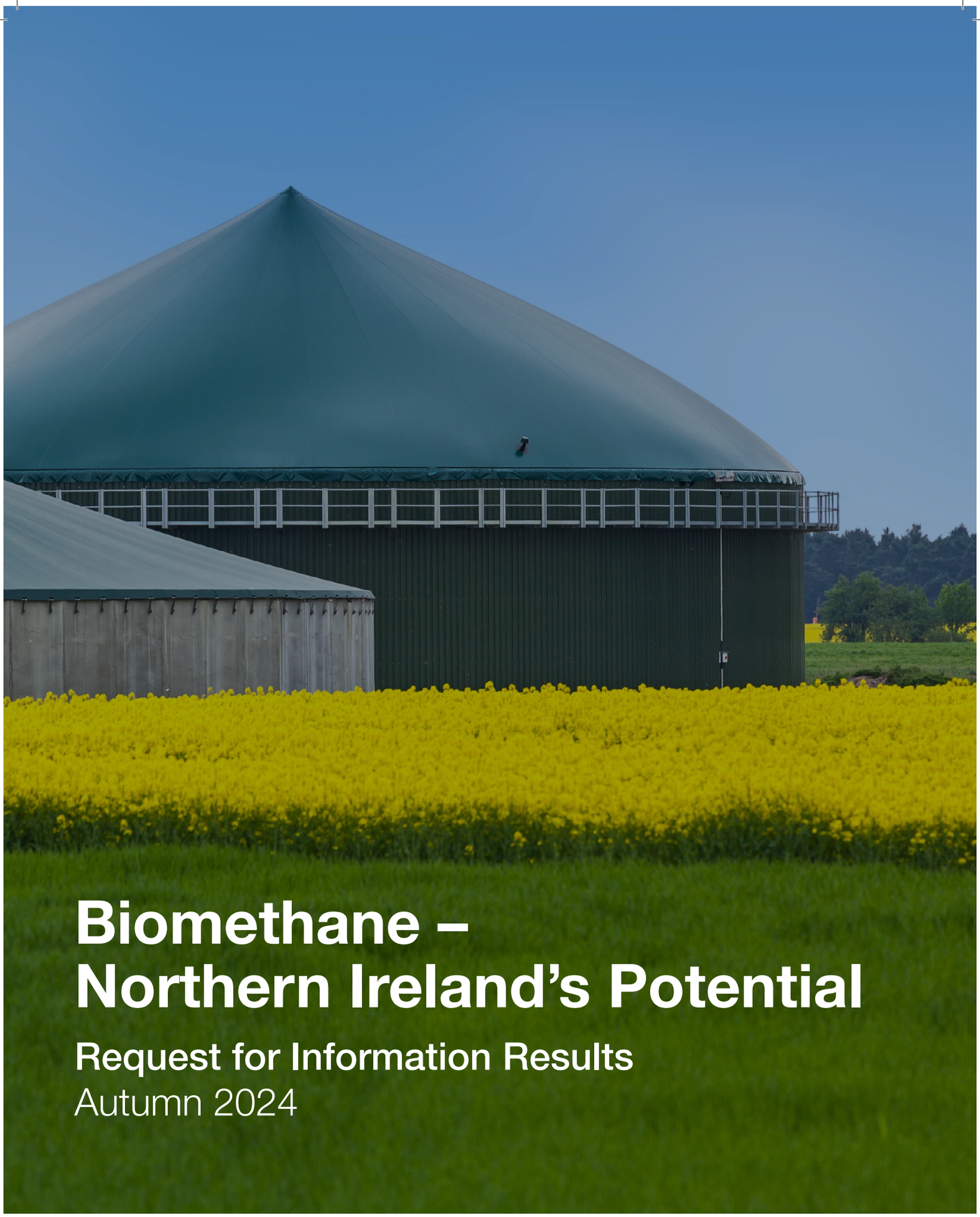


Biomethane – Northern Ireland's Potential

Request for Information Results

Autumn 2024

evolve
Connecting pipes and people

firmus energy
transitioning to net zero carbon

GNI (UK) Ltd.

mutualenergy

Phoenix Energy

Purpose

To prepare for increased biomethane injection to Northern Ireland's gas network, the NI Gas Network Operators issued a Request for Information in March 2024. Its purpose was to identify potential biomethane projects that are interested in connecting to the gas network. This information provides the Gas Network Operators alongside policy and regulatory decision-makers with insights that will allow for strategic network planning and assist effective policymaking, as we decarbonise the gas network to support Northern Ireland's transition to net zero.

84 Projects
Submissions received

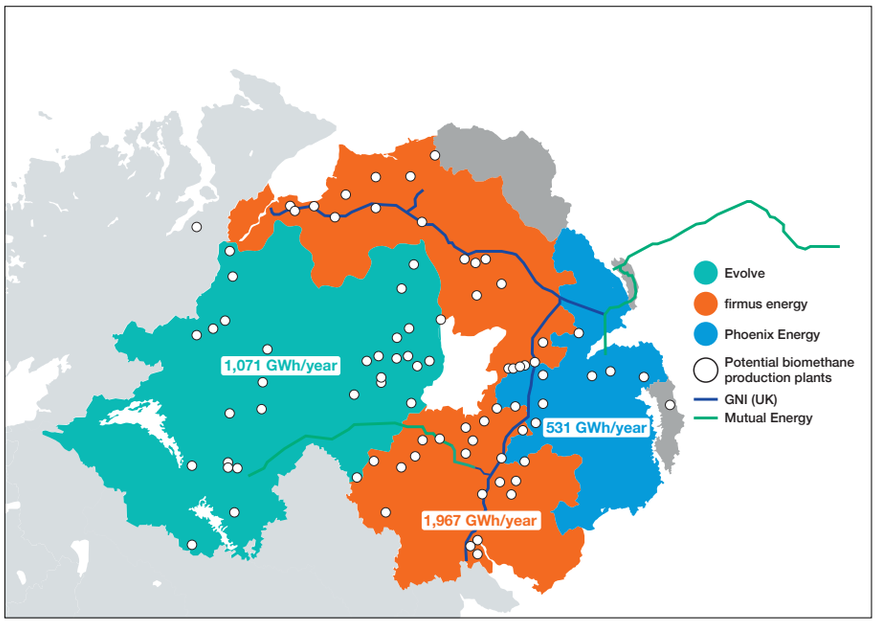
3.6 TWh per year
Potential production

27 GWh per year
Median plant size

Enough to heat **290,000** homes or **90%** of industrial & commercial gas demand

