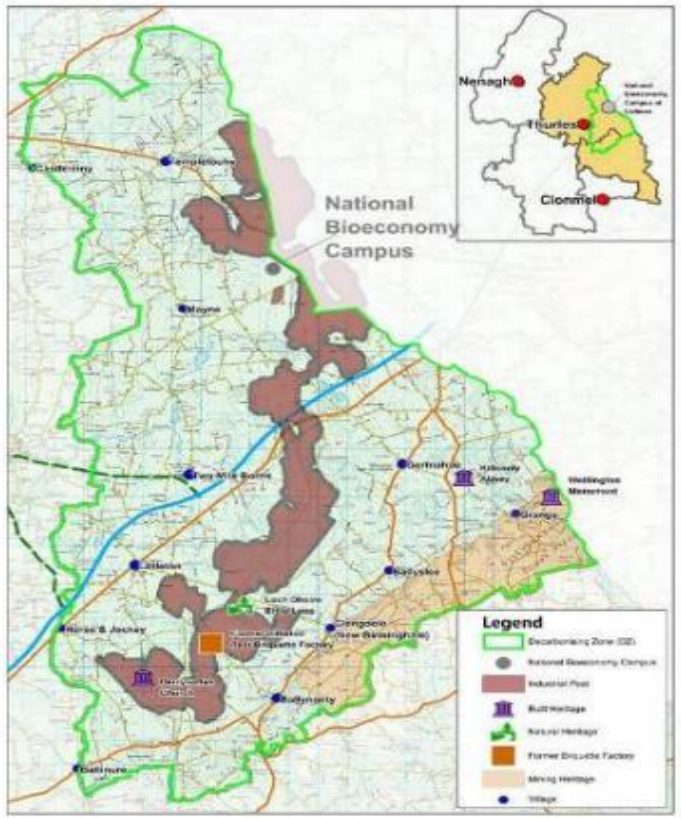
To protect, enhance and improve the quality of Tipperary's natural environment, including its water bodies and biodiversity, and to lead and coordinate an effective and transformative climate mitigation and adaptation response both **within the local authority** and by mobilising and supporting climate action at a **community** and **sectoral level**.

Whole of society approach

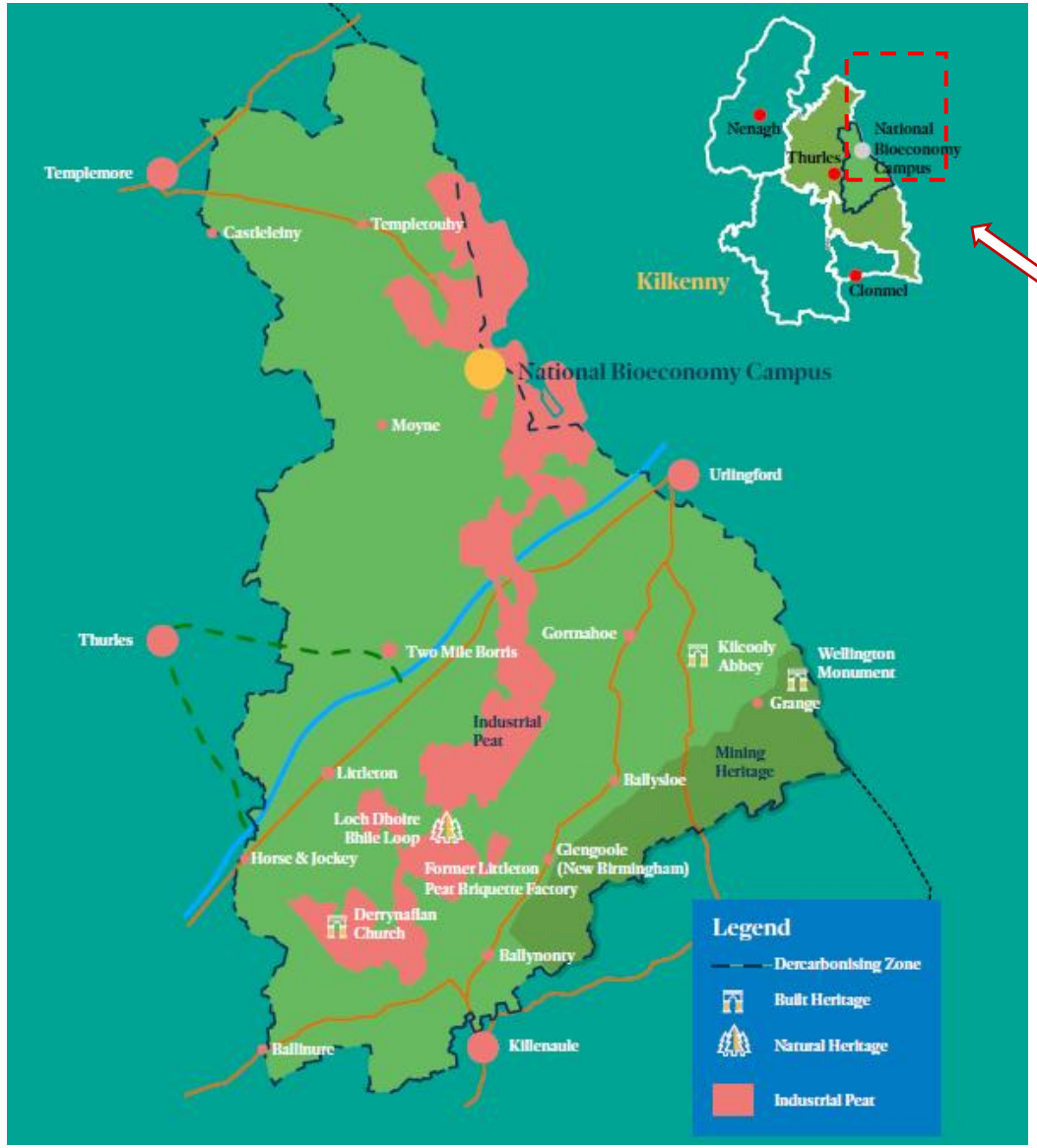
Tipperary Decarbonising Zone (DZ)







Chapter 6 – TCC Climate Action Plan 2024-2029



Tipperary DZ Characteristics

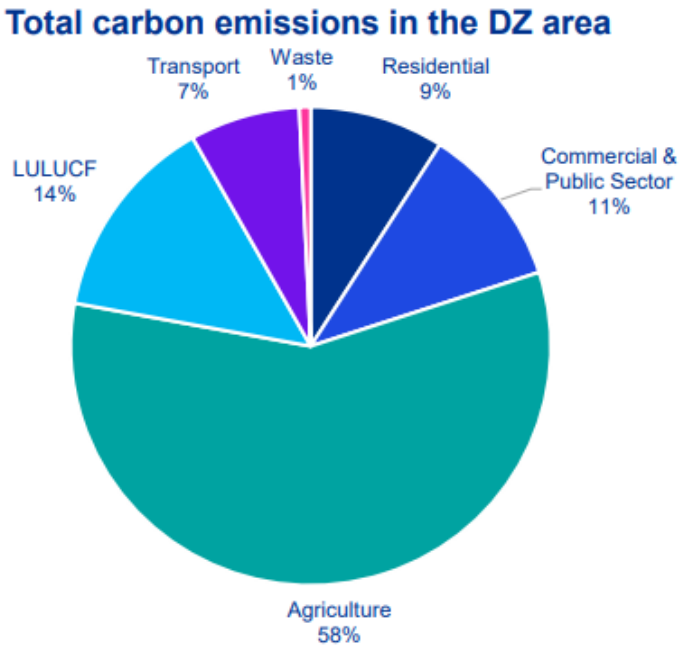
- Area c313 Km^2
- Entirely within EU JTF territory
- Population 7,100 people
- ~~12~~ 13 villages (*local communities*)
- Rich rural hinterland - *Agriculture, Forestry*
- Former mining industry at Lisheen
- Former BnM industrial peat bogs
- National Bioeconomy Campus at Lisheen

Socio-Economic Profile and Baseline Emissions Inventory

Mid-Tipperary Decarbonisation Zone (KPMG, 2023)

	Carbon emissions (tCO_2e)
Residential	20,820
Commercial & Public Sector	25,218
Transport	17,073
Waste	1,450
Agriculture	133,214
LULUCF	32,087
Total carbon emissions	**229,862**





Mid-Tipperary Low Carbon Community

Biomethane for Carbon and Community

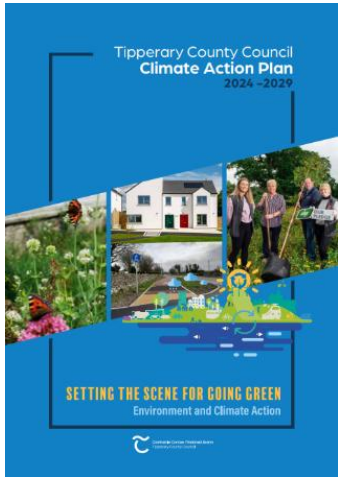


Tipperary DZ Vision *(Revised)*

A place where climate-resilient communities thrive in a biodiversity-rich landscape; where sustainable agriculture and investment in the National Bioeconomy Campus support local jobs; where local communities, in partnership with Tipperary County Council and service providers create low-carbon, healthy, vibrant places to live, work and visit.

10 DZ Actions – Key Thematic Areas

1. Development of **National Bioeconomy Campus** (Lisheen) – *including biomethane*
2. Support and enable a **village network**
3. Leverage **funding** through EU JTF, LEADER, & other streams
4. Enable **sustainable renewable energy** development
5. **Local climate action,** supported by Tipperary County Council
6. Multi-agency **collaboration and cooperation**
7. **Sustainable travel and mobility**
8. **Business and Community Awareness**: Knowledge, capacity and resilience
9. **Nature-Based Solutions** delivering multiple benefits
10. **Sustainable Tourism**: Sensitive to the natural, built and cultural heritage of the area





Progress to date…

1. Effective Governance Structure in place

Biomethane for Carbon and Community

National Level

National Decarbonising Zones Strategy Group

DCEE, SEAI, CCMA, EMRA. CARO, PR

Regional Level

CAROs (Eastern and Midland) coordination, support, capacity building.

(Regional Assembly – strategy, planning)

Local Level

Tipperary County Council Structures

Climate Action Steering Group

Climate Action Team

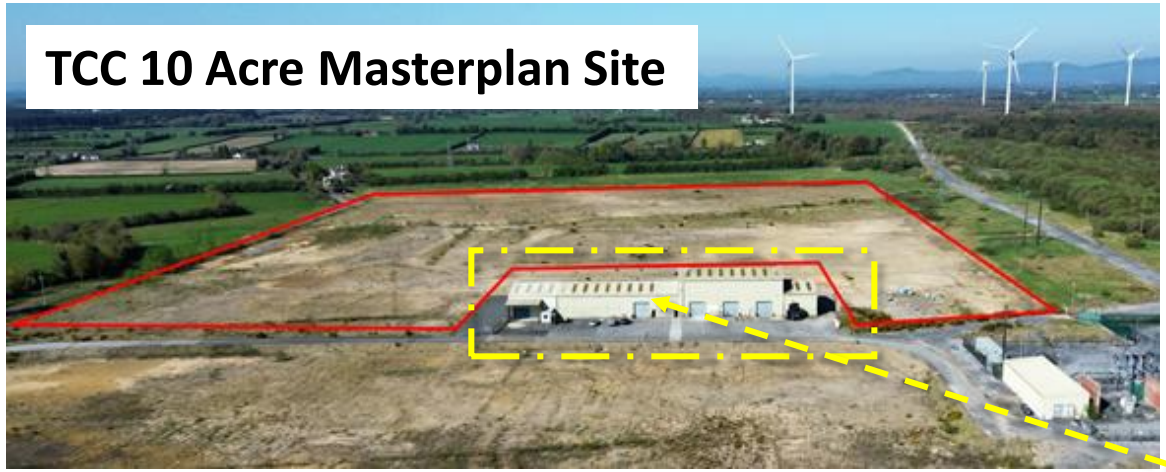
Decarbonising Zone Working Group

Climate Action Office

DZ Officer

2. Development of National Bioeconomy Campus at Lisheen

Biomethane for Carbon and Community





- **Biomethane Development Office**
  Biomethane for Carbon and Community
- **National Biorefinery Pilot Plant**
  Bio-industrial and Innovation Hub
- **Successful Partnership**
  Local Authority, Industry, Research
- **<u>EU Just Transition Fund</u>**

Rialtas na hÉireann Government of Ireland
Arna chomhchistiú ag an Aontas Eorpach
Co-funded by the European Union
Tionól Réigiúnach an Oirthir agus Lár Tíre Eastern and Midland Regional Assembly
pobal government supporting communities

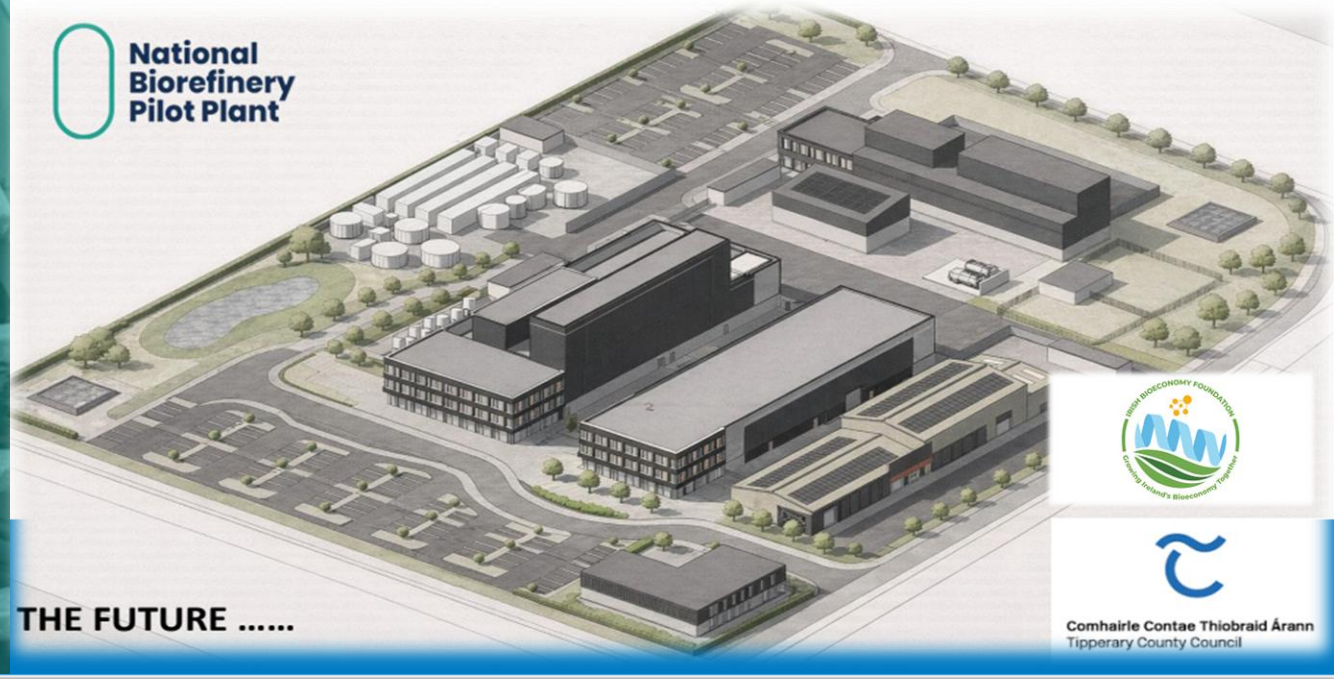
The Masterplan development of a 10 acre site and Part 8 Planning for an industrial core building at Lisheen Co. Tipperary, is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund 2021-2027

National Biorefinery Pilot Plant

Scaling bio-based innovation

Open-access pilot-scale infrastructure supporting the transition from lab-scale innovation to pre-commercial deployment.

- **National Biorefinery Pilot Plant** (NBPP) is a new open access pilot scale-up facility.
- Based at National Bioeconomy Campus, Lisheen. In the Tipperary DZ.
- Operated by the Irish Bioeconomy Foundation (IBF) in collaboration with industry, researchers, and authorities.
- ***Scale smart, scale fast.***



3. DZ Stakeholder Group established

Biomethane for Carbon and Community

Purpose: to identify and advance opportunities to support communities in a clean energy transition in the Tipperary DZ.

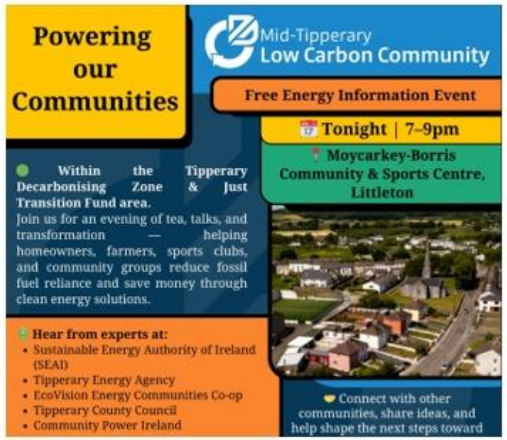
1. Partnership approach
2. Community engagement

   Powering Our Communities (Sept. 2025)
3. *Sustainable Energy Community (SEAI)*
4. *DZ Energy Masterplan (SEAI)*
5. Supporting community-led Solar Meitheal

   Three Villages Solar Meitheal *(pilot)*

   ❖ *DCEE DZ Demonstrator Fund*





Comhairle Contae Thiobraid Árann
Tipperary County Council

seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

ecovision energy communities co-op

Tipperary energy AGENCY

Public Participation Network Tipperary

South Tipperary Development CLG

NTDC North Tipperary Development Company

4. DZ Community Engagement

Initial Engagement

- **Loughmore**
- **Glengoole**
- **Moyne**
- **Littleton**

- Solar Meitheal (pilot)
  - *Scalable, replicable*
- Biodiversity enhancement
  - *Community-led*
- Community learning
  - *Capacity, resilience*
- Village Development Plans







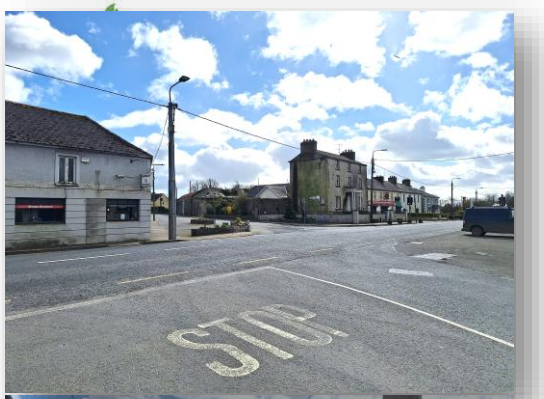


SOLAR MEITHEAL

6. DZ Future Vision

What will a low-carbon, climate resilient rural village look like?

- Opportunity to co-design with local community and stakeholders.
- Littleton village is of strategic importance within the DZ, strong community base, significant public realm and buildings potential.







EU Just Transition Fund START Application October 2026 – March 2028	• TCC Oversight and Coordination • DZ Stakeholder Group participation • Community Forum - co-production • Consultant delivered – multidisciplinary
(project Opportunity) **Littleton Village 2050 Vision** *Low-Carbon, Sustainable Community* Masterplan & Action Plan	*Action Plan* • Leverage existing services and programmes (TCC and stakeholders). • Funding to support community projects

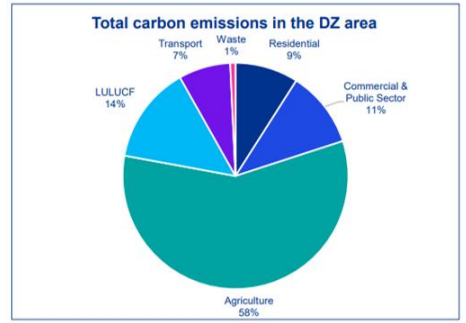
5. DZ Sectoral/ Thematic Opportunities Identified

Biomethane for Carbon and Community

1 Residential	2 Commercial & Public Services	3 Agriculture	4 Transport	5 Land Use, Land Use Change & Forestry	6 Waste
-Solar Meitheal -Village Renewal -Place Making -Community Gardens -Sustainable Tourism -Local jobs - Community Development (Resilience)	·Bioeconomy ·Farmer Engagement · Teagasc · GHGs ▼ ·Innovation	·Active Travel ·Littleton Labyrinth · Local Link ·EVs/ ZEVI	·Bioeconomy ·BnM PCAS ·Forestry schemes ·Biodiversity ·Community tree planting ·Community gardens	·Bioeconomy - Biomethane ·Circular economy ·Collaboration ·Social Enterprise (Repair, reuse)

Collaboration

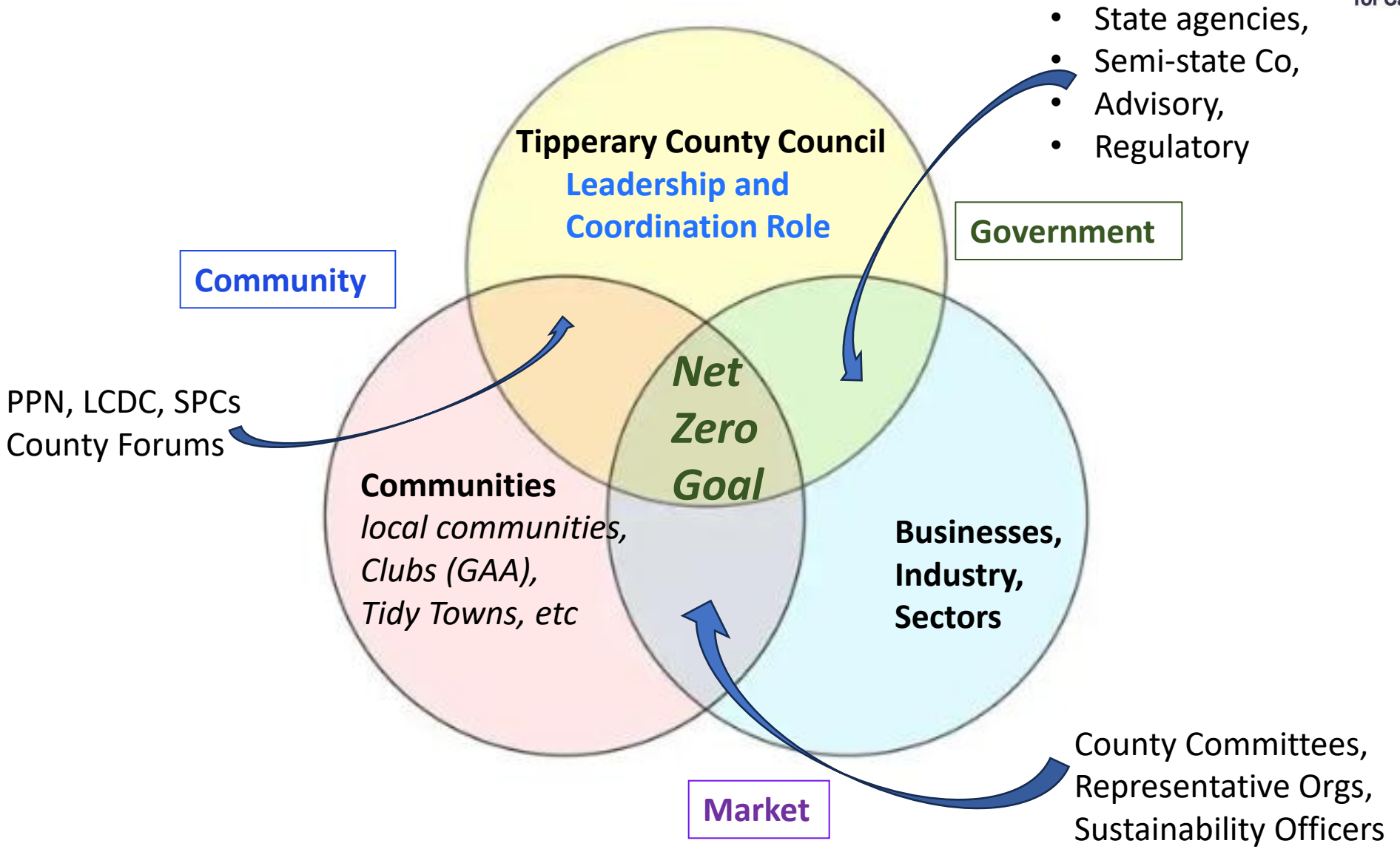




- **BEI 2030 ?**
- **tCO_2e ?**

DZ Stakeholders & Communities Participation Model

Biomethane for Carbon and Community



- State agencies,
- Semi-state Co,
- Advisory,
- Regulatory

PPN, LCDC, SPCs
County Forums

County Committees,
Representative Orgs,
Sustainability Officers

Learnings to date - DZ

Biomethane for Carbon and Community

1. ***Communities***
   - Local communities have vision and ambition
   - Support is needed – technical, admin, funding
   - TCC has strong linkages with communities – MDs, ECRD, PPN, LCDC, etc
2. ***Stakeholders***
   - Collaboration is proving successful
     - National Bioeconomy Campus – TCC, IBF, TUS
3. DZ Funding is required to develop local projects
4. Scale-Up - *scale smart, scale fast*
5. Research, learning, inform policy (ESPON)
6. Biomethane has a role to play in rural decarbonisation
   - *Potential community scale AD?*



Learnings to date - BCC

Biomethane for Carbon and Community

- ❑ **Need for a coordinated communications strategy and plan on biomethane**
- *National – Regional – Local implementation*
- *Trusted advisory and farming organisations to provide confidence and clarity to rural communities (Tipperary DZ)*
- ❑ **Clear, concise farmer-focused guidance on economic opportunities and supports**
- *Clear messaging on national policy, targets, delivery pathways, supports and timelines*
- ❑ **Strengthen alignment between national policy and place-based delivery**
- *Leverage Decarbonising Zones for implementation and innovation*
- *Stakeholder and community engagement at both regional and local levels*

Tipperary DZ Conclusions (to date)

Biomethane for Carbon and Community

1. Strong **demonstration and testbed** for rural decarbonisation
2. **Placed-based and community-centred** approach is key to success
   - *Further engagement, learning, capacity building, resillience*
   - *Village/ urban renewal and regeneration (Town Centre First)*
3. Strengthen alignment of **national, regional, local policy** and governance
   - *Stakeholder coordination and action towards net-zero goal*
   - *Integrated approach (BEI): residential, energy, transport, biodiversity, waste*
4. **Funding, guidance and support** to help advance the DZ vision and actions
5. **Local Authorities** have a significant **leadership and coordination** role
   - *Closest point of government to communities*
   - *Strong stakeholder and community connections and networks*
   - *Trusted sources of information*

Latest News

Biomethane for Carbon and Community

A new **Climate Action Charter for Local Authorities** (2026)

- Strengthened role for LAs in delivering Irelands climate targets
- Local authority work tied more closely to LACAPs
- Support for Decarbonising Zones in every county and city
- Improve monitoring and reporting of local emissions and climate action measures
- Expand community level programmes and funding streams

"This revised Charter signals a clear and continued intent for collective leadership and collaboration across national and local government to achieve the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy. "

Darragh O'Brien TD, Minister for Climate, Environment and Energy



“We often talk of saving the planet, but the truth is that we must do these things to save ourselves.”

Sir David Attenborough

Centenarian



The Biomethane for Carbon and Community project is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Key aspects of the Feasibility of the Biomethane Plants in Tipperary

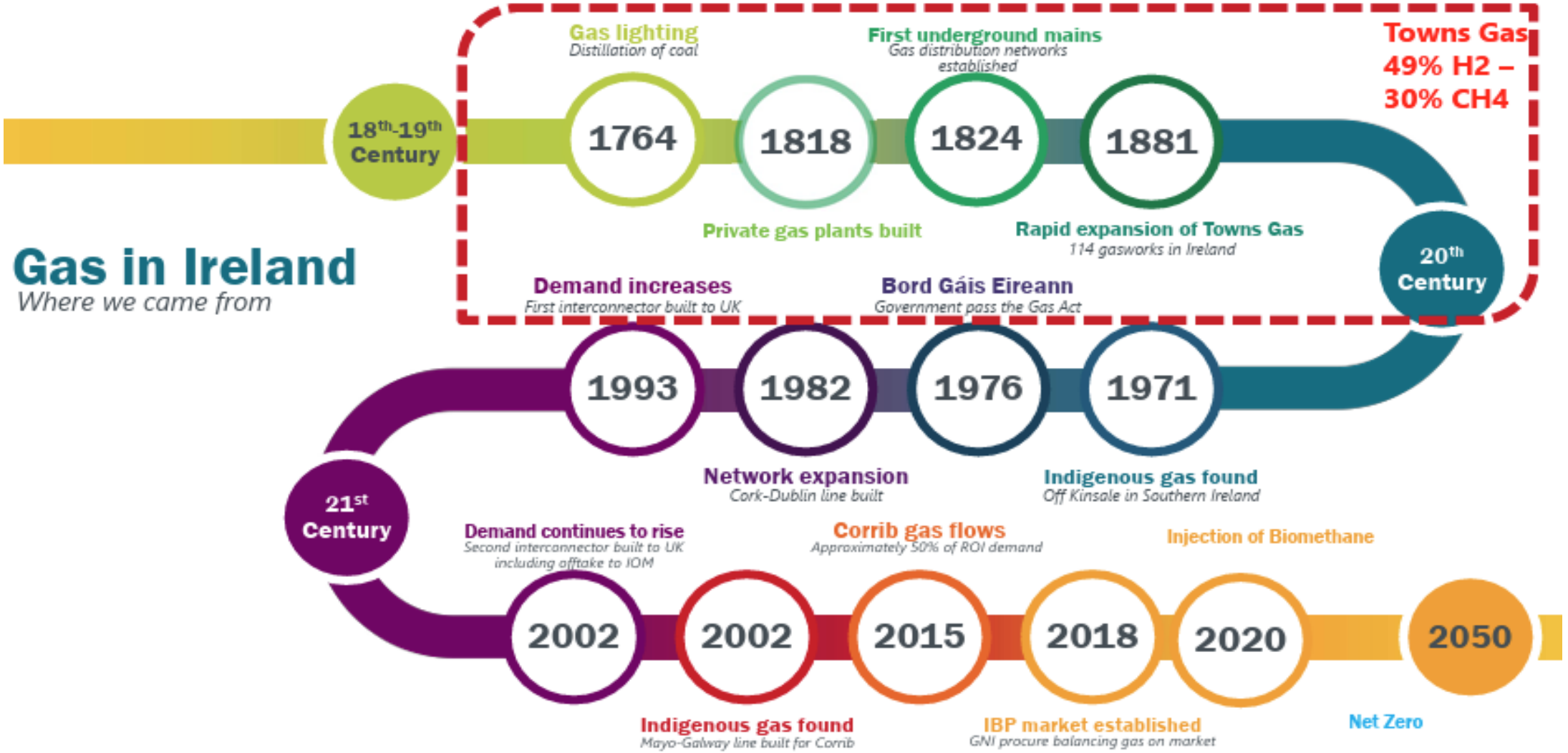
Wednesday, 13th May 2026

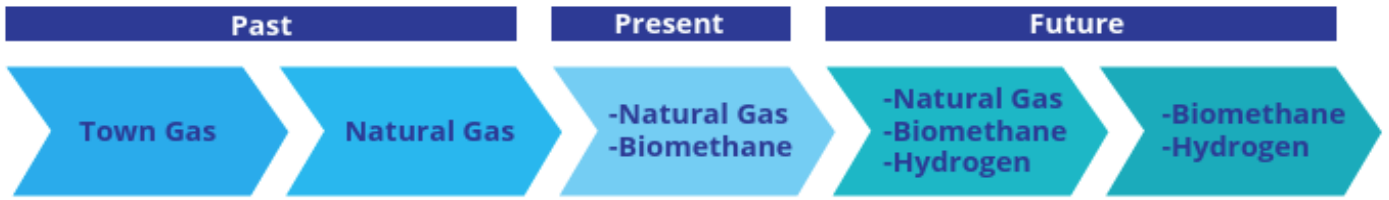
Presentation By: Biomethane Development Office

The Biomethane for Carbon and Community project is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Gas in Ireland

Where we came from



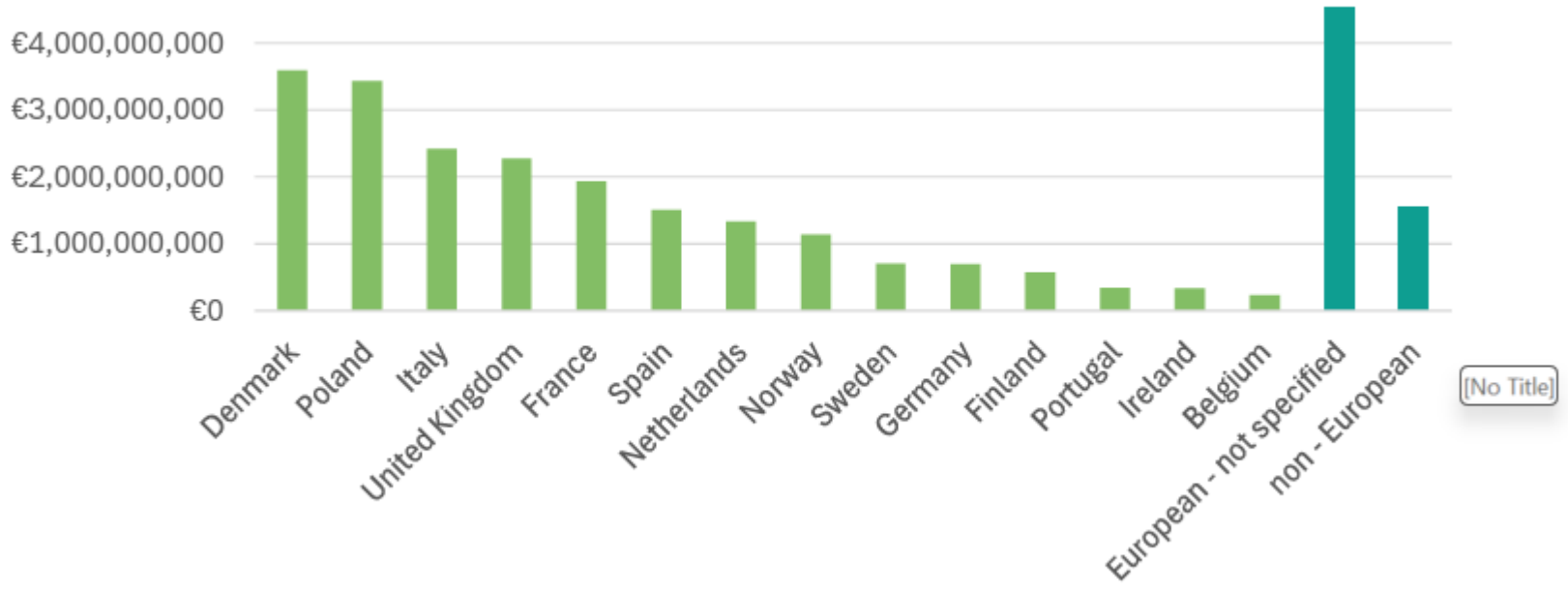


Gas Networks Ireland

Investment volume and additional biomethane production capacity for the timeframes 2024–2026, 2027–2030 and after 2030.

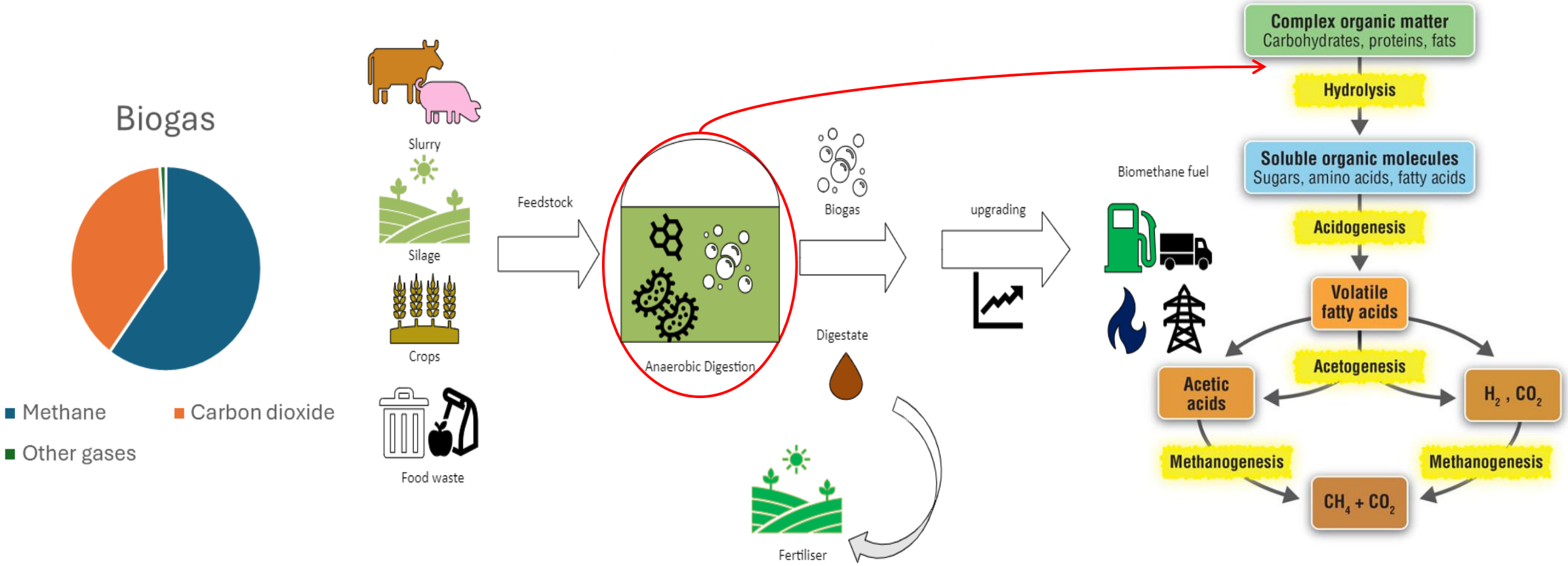
	European and by 2030	European 2024 – 2026	European 2027 – 2030	After 2030, non-European or non-specified	TOTAL
Investment volume (EUR)	24.5 billion	10.5 billion	14.0 billion	2.1 billion	26.7 billion
Production capacity (bcm biomethane)	6.3 bcm	3.1 bcm	3.2 bcm	0.6 bcm	6.9 bcm

Geographical distribution of investment volumes



Biogas Production through Anaerobic Digestion

Anaerobic digestion is a microbiological process where the organic matter is digested in absence of O_2 to produce biogas.



Mouftahi et al. 2020

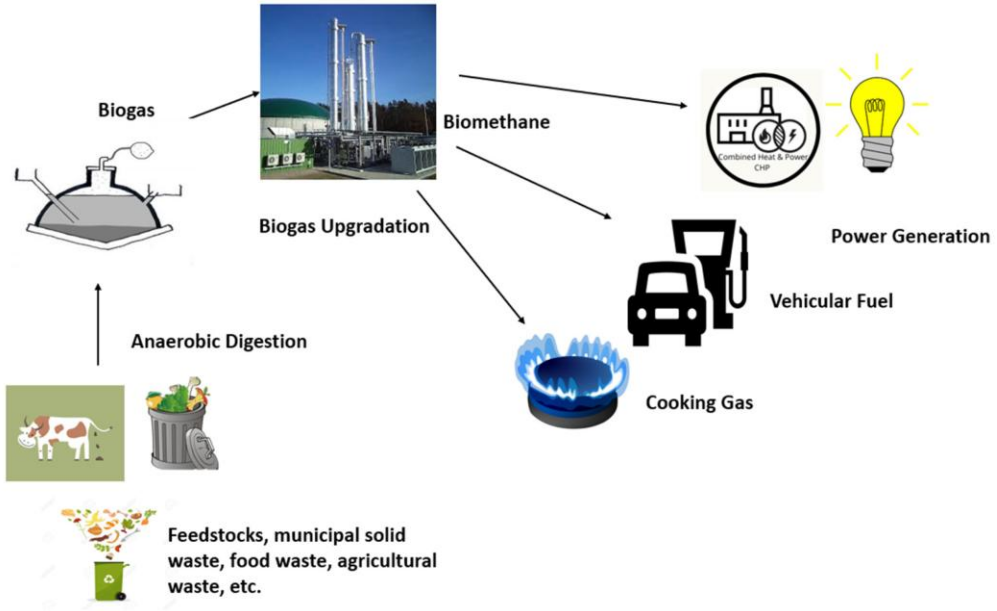
Feedstock & variability

- **Types of Feedstock:**
  - ✓ Agricultural residues (manure, crop residues, slurry).
  - ✓ Energy crops (maize silage, grass silage).
  - ✓ Organic municipal solid waste (food waste, garden waste).
  - ✓ Industrial organic waste (brewery waste, dairy processing residues, slaughterhouse waste).
  - ✓ Sewage sludge from wastewater treatment plants.
- **Variability Factors:**
  - ✓ Composition: CH_4 yield depends on C/N ratio, lignin content, biodegradability.
  - ✓ C/N ratio ideally ~ 20–30:1 (too much N → ammonia inhibition, too little N → nutrient deficiency).
  - ✓ Moisture content: high water content lowers energy density.
  - ✓ Seasonality: crop residues and silage availability vary with harvesting cycles.
  - ✓ Contaminants: presence of sulfur compounds, siloxanes, heavy metals from industrial or municipal waste streams. Avoid toxic compounds (heavy metals, antibiotics, cleaning agents, sulfates in excess).
  - ✓ Digestibility: some feedstocks (e.g., lignocellulosic material) require pretreatment for efficient biogas production.
  - ✓ Higher protein content → more NH_3 emissions.
  - ✓ Sulfur-rich feedstock → higher H_2S levels, requiring more cleaning.
  - ✓ Food/organic waste → faster biogas generation but higher risk of impurities

Why upgrade biogas?

Unlock Higher-Value Applications

- ✓ **Electricity & heat:** CHP units can tolerate raw biogas, but efficiency is lower.
- ✓ **Transport & grid injection:** require biomethane (higher market value).
- ✓ **Expands markets:** industrial users, households, and transport fleets.



Enable Climate & Policy Benefits

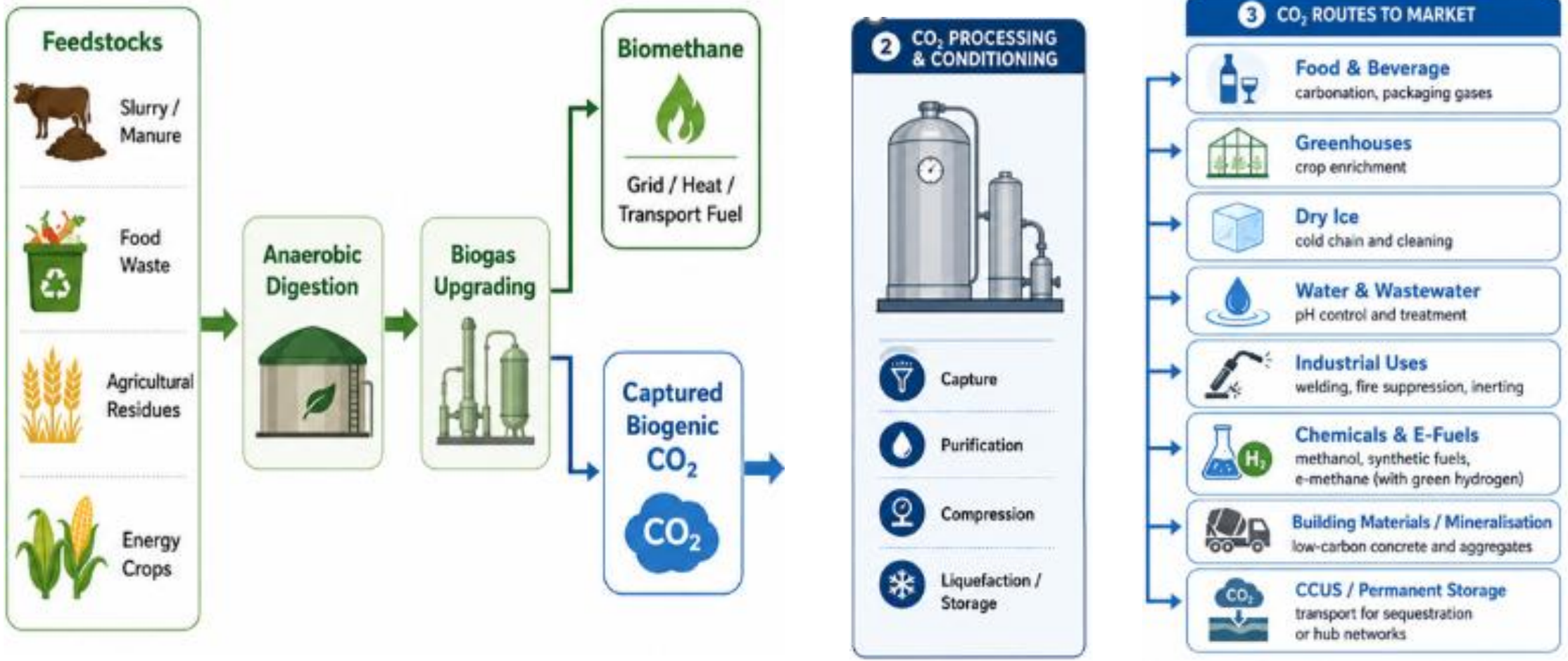
- ✓ Biomethane qualifies as renewable energy under EU RED III.
- ✓ Reduces lifecycle GHG emissions by 70–200% compared to fossil gas (when considering avoided methane emissions from waste).
- ✓ Contributes to national targets for renewable gas, emissions reduction, and circular economy.

Circular Economy & Local Value

- ✓ Uses waste (agricultural residues, food waste, sewage) as feedstock.
- ✓ Produces renewable fuel + digestate (biofertiliser).
- ✓ Keeps value within local communities (farmers, industries).

Technology and market pathway: from organic resource to bankable gas

Feedstock reception → **Anaerobic digestion** → **Biogas upgrading** → **Quality assurance** → **End-use market**



Technical perspective: grid, storage and quality management

Farm-scale AD

Lower feedstock radius, local heat/power use, simpler community narrative; but lower economies of scale and limited grid injection economics.

Medium regional plant

Balanced logistics, potential for upgrading, farmer contracts and digestate return; suitable for regional clusters.

Large centralised plant

Stronger economies of scale, grid injection and CO_2 capture potential; higher transport, planning and ABP/waste complexity.

Choice rule

Scale should follow feedstock density, market access and consentability.

Technical recommendation: assess at least two scenarios for Tipperary - a regional 20 - 40 GWh cluster model and a larger centralised model.

Gas quality

Biomethane must meet GNI gas quality requirements: methane content, oxygen, H_2S, water, siloxanes and calorific value control.

Grid connection

Early GNI enquiry, feasibility assessment, planning reference, connection application and economic-test exposure.

Storage & safety

Gas-tight digesters, flare, pressure relief, ATEX zones, monitoring and emergency procedures are core technical systems.

Operations

Reliable operation needs feedstock QA, maintenance, process monitoring and digestate quality assurance.

For Tipperary, technical development should be staged through: pre-FEED → feedstock validation → grid enquiry → planning design freeze → financial close.

Policy perspective: national ambition creates a delivery mandate

Policy anchor

The National Biomethane Strategy target of 5.7 TWh/year by 2030 gives the sector a defined national delivery benchmark.

Just Transition fit

Tipperary/Lisheen sits within a place-based transition narrative: rural enterprise, skills, bioeconomy and regional decarbonisation.

Local authority role

Tipperary County Council and the Mid-Tipperary DZ provide governance, convening power and planning relevance.

Communities

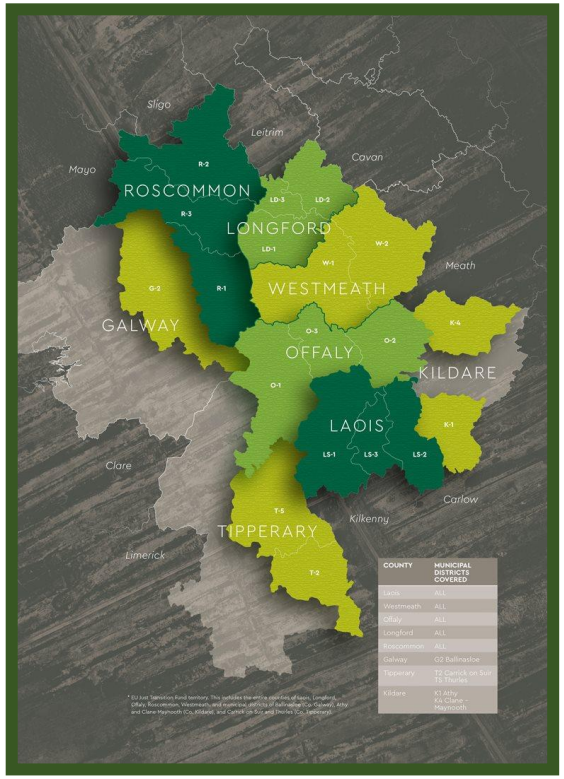
Acceptance depends on traffic, odour, benefit sharing, transparency and early engagement.

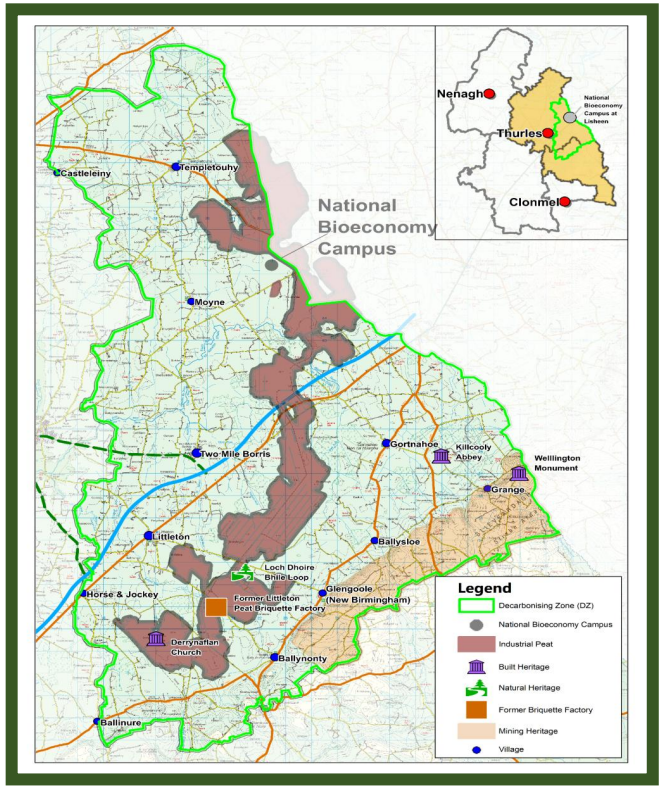


Biomethane Environmental Sustainability Charter

Supporting the delivery of environmentally sustainable biomethane production in Ireland

Capital Grants
(~€40 m Fund Completed by 2025)
(~€200 m Fund is expected soon)







Social perspective: farmer participation and rural value

Farmer proposition

Reliable feedstock income, digestate value, reduced fertiliser exposure, and participation in long-term renewable gas supply chains.

Community proposition

Local decarbonisation, skills, education, rural enterprise and transparent benefit-sharing mechanisms.

Trust condition

Communities must see credible evidence on odour, traffic, visual impact, safety and local benefits.

Risk

Perceived industrialisation of farming if engagement is weak or benefits are unclear.

FLEET reports farmer willingness to supply around 175,000 ha of grassland, compared with an estimated 110,000–130,000 ha required nationally to meet 5.7 TWh.

Social perspective: Community acceptance model

Inform

Plain-English website, FAQs, VR/3D models and public events.

→

Consult

Early meetings before planning; publish traffic, odour and digestate assumptions.

→

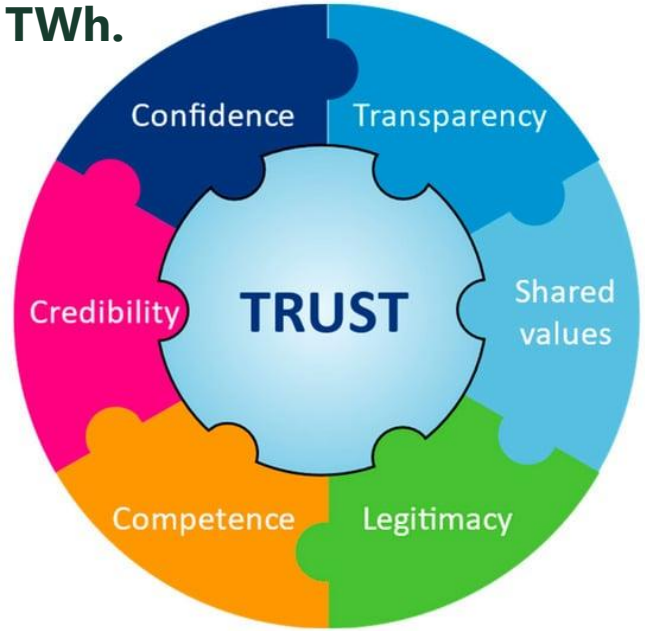
Co-design

Farmer groups, community reps and local authority input into routing, benefits and monitoring.

→

Report

Annual local impact statement: feedstock, transport, incidents, digestate use and benefits.



Social licence principle: move from “consultation after design” to “engagement before design is locked”.

Key message: The bodies like BDO can serve as an independent knowledge bridge between technical developers and local stakeholders.

Financial perspective: risk allocation and investment readiness

Revenue stack

Biomethane sales, Guarantees of Origin, gate fees, digestate value, CO_2 offtake, heat/power and potential policy support.

Cost drivers

CAPEX, upgrading, grid connection, feedstock purchase, transport, storage, digestate logistics, finance and compliance.

Farm economics

FLEET indicates silage supply becomes competitive with vulnerable livestock systems when silage price exceeds c. €35/t.

Bankability

Long-term contracts and stable support mechanisms are required to secure debt and reduce equity risk.

Policy risk

RHO/market support timing, GO value, grant availability and changing sustainability criteria.

Supply risk

Feedstock price volatility, farmer participation, seasonal logistics and quality variation.

Connection risk

Upfront contribution, economic test, application timeline and network constraint management.

Planning risk

Appeals, conditions, odour/traffic objections, permitting sequencing and legal challenge.

Recommended investment sequence

1. Resource proof → 2. Farmer LOIs → 3. Site/options → 4. Grid enquiry → 5. Pre-FEED → 6. Consent strategy → 7. Offtake heads of terms → 8. Financial model → 9. Planning → 10. Financial close

Environmental perspective : safeguards for responsible deployment

Methane leakage

Continuous monitoring, covered storage, gas-tight systems, high methane recovery in upgrading.

Water protection

Nutrient Management Plans, buffer zones, restricted spreading periods and landbank verification.

Biodiversity & land use

Prioritise slurry/residues and low-N grass-clover or multi-species swards; avoid habitat loss.

Odour & traffic

Covered reception, enclosed handling, routing plans, peak-season logistics and community communication.

Environmental perspective: emissions reduction and circularity

GHG pathway

Irish research shows co-digestion of cattle slurry and grass silage can reduce farm-level emissions when integrated with livestock systems.

Nutrient recovery

Digestate can replace synthetic N, P and K where soil status and nutrient management plans allow.

Circular bioeconomy

AD transforms slurry, manure and residues into renewable gas and biofertiliser, reducing waste and fossil fuel dependence.

Safeguard

Avoid nutrient loading, ammonia, odour, fugitive methane and unsustainable energy-crop expansion.

Evidence point: Tisocco et al. reported 24% farm-level GHG reduction and potential nutrient fertiliser savings of up to 65% N, 33% P and 56% K in a 40 GWh biomethane plant model.

Why Tipperary and Midlands are credible biomethane regions

National target

Ireland's policy target is 5.7 TWh/year of biomethane by 2030 - approximately 10% of current gas demand. Delivery requires a move from isolated projects to a coordinated market.

Regional proposition

Tipperary combines livestock, grassland, agri-food residues, brownfield land and the National Bioeconomy Campus at Lisheen within a Just Transition context.

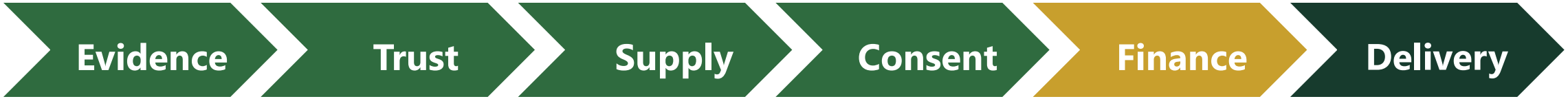
Commercial lens

The feasibility study focuses on practical routes: feedstock contracting, technology choice, grid injection, transport fuel, digestate management and investable governance.

Strategic outcome

A bankable, community-aware and environmentally responsible development pathway.

Practical feasibility =
Resource sufficiency × consentability × sustainability × market access × investability



Tipperary is not being assessed only for theoretical resource potential; it is being assessed for practical readiness to host responsible biomethane projects.

Coffee Break



Biomethane & Bioeconomy Synergies

Wednesday, 13th May 2026

Kevin Ryan
Irish Bioeconomy Foundation

Presentation By:

Biomethane Development Office

Biomethane for Carbon and Community

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach

Co-funded by the European Union

EMRA

pobal
government supporting communities

The Biomethane for Carbon and Community project is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Irish Bioeconomy Foundation

- IBF is a not-for profit organisation to promote the conversion of Ireland's natural land & sea resources to high value products.
- Projects related to education, start-up finance and rural development.
- IBF is located at the National Bioeconomy Campus in Lisheen

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

National Biorefinery Pilot Plant (NBPP)

- IBF operates National Biorefinery Pilot Plant with close collaboration from industry, researchers, and authorities.
- NBPP is a new open access pilot scale facility that has been in development for many years.
- Demonstrate scale-up and de-risk of low TRL (4) biochemical processes from industrial feedstock (dairy, food and forestry) to produce high-value bio-based products (TRL 8).
- Scaling up SME training and skills development



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NBPP Expertise

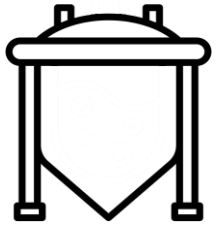
National Biorefinery Pilot Plant

Biomethane for Carbon and Community



Pre-treatment and Upstream Processing

- Conversion of virgin by-products of agri-food processing into fermentable substrates by physico-chemical treatments (maceration, high shear mixing, wet milling, precipitation, centrifugal separation, demineralisation, homogenization, conversion to solubilise and create dispersions.)
- On-site inoculum preparation and Scale-Up.



Fermentation

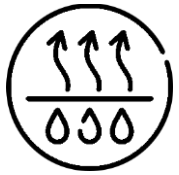
- Precision bioreactors (100 L, 1000 L, 3000 L)
- General-purpose Bioreactor Vessels (500 - 3000 L)
- Anaerobic Digestors – 2-stage system with gas capture (2500 L)
- Photobioreactor (1000 L)



In-process analytical support (HPLC, ICP)

Downstream processing (DSP)

- Harvesting of microbial cells and clarification of supernatant
- (500 to 5000 LPH).
- Fractionation with cross-flow filtration (MF/UF/NF/FO plants at 100 - 4000 LPH).
- Liquid-Liquid and Liquid-Solid solvent extraction
- High-pressure chemical reactor (100 L)
- Separation – Continuous flow centrifuge , Homogeniser.



Preservation and Concentration

- Batch and continuous (short-path) distillation,
- Hydrophilic and hydrophobic pervaporation (100 LPH)
- Spray drier, Drum Drier, power blending and mixing.



Samples for application testing &TEA/LCA assessments

- Complete pipeline assessments and consultations for your Tech Transfer team. Including prototype products and equipment for customer evaluation.

Lisheen developments

Biomethane
for Carbon and Community



Video Link:

https://vimeo.com/dogdaymedia/download/1090535289/f0e99e48d0

IBF projects

- IBF has been involved in several EU projects promoting the bioeconomy in Tipperary.



- RuralBioUp- action plans, education videos, networking events, study visits

- PRIMED- new business models integrating primary producers into novel bio-economy value chains and leveraging advanced bio-refineries in five living labs.



- NPower- solutions that limit their N/P emissions

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Biomethane for Carbon & Community

- Role within BCC project is to explore synergies with Biomethane and bioeconomy sector.
- Position BCC office at Lisheen with a view to positioning the National Bioeconomy Campus as centre of excellence in this regard.
- Create report which examines how biomethane can be embedded within a circular bioeconomy framework to deliver climate, economic, and community benefits across Ireland.



The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

What the report covers

- Technical performance of anaerobic digestion and biomethane within integrated bioeconomy systems, including green biorefineries, nutrient recovery, and cascading use models.

- European and Irish policy frameworks, drawing on lessons from Denmark and Germany where biomethane has scaled rapidly.

- Regional implementation pathways, with a focus on the National Bioeconomy Campus at Lisheen and the Tipperary Decarbonising Zone.

- Key bottlenecks — including grid connection costs, digestate regulation, and operator capacity — and a sequenced set of actions to address them.

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Key audience

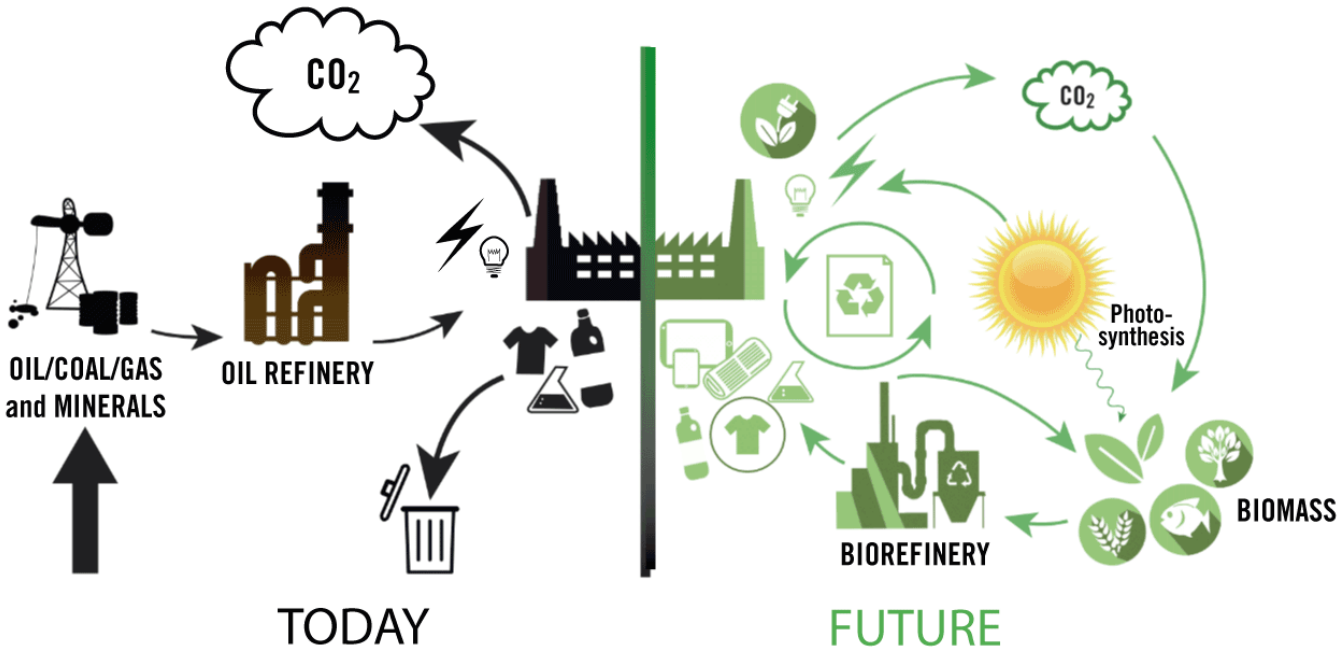
- Policymakers and regulators seeking evidence-based recommendations on biomethane strategy, digestate standards, and grid access
- Local authorities looking to understand the role of biomethane within decarbonisation zones and regional climate action plans
- Primary producers and the agri-food sector exploring new income opportunities and sustainable land management options
- Researchers and innovation professionals working on circular bioeconomy value chains, life-cycle assessment, and system integration

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

What is bioeconomy?

- Renewable resources from agriculture, forestry and the marine to produce food, feed, materials and energy, while reducing waste,, in support of achieving a sustainable and climate neutral society.

- It aims to reduce dependence on fossil fuels in support of achieving a sustainable and climate neutral society.



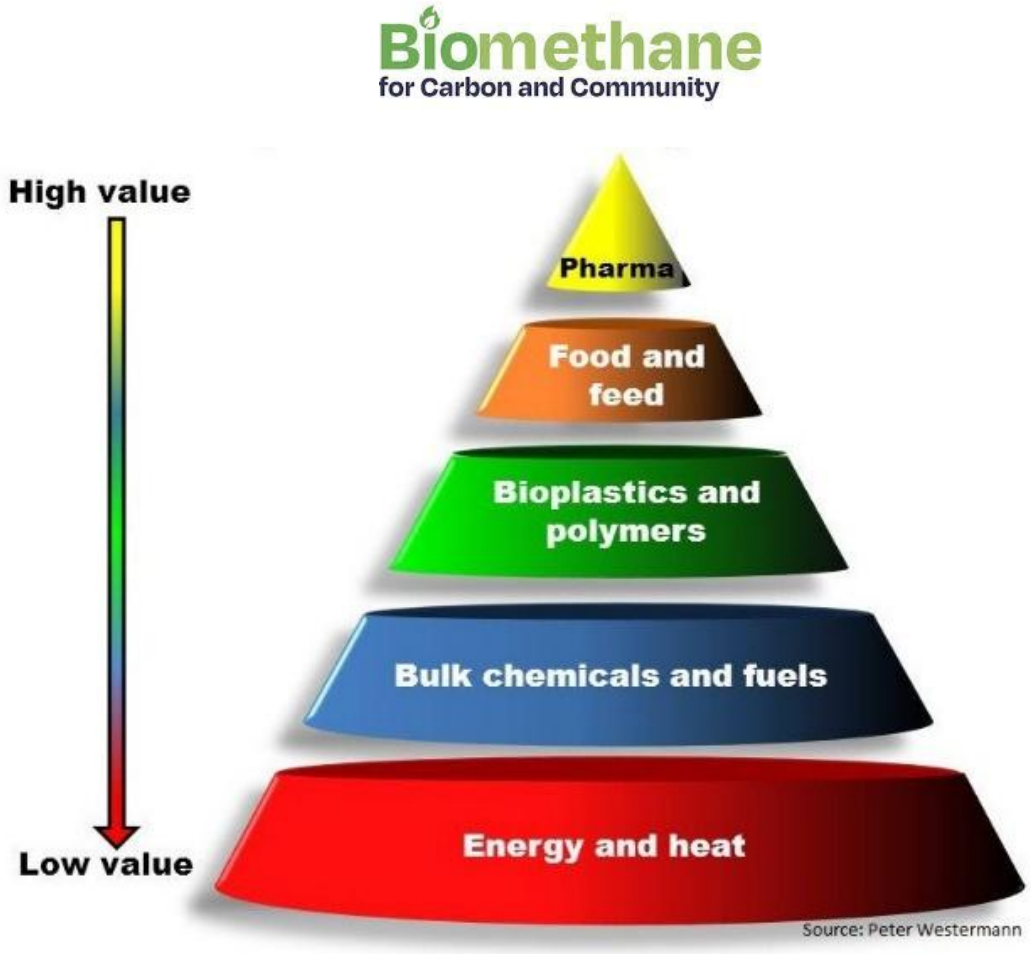
The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Biomethane part of bioeconomy

- Biomethane is part of the bioeconomy as produced from biological materials and organic waste into renewable energy and useful by-products.

- Cascading use aims to increase biomass utilisation by reusing, recycling and finally for energy production at the end of the lifecycle.

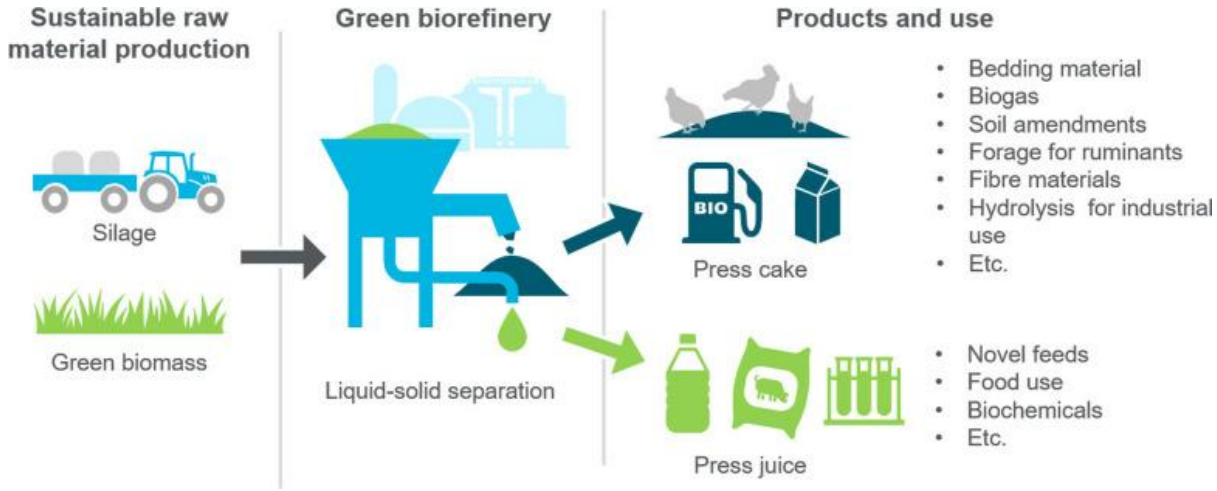
- When AD is paired with other technologies it is possible to get higher value products as well as bioenergy.



The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Technology

- The report details the technologies that can be integrated with traditional biomethane production such as AD.
- Section includes green biorefinery, fermentation and pyrolysis.
- When integrated with AD to create multi-product value chains that combine renewable gas, bio-based materials, circular fertilisers, and carbon-rich soil amendments.

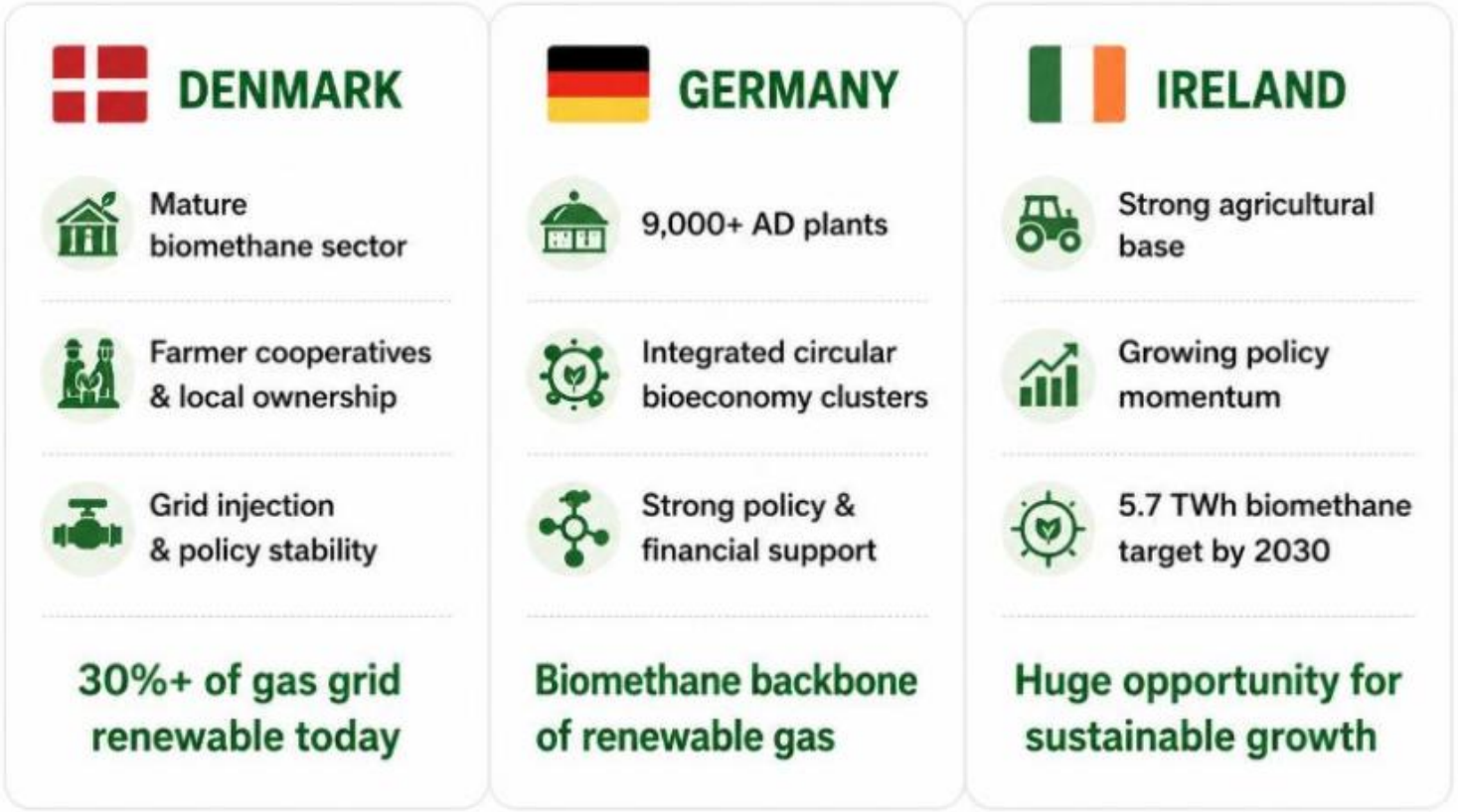


The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Policy

- Policy section includes EU, National and Regional Policies relevant to the biomethane section.

- Comparisons of successful biomethane policies and actions from Denmark and Germany and what Ireland can learn.



The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Conclusion

- Regional initiatives (NBPP and BCC) illustrate how clustered infrastructure and stakeholder collaboration, involving the Local Authority, Industry and Research Institutions and industry partners, can support and accelerate first-wave projects.

- Ireland can significantly increase biomethane output and establish a credible export-aligned renewables sector if biomethane is embedded within farmer-led, residue-based bioeconomy networks.

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Thanks for listening

Kevin Ryan
Irish Bioeconomy Foundation
Wednesday 13th May 2026

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Planning, Permitting & Guidelines for Biomethane Project

Aim: *To provide a practical, end-to-end planning and permitting roadmap for agri-led biomethane (anaerobic digestion) projects in Ireland and to provide a structured guide organising all existing statutory requirements into a single coherent roadmap from feasibility to commissioning.*

Target Audience: *Possible developers, planners, regulators and communities to navigate the consenting process with confidence.*

Current Status: *Draft Completed.*

Incorporated comments from Clare & Alan. Incorporated inputs from the KPMG study into the document.



Pathway: Feasibility to Operations

0 Feasibility & Site

Desktop scan: zoning, Natura 2000, flood, heritage. Grid capacity checks. Land control (options/HoT).

1 Pre-Planning & Scoping

Formal pre-planning; EIA/AA screening; surveys (ecology, noise, odour); confirm licence path (EPA IE / ABP).

2 Planning Application

Full planning set: plans, EIAR (if required), AA/NIS, Traffic, Noise & Odour, Flood Risk, CMP, Heritage.

3 Parallel Consents

EPA IE licence (if thresholds met); Section 4/16 discharge; Road Opening Licences; GNI/ESB connections; COMAH screening.

4 Construction Mobilisation

Appoint PSDP/PSCS; Construction Mgmt Plan; Traffic Mgmt (TII); HSA notification; C&D Waste Plan.

5 Commissioning & Operations

Grid & gas commissioning; odour/flare checks; safety file; staff training; complaints protocol; monitoring.

Regulatory Landscape by Thematic Area

Planning Consent — 1+6 laws

Planning Permission · EIAR · AA/NIS · Flood Risk Assessment · Fire Safety Cert · Disability Access Cert

Environmental / Emissions — 9 laws

EPA IE Licence · Air Pollution Act Licence · MCP Registration · Section 4 Licence · Section 16 Licence · Water Abstraction · EPA NG4 (Noise) · EPA AG9 (Odour)

Traffic & Roads — 6 laws

TII Traffic & Transport Assessment · Road Opening Licence (MapRoad) · Abnormal Load Permit · ADR Compliance · Temp. Traffic Mgmt (TII) · Bridge Clearance Checks

Utilities & Energy — 4 laws

ESB Networks Demand Connection · ESBN/EirGrid Generator Connection · GNI Biomethane Injection · CRU Gas Act s.39A Consent

Materials, Waste & ABP — 5 laws

EU Reg. 1069/2009 (ABP) · EU Reg. 142/2011 · Nitrates Regulations S.I. 113/2022 · C&D Waste Management Plan

Biodiversity & Heritage — 5 laws

Habitats Directive (AA/NIS) · Birds Directive · EIA Directive · National Monuments Acts · Landscape & Visual Assessment

Health, Safety & Construction — 7 laws

Safety, Health & Welfare (Const.) Regs 2013 · ATEX 2014/34/EU · Pressure Systems (GA Regs 2007) · Dangerous Substances Licence · COMAH/Seveso S.I. 209/2015 · HSA Notification

Site-Specific & Other — 5+ laws

Weighbridge Cert · MCP Registration · Building Regulations · BCMS Commencement Notice · Other LA Permits

TOTAL: 48+ individual legislative instruments, licences & consents across 8 thematic areas

What the Data Tells Us: 78 Applications Reviewed (2008–25)

68%

Grant Rate

of AD/biomethane planning applications nationally were granted

44%

Appeal Rate

of decisions were appealed - a significantly elevated risk bundle

78

Applications

reviewed by KPMG Ireland to identify common failure themes

Common Reasons for FI Requests

⚠ Incomplete Design Envelope

Failure to state max throughput, HGV numbers, storage volumes or operating hours upfront.

💨 Odour & Noise Gaps

Inadequate baseline surveys, modelling or receptor mapping for odour and noise impacts.

🚚 Traffic & Roads Detail

Missing junction capacity analysis, swept-path data or construction traffic routing plans.

💧 Digestate Management

Insufficient landbank evidence, nutrient balance data or Nitrates Regulations compliance.

🔬 EIA/AA Inadequacy

Absent or insufficient EIA screening/Appropriate Assessment documentation.

📋 Parallel Consents

Failure to demonstrate awareness of EPA IE, ABP approvals and Section 4/16 discharge licences.

Key Messages & Conclusions

01

Define the Design Envelope First

Establish a realistic 'worst credible case' for throughput, odour, noise, traffic and grid load before preparing any application. This reduces redesign risk and enables coherent assessment.

02

Align Planning & Parallel Consents

Treat EPA IE licensing, Section 4/16 discharge, ABP approvals, grid connections and safety frameworks as one integrated programme — not sequential steps — to avoid critical-path delays.

03

Engage Early & Consistently

Early engagement with the local authority, statutory consultees and the local community reduces Further Information requests and builds decision-maker confidence.

04

Policy Context as a Planning Tool

Reference the National Biomethane Strategy, Climate Action Plan and County Development Plan explicitly to demonstrate project alignment with national decarbonisation targets.

