wellington electricity™

Submission to Gas Transition Plan Issues Paper

2 November 2023

Submission and contact details

Consultation	Gas Transition Plan Issues Paper 2023
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Release of information

This report contains no confidential information and can be publicly disclosed.

1 Introduction

Wellington Electricity (WELL) welcomes the opportunity to provide feedback on the Gas Transition Issues Paper ('the paper') that will help build New Zealand's Energy Strategy to support the government's net-zero emissions reduction plans.

WELL is a distribution network that manages the local lines that deliver power to Wellington, the Hutt Valley, and Porirua. We power around 173,000 homes and businesses of which 65,000 are also gas connections. The Wellington region has the highest residential gas connections in the country and changes in government policy for gas will significantly influence investment and operating measures of the electricity network.

After several years of low electricity demand growth, WELL has been operating in a 'business as usual' setting and one of the most cost-effective distribution networks in the country. WELL is forecasting to increase the capacity of our network by greater than 100% to accommodate expected demand growth for electricity. This is largely due to the uptake of transport electrification and the potential transition of 100MW of gas use to electricity. It is prudent that there is adequate time to build the electricity network and WELL echoes the government's view that fossil gas will be needed as a transition fuel to

enable construction of additional capacity, maintain resilience, and not cause price shocks to customers.

As a regulated distribution network, WELL must justify the use of consumer funding by building for quality, affordability, and necessity. It is imperative that distribution networks can make strategic decisions for building the necessary network capacity requirements that will come about because of the Gas Transition Plan. An uncoordinated or badly timed plan would result in higher costs for consumers and exacerbate constrained resources while there is a rush to electrify. The Gas Transition Plan will help set the pace for networks to build new capacity and how much distribution networks will need to invest.

A well-planned and executed transition plan away from fossil gas, with incentives for alternative technologies needs to be established. In this plan, it is crucial for the government to be technology agnostic and not favour electric options in all cases while the gas market is adapting to meet the net-zero targets. Renewable gas alternatives should not be dismissed based on their current viability and instead analysed on their potential to limit the disruption to consumers in the future. The gas infrastructure has the potential to be used as a storage option when electricity needs flexibility or climate events affect the electricity supply (either dry year or more severe events). Consumer choice fosters competition which allows the most cost-effective solutions to thrive, and consumers will also benefit if there is a choice. For example, rural customers may prefer having access to gas alternatives for resiliency.

2 Consultation Questions

2.1 How can New Zealand transition to a smaller gas market over time?

New Zealand is dependent on highly sought-after internationally sourced equipment for electrification, and we must make strategic decisions that do not curb our ability to decarbonise. For example, the global chip shortage in 2020 - 2023 affected the production of EVs and impacted the availability of transformer semi-conductor materials which led to delays in procurement plus cost increases. Renewable generation requires a substantial reliance on critical minerals such as copper, zinc, lithium, cobalt, and nickel, with global demand increasing four times for these minerals by 2040. This is why an initial view of transitioning to a smaller gas market should be specific to fossil gas and not renewable gases. By having this approach New Zealand's dependency on electricity alone will be reduced by having alternate energy sources available. If we plan to electrify too fast, then New Zealand will be at the behest of the international market as global demand for these components soars.

In our submission on the Climate Change Commission's '*Advice to Emissions Reduction Plan June 2023*'[1], we highlighted that preventing or cutting gas connections too early may create a disincentive for investment in renewable gases to be available in the future. As made clear in the paper, there are many technologies on the fringe of being economically viable and if the government incentivizes a smaller gas market (including renewable gases), then this is not giving the alternative markets time to mature and be viable. New Zealand can transition to a smaller fossil gas market by encouraging innovation and the development of new technologies.

2.2 What is needed to ensure fossil gas availability over the transition period? / What factors do you see driving decisions to invest or wind down fossil gas production?

WELL views the main factors leading to fossil gas production decline is the cost of producing gas through the cost of NZ carbon units and the uncertainty of recent government policy. WELL hopes that the Gas Transition Plan will give gas producers the direction and certainty required to maintain existing operations over the transition period while intermittent renewable generation is built and then have the motivation to diversify to renewable sources. An example of this is supporting the gas producers to make a normal return on their investment in the Commerce Commission's DPP3 final decision[2] that allows accelerated depreciation of assets at risk of being stranded. This policy acknowledged the importance of certainty and investor confidence to ensure a safe, reliable supply of gas in a changing economic landscape.

2.3 Does the Government have a role in enabling continued investment in the gas sector to meet energy security needs? If yes, what do you see this role being?

Yes, support the market to develop and encourage diversity of energy for a resilient network.

2.4 Does the Government have a role in supporting vulnerable residential consumers as network fossil gas use declines? If yes, what do you see this role being?

It is essential to acknowledge and factor in how the impact of transitioning away from fossil gas use will affect vulnerable customers or those customers with the inability to electrify at pace. This means the government has a role in ensuring the net-zero targets are still manageable without having an adverse effect on these people. The government could also assist vulnerable customers in converting the most efficient appliances from gas to electricity. We have noticed constraining areas in our

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[1] Wellington Electricity Submission to Climate Change Commission on Advice to Emissions Reduction Plan June 2023

[2] Commerce Commission (2022, May). *Default price-quality paths for gas pipeline businesses from 1 October 2022.* Pages 90 –106. Available at https://comcom.govt.nz/__data/assets/pdf_file/0025/284524/DPPs-for-gas-pipeline-businesses-from-1-October-2022-Final-Reasons-Paper-31-May-2022.pdf

network where Kaianga Ora have removed gas appliances from client homes and installed heat pumps. Gas radiators take 1/6th of the time to heat a home compared to heat pumps so it is expected that homes will be more difficult to heat using electricity and those vulnerable customers may need further assistance to keep their homes warm.

2.5 What role do you see for gas in the electricity generation market going forward?

While intermittent generation is built and the operations of NZ's renewable electricity market are forming, fossil gas still has a role in firming the electricity supply in the competitive market and keeping the lights on. Renewable gases have the potential to compete in the electricity market as well. Having redundant energy sources will allow multiple pathways for energy delivery and diverse energy sources will reduce vulnerability to supply disruptions from weather patterns and provide a reliable service when the service is returned.

2.6 What would need to be in place to allow gas to play this role in the electricity market?

The government should look to expedite permitting and compliance procedures to facilitate the integration of alternative gas sources into the existing pipeline network.

2.7 Do you think gas can play a role in providing security of supply and/or price stability in the electricity market? Why / Why not?

Gas has a role in providing security of supply by diversifying energy sources and increasing competition in the electricity market. A competitive energy market encourages innovation and drives energy providers to improve services. Investment in the gas market through electricity generation will help fund the upkeep and maintenance of the gas infrastructure. Without gas generators or large commercial users, the costs will be too high to share across a diminishing base of customers and result in an abrupt shift away from gas.

There is already existing infrastructure that will become a sunk cost and stranded assets if not able to be converted. To provide price stability, gas producers need to be receiving steady returns, and if only available in a scarcity situation returns would be unpredictable and are not as desirable for investors.

2.8 If you believe additional investment in fossil gas infrastructure is needed, how do you think this should be funded?

No Comment.

2.9 Do you see alternative technology options offering credible options to replace gas in electricity generation over time? Why / Why not?

Yes, elaborated below.

3 Biogas

3.1 On a scale of one to five, how important do you think biogas is for reducing emissions from fossil gas? Why did you give it this rating? / Do you see biogas being used as a substitute for fossil gas? O If so, how?

WELL strongly supports using renewable gases (specifically biogas) in the existing gas pipelines, especially in the transition away from fossil gas. There are many benefits to using biogas in the existing network that would make the transition less disruptive and we have elaborated on them below:

Existing Asset Base and Energy Storage

A key advantage of investing in renewable gases is the ability to adapt the existing gas network thus being an efficient use of existing assets. Rather than building new infrastructure; retrofitting the existing pipelines and establishing storage facilities could be more cost-effective. There is a large opportunity, as outlined in the paper, to adapt the existing gas infrastructure to handle biogas materials. This would also require less adaptation from consumers to switch their appliances therefore less disturbance on vulnerable consumers that may be unable or unwilling to transition away from gas use.

Managed Capacity build of the Electricity Supply Chain

NZ can manage a cost-effective build of the electricity supply chain by slowing the transition away from gas. Incrementally building infrastructure as the need arises means that costs are allocated to the customer using the service at the time and future price shocks are prevented when mass-built equipment comes to the end of life and all need replacing. This applies to all stages of the electricity supply chain, from generation to transmission and distribution. For example, if 10 wind farms are built at the same time, they will also need to be replaced at the same time. If NZ can replace a portion of fossil gas with biogas, this will relieve the pressure to build at such a speed that creates resource shortages leading to price shocks.

Technology already established and feasibility likely in New Zealand

Unlike other alternative gas products, biogas is the most established renewable gas in New Zealand and the examples described in this paper offer credible potential that is not too dependent on international growth.

4 Hydrogen

4.1 On a scale of one to five, how important do you think hydrogen is for reducing emissions from fossil gas use? Why do you think this? / Do you see hydrogen being used as a substitute for fossil gas? If so, how and when?

Many of the alternative ventures outlined in the Gas Transition Plan paper, are already being funded and pursued by private enterprises in New Zealand and overseas. As we are a small economy, we can benefit from other country's economies of scale and apply their learnings to our application, for example, green hydrogen. WELL sees the possibility for hydrogen blended gas and electricity generation, but not within the timeframe for the net-zero target.

5 What else can be done to accelerate the replacement of fossil gas with low-emissions alternative gases?

Subsidies or tax credits for innovation to invest and research alternative gas sources – this is recommended with caution because the timing of subsidies and taxes can create adverse effects. The clean car discount and tax saw 20,000 new diesel trucks/utes bought in the months leading up to the tax implementation, creating a distortion for the success of these schemes.

Waste management strategies can make the most of public participation in biogas production.

6 Renewable gas trading certificates

6.1 On a scale of one to five how important is a renewable gas trading to supporting the uptake of renewable gases? Why have you given it this rating? / What role do you see for the government in supporting such a scheme?

No Comment.

7 CCUS

7.1 On a scale of one to five how important do you think CCUS is for reducing emissions from fossil gas use? Why did you give it this rating? / What are the most significant barriers

to the use of CCUS in New Zealand? / Do you see any risks in the use of CCUS? / In what ways do you think CCUS can be used to reduce emissions from the use of fossil gas?

No Comment.

8 Gas Storage

8.1 What role do you see for gas storage as we transition to a low-emissions economy? / On a scale of one to five, how important do you think increasing gas storage capacity is for supporting the transition? Why did you give it this rating? / What should the role for government be in the gas storage market?

No Comment.