Saving around
525,000 tonnes
of carbon dioxide equivalent per year[1]

The responses show that these potential biomethane projects are located right across Northern Ireland, with one possible project located in Donegal. This highlights the potential benefits of biomethane production across Northern Ireland, but also means the Gas Network Operators need to consider strategic planning to ensure our networks can connect biomethane production with sufficient gas demand, overcoming any network constraints.

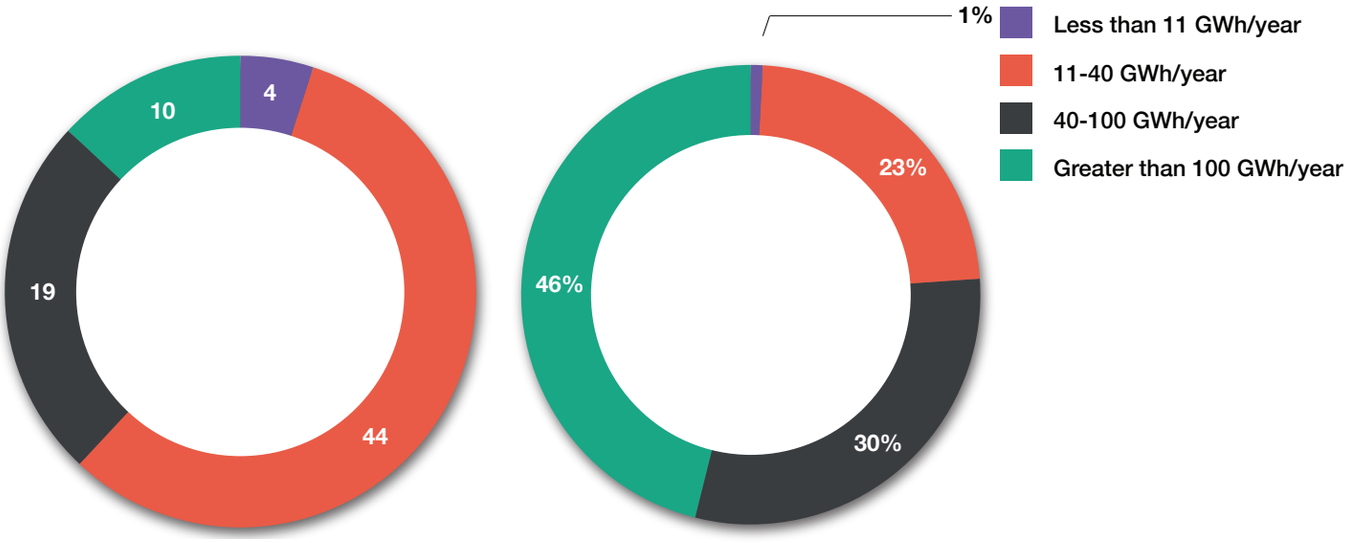


Approximately 45% of biomethane projects identified are within the Lough Neagh catchment area. Biomethane production could support water quality improvements by co-installing nutrient stripping technologies.

[1] Based on SEAI carbon emissions values in https://www.seai.ie/publications/Low-Carbon-Gases-for-Heat.pdf

Size of plants

Responses included a range of different sized biomethane production plants from relatively small plants of less than 11 GWh per year through to larger plants capable of producing more than 100 GWh per year. The median plant size was 27 GWh per year.



Number of Plants by Production Capacity*

Share of Production Capacity by Plant Size

*7 respondents did not state planned plant capacity.

The responses were assessed to estimate each project's stage of development and planning undertaken. The most advanced projects equate to production values of

1.6 TWh per year by 2030.

This supports the Gas Network Operators commitment to achieve biomethane injection of

1.5 TWh per year by 2030.

Challenges for project development

Respondents were asked what the key barrier to their projects was. Three main themes emerged:

- Absence of Northern Ireland specific biomethane policy and financial support scheme.
- Delays in obtaining planning permission.
- Network connection costs associated with current 'producer pays' policy.

Advantages of biomethane in Northern Ireland

- ✓ Results show that biomethane is ready to be deployed at scale.
- ✓ A carbon neutral solution that can help Northern Ireland meet its 2030 emission reductions and 2050 net zero targets.
- ✓ Local businesses can easily use biomethane to decarbonise and meet market pressures to remain competitive.
- ✓ Biomethane production can contribute to addressing Northern Ireland's surplus nutrient issue affecting local waterways.
- ✓ Provides a sustainable and local energy supply – enhancing security of supply.
- ✓ Provides green growth opportunities across Northern Ireland.
- ✓ Contributes to sustainable circular economies.

Next steps

1

Policy support which provides a robust biomethane strategy to encourage investment and informs broader departmental policies, e.g., environment and economy.

2

Gas Network Operators will develop a coordinated gas network plan – to support the strategic development of biomethane and overcome any network constraints.

3

Gas Network Operators are currently engaging with SONI, the Utility Regulator and Department for the Economy to develop strategic whole energy system planning.

Scan to read the full research report: