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Media release

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A zero carbon gas future for New Zealand

-Firstgas Group announces results of Hydrogen Trial Study

Firstgas Group has today announced a plan for decarbonisation of its gas pipeline network in New Zealand. Hydrogen will be blended into the North Island natural gas network from 2030, with conversion to a 100 per cent hydrogen grid by 2050. This will be supported by biogas and bioLPG to offer emissions reductions for all gas users.

The transition timeline is informed by the Firstgas Hydrogen Network Trial report, also released today, which projects future hydrogen supply and demand in New Zealand and assesses technical practicalities and regulatory factors.

The report was 50% funded by the Government through the Provincial Development Unit.

Firstgas has confirmed that the Firstgas networks can deliver sufficient hydrogen to decarbonise the natural gas network by 2050. Hydrogen blends of up to 20 per cent reduce the carbon emissions of natural gas users without requiring any change to existing appliances. The blends will be phased in regionally from 2030.

The conversion of networks to 100 per cent hydrogen gas will begin from 2035, allowing time to plan for appliance replacements that can operate on pure hydrogen. Complete conversion of the gas network to 100 per cent hydrogen is scheduled for 2050.

The report found sufficient demand in high temperature process heat and heavy transport to support a viable hydrogen industry in New Zealand. It is expected that hydrogen will substantially replace fossil fuels for 'hard to abate' emissions – those where electrification is not possible.

This means gas users can meet the objectives of the Zero Carbon Act without resorting to electrification or carbon offsets, and without the need to replace their current gas equipment.

Paul Goodeve, Firstgas Group CEO, said the announcement was a major milestone for Firstgas Group, the gas industry and gas customers.



“I know many New Zealanders have been unsettled by some proposals about the future of gas. We’ve been challenged by that, and we’re meeting that challenge.

“The benefits of gas are here to stay in a cleaner future of zero carbon gas,” Paul Goodeve said.

The report findings propose that green hydrogen produced from surplus renewable electricity will replace fossil fuels where possible. The hydrogen will be produced by regionally dispersed electrolyzers and distributed by the existing local pipe networks. Stored green hydrogen will be converted back to electricity when required to meet demand during peak times or dry spells.

Firstgas CEO, Paul Goodeve, said that the plan and timeline gives “ultimate security” to gas users and the nation.

“This is a realistic route to zero carbon gas that does not require anything of consumers for the next 15 to 20 years.

“Gas users have the security of continued gas on their existing equipment, at lower emission levels, and the nation has the security of a stable switch-over to zero-carbon gas by 2050.

“By 2050, New Zealand will have a zero-carbon electricity network, *and* energy from a clean and reliable gas that delivers the same benefits that natural gas and LPG users have come to know.” Goodeve said.

Hydrogen Project Leader, Angela Ogier, expanded on hydrogen’s unique value.

“Hydrogen is zero emission at the point of use. It replaces use of fossil fuels that electricity is not well suited to replace, such as in heavy transport and process heat in manufacturing industries.

“We all know that coal and gas are burnt to produce electricity during dry-years and winter demand peaks. Hydrogen can replace those uses and reduce total emissions from the energy sector by 25 per cent.

Ogier added that the report found broad use of green hydrogen, alongside and in support of renewable electricity, to be the best way to balance competing energy sector objectives.

“Integrating hydrogen with our energy mix gives New Zealand the best available balance of energy security, energy equity, and environmental sustainability.

“I am incredibly proud of the innovation we have harvested and the strong future this gives everyone who uses gas or is involved in the industry.” Angela Ogier said.

For more information visit www.gasischanging.co.nz (this link will be available from Monday 29 March 2021)



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About Firstgas Group:

Firstgas Group has been at the forefront of innovation in New Zealand's energy sector for nearly forty years. Through our leading companies Firstgas, Rockgas, Flexgas and Gas Services New Zealand, we have the future of gas in our sights - while ensuring Kiwis get the natural gas and LPG they need today, safely and reliably.

Investigating innovative technology is part of Aotearoa's journey to cutting emissions, and we firmly believe that the sustainability, reliability and affordability of gas will help get us there. That's why we continue to invest in our operations and explore new, better ways of delivering gas to all New Zealanders, now and in the future.

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