Submission on the *Gas Transitions Plan Issues Paper*

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Responses to questions

Chapter 2: Transitioning our gas sector	
	How can New Zealand transition to a smaller gas market over time?
1	We are in a climate emergency. With extreme weather events ever more apparent around the world, New Zealand's goal must be to stop emissions from fossil fuels as quickly as possible. There is no justification to delay this transition to manage energy security or affordability: with care and focus these can be addressed while we make a rapid transition. The consultation document mentions high international fossil gas prices resulting from Russia's invasion of Ukraine, with perhaps an implied message that New Zealand is lucky not to be exposed to these. We take a different lesson from the international gas situation. The response of European countries, transforming their energy supply away from dependence on Russian gas in under a year, shows how quickly change can happen if there is political will and follow-through. There is no reason to assume that because we have been doing things one way in the past, that must continue. If we allow existing fields to phase out, New Zealand will naturally be in a situation of a smaller and shrinking gas market. That is the envelope we must work within, although even here we note that there should be no assumption that all gas in current fields should be used. If we were to properly reflect the damages of fossil gas emissions in our policy (for example using the recent United States social cost of carbon assessment of US$202/tCO$_2$ in 2023 and rising[1]) then zero-emissions choices and far greater use of demand response become obvious choices. We also note that the Climate Change Commission's Demonstration Path has been used as a reference pathway. This should not be interpreted as an allowed emissions quantity for the gas sector. Its gross emissions are too high, and the transition is too slow. The Demonstration Path assumes significant offsetting of fossil fuel emissions with forestry removals – inconsistent with international 1.5C pathways such as the International Energy Agency's Net-Zero Energy scenario[2] and the IPCC's sixth assessment report. For consistency with 1.5C, gross energy sector emissions are reduced in these scenarios by over 90% at net-zero. In the IEA scenario this is reached by 2045 for developed countries, with zero use of forestry offsetting. New Zealand should be targeting much faster phase-out of fossil fuel emissions, and that will require a rapid shrinking of fossil gas emissions.
2	**What is needed to ensure fossil gas availability over the transition period?**
	The government's focus should not be on gas availability, but on an overall energy system transition that meets consumers' needs for energy services. This will predominantly be

[1] https://www.regulations.gov/document/EPA-HQ-OAR-2021-0317-1549, 2020 dollars. https://www.whitehouse.gov/briefing-room/statements-releases/2023/09/21/fact-sheet-biden-harris-administration-announces-new-actions-to-reduce-greenhouse-gas-emissions-and-combat-the-climate-crisis/

[2] Net Zero by 2050 – Analysis - IEA

	through electrification, while there is sufficient fossil gas in existing phasing-down fields for the remaining residual uses without immediate alternatives. We note, as we will repeat throughout this submission, that gas supply should not be subsidised but currently is. We underprice gas due to inadequate emissions prices compared to true 1.5C consistent scenarios, and compared to a situation without forestry in the ETS. Moreover, we directly subsidise fossil gas use in our two largest consumers (Methanex and Balance Agri-nutrients) via free allocation in the NZ ETS. This distorts decisions around how to efficiently allocate remaining gas, distorts choices around use of gas versus zero-emissions alternatives, and distort decisions on whether to invest in future fossil gas supply. There is no case for the government to intervene to ensure fossil gas availability on this basis: we need to wind down these subsidies not add to them.
	What factors do you see driving decisions to invest or wind down fossil gas production?
3	As above, if we did not subsidise fossil gas then the case to allow production to naturally wind down would be far more apparent. The government's analysis should start from this point: what would happen in a gas market and electricity market that fully priced emissions, and exposed all users to these prices. In the absence of very major ETS reform to make very high explicit prices a reality, there is no reason to expect a market response that is aligned with the problem at hand. This market failure necessitates government attention to ensure (rather than delay) phase-down.
	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?
4	No, there should be no further subsidy for the fossil gas sector. Energy transition will be challenging but the government's responsibility is to the overall system not to the fossil gas industry: we hope that the Energy Strategy will take a far more whole-of economy perspective to this. The major transition challenge will be the rapid scale-up of zero-emissions alternatives and far more demand response: this should be the focus area, based on a rational assessment of true emissions costs and benefits, not relying on the subsidised explicit emissions prices in our ETS. The consultation document paints a misleading picture of the role of Methanex in the transition. It is clear that their large demand would be needed to underpin any further offshore development – but we do not need any further offshore development. A smaller on-shore market based on existing fields does not need this level of demand (which we again note we currently subsidise). According to the Commission's analysis, a delay of six to twelve months in renewable electricity build leads to a 14-30% increased in wholesale electricity prices: maintaining or increasing fossil gas increases costs.[3] However we also note that this phase-down process and pathway has not been analysed in the consultation document, only concerns around its risks raised in a general sense. This is

