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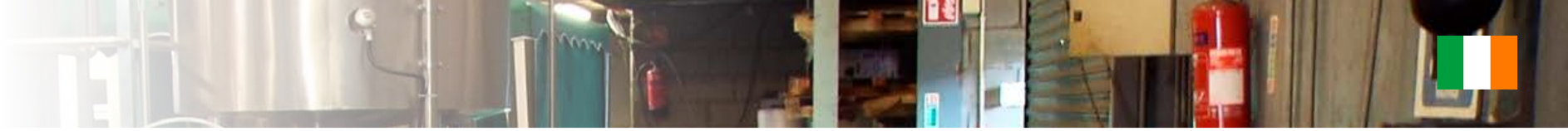
AD test line at tcbb Resource in Thurles © P. Ó hUiginn

Bioeconomy Factsheet Ireland

July 2018

This factsheet gives an overview of the Irish bioeconomy innovation technology system. It includes the key government interventions, research institutes, networks and finance instruments in Ireland.



BIOECONOMY GOVERNANCE

Ireland's key government bodies are the:

- Department of Climate Action, Communications and Environment (**DCCAE**)
- Department of Agriculture, Food, and the Marine (**DAFM**)
- Department of Jobs, Enterprise, and Innovation (**DJEI**)
- Department of An Taoiseach (The Irish prime minister has taken a co-ordinating role in bioeconomy policy development since 2016)

BIOECONOMY STRATEGIES AND ROADMAPS

- National Policy Statement on the Bioeconomy (2018)
- Project Ireland 2040 (national plan) – National Strategic Outcome 8: Transition to a Low-Carbon and Climate Resilient Society (2018)
- Ervia-commissioned report by KPMG Ireland on de-carbonising domestic heating in Ireland (AD biomethane) (2018)
- Bioenergy Supply in Ireland 2015-2035 (2017)
- Economic Assessment of Biogas and Biomethane in Ireland (2017)
- Draft Bioenergy Plan (2014)
- Irelands National Renewable Energy Action Plan (NREAP) (2010)
- **BioÉire project** results, e.g. The Irish Bioeconomy: Definition, Structure and Situational Analysis (2017)
- Food Wise 2025 – A 10-year strategy for the Irish agri-food industry (2015)
- The Economic Impact of the Irish Bioeconomy – The Bio-Economy Input Output Model: Development and Uses (2015)

LEGISLATION

The Climate Action and Low Carbon Development Act 2015 provides for the establishment of a national framework with the aim of achieving a low carbon, climate resilient, and environmentally sustainable economy by 2050.

A requirement of the Act is the creation of **National Mitigation Plans**, the first of which was published in 2017. This plan sets out the Government's approach to reducing greenhouse gas emissions in Ireland.

The current primary support mechanism for renewable electricity in Ireland is the **Renewable Energy Feed-In Tariff (REFIT)** scheme, which provided certainty to renewable electricity generators by providing them with a minimum price for each unit of electricity exported to the grid over a 15-year period. The current scheme closed to new applications in 2015. The third phase of the REFIT scheme (REFIT 3) incentivised the addition of 310 MW of renewable electricity capacity to the Irish grid composed of CHP (using AD and thermochemical conversion of biomass), biomass combustion and biomass co-firing.

The **Support scheme for Renewable Heat** is expected to be operational in 2018. It provides operating aid for 15 years to renewable heat from biomass and anaerobic digestion, as well as investment aid for heat pumps.

A new **Renewable Electricity Support Scheme (RESS)** is being developed to incentivise the introduction of sufficient renewable electricity generation to meet national and EU renewable energy and decarbonisation targets.

NETWORKS AND CLUSTERS INDUSTRY ASSOCIATIONS

Industry associations:

- Irish Bioenergy Association (IrBEA)
- The Composting and Anaerobic Digestion Association of Ireland (Cré)
- Irish BioIndustry Association (IBIA)
- Renewable Gas Forum Ireland (RGFI) – this is a forum of both consumers and producers
- Irish Bioeconomy Foundation, founded in 2017
- Irish Forestry and Forest Products Association (IFFPA)

Farming associations:

- Irish Farmers Association (IFA)
- Irish Cattles & Sheep Farmers Association (ICSA), which has been one of the more proactive farming organisations in bioenergy and the bioeconomy

Network and enterprise support organisations:

- BioConnect Ireland led by Enterprise Ireland
- Knowledge Transfer Ireland (KTI)

UNIVERSITY CENTRES AND RESEARCH

Universities, such as:

- **NUI Galway**, Ryan Institute for Environment, Marine and Energy Research
- **University College Cork** (UCC), Sustainable Energy Research Group
- **University College Dublin** (UCD), Energy Research Group
- **Dundalk IT**, Centre for Renewable Energy
- Institute of Technology Carlow
- Galway Mayo Institute of Technology

Research institutes, such as:

- **Shannon ABC** (Applied Biotechnology Centre)
- **Teagasc**
- **Marine Institute**

Research centres across institutes, such as:

- **BEACON** research centre, co-ordinated by UCD
- **MaREI Marine and Renewable Energy Research Centre** co-ordinated by UCC
- **Dairy Processing Technology Centre** (DPTC) co-ordinated by UL

FINANCIERS

Teagasc is the Agriculture and Food Development Authority whose mission is to support innovation in the agri-food sector and the broader bioeconomy.

