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Chapter 10: Energy

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GNI welcomes E6 Objective 2 which promotes the circular economy by generating energy through waste subject to environmental considerations and E12 Objective 1 which promotes the generation and supply of low carbon and renewable energy alternatives. GNI is involved in facilitating the injection of renewable gas, a carbon neutral energy source, into the gas network. Renewable gas was first introduced to the Irish gas network through a renewable gas injection point in County Kildare, supplied by Green Generation, in August 2019. A deal[1] between Tesco Ireland and Green Generation has seen Tesco supplying 6,400 tonnes of food waste per annum to Green Generation for conversion to renewable gas. This renewable gas is injected into the gas network at the Cush injection point. In turn, Tesco purchases this renewable gas and uses it to supply six Tesco stores. This results in carbon savings of 1,200 tonnes per year for Tesco and supports the circular economy. Renewable gas, which is often produced from waste materials co-digested with other feedstocks in an anaerobic digestion plant, supports the circular economy, improves security of energy supply and helps diversify energy sources. Agriculture is a necessary part of Irish life, but farms produce waste and that waste must be managed and minimised where possible. The EU Strategy[2] to reduce methane emissions explicitly identifies the role that AD can play in reducing emissions from agriculture. The EU methane emissions strategy highlights that EU agriculture is the biggest contributor to man-made methane emissions, accounting for 53% of all emissions, followed by 26% from waste and 19% from energy. Within agriculture itself, most of these emissions come from livestock with enteric fermentation accounting for around 80% of all methane emissions, and close to 20% coming from manure management. AD plants can utilise a wide variety of feedstocks ranging from food wastes, to animal slurries and specifically grown energy crops such as grass silage. These feedstocks are broken down to produce biogas, which can be upgraded to biomethane. This biomethane can then be injected into the gas network at appropriate points and transported to all gas consumers. Anaerobic digestion is a way of minimising wastes and contributing to the circular economy with the production of renewable gas and digestate/bio-fertiliser.

GNI welcomes Policy E3 which focuses on 'Energy Performance in Existing and New Buildings' and is concerned with supporting 'high levels of energy conservation, energy efficiency and the use of renewable energy sources in new and existing buildings'. The gas network can play a part in transitioning domestic heating to renewable energy. Ervia, GNI's parent company, commissioned KPMG to develop and evaluate scenarios for decarbonisation of the one million Irish residential homes currently connected to, or within close proximity to the existing gas network. The study[3] concluded that renewable gas is the lowest cost option to decarbonise the domestic heat sector. Furthermore, the need for potentially costly deep retrofits to convert properties to a BER rating for electric heat pumps to work effectively, is avoided. GNI is currently recommending all

homeowners located on or close to the gas network, with oil fired central heating systems, to upgrade their homes using a “fabric-first” approach. This approach focuses on insulation (attic, cavity walls, hot water cylinder) when switching from oil to hydrogen-ready high efficiency gas boilers[4] (ready for blends of circa 20% hydrogen) and installation of Solar PV. Using this combination of insulation, oil to gas changeover and solar PV installation can bring homes up to a BER B standard at a significantly lower cost than alternative deep retrofitting activities.

[1] <https://www.irishtimes.com/business/energy-and-resources/tesco-to-cut-emissions-by-converting-waste-food-from-irish-stores-to-gas-1.4271907#:~:text=Tesco%20plans%20to%20cut%20carbon,to%20be%20converted%20into%20energy>

[2] https://ec.europa.eu/energy/sites/ener/files/eu_methane_strategy.pdf

[3] KPMG, Decarbonising Domestic Heating in Ireland: <http://www.ervia.ie/decarbonising-domestic-he/KPMG-Irish-Gas-Pathways-Report.pdf>

[4] <https://www.cibsejournal.com/technical/fuel-for-thought-hydrogen-gas-boilers/>

Ceangaltáin:

□ SD-C195-163-8067 - 2021.09.15_South County Dublin_Draft Co. Dev. Plan_2022-2028_GNI Response.pdf