[3] https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/

	not a sufficient basis on which to plan a secure, rapid phase-out of fossil gas emissions. The Energy Strategy will need to do a far more comprehensive job.
	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?
5	Yes, but as an integral part of the transition that allows it to proceed at pace, and NOT as an excuse to slow the transition. Vulnerable consumers will need assistance, and that includes government taking a forward-looking view to avoid lock-in of future uneconomic gas connections and appliances. We agree with the Commission's recommendation to ban new gas connections to avoid costly lock-in, given their finding that "continued fossil gas use and asset expansion will add additional cost to consumers as well as raise equity issues for future generations".[4] Moreover, the health benefits of removing gas use from homes (discussed further below) would justify this change on its own, and this is not even mentioned in the issues paper.
	Fossil gas and electricity
	What role do you see for gas in the electricity generation market going forward?
6	We agree with the consultation document's assessment that fossil gas use needs to be phased down, and are encouraged by the business-as-usual trend towards this. We note again the Climate Change Commission's analysis that any delay to renewable energy build raises costs: continued reliance on fossil gas increases, not decreases system costs. While there could be very small residual gas use for peaking and flexibility, proper valuing of emissions (i.e. removing the explicit and implicit subsidies already discussed) would result in even faster phase-out of emissions.
	What would need to be in place to allow gas to play this role in the electricity market?
7	Again, there should be no specific focus on supporting fossil gas. The overall Energy Strategy needs to focus on rapid development of zero-emissions supply, demand response, and grids, including distributed household level supply and demand, to progressively displace the remaining uses of fossil gas. We are concerned that the focus of this document and consultation appears to be seeking to make a case for continued or even expanded fossil gas use – that is entirely the wrong direction.
	Do you think gas can play a role in providing security of supply and/or price stability in the electricity market? Why / Why not?
8	Fossil gas currently plays an important role in electricity system security and for dry year supply. The challenge for the Energy Strategy is to find alternative ways to provide those services, not treat the current status-quo as an inevitable future or as an excuse to slow down transition.

