

The NZ Green Building Councils submission on the Crown Minerals Amendment Bill

1st October 2024

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Who we are

The New Zealand Green Building Council (NZGBC) is a 700-member organisation comprising property owners, construction firms, architects, contractors, suppliers, banks, and research institutions focused on improving the environmental sustainability of buildings and construction.

We represent the construction and property industry's expertise on sustainability and, in collaboration with industry experts, design and operate the leading Green Star and Homestar certifications that are the benchmarks for the environmental sustainability of buildings in New Zealand. We also run the NABERSNZ energy efficiency system on behalf of central Government.

Background

In 2018, the International Panel on Climate Change (IPCC) published a report that laid forth a mandate to limit global warming to 1.5°C. It outlined the impact of unmitigated greenhouse gas emissions, detailing the stark contrast between 1.5°C and 2°C of warming. Since the report was released, we've witnessed dangerously high ocean temperatures, record-breaking wildfires and deadly flooding across the world. Such extreme weather events are no longer anomalous—they are expected, and they are worsening.

But the window of opportunity has not closed. It is true that each passing year has reduced the likelihood of limiting warming to 1.5°C, but all hope is not yet lost. We still have the potential to take ambitious measures to rapidly cut greenhouse gas emissions—and Government and the private sector will have a crucial role to play in such efforts.

The globe's collective efforts to stem the tide of global warming must include every government across every region achieving emissions reduction targets from now, to 2030 and beyond.

We do not support this bill

We are very concerned about the Government's proposed changes to the Crown Minerals Act 1991. The changes will not assist with energy security in the near term. The proposal is likely to cause NZ to breach its climate obligations.

The following is a short summary of our concerns about this bill

Reduces trust in Government

- a) The consultation period is alarmingly short. Not allowing people time to consider the proposal means there is little opportunity to provide input. This indicates a complete disregard for due process and is disrespectful to the New Zealand public. This lack of proper process reduces trust in Government.

The bill is inconsistent with COP28

- b) The bill is blatantly inconsistent with New Zealand's climate change obligations. In November 2023 New Zealand signed up to COP28. This includes a commitment to rapidly reduce emissions. Also at that Conference Minister Watts signed up to triple our rate of renewables and double the rate of energy efficiency.

Scaling up fossil fuel use, as this bill is designed to do shows a disregard for our international obligations. This is very concerning. Again this significantly undermines trust in Government institutions.

Breach of the intent of the Paris Agreement & domestic obligations

- c) This bill is also likely to cause a breach of our international obligations under the Paris Agreement and domestic obligations under the Climate Change Response Act 2002.

Any domestic emissions increases from expanded oil and gas exploration will either need to be offset by deeper reductions in other sectors or through increased reliance on offshore mitigation.

Many Government policies are likely to increase domestic emissions

- Transport
 - o EV sales have crashed
 - o Removal of climate change as a priority in the Government Policy Statement on Transport.

- Local govt activity on active and public transport significantly reduced.
- Massive road building programme with large embodied carbon
- Increased investment in new roading infrastructure at the expense of investment into other sustainable modes.
- Agriculture
 - Entry to the ETS delayed many years.
- Industrial emissions
 - Ceasing of the Government Investment in Decarbonising Industry fund.
- Buildings
 - ceasing of measurement of operational or embodied carbon,
 - scaling down of warmer kiwi homes,
 - ceasing of support to take out fossil fuel heating systems.

As such NZ's gross emissions are likely to rise. There is a reliance in the Emissions Reduction Plan Two that CCUS will help to reduce these emissions.

A [major study by](#) the Institute for Energy Economics and Financial Analysis (IEEFA) of CCS projects – that together account for over half of global capacity – found that almost every project had either failed or significantly underperformed, typically at the implementation stage. Findings in [this 2024 article in Nature](#) also sets out that CCUS is likely to significantly underperform against expectation.

Given CCUS is unlikely to work at the scale envisaged this means additional emissions from fossil fuels are likely to make it even harder to meet future emissions budgets.

Serious risk to our trade agreements

- d) Failing to meet the Paris Agreement is a serious risk to our trade agreements. Increasing emissions, as this bill will do, dramatically increases the likelihood of foreign companies and farmers lobbying to exclude NZ products into their country. This will have severe consequences for NZ's trade, removing large tracts of our export earnings.

Premise of the bill is false

- e) The premise on which the bill is proposed is false. It will not provide energy for at least 10 years. This means it does not help with current energy issues. Instead there are other steps that could be taken.

Recent [research from Otago University](#) shows that peak demand stems from a need to heat and run our cold and inefficient homes. Improving the energy efficiency of these homes and building to energy efficiency standards could reduce peak load considerably, potentially up to 75%.

This will

- Improve health
- Lower energy bills for kiwis
- Reduce peak load significantly

Instead the only solution being considered is more gas.

