Waste Action Plan for a Circular Economy

Department of Communications, Climate Action and Environment

Gas Networks Ireland Response

21st February 2020

Part of ervia group

Contents

1 Introduction

Gas Networks Ireland (GNI) welcomes the opportunity to respond to the consultation on Waste Action Plan for a Circular Economy issued by the Department of Communications, Climate Action and Environment (the Department).

GNI owns, operates, builds and maintains the gas network in Ireland and ensures the safe and reliable delivery of gas to its customers. The company is responsible for transporting natural gas through 14,390km of pipeline networks. The gas network supplies energy to over 700,000 customers, including businesses, domestic users and power stations. GNI believes that gas and the gas network are integral to Ireland's energy system and future.

GNI is involved in a number of carbon reduction initiatives, including the development of Compressed Natural Gas (CNG) infrastructure for gas in transport and biomethane[1] injection infrastructure.

The production of biomethane using Anaerobic Digestion (AD) technology is an example of a circular economy activity that can use food waste streams from agricultural/commercial sources. These food waste streams are typically combined with sustainable biomass sources, including grass and animal waste to produce biomethane.

2 Consultation Questions

2.1 Section 4: Food Waste

4.7 Consultation Questions – Food Waste: Have you any other comments or suggestions on how you would like to see Ireland transition to a more resource efficient and circular economy by improving our waste management practices?

To benefit from the re-use of food waste streams GNI suggests that more agricultural/commercial food waste is directed to AD to produce biomethane. This activity supports the circular economy. The AD process has a naturally occurring by-product in the form of digestate. Digestate is a high potency bio-fertiliser that can replace chemical fertilisers. There are carbon emissions associated with the production and transportation of chemical fertiliser products which are avoided when replaced with digestate.

Additionally, as this digestate is of a high quality, its application to land can result in higher levels of carbon being sequestered into the soil, with the land becoming a carbon sink.

Re-use of food waste to produce biomethane has some wider economic and environmental benefits:

- **Creates a carbon neutral fuel source**[2].
- **Provides indigenous source of energy:** Biomethane, produced through AD in Ireland, provides both security of supply and diversity of supply benefits. Having an indigenous source of energy reduces the likelihood of disruption to supply due to issues in other countries.
- **Enables carbon neutral transport:** CNG vehicles provide an alternative to diesel vehicles for buses and heavy goods vehicles (HGVs) where electricity is not currently a viable alternative. The rollout of a network of CNG refuelling facilities has commenced with 14 fast fill CNG stations

[1] Biomethane: https://www.gasnetworks.ie/corporate/company/our-commitment/environment/renewable-gas/

[2] Biomethane is considered a carbon-neutral fuel because it comes from organic sources that once absorbed carbon dioxide from the atmosphere during photosynthesis.

being installed across the Core TEN-T road network via a project called the Causeway Study[3]. If renewable gas is utilised by CNG vehicles as bio-CNG, carbon neutral transport can be achieved.

- **Enables carbon neutral power generation:** When biomethane is used to generate electricity carbon neutral electricity is produced.
- **Economic Benefits:** Locating AD plants in rural areas would provide additional revenue sources for these communities, from the sale of feedstocks for the AD plants, bio-fertiliser and biomethane. The SEAI[4] estimates that stimulating a biomethane industry in Ireland could contribute directly to over 5000 jobs during plant construction and over 3000 jobs in plant operations. With ongoing uncertainty regarding agricultural exports to the UK, post Brexit supplementary income streams for farming are important.

3 Conclusion

GNI would welcome the opportunity to discuss this response in more detail and can provide further information on any of the topics discussed, if required.

[3] Causeway Study: https://www.gasnetworks.ie/business/natural-gas-in-transport/the-causeway-project/

[4] https://www.seai.ie/publications/Assessment-of-Cost-and-Benefits-of-Biogas-and-Biomethane-in-Ireland.pdf