[4] https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/

	Even in the short term, the Commission's analysis shows that there is no reason to delay, given the higher cost of gas generation to consumers. From a consumer perspective, perpetuating reliance on fossil gas would raise costs.
	Do you see alternative technology options offering credible options to replace gas in electricity generation over time? Why / Why not?
9	In the context of this consultation and issues paper we find this a highly misleading question, as submitters have not been provided with any information on the other options available. It almost seems designed to elicit answers that say submitters haven't seen alternatives discussed. Analysis of whole of energy system pathways (such as those conducted by the Climate Change Commission) show that phasing down gas use in line with declining supply from existing fields is a feasible approach, and that choices exist to make this happen. Decisions will need to be taken on dry-year responses, but that does not justify simply continuing to use fossil gas with the result of increased emissions and costs.
10	**If you believe additional investment in fossil gas infrastructure is needed, how do you think this should be funded?**
	If there is to be additional investment that should be a private choice – there should be NO further public subsidy to continue fossil gas emissions. Any public support should be toward transition to zero-carbon replacement supply, energy efficiency, and demand response. It would be a tremendous waste of public funds to subsidise emissions that we are trying to phase out. This also includes levelling the playing field to remove existing ETS subsides and under-pricing, or using other tools such as regulation and public investment if the government is not willing to use high explicit prices.
Chapter 3: Key issues and opportunities	
	Renewable gases and emissions reduction technologies
	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?
11	1/5. The document indicates the scale to be very small at only half of residential and commercial demand. In terms of blending into the network, this is far below the level needed to maintain the existing gas network, so is a dead-end: achieving these very minor reductions is accompanied by commitment to significant ongoing fossil gas use and associated emissions. Biogas may have some local applications but the focus on blending a small fraction into the overall fossil gas supply is a distraction, similar to the marginal benefits from biofuel blends in transport fuels. Our focus must be on system-level transition away from emitting activities not on small tweaks.
	Do you see biogas being used as a substitute for fossil gas? If so, how?
12	Only in limited, local uses. Blending in the overall network is a distraction, and could even perpetuate the system (as large-scale fossil use would be needed to maintain the network overall). Biomass resources would likely be better used directly for thermal heat rather than

	turned into biogas[5]: again, this discussion points to the consultation document seeming to try and make a case for gas, rather than assess the best overall energy system.
	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?
13	1/5. Green hydrogen may be important globally for particular industrial processes such as methanol and fertiliser manufacture, but it is not at all clear that NZ would have an advantage in this space compared to countries with cheap abundant solar. It may be a driver of relocation as much as switching away from fossil gas.
	Do you see hydrogen being used as a substitute for fossil gas? If so, how and when?
14	Only potentially in certain industrial processes – and then only if these companies see effective emissions price signals (or face equivalent regulation or other policies). Suggestions in the document of blending H_2 in the pipeline are absurd given high costs of transitioning network and end-use appliances, and given that the document notes that for most fossil gas uses, switching to electricity is already more cost effective.
	What else can be done to accelerate the replacement of fossil gas with low-emissions alternative gases?
15	For industrial processes, removing ETS subsidies for industry and reform of forestry in the ETS for higher prices. These will allow more rational decision-making. For pipeline blending government should not be involved: this is a distraction from the system-level necessary transition away from fossil fuel use.
	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?
16	1/5. If industry wants to pursue this they can – but blending only has a small emissions benefit at the margin, and increases costs. Government focus should be on system-level transition.
	What role do you see for the government in supporting such a scheme?
17	None – would be a low priority and distraction from the main task at hand.
	Carbon Capture, Utilisation and Storage
	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?
18	1/5.

[5] We note for example the option of biomass at the Huntly Power station is being investigated as a potential dry-year solution.

	The consultation document significantly overstates the actual findings on CCS feasibility assessed in the supporting document. That supporting report[6] only the cost of analysed reinjection of stripped CO_2 at production sites, but the implication is drawn in the consultation document that CCS is therefore feasible on a more widespread basis. Of course stripped CO2 should be reinjected not vented to the atmosphere, but that is not what most people imagine by CCS. No analysis has been undertaken on the cost or feasibility of end-use emissions from burning fossil gas being capture and stored.
	What are the most significant barriers to the use of CCUS in New Zealand?
19	Outside the obvious case of reinjecting stripped CO_2 at production sites, the main barrier is that it is unlikely to be cost effective vs low-carbon alternatives given high cost of capture and cost of pipelines to bring CO_2 to storage sites, and the ongoing monitoring and insurance costs. We already see this, for example NZ Steel which has chosen a path of electrification. And in an electricity system where fossil fuels are only used occasionally, the large capital investment in CCS would not be cost effective. There is a need to remove ETS subsides for gas use (free allocation, forestry in ETS) for ETS prices to rise to anywhere near where CCS application to end-uses would be feasible. If gas suppliers and users wish to argue that CCS is "the answer" they should also be arguing for significant ETS reform that brings prices to these levels. We would support any regulatory changes needed to enable reinjection of stripped CO_2 (noting that the company would need to maintain responsibility for monitoring and permanent storage, and liabilities around any release). However it is our view that spending significant government time on a wider CCS regulatory framework will be wasted unless there is an intention to reform the ETS for very significantly higher prices, and to expose emitters to those prices.
	Do you see any risks in the use of CCUS?
20	Any regulatory regime must ensure permanence of storage, and put this obligation and liability on companies. It must also respect the views of tangata whenua. One tonne of CO_2 emitted to the atmosphere is in the atmosphere permanently: if CCS is used instead, then storage must also be permanent.
	In what ways do you think CCUS can be used to reduce emissions from the use of fossil gas?
21	The document paints a very false picture in this space, implying that CO_2 use does not result in emissions. If captured CO_2 is used then the CO_2 still ends up in the atmosphere unless there is chemical transformation, it only delays emissions. Dry ice melts, drinks with injected CO_2 release their CO_2 when consumed. The government should be very careful not to mislead on emissions implications of "use" applications, and properly account for these emissions.

[6] https://www.gasindustry.co.nz/assets/CoverDocument/Review-of-CCUS-CCS-Potential-in-New-Zealand-March-2023.pdf

	Options to increase capacity and flexibility of gas supply
	What role do you see for gas storage as we transition to a low-emissions economy?
22	There is need for flexibility in the electricity system, but the focus should be on zero-emissions options on both the supply and demand side. System flexibility does not equate to continuation of fossil gas.
	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?
23	1/5. There is no analysis presented in the document to suggest that in a smaller gas system existing storage is inadequate or that alternative flexibility approaches couldn't be taken.
	What should the role for government be in the gas storage market?
24	None – this would be a commercial decision. However it should only be left "to the market" if ETS subsidies (free allocation, forestry in ETS) are removed to result in a significantly higher emissions price track , consistent with actual climate damages. In the absence of doing so, commercial operators are not seeing the correct signal for gas investment vs zero-emissions alternatives, so government regulation (or government co-investment in alternatives) would be warranted to level the playing field.
	Our position is that LNG importation is not a viable option for New Zealand. Do you agree or disagree with this position? If so, why?
25	Agree. No new fossil gas is required, let alone expensive imported fossil gas.
	What risks do you anticipate if New Zealand gas markets were tethered to the international price of gas?
26	Fossil gas is already an expensive option in the New Zealand system, there is no case for more expensive imported fossil gas to be used.

General comments

1. We are in a climate emergency, and there is no time for delay. The European response to gas constraints after Russia's invasion of Ukraine showed how quickly energy systems can be changed if there is a will to do so. New Zealand can rapidly transition away from fossil gas emissions if it chooses to, but this will take focus and follow-through. Analysis should start from the decline of existing fields and assume no further development. Of course security and affordability need to be managed during that transition – but they are not an excuse to delay.

2. We wish to express our dismay at the apparent influence of gas industry opinions in the consultation document. The role of GIC as an industry "co-regulator" has provided the industry with inside access to this process. This is a policy process of winding down emissions from a polluting industry – it is not going to work if that industry has its hand on the pen. We see numerous

examples in the document of selective and/or factually incorrect information that tilts the discussion toward favouring continued use, or even expansion of fossil gas.

e.g. Complete misrepresentation of IEA findings. The IEA report quoted actually states that upstream oil and gas developments are NOT needed in 1.5C consistent scenarios, while the consultation document selectively quotes to present the opposite view. It is only in scenarios that fail to meet 1.5C where additional gas is needed globally.[7]

e.g. Selected quoting of Climate Change Commission to highlight the Commission's comments around the need to carefully manage transition, but not quoting their strong advice on the need for ambitious rapid change. We support Commission's draft recommendation to prohibit new installation of fossil gas in buildings, to safeguard consumers from the costs of locking in new fossil infrastructure. We note the Commission's finding that delayed transition away from fossil gas increases electricity costs.

e.g. Misrepresentation of the CCS issues supporting report to claim that a hub of industry with CCS would be viable. The supporting report only analysis the cost and potential for reinjection of stripped CO_2 at the production stage – it does not analyse costs or viability of CCS for a single molecule of fossil gas end-use.

e.g. Taking conclusions about Methanex being essential to underpin further offshore gas developments and applying them to all gas developments generally (e.g. stating "little if any private sector investment is likely to occur in the absence of a demand from a gas user of that scale") while in other parts of the document it is clear that this logic only applies to offshore investment, which we do not need. A smaller onshore-only gas sector is an essential step as we phase down fossil gas emissions, and may even be cheaper given the high costs of offshore exploration and development.

e.g. The analysis assumes that petrochemical use like Methanex operates on a level playing field with electricity generators – and yet these companies receive substantial subsidy through free allocation under the ETS (as well as all seeing lower than 1.5C-consistent emissions prices). Through this we are distorting incentives for how to best use the remaining gas supplies - subsidising petrochemical production over electricity.

e.g. The implication that some iwi may support gas development due to cost of energy concerns. The linked document[8] contains no mention of Māori attitudes to fossil gas. We note again that energy affordability concerns are best addressed by a switch away from fossil gas, rather than by perpetuating its use.

e.g. The document even describes switching away from fossil gas as a risk rather than a desired outcome e.g. "Demand for fossil gas and in turn investment into fossil gas development and production to meet that demand, is affected by ***concerns that […] businesses and industries will become uneconomic and shut down or switch to low emissions fuels***, thus reducing demand for developed gas producing assets" (emphasis added).

[7] https://www.iea.org/reports/outlooks-for-gasmarkets-and-investment

[8] Ka Mahana I Taku Kiri: Māori Perspectives on the Measurement of Energy Wellbeing, Haemata Limited, June 2022.

3.The document implies reliance on ETS price as a driver of climate outcomes, but does not recognise that we are subsidising gas, through a number of channels that distort decisions on gas use, gas exploration and choices between gas and alternatives:

- ETS free allocation subsidies to major end users, that perpetuates uneconomic uses of gas.
- A failure to price emissions appropriately. Our ETS price is far short of international benchmarks such as the US social cost of carbon, used by all US Federal government agencies for policy evaluation and procurement decisions. Unless there is reform to how forestry offsetting (particularly plantation pine) is treated in the ETS, the ETS price will be held below levels needed for price to effectively drive replacement of fossil gas with clean alternatives, and below the levels industry has claimed are needed for widespread CCS (in the $120 plus range, not including pipeline costs)[9].
- A royalty regime that has low returns for New Zealand on resource extraction. In a race to the bottom, New Zealand has over decades tried to attract exploration companies through low royalties. By contrast, since 1996 Norway has imposed a 78% tax on the profits of its oil and gas sector, which is channelled into their Sovereign wealth Fund. Failure to tax the industry at a level that provides an appropriate return on extracted resources is a subsidy to the production and use of fossil gas.

4. The document fails to recognise health benefits of switch away from gas use in households, which would justify change even without the climate benefits. The Climate Change Commission notes that "In the United States, switching to an electric stove reduced patients' need for asthma medication which resulted in savings of USD $175 per year per person. Indoor air pollution from fossil gas cooking is estimated to cost the EU at least €3.5 billion per year in healthcare costs, lost earnings and productivity, and disability adjusted life years"[10]

[9] https://castalia-advisors.com/wp-content/uploads/2023/03/2035-2050-Vision-for-Gas-for-New-Zealand-Final-for-print.pdf

[10] https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/advice-for-preparation-of-emissions-reduction-plans/2023-draft-advice-to-inform-the-strategic-direction-of-the-governments-second-emissions-reduction-plan-april-2023/