Science Foundation Ireland (SFI) is the national foundation for investment in scientific and engineering research.

The Irish **Research Council** supports research across all disciplines.

Enterprise Ireland funds SME R&D projects in exporting industries or the manufacturing sector through a range of programmes.

IDA Ireland attracts foreign investment in Irish advanced manufacturing, global business services, and R&D operations.

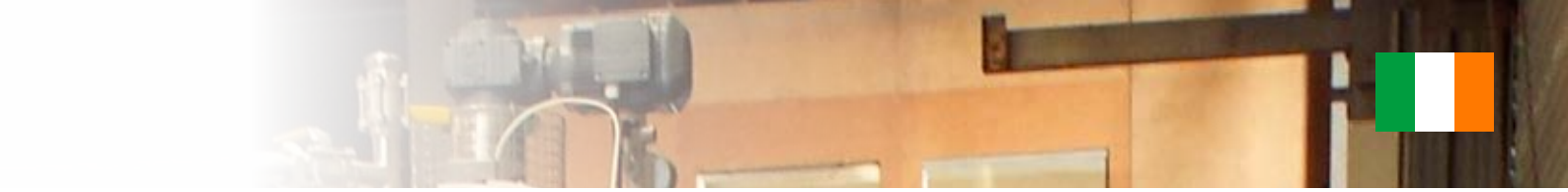
InterTrade Ireland is a cross-border trade and business development body who support businesses through innovation and trade initiatives, in order to take advantage of North/South co-operative opportunities.

Údarás na Gaeltachta offers enterprises from a range of incentives and supports to start-up, develop or expand in a Gaeltacht region (mostly along Atlantic coastal regions).

Western Development Commission develops projects in industry, marine, renewable energy and so. It operates the Western Investment Fund (WIF).

The Environmental Protection Agency funds projects of support to the bioeconomy.

Since 2017 the **Sustainable Energy Authority of Ireland (SEAI)** has opened an RDD call which has funded a range of projects supporting the realisation of Ireland's broader bioenergy potential.



INDUSTRY STAKEHOLDERS

The agri-food sector is a key industry in Ireland and is the basis for Ireland's future bioeconomy. Many agricultural bodies are active in the bioeconomy, including dairy co-operatives like **Dairygold**, who developed a wastewater AD plant to recover resources and generate biomethane to produce steam in its own plant. Other agriculture co-operatives like **CMP** (Commercial Mushroom Producers) are also active. Some food and food-ingredients company **Glanbia** is leading the **AgriChemWhey** project, which is developing a state-of-the-art biorefinery turning by-products of the dairy industry into high value bio-based products.

Biomarine Ingredients Ireland recently set-up arguably the first biorefinery in Ireland, producing marine-based protein, lipids and calcium.Many global pharma and biotech companies have production and research in Ireland and provide expertise and biological waste streams to the bioeconomy.

There are several spin-outs and SMEs active in the Irish bioeconomy. For example, **Monaghan Biosciences** develop industrial enzymes.

In the bioenergy sector, **Bord na Móna** is a semi-state company historically harvesting and burning peat but now transitioning to biomass procurement and bioenergy production. **Gas Networks Ireland** (part of Ervia group) operates the gas grid and will inject biomethane for the first time in the EU-funded Causeway (NUI Galway, its project partner will report on the results, for EU-wide dissemination). This biomethane will be produced in Ireland. **Calor Ireland** launched BioLPG on to the Irish off-grid gas market in early 2018.

OPEN ACCESS PILOT PLANTS

tcbb RESOURCE, in Thurles, has led the first integrated piloting facilities for AD and pyrolysis for the recovery of energy, nutrients and materials.

There are pilot plant facilities at **The National Institute for Bioprocessing Research and Training (NIBRT)**, a centre of excellence for training and research in Dublin.

The re-development of the former Lisheen Mines (lead and zinc), near Thurles, Co Tipperary will see the development of biorefining piloting facilities.

BIOBASE4SME

BioBase4SME is a strong network of leading bio-economy experts. The project offers innovation support services to North-West European SMEs and start-ups active in the bio-economy.

The project supports SMEs on their way to getting industrial proof of concept and a realistic business plan. Both are essential to convince any type of investor or client.

This factsheet was produced by the BioBase4SME partners, more factsheets and information on the project can be found here: **http://www.nweurope.eu/BioBase4SME**

BioBase4SME is co-funded 60% by the Interreg North-West Europe Programme. Interreg NWE fosters transnational cooperation to make Northwest Europe a key economic player and an attractive place to work and live, with high levels of innovation, sustainability and cohesion.

BioBase4SME partners are:

BioBase4SME is additionally co-funded by: