

Consultation on the National Smart Specialisation Strategy

Gas Networks Ireland Response

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Introduction

Gas Networks Ireland welcomes the opportunity to respond to the Department of Enterprise, Trade and Employment's consultation on the development of a Smart Specialisation Strategy for Ireland.

Gas Networks Ireland is a wholly owned subsidiary of Ervia and was established in accordance with the Gas Regulation Act 2013, as amended. It owns and operates the natural gas transmission and distribution networks in Ireland. Gas Networks Ireland builds, develops and operates Ireland's world-class gas infrastructure, maintaining over 14,500 km of gas pipelines and two sub-sea interconnectors. The gas network can be considered a critical entity as it transports gas through the network on behalf of over 700,000 customers made up of the following sectors, Power Generation, Industrial and Commercial, Residential and Transport. The gas network, which is an important piece of national strategic infrastructure, delivers 30% of the country's primary energy needs and annually fuels over half of Ireland's electricity on average. Gas Networks Ireland believes that gas and the gas network are integral to the future of Ireland's energy system. In 2019, Gas Networks Ireland published 'Vision 2050: A net zero carbon network for Ireland'. This Vision 2050 document outlines one potential pathway to achieve a net zero carbon gas network by 2050 through the introduction of biomethane and hydrogen into the gas network and the abatement of the remaining natural gas demand. Gas Networks Ireland is currently working to develop renewable gas injection points and compressed natural gas (CNG) refuelling infrastructure on the gas network. These developments are being delivered through the Causeway and Green Connect projects, both of which are supported by grant funding from the European Connecting Europe Facility Fund for Transport as well as the Commission for Regulation of Utilities (CRU) providing innovation funding for the Causeway project.

Consultation Response

Gas Networks Ireland engages with businesses, research and innovation organisations, citizens and community organisations on research and innovation issues through its Gas Innovation Fund¹. This fund has been provided through an innovation allowance approved by the CRU to support gas related innovation projects. The Gas Innovation Fund has supported research and innovation projects by a number of universities, businesses and community groups. Gas Networks Ireland has had positive experiences of engaging with stakeholders on research and innovation projects. Enterprise Ireland, MaREI, ESRI, NUIG, CIT, NESC and UCC are all member of Gas Networks Ireland's Gas Innovation Advisory Group which provides advice and technical expertise on applications to the Gas Innovation Fund. The expertise provided by these organisations enables Gas Networks Ireland to make informed decisions about which projects should be funded through the Gas Innovation Fund. In addition, Gas Networks Ireland is currently co-funding a number of research and innovation projects with the SEAI and Science Foundation Ireland.

¹ <https://www.gasnetworks.ie/business/renewable-gas/innovation-fund/>

The National Smart Specialisation Strategy Consultation Paper raises some important questions about green transformation for enterprises. One of the challenges that exist for enterprises in trying to reduce emissions or introduce sustainable practices is getting access to renewable energy that meets the requirements of their business. Although great strides have been made in scaling up renewable electricity from wind energy some enterprises need other types of renewable energy, such as renewable gases (biomethane and hydrogen), to meet their high thermal heat requirements. The Government published the Interim Climate Actions 2021 document in March 2021. Action 57 in this document is aimed at decarbonising the heat sector with a focus on enterprise. One of the actions within this overarching action is about considering the introduction of a renewable energy obligation in the heat sector which would increase demand for renewable energy.

The Government has recognised the requirement to decarbonise the gas network in Action 54 of the Interim Climate Actions 2021 document. Action 54 is made up of a number of different parts including actions related to developing biomethane grid injection infrastructure and testing the feasibility of technically and safely injecting green hydrogen blends into the gas grid as a means of decarbonising the gas network. Biomethane was first introduced into the Irish gas network through an injection point in County Kildare, supplied by Green Generation, in August 2019. A deal 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 gas². This biomethane is injected into the gas network at the Kildare injection point and then Tesco purchases this renewable gas to supply energy needs at six of its stores. This results in carbon savings of 1,200 tonnes per year for Tesco and supports the circular economy. It is likely that hydrogen will have a key role to play in decarbonising different sectors of the economy. The EU Green Deal places a strong focus on hydrogen and the EC published a stand-alone EU Hydrogen Strategy in July 2020. Green hydrogen can be produced from excess wind energy via electrolysis and then injected into the gas network. Gas Networks Ireland has created an Innovation Centre in Dublin to progress innovation, demonstration, training and safety initiatives with regard to preparing the gas network for hydrogen injection in the future. Hydrogen is an important energy carrier that can be used across industry, transport, power and buildings sectors some of which are difficult sectors to decarbonise. Hydrogen does not emit CO₂ and there is almost no air pollution when it is used³.

Action 54 also calls for an assessment of the potential for energy system integration between the gas and electricity and networks including the production, storage and use of green hydrogen. This is very important as the gas network plays a significant role in the Irish economy by delivering gas to power stations and industrial and commercial customers. The Irish gas network, on average, generates over half of Ireland's electricity annually and is capable of meeting gas demand in all weather conditions. It also provides essential back up for intermittent renewables, such as wind and solar, to operate securely. While the average reliance for power generation is circa 50%, this can be over 90% at times, depending on the prevailing conditions (i.e. wind levels) for renewable generation. The gas

² Irish Times – Tesco to cut emissions by converting waste food from Irish stores to gas:
<https://www.irishtimes.com/business/energy-and-resources/tesco-to-cut-emissions-by-converting-waste-food-from-irish-stores-to-gas-1.4271907>

³ https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf

network has demonstrated resilience during the harshest weather events, ensuring security of gas supply and safety is maintained. For example, record high energy demand was experienced in January and December 2010 when significant sub-zero temperatures were recorded. During late 2017 and early 2018, the gas network demonstrated its resilience through extreme weather events, i.e. storm Emma and Ophelia, with no interruption of gas supply to households, businesses or the power generation sector. Gas Networks Ireland will continue to ensure that a resilient, robust and safe gas network is maintained for customers through appropriate and efficient investment.

Conclusion

Gas Networks Ireland recognises that there are significant challenges for enterprises trying to reduce emissions, especially for those in certain industrial sectors, and that biomethane and hydrogen supplied from the gas network can help enterprises to decarbonise. Gas Networks Ireland would welcome the opportunity to discuss this response in more detail with the Department of Enterprise, Trade and Employment, particularly if there are any questions or clarifications needed.