

Seizing the biomethane opportunity: A smart boost for New Zealand's energy mix

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Every time we use gas to fire up our cooktop or take a hot shower, we tap into an energy source that's rapidly changing. As New Zealand works towards decarbonising its energy system by reducing its dependency on fossil gas, the country has a unique opportunity: to transform our organic waste into a renewable fuel – biomethane.

Biomethane isn't a futuristic concept; it's already proving its worth overseas and offers us a pragmatic win. Our country's towns and cities, and agricultural and industrial sectors, produce vast amounts of organic waste that can be converted into renewable gas.

With an estimated potential of 23.5PJ per year (for contrast, the 290,000 Kiwi homes and 16,000 commercial businesses connected to natural gas use 7.2PJ and 7.7PJ respectively per year), biomethane could effectively supplement the natural gas that currently energises our homes and industries.

What makes this opportunity particularly attractive is that our existing gas infrastructure – pipes, meters, and appliances – is already in place. This means we can repurpose the gas network without incurring the costs associated with building entirely new systems.

Beyond the obvious economic benefits, there's a good environmental case for biomethane. Biomethane is a



Above: Biogest in France processes agricultural crop residues to produce biogas and biofertiliser.

Above right: Upgrading biogas to biomethane at Ecogas Organics Recycling Facility, Reporoa.

Left: A farm-scale anaerobic digester.

low-carbon alternative to natural gas because it is produced from renewable organic waste rather than extracted fossil reserves. By converting waste into energy, biomethane not only prevents the release of greenhouse gases that would result from uncontrolled decomposition but also avoids the environmental impacts associated with fossil fuel.

The transition to biomethane also has a strong social and economic dimen-

sion. Imagine linking local farmers, waste management companies, and industrial players in a single, resilient circular economy. Such integration would not only support energy independence for New Zealand by reducing reliance on imported fuels but also stimulate regional development and job creation. It's a model that empowers local communities, while enhancing our export profile with a compelling story of sustainability.



Moreover, while electrification is a critical piece of the decarbonisation puzzle, it comes with its own challenges.

Building new electrical infrastructure to entirely replace gas potentially could be a costly and lengthy process – one that ultimately places a heavy burden on consumers. Biomethane offers a balanced approach; it allows us to continue using the gas network and appliances already installed, significantly easing the financial and logistical strain of a complete energy overhaul.

In essence, biomethane doesn't force us to choose between old and new – it enhances the strengths of both.

Across the globe, nations are already reaping the benefits of biomethane. Countries such as Denmark are rapidly integrating this renewable fuel into their gas grids, setting ambitious targets for a cleaner energy future.

Their progress serves as a persuasive blueprint, showing that with commitment and smart policy, a transition to

sustainable gas is not only possible but inevitable.

Every time you light your stove or warm up your shower, there's an opportunity to eventually energise those everyday moments with locally sourced, renewable energy.

Biomethane is not just an alternative; it's a transformative step towards a more resilient, environmentally responsible future. By embracing this resource, we can safeguard our energy supply, stimulate local economies, and make significant strides in our fight against climate change.

So, as you consider your next meal or even your daily routine, ask yourself: is this the moment for New Zealand to harness its untapped potential?

The prospect of renewable and home-grown energy is right at our doorstep. Let's seize this opportunity, transform our organic waste into a force for good, and pave the way for a resilient energy future.