Next Steps

- Final review and sign-off (Submission)
- Distribution to BDO stakeholders and partner local authorities

For Future Consideration

- Align with forthcoming Action 5g national guidance when published

Agenda

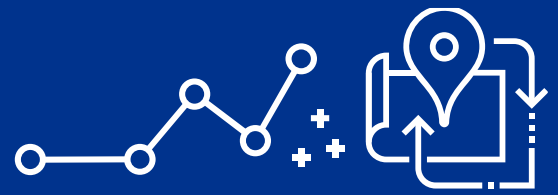


Dr Dónal Ó Céileachair

Manager, Infrastructure Advisory
KPMG Sustainable Futures

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1.0 Where KPMG fits in the renewables landscape

2.0 KPMG policy development in the sector

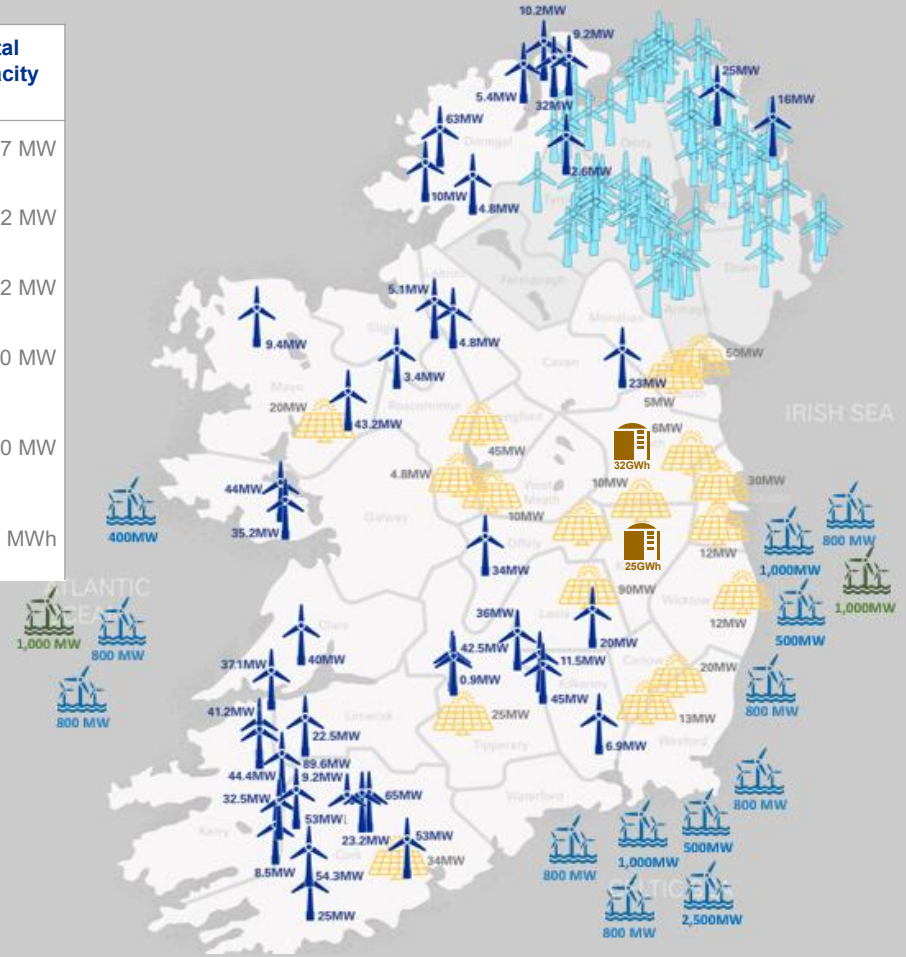
3.0 Planning analysis

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1. Where KPMG fits in the Renewables Landscape

KPMG has acted as lead advisor on c.90% of all renewable energy transactions in Ireland over the past 5 years. We are deeply embedded in the Irish renewable sector.

Renewable Technology	Number of Assets	Total Capacity
Wind farms	78	1,837 MW
Single turbines	190	32 MW
Solar farms	29	832 MW
Offshore wind	13	13,500 MW
Floating offshore wind	2	2,000 MW
Anaerobic Digestion	2	57 MWh



Deal spotlight

KPMG

Project Barrow

Lead advisor on the sale of a biomethane plant and gas injection facility.

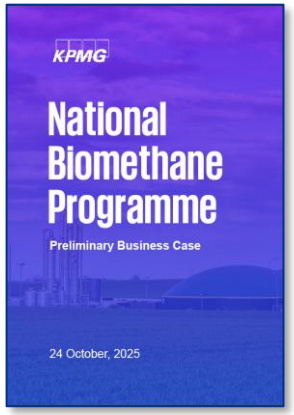
2025

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2. KPMG policy development in the sector

KPMG has worked on various projects that have provided us with comprehensive visibility of developers and projects in Ireland across all stages of the development pipeline, giving us substantial knowledge of the industry landscape, key players, and emerging trends. Recent credentials in this sector include:



October 2024
KPMG completed an assessment for the Department of Climate, Energy and the Environment on the National Biomethane Programme. The report, including a Preliminary Business Case, supports government funding to expand Ireland's biomethane production by evaluating demand from key stakeholders.



May 2024
KPMG was hired by the Department of Agriculture, Food and the Marine, alongside DCEE, to help create the National Biomethane Strategy for a coordinated government effort to develop Ireland's biomethane industry and achieve 2030 goals.



July 2022: KPMG produced a paper for the Gas DNOs on options to develop the NI biomethane sector.



October 2021: KPMG assessed the environmental feasibility of an agricultural led biomethane industry in Ireland.



September 2024
KPMG Ireland evaluated more than 25 biomethane projects for DAFM under the REPowerEU grant scheme, reviewing planning, permits, readiness, and financial viability to help allocate over €40 million in funding.



July 2021
KPMG Ireland served as lead advisor to Project Clover, an industry consortium aiming to develop a scalable agricultural biomethane sector in Ireland, with members like Danone, Glanbia, Dairygold, Nestle, and Carbery.



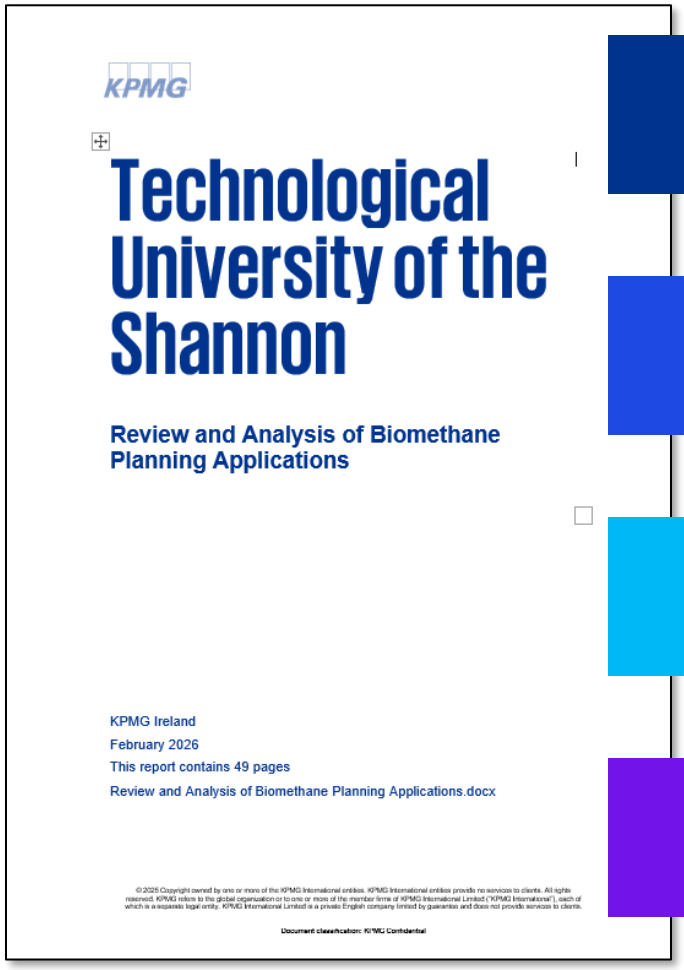
Feb 2021: KPMG was appointed by British GNOs to develop a visionfor a UK hydrogen economy.



October 2019: Full economic business case for the introduction of biomethane in Ireland.

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3. Planning analysis



Context

Review and analysis of biomethane planning applications in Ireland

Objective

Understand planning outcomes, constraints and trends

Audience

Policymakers, developers, investors and educators

Deliverables

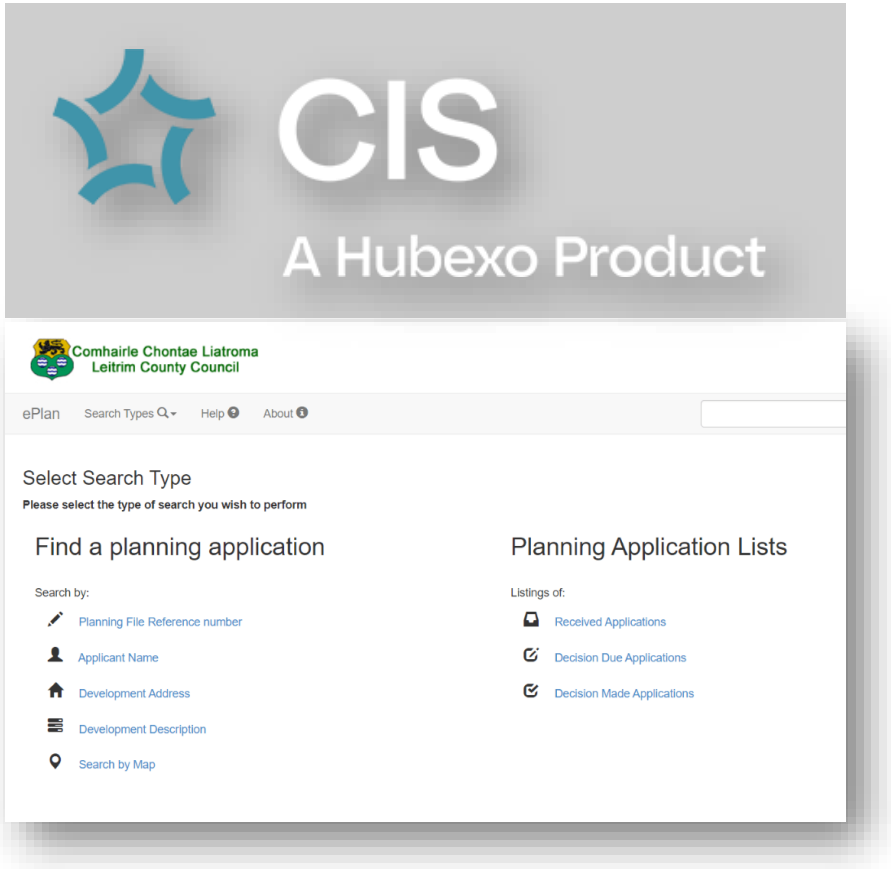
Written analytical report, structured planning dataset, Supporting dashboard for interrogation of results

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3. Planning analysis – Methodology

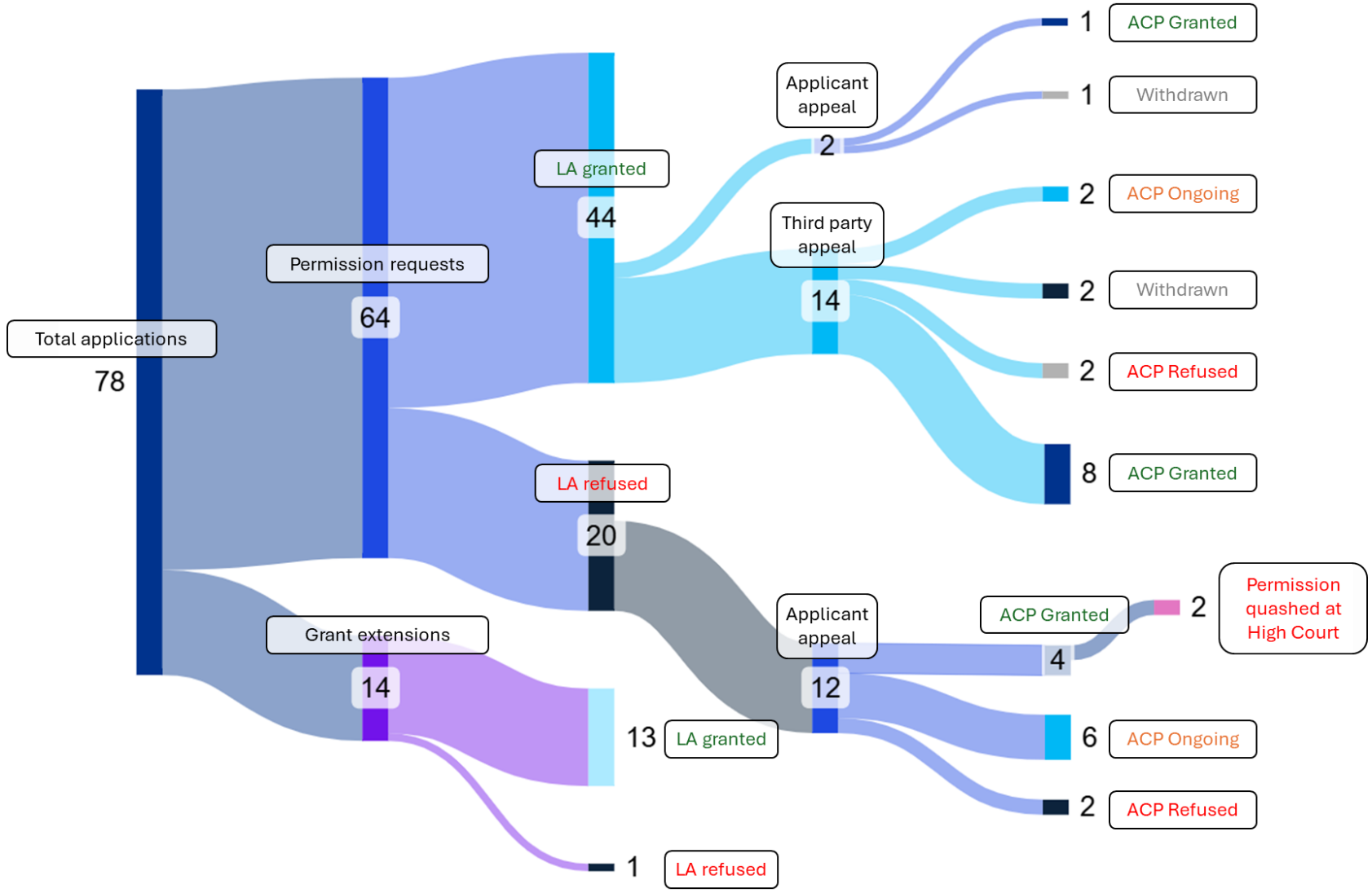
TUS's ask

1. **Compile a report on all relevant biomethane planning applications**
2. **Conduct a thematic analysis of these applications**
3. **Develop policy insights and recommendations for areas of improvement in planning guidance and national policy**
4. **Deliver a summary report of findings, including an Excel database and final presentation to the BDO and BCC Steering Committee**



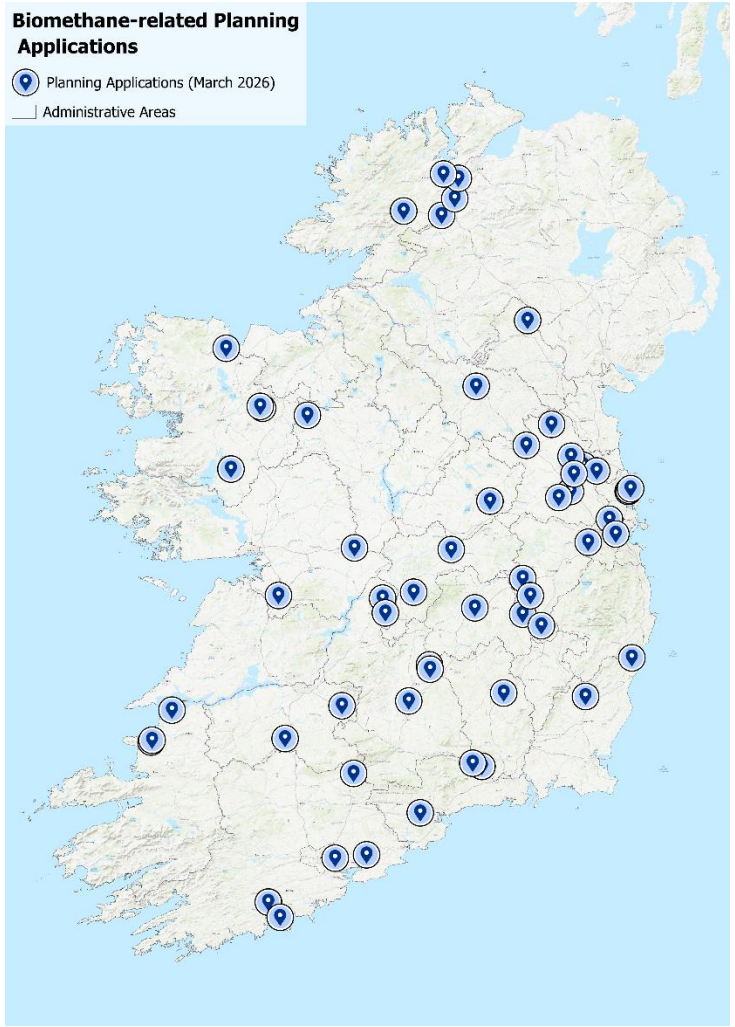
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3. Planning analysis – Search results



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Planning analysis – Search results

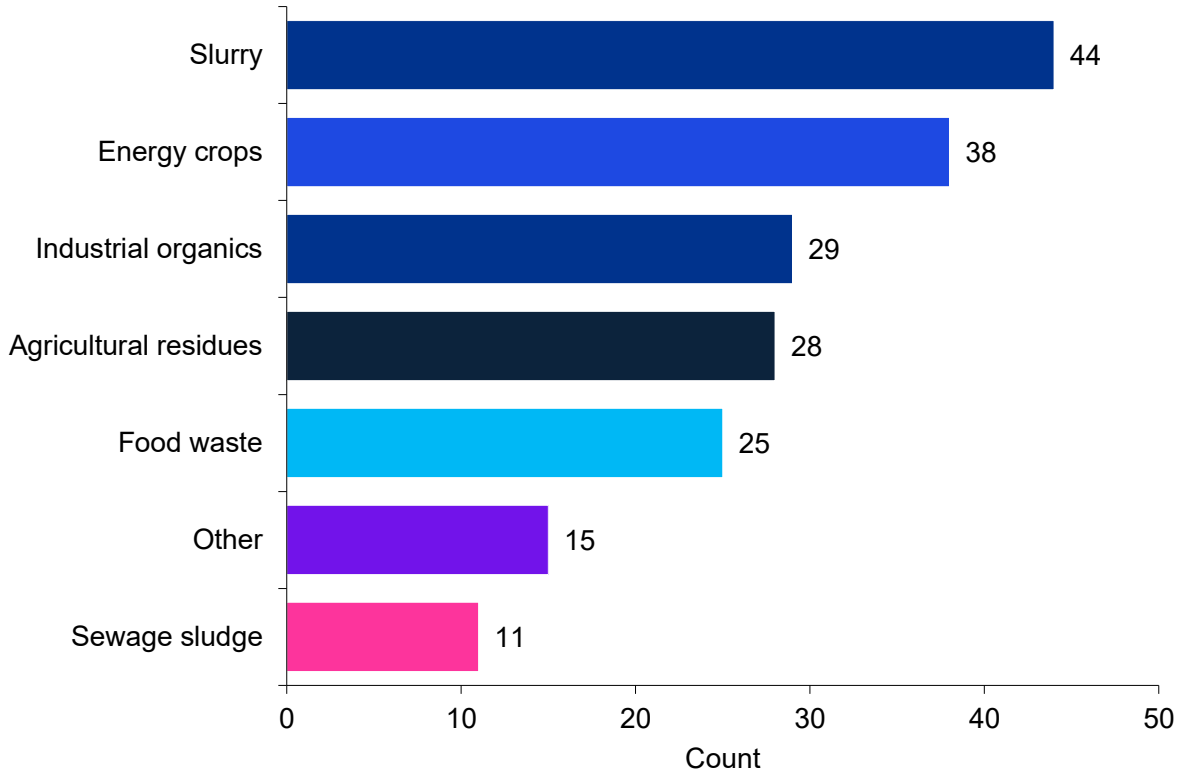


Council	No. of Applications
Meath County Council	8
Cork County Council	6
Donegal County Council	6
Mayo County Council	5
Tipperary County Council	5
Fingal County Council	4
Kildare County Council	4
Waterford City & County Council	4
Kerry County Council	3
Galway County Council	2
Kilkenny County Council	2
Laois County Council	2
Limerick County Council	2
Offaly County Council	2
Westmeath County Council	2
Wexford County Council	2
Cavan County Council	1
Dublin City Council	1
Monaghan County Council	1
Roscommon County Council	1
South Dublin County Council	1
Wicklow County Council	1
Total	**64**

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3. Planning analysis – Application feedstock categories

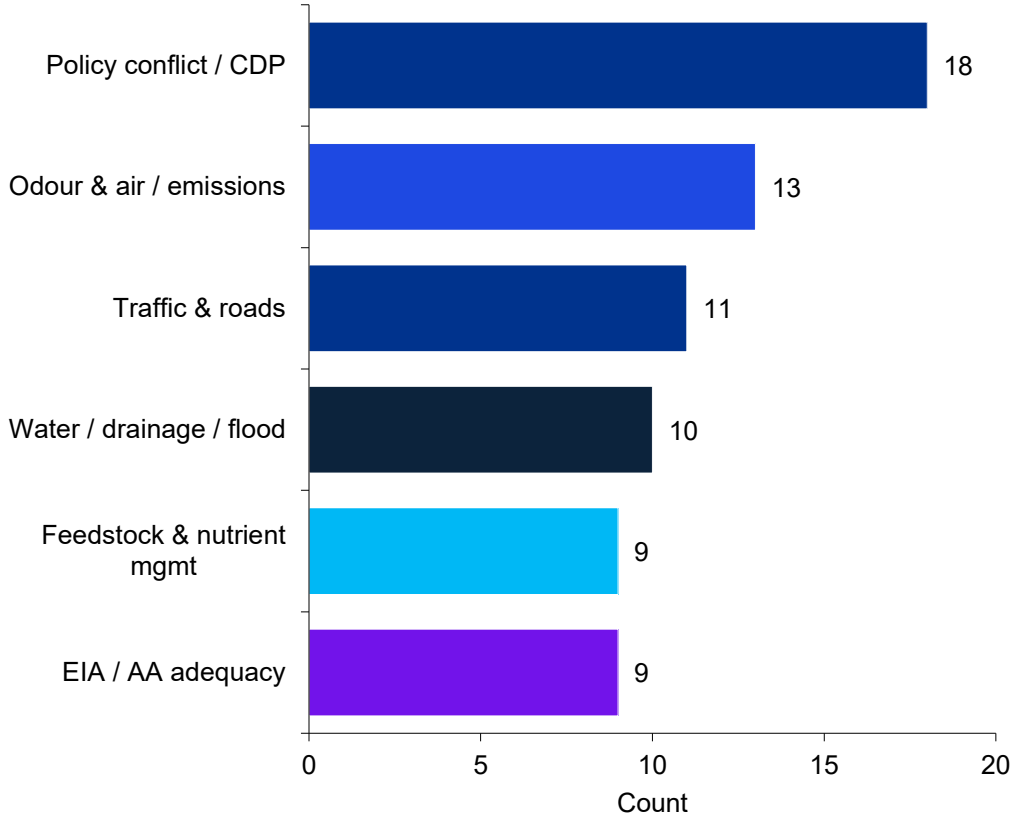
Number of non-extension applications detailing feedstock categories



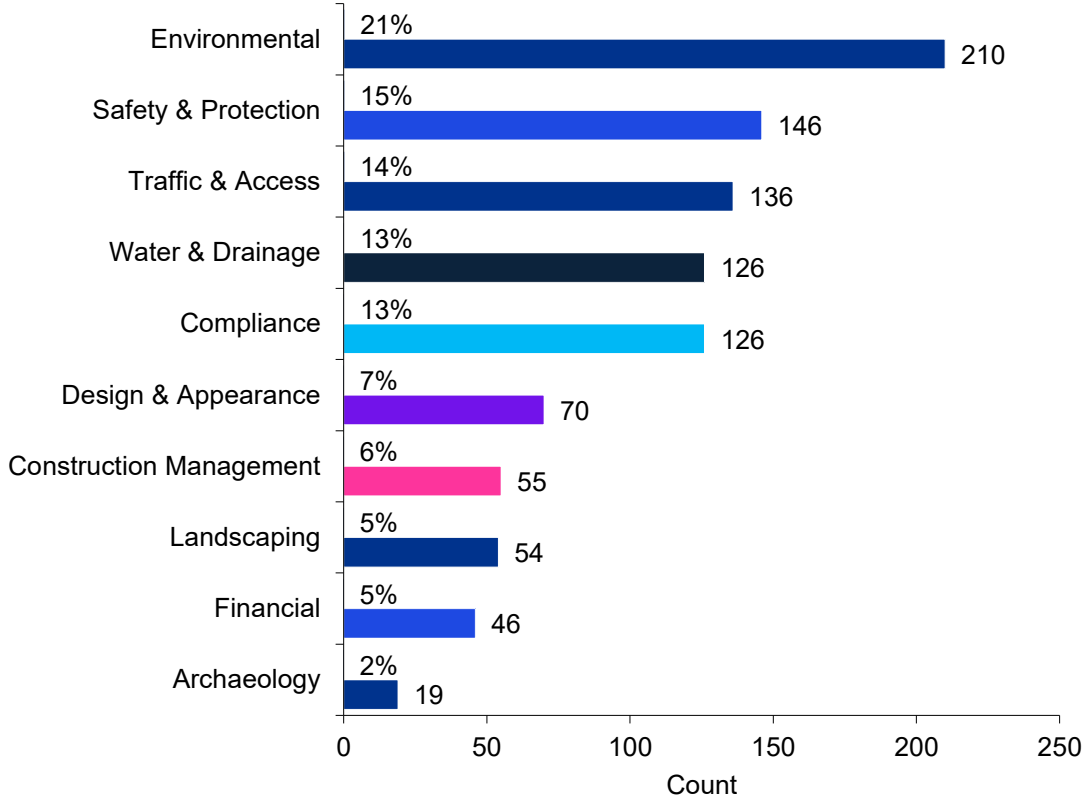
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3. Planning analysis – Refusals and conditions for approval

Number of non-extension refusals mentioning theme (19 total refusals)



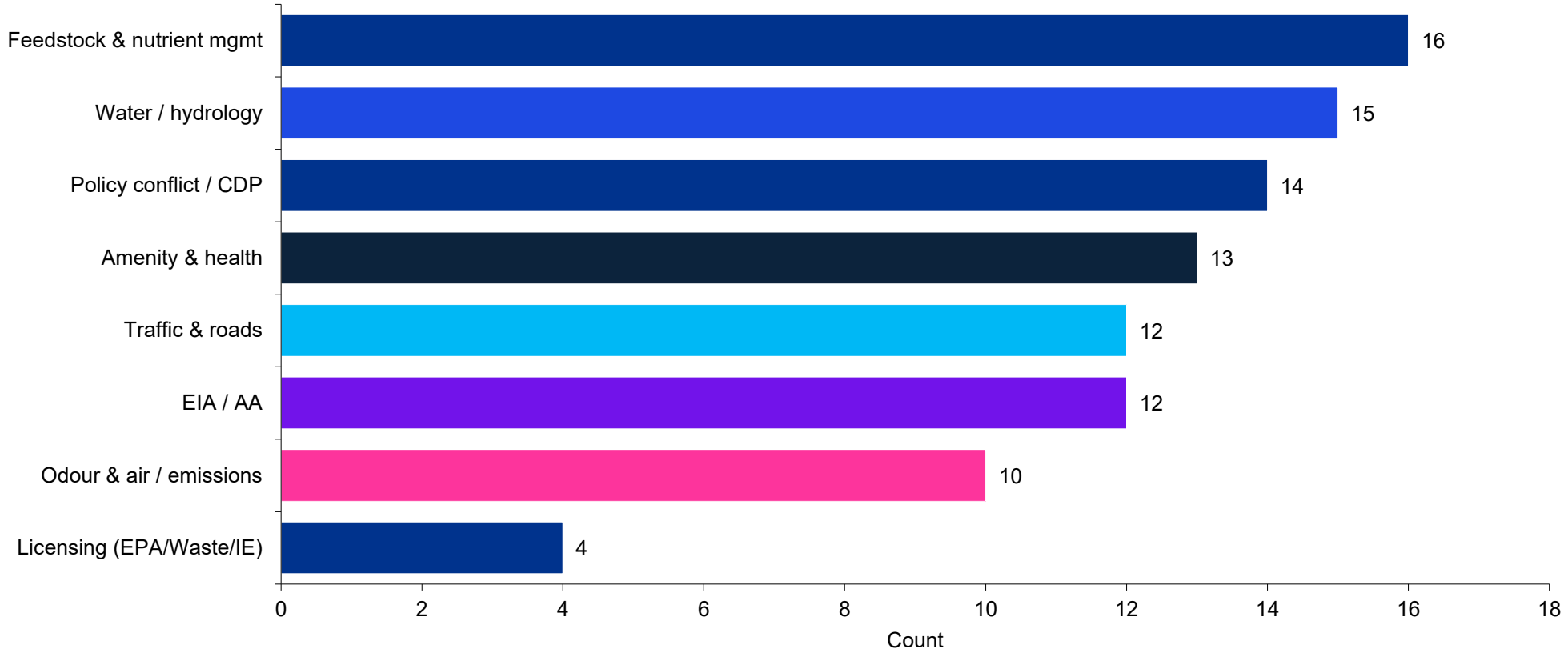
Theme count across conditions for approval at local authority stage



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3. Planning analysis – Themes across appeals to An Coimisiún Pleanála

Number of appeals mentioning theme



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3. Planning analysis – Key insights

01

Planning outcomes are predictable but demanding

Environmental risk, traffic/roads, feedstock & digestate management, and EIA/AA adequacy.

Biomethane is generally acceptable in principle, but only where risks are clearly evidenced and enforceable.

02

Conditions

Environmental controls, traffic limits, monitoring, reporting.

This reflects confidence in the technology **when impacts can be tightly managed**.

03

Refusals are driven by information gaps, not policy opposition

Insufficient or unclear supporting information, unresolved traffic impacts, weak nutrient/digestate plans, or misalignment with County Development Plans.

Many refusal drivers are avoidable with stronger front-loaded submissions.

04

Local policy clarity materially affects outcomes

Projects align more consistently where CDPs explicitly reference AD/biomethane and distinguish between farm-scale and larger, waste-led facilities.

Generic renewable energy policies increase uncertainty and divergence across counties.

05

Appeals play a significant shaping role

ACP frequently:

- Upholds refusals where key risks remain unresolved, or
- Grants permission with strengthened conditions where additional evidence resolves site-specific risks.

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3. Planning analysis – Recommendations

Standardise minimum planning evidence requirements

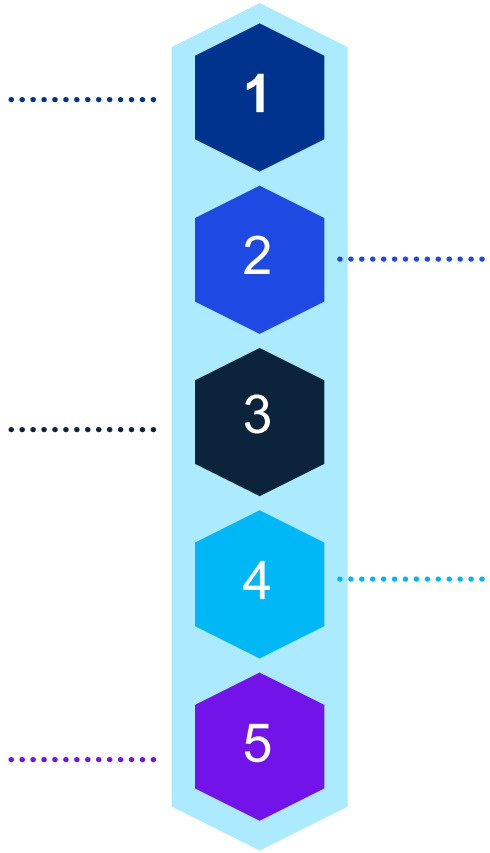
- Define a clear, proportionate minimum evidence set for AD/biomethane (scaled by size and site sensitivity).
- Standardise requirements for traffic, odour/air, digestate management, and EIA/AA.

Improve consistency on traffic and environmental risk

- Standardise HGV reporting, route assessment, and mitigation expectations across authorities.
- Clarify minimum standards for nutrient management and digestate landbank evidence.

Support delivery with practical tools

- Publish checklists, templates, and model planning conditions for Local Authorities.
- Clarify the planning–licensing interface (planning vs EPA / waste consents).Support consistent interpretation through guidance and targeted training.



Embed sustainability expectations at planning stage

- Translate the Biomethane Sustainability Charter into assessable planning-stage evidence.
- Require clear statements on feedstock sustainability, digestate handling, and community engagement.
- Ensure sustainability is demonstrable before consent, not deferred to licensing.

Strengthen national–local policy alignment

- Introduce model CDP wording explicitly addressing AD/biomethane.
- Reduce county-by-county divergence and appeal risk.

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Document Classification: KPMG Public

Project work - in brief

The Biomethane for Carbon and Community (BCC) Project

(From Apr-2024 to June-26)

WELCOME

Wednesday, 13th May 2026

Presentation By: Biomethane Development Office

The Biomethane for Carbon and Community project is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.

Biomethane Communication Campaign and Capacity Building

Biomethane Development Office

Biomethane Development Office
1,368 followers
1mo •

🌍 BDO Team at the European Biomethane Week 2025 💚

The Biomethane Development Office (BDO) Team was delighted to attend the European Biomethane Week and European Biogas Conference held in Brussels on 14–15 October 2025.

The event brought together key stakeholders, researchers, and industry leaders across Europe to discuss the accelerating role of biomethane and biogas in the energy transition, showcasing innovations, policy developments, and opportunities to scale renewable gas production.

Attending this conference allowed our team to exchange insights, strengthen networks, and explore how Ireland's growing biomethane sector can align with Europe's collective ambition for a secure, decarbonised energy future.

#Biomethane #Biogas #EnergyTransition #Sustainability #RenewableEnergy #CircularEconomy #Ireland #EuropeanBiomethaneWeek #EUBW2025 #EBAConference TUS Sustainable Development Research Institute (SDRI)



Elaine Cullinan • 1st
Circular Bioeconomy Outreach Officer | Pathways2Resilience Programme Manager
1mo • Edited •

Team Tipperary at the EU Just Transition Fund Fest in the fabulous setting of Mount Druid today! Delighted to be showcasing our BioScaleUp project on the National Bioeconomy Campus, Lisheen at this event. Our Biomethane for Carbon and Community project team are here in full force too!
Eastern and Midland Regional Assembly Pobal Department of Agriculture, Food and the Marine Mount Druid Events
#EUinmyregion #justtransition #eufunding #governmentofireland #bioeconomy #tipperary



TUS Sustainable Development Research Institute (SDRI)
1,430 followers
1mo • Edited •

🌿 Raising of the Green Flag at TUS Thurles 🌿

On October 22nd, we proudly celebrated the raising of the Green Flag at TUS Thurles, recognizing our ongoing commitment to sustainability and environmental awareness across campus.

As part of the celebrations, we hosted a stand at Thurles campus, showcasing some of our key sustainability projects — AGRETAIN, #AgriNext, and Biomethane Development Office — each contributing to a more sustainable and resilient future for rural communities and agriculture.

Projects such as #GreenHive and the N-TUTORR programmes have played a key role in raising awareness and supporting our sustainability initiatives, ultimately helping us achieve the Green Flag.

We also facilitated an engaging Climate Justice activity, sparking curiosity and conversation around this important theme — the very focus of this year's Green Flag recognition.

A special thank you to Vincent Cunnane, President of TUS, and Seamus Hoyne, Dean of Flexible and Work Based Learning, for attending and supporting this important milestone — and to everyone who stopped by, asked questions, and shared their thoughts.

💚 Together, we're creating a more sustainable future!

Mercedes ALONSO GÓMEZ Yvonne Doyle Elisa Minoue Alifia Issabella Mulyawati David Mulcahy Lal Chand James Dooley Jennifer Clancy Kevin Healion
#TUS #GreenFlag #Sustainability #EUinmyRegion #ThurlesCampus #ClimateAction #GreenCampus #EnvironmentalAwareness #AGRETAIN #Biomethane #AgriNext



Biomethane Communication Campaign and Capacity Building

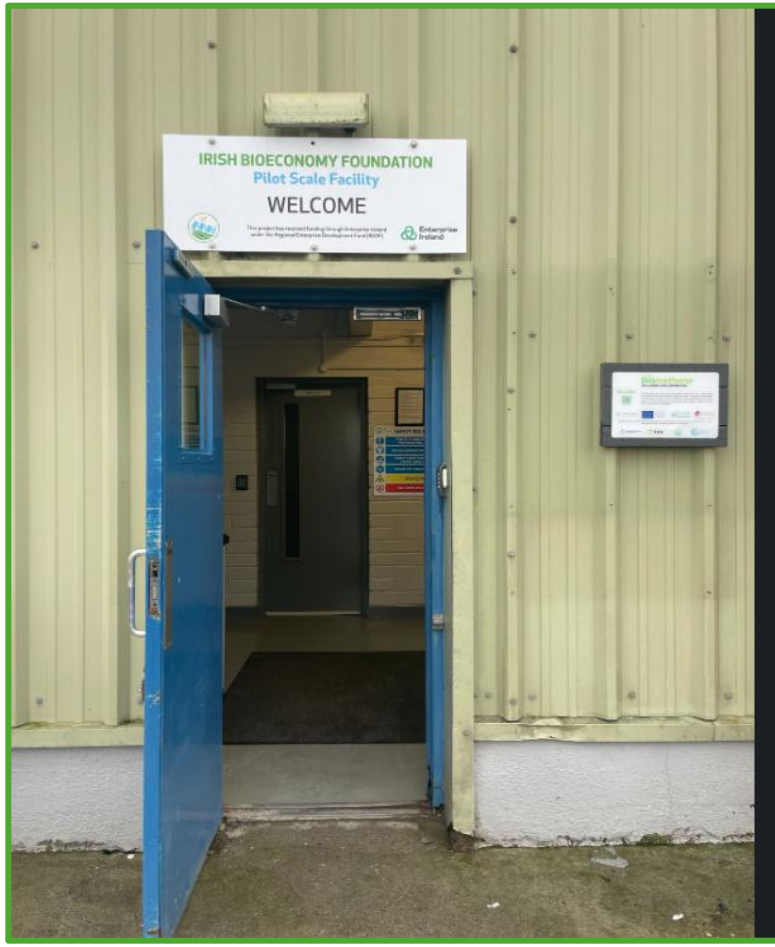
Biomethane Development Office

Seamus Hoyne • 1st
Dean of Flexible and Work Based Learning, Director of Industry Engagement at Tec...
1mo •

Incredibly proud of the TUS Sustainable Development Research Institute (SDRI) team who were central to the #TURise Connected Innovations event held in #TUSThurles on 6th November.

Powerhouse presentations from some of the team on just a sample of sustainability innovations and projects which we are working on. #28 projects #25 staff #150 international partners #19 poster presentations and lots more.





Circular Bioeconomy Research G...
4,125 followers
1mo •

The NPower Project Irish Cluster Industry group for Food, Drinks, and Bioprocessing was successfully launched last Friday, Nov 7th

Our partners at the Irish Bioeconomy Foundation hosted this #NPower workshop at the Horse & Jockey Hotel in Thurles, bringing together a diverse group of stakeholders to discuss nutrient management opportunities for local industries. We had a warm welcome from Gavin Moroney and Stephen Napier from IBF, who took the chance to highlight the importance of this event in the move towards a bio-based economy. Sean O'Grady and Gearóid McDermott provided insight into the breadth of projects at IBF, and Daisy O. shared work fr ...more

49 2 comments • 6 reposts

Like Comment Repost

Comment as Biomethane Development Office...

Most relevant

Elizabeth Gavin • 2nd 1mo
EU enthusiast running NuaFund, Ireland's ...

Gary Logue Rachel Hawes Percy Foster Celia Cremin

Like | Reply

NPower Project 1mo
369 followers

BIOECONOMY IRELAND





BIOECONOMY IRELAND

@ National Bioeconomy Campus, Lisheen



H.E. Ms Angela Hassan-Sharp, New Zealand Ambassador to Ireland, and John Roche, Chief Science Advisor to the Prime Minister of New Zealand visit to the National Bioeconomy Campus at Lisheen.







Launch of upcoming 5th All-Island Bioeconomy Summit & Awards taking place on the 19th of May in Johnstown Estate, Enfield, Co. Meath.

Biomethane
for Carbon and Community



BIOECONOMY IRELAND

Biomethane
for Carbon and Community

Bioeconomy Ireland Week event in Waterford: **Presentation by BDO Office on:**

"Biomethane for Carbon and Community Project/Biomethane Development Office"





🌍 BDO PPN Autumn Plenary Invite, Cashel on 28.11.2024 🌱

Public Participation Network Tipperary





🌍 Engaging Communities for a Sustainable Future – PPN Environmental Groups Meeting 2025 🌱

BDO office representation at Teagasc, Ashtown Dublin on 28.11.2024





Limerick School of Art & Design -TUS





EirGrid ESB NETWORKS seai SUSTAINABLE ENERGY AUTHORITY OF IRELAND

Energy Citizens Roadshow Tipperary



Meeting with Denyse Julien from EIT **Climate KIC** and members of the **Pathways2Resilience** team from Tipperary County Council at the National Bioeconomy Campus.



Science Week Event at TUS, Thurles







Irish Bioenergy Association/ Biolectric biogas tour of Belgium & Netherlands





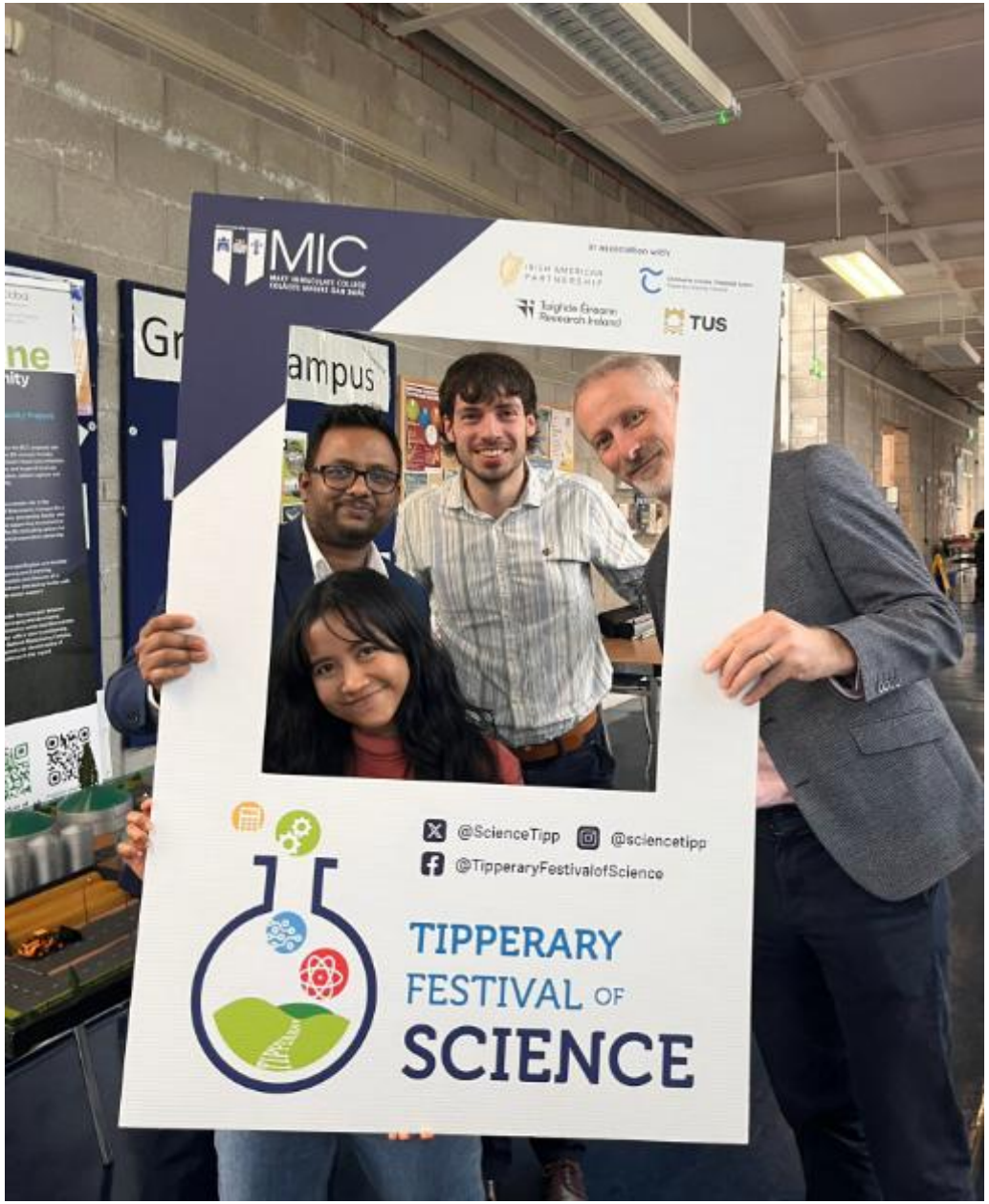






TUS RISE Connected Innovations





Biomethane
Development Office

EU Just Transition Fund Fest



Biomethane
for Carbon and Community

Our Achievements

AD&BIOGAS INDUSTRY AWARDS 2026
AND GALA DINNER
Organised by ADBA WORLD BIOGAS ASSOCIATION
8 JULY | THE VOX | BIRMINGHAM | UK

4. Education Campaign of the Year

- Amplum Biogás Knowledge and Education Initiative, Amplum Biogás, Brazil
- Biomethane for Carbon and Community (BCC) project, Technological University of the Shannon (TUS), Republic of Ireland
- C-CHANGE: Grass2Gas Project, Iowa State University and Penn State University, USA
- Celebrating 10 Years of Green Gas in Nether Stowey, Somerset, Wales & West Utilities, UK
- FSM Education Programme, Sguazzi in partnership with Anaergia, Italy
- Upishi Bora Afya Bora Influencer Campaign, Ministry of Energy, Republic of Kenya, Kenya

World Sustainable Energy Days
24 - 27 February 2026, Wels/Austria

BDO's paper "Scaling Biomethane Development: Lessons from Ireland's Just Transition Approach" selected

ISEC 4th INTERNATIONAL SUSTAINABLE ENERGY CONFERENCE 2026
14 – 16 April 2026
Messecongress Graz
Austria

BDO's poster titled "**OPPORTUNITIES, CHALLENGES, AND TECHNOLOGY INTEGRATION STRATEGIES FOR BIOMETHANE SECTOR DEVELOPMENT IN IRELAND** " selected


Q & A

Comhairle Contae Thiobraid Árann
Tipperary County Council

TUS

IRISH BIOECONOMY FOUNDATION
Growing Ireland's Bioeconomy Together

TIPPERARY energy AGENCY

Thank You

Biomethane Development Office

Contact us at

bdo@tus.ie

Biomethane for Carbon and Community

Rialtas na hÉireann
Government of Ireland

Arna chomhchistiú ag an Aontas Eorpach

Co-funded by the European Union

Tionól Reigiúnach Oirthir agus Lár-Tíre
Eastern and Midland Regional Assembly

pobal
government supporting communities

The Biomethane for Carbon and Community is co-funded by the Government of Ireland and the European Union through the EU Just Transition Fund Programme 2021-2027.