

*"The team showed a strong understanding of our ways of working as a trade association representative body and were able to adapt to the same while delivering."*

**David O'Donnell**  
**Liquid Gas Ireland**



## THE CHALLENGE

Ireland faces a significant challenge in decarbonising its heating sector, which accounts for 38% of energy-related emissions and nearly a quarter of total greenhouse gas emissions. With over a third of the population living in rural areas and many homes currently unsuitable for heat pumps, there is a pressing need for alternative low-carbon heating solutions.

The existing policy framework provides limited support for domestic renewable liquid gas production – leading to **underinvestment, reliance on imports, and missed opportunities** to reduce emissions and enhance energy security.

Liquid Gas Ireland (LGI) is the association representing companies in the liquid gas (LPG) and BioLPG industry in Ireland.

LPG plays a crucial role in Ireland's energy mix, **providing lower carbon gas** to thousands of off-grid homes and businesses. It is widely used for heating, cooking, and automotive propulsion, making it an **essential energy source** in areas without access to natural gas.

LGI sought a consultancy to support modelling and analysis for the potential of renewable gases in Ireland, with the view of integrating this into their net zero ambitions.

# THE SOLUTION

Leveraging the expertise of Talan's energy economists and policy advisors, we partnered with LGI to showcase the potential for indigenous renewable liquid gas supply given the right level of government support. We developed a **long-term supply model** comparing two scenarios out to 2050:

- Business-as-Usual (BAU), representing the continuation of current policies and market conditions.
- Supportive Policy Framework (SPF), representing the stimulation of domestic RLG production with the introduction of capital grants, streamlined permitting, and clear offtake signals.

Our team integrated co-production and dedicated production pathways into the models, covering key renewable liquid gases: **renewable dimethyl ether (rDME)** and **bioLPG**.

These pathways include the co-production of rDME from anaerobic digestion plants; the co-production of bioLPG as a by-product of hydrotreated vegetable oil and sustainable aviation fuel production; and purpose-built renewable liquid gas facilities.

Close collaboration with LGI members ensured the forecasts were grounded in industry realities.

# THE IMPACT

Talan's work has been integrated into Liquid Gas Ireland's new report on **unlocking rural Ireland's net zero transition** with renewable liquid gas. This builds on the sector's commitment to achieving net zero by 2050 and presents a **robust evidence base** to inform future policy decisions.

Under a Supportive Policy Framework, indigenous renewable liquid gas production could reach nearly 100 kt annually by 2050, compared to 9 kt under a Business-as-Usual scenario, and meet over 60% of current LPG demand.

To support this positive outlook, it will be important to develop a **purpose-built plant to scale production** and respond directly to market demand. This facility would likely produce rDME through gasification – one of the more mature dedicated production pathways.

Our modelling demonstrates that with the right policy environment, Ireland can unlock substantial volumes of renewable liquid gas, supporting a just and affordable transition to net zero for homes and businesses across the country.

With our clients we are delivering net zero solutions.

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