REGARD

Regional Strategies for Collaborative Anaerobic Digestion & Biorefinery Development in Ireland

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REGARD is building the evidence, models, and partnerships to scale AD and biorefinery development region by region.

- Assess the socio-economic case for co-operative AD models.
- Design co-ownership and multi-actor business models that share risk and reward fairly.
- Map regional potential of AD-biorefineries through GIS and scenario-based planning tools.
- Deliver a pilot co-owned AD-biorefinery including for technical and co-ownership/ business model feasibility assessments.

Partners & collaborators

irbea | Irish bioenergy association · Teagasc Agriculture and Food Development Authority · icos · Dingle HUB

EXPAND

Exploring Economic Viability and Market Development of Products from Anaerobic Digestion

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EXPAND is exploring how AD by-products including digestate and biogenic CO_2 can be valorised to develop new products, markets, and revenue streams for the emerging AD industry.

- Identify technically feasible value chains for AD by-products across a range of AD plant sizes
- Explore innovative digestate valorisation pathways such as the production of biochar-based fertilisers
- Investigate biogenic CO_2 valorisation to produce higher-value fuels and products
- Assess market demand and commercial potential to identify economically viable business models for AD by-products

Partner: Teagasc Agriculture and Food Development Authority

CABBBIE

Developing Cascading Biomethane Biochemicals and Biofertiliser Systems for a Circular Bioeconomy in Ireland

Developing Cascading Biomethane Biochemicals and Biofertiliser Systems for a Circular Bioeconomy in Ireland

CABBBIE is exploring photosynthetic biogas upgrading for Ireland, optimising the process, identifying indigenous algae species and evaluating stakeholder perspectives of this technology.

- Optimised operations of biogas upgrading.
- Optimise microalgae suitable under Irish climatic conditions.
- Optimise process configuration and co-product selection in a multi-criteria approach.
- Investigate social acceptance and business models

Partner: Dingle HUB

Irish Biomethane Outlook

2020

- Research and Development
- Anaerobic Digestion for biogas production

2020–2024

Policy drivers

- National Biomethane Strategy
- RePowerEU
- Climate Amendment Bill

2030

- c. 90 Number of Anaerobic digesters
- 5.7 TWh Biomethane production
- 10% Substitution of natural gas demand

Beyond 2030: Future of Biomethane in Ireland

Unlocking potential of AD

UCC · BIO

2050

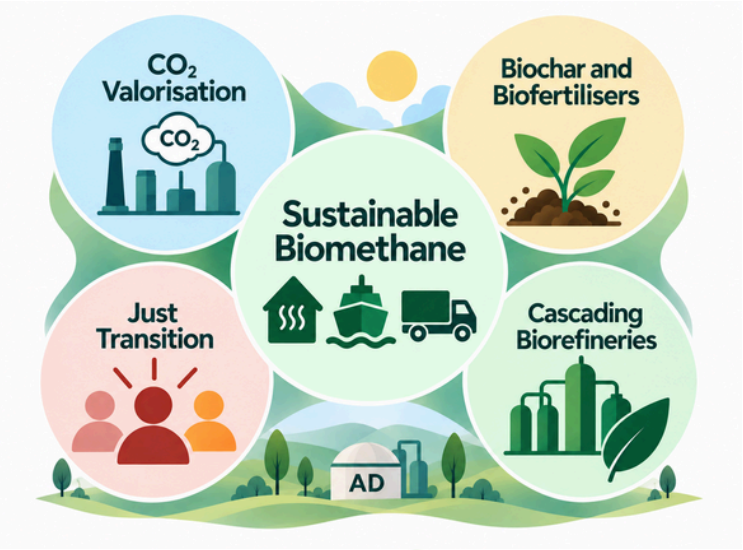
- Widespread Deployment
- 100% replacement of reduced natural gas demand
- Multi-product AD biorefineries
- Regional resilience and just transition
- Enabler of the bioeconomy

Funded by SEAI RD&D Programme (Co-funded by DAFM)

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An Roinn Talmhaíochta, Bia agus Mara
Department of Agriculture, Food and the Marine

Anaerobic Digestion for a De-Fossilised Irish Bioeconomy



CORK UNIVERSITY BUSINESS SCHOOL

Circular Economy, Energy & Environmental Systems

UCC
Coláiste na hOllscoile Corcaigh
University College Cork, Ireland

ShipFuel-IE

Developing pathways for a sustainable shipping and maritime fuel value chain in Ireland

ShipFuel-IE undertook an integrated techno-economic, life cycle, multi criteria decision analysis of renewable fuels for the maritime sector, including for low carbon fuels in the form of hydrogen, methane, methanol, ammonia, and Fischer Tropsch diesel.

ShipFuel-IE

Partners

GDG
GAVIN & DOHERTY GEOSOLUTIONS

ShipFuel-IE determined practical decarbonisation solutions such as indigenously produced liquefied biomethane for Ro-Pax ferries, and battery electric ferries to connect our island communities. Such initiatives can assist in achieving EU targets of 80% emissions reduction in the maritime sector by 2050.

Funded by SEAI RD&D Programme (Co-funded by Department of Transport)

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An Roinn Iompair
Department of Transport

Find out more

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