



**Liquid Gas  
Ireland**

**Liquid Gas Ireland submission  
to DECC's Review of Security of Energy of Ireland's  
Electricity and Natural Gas System**

**28 October 2022**

**\*This document follows the format of the online consultation questionnaire**

## Introduction to Liquid Gas Ireland

Liquid Gas Ireland (LGI) is the association representing companies operating in the LPG and BioLPG industry in Ireland. Members include LPG and BioLPG producers, distributors, equipment manufacturers, and service providers. Our mission is to ensure that policy makers continue to recognise LPG and BioLPG as the cleaner, versatile, and alternative lower carbon energy of choice for off-grid energy users in the residential, commercial, industrial, agriculture, leisure, and transport sectors in Ireland. LGI is committed to working with consumers, stakeholders, and policymakers to support Ireland's goal to tackle air quality, drive decarbonisation and achieve net zero emissions by 2050.

As part of Liquid Gas Ireland's response to the Department of Environment, Climate and Communication's consultation process for a Review of Security of Energy of Ireland's Electricity and Natural Gas System, we are submitting a response that is relevant to our sector. This response is reflected through questions 4, 8, 9 and 10 only.

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For further updates, you can find us on social media on [Twitter](#) and [LinkedIn](#) or visit our website [www.lgi.ie](http://www.lgi.ie).

## Responses

### Question 4: Do you have any additional mitigation options that you think should be considered?

Liquefied petroleum gas (LPG) and renewable BioLPG and rDME should be considered as an additional mitigation option, particularly in the case of rural homes and businesses, 500,000 of whom are reliant on oil and solid fuels and are not on the natural gas grid. As well as offering alternative fuel options, this would be better for the environment. It is estimated that that if 500,000 homes switched from using oil-fired central heating to BioLPG by 2040, it would save about 1.9 million tonnes of CO<sub>2</sub> emissions per year.<sup>1</sup>

These fuels are acknowledged in Europe as the clean, available, and innovative alternative energy of choice, which brings great benefits today to all users and will continue to deliver even more value in the future. LPG is a clean-burning, smoke-free fuel that cuts carbon emissions from heating oil by 11%. BioLPG is a chemically indistinct but renewable version of LPG, made from sustainably sourced renewable vegetable oils, wastes, and residues, and delivers up to 90% certified carbon emission savings compared to conventional LPG. As BioLPG can be used in existing LPG infrastructure, it increases the speed at which renewable fuels can be used in homes and businesses all over Ireland without the need for capital investment. LPG and BioLPG can also be blended offering further flexibility to the consumer.

Ireland's supply of LPG and BioLPG is unlikely to be impacted by external factors such as the current conflict in Ukraine. Enjoying multiple supply sources, LPG originates from different natural sources and its flexible supply chain reduces risks of disruption. It does not rely on a fixed infrastructure which could be vulnerable to supply disruption. LPG can be transported easily, using an optimal combination

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<sup>1</sup> <https://www.lgi.ie/assets/uploads/documents/LGI%20Vision%20Document%202040%20Final.pdf>

of sea, rail, and road. It is not dependent on pipelines, allowing it to move seamlessly all the way along the distribution chain to the end user.<sup>2</sup>

As both LPG and BioLPG are supplied in liquified form in a tank or cylinder, it is a flexible fuel source that can reach areas not connected to the gas grid or centralised heating systems. LPG and BioLPG can also be used seamlessly in cutting edge heating systems, such as gas driven heat pumps and hybrid heat pumps. Due to this flexibility as a fuel source, LPG and BioLPG can be used as an alternative fuel source to mitigate against significant shock events both in the short and longer term.

### **Question 8: Do you have any views on how the mitigation options should be implemented?**

To help implement the use of LPG and BioLPG as a mitigation option, consumers, especially in rural areas, should be encouraged to transition away from oil high-carbon fossil fuel infrastructure to cleaner, lower carbon, biofuel-ready gas heating systems – such as hybrid heat pumps and biofuel enabled LPG boilers<sup>3</sup> This approach essentially reflects a mixed technology approach to a just transition from oil to LPG/BioLPG.

Grants for renewable heating technologies should be expanded to other technology options for businesses, particularly biofuel enabled boilers which offer capital-constrained consumers a lower upfront cost option. Modern condensing biofuel enabled boilers have efficiencies of more than 90% compared with 70%-80% with conventional designs (based on the higher heating value fuels). This position has received industry consensus, as published by Renewable Energy Ireland in its 40by30 report (2021)<sup>4</sup>

### **Question 9: Do you support the policy measures proposed in section 8 of the consultation paper?**

The consultation paper highlights the fact that interdependencies between the electricity and gas networks has increased in recent years and this trend is expected to continue as more intermittent renewable sources are added to Ireland's energy system.

LGI strongly endorses the proposal to conduct an annual assessment for electricity and gas to be produced collaboratively and jointly by the operators of the electricity and gas transmission and distribution networks i.e., EirGrid, ESB Networks and Gas Networks Ireland.

Particularly significant would be the inclusion of renewable gases in this assessment and could lead to greater collaboration and the development of synergies between the energy systems. As well as biomethane and hydrogen, renewable liquid gases such as BioLPG and rDME must be included. This would give a broader overview of energy security options, especially for off gas grid rural areas.

### **Question 10: What further tools and measures do you think would contribute the most to Ireland's energy security of supply?**

LPG and BioLPG offer options that can mitigate against threats to Ireland's energy and supply, especially for off-gas grid rural areas. 500,000 homes in Ireland have no connection to the natural gas distribution network, and two-thirds of these currently rely on oil boilers for heating. Connecting these properties to the natural gas grid or installing new heat pump technology is not a financially or logistically viable option for most families. In contrast, switching to an LPG boiler is easy and affordable, with immediate environmental benefits. By adopting a mixed technology approach to decarbonisation, we

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<sup>2</sup> <https://www.liquidgaseurope.eu/lpg-supply-chain-energy-security>

<sup>3</sup> <https://www.lgi.ie/assets/uploads/Liquid%20Gas%20Ireland%20CAP%202023%20submission%20response%20to%20DECC%2020.09.22.pdf>

<sup>4</sup> [https://renewableenergyireland.ie/wp-content/uploads/2021/05/Renewable-Energy-Ireland\\_Renewable-Heat-Plan\\_-\\_Final.pdf](https://renewableenergyireland.ie/wp-content/uploads/2021/05/Renewable-Energy-Ireland_Renewable-Heat-Plan_-_Final.pdf)

can accelerate Ireland's transition to lower carbon and efficient heating sources while keeping people warm in their homes.

The 'one size fits all' approach to home heating being promoted by this Government is expensive compared to the installation of an LPG boiler. Climate change policy must be equitable for all families and businesses, and the retrofit scheme as currently operated does not offer a fair deal for rural Ireland. Heat pump installation coupled with the necessary deep retrofitting required to achieve an energy efficiency upgrade could cost more than €60,000 according to the SEAI<sup>5</sup>. By comparison, a new, high efficiency LPG boiler with standard system upgrades can be installed for around €5,000.

LPG is a versatile fuel with multiple supply sources. Because it is easily and safely transported, it offers a secure and widely available energy source for homes, businesses and applications off the gas grid. LPG and BioLPG are a reliable source of lower carbon and renewable energy for home heating and industrial processes like water heating, cooking, and food processing. Both fuels are used in the hospitality, food processing, healthcare, sports and leisure, industry, and education sectors.

In supporting the use of these lower carbon and renewable fuel options, the Government would be offering further options for efforts to mitigate against energy security and supply.

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<sup>5</sup> <https://www.seai.ie/grants/home-energy-grants/deep-retrofit-grant/key-findings/>