Eroding international action

- f) More fossil fuel extraction erodes the steps the international community is doing to reduce emissions as a collective. [Based on current emissions](#) and the global carbon budget, humanity would have to stop burning fossil fuels by 2030 to have a 50:50 chance of limiting warming to 1.5°C,

When NZ extracts more fossil fuels other countries are more likely to do the same. This leads compounding effect will help doom global climate action. What a sad legacy for New Zealand. A country full of people who value nature.

Industrial allocations

- g) As discussions and analysis of New Zealands climate policies increase there is an increasing understanding of the policies that are in place.

Under the ETS industrial allocation regime Methanex receives allocation that equates to a cost to the taxpayer of approximately NZ\$200,000 per worker, per year.

With kiwi families paying for the ETS day to day that subsidy is likely to be called into question. Without such a subsidy Methanex may not be viable. This could free up gas for other uses.

Electrifying buildings to reduce pressure on natural gas supply

- h) Luckily there are other potential solutions than extracting more fossil fuels.

New Zealand has a shortage of natural gas that is projected to dramatically worsen in coming years. [MfE's Emissions Reduction Plan Two model](#) assumes 440PJ more demand from 2025 to 2035 than [MBIE's production model forecasts](#) - a gap of 3x current annual production.

Lack of supply and higher prices is already imperilling gas-dependent industry, increasing power prices, and potentially leading to substitution for higher emissions coal.

No new gas field has been discovered and commercialised since Pohokura in 2000, so relying on new discoveries is risky, and any new discovery will take years to commercialise, anyway. LPG imports would take years for infrastructure to be available and the expense of importing enough gas to fill the supply gap would be enormous.

Demand reduction is an avenue the Government is yet to explore. This paper focuses on direct demand reduction measures from changes to buildings.

The NZGBC recommendation of an industry-led moratorium on new connections to the reticulated natural gas network, and electrifications of residential and commercial gas use for heating would save on the order of 6.7mt of emissions and 119PJ of natural gas and LPG by 2035, if rapidly implemented. Figures are based on publicly available data and are intended to provide a gauge of the scale of opportunity for savings, rather than be precise predictions.

Electrification is practical and reduces the cost of living

There are no technical barriers to using electrical heating rather than gas. Electric alternatives are available for all heating use cases. In fact, both space and water heating with electricity rather than gas is cheaper, more energy efficient, and reduces emissions.

EECA's Genless provides the following figures on cost-of-living savings for a typical household.

Space heating	vs piped gas	vs bottled LPG
Variable energy costs per year	\$235	\$805
Total energy costs per year*	\$820	\$940
15 year savings (maintain supply)	\$3540	\$12,290
15 year savings*	\$12,350	\$14,380

*Assuming gas/LPG supply is cancelled

Water heating	vs piped gas	vs bottled LPG
Variable energy costs per year	\$95	\$430
Total energy costs per year*	\$680	\$570
15 year savings (maintain supply)	-2,040	\$3,010
15 year savings*	\$6,760	\$5,090

*Assuming gas/LPG supply is cancelled

Moratorium on new residential natural gas connections to reticulated network
 We understand that the Government would not want a government-mandated end to new residential natural gas connections.

However, the Gas Industry Company and First Gas may want to implement a moratorium on new residential connections to the reticulated network given the current shortage to protect reserves for gas-dependent industry . Note this is different from a 'new gas ban', which would also include LPG

According to the Gas Association of New Zealand, there are 272,000 residential natural gas connections.

According to MBIE's gas statistics, households consumed 7.2PJ of natural gas in 2023, or 26GJ per dwelling. Calculating residential consumption of 7.2PJ with MfE's Emissions Guidance advice gives an average of 1.4t per household per year. The average increase in connections to the reticulated network has been nearly 5,000 a year over the past decade (although it has dropped dramatically in recent months).

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Residential accounts for nearly all new connections. Allowing for some disconnections. 5,000 new residential connections is a fair approximation.

A moratorium on new connections would save a growing amount of gas and emissions over time. The moratorium would save 8.58 PJ by 2035.

	Annual Savings		Cumulative Savings	
	Natural Gas (PJ)	Emissions (CO2e kt)	Natural Gas (PJ)	Emissions (CO2e kt)
2025	0.13	7	0.13	7
2026	0.26	14	0.39	21
2027	0.39	21	0.78	42
2028	0.52	28	1.30	70
2029	0.65	35	1.95	105
2030	0.78	42	2.73	148
2031	0.91	49	3.64	197
2032	1.04	56	4.68	253
2033	1.17	63	5.85	316
2034	1.30	70	7.15	387
2035	1.43	77	8.58	464

Electrifying residential gas use for home heating

The Climate Change Commission's model for ERP1 shows the residential sector is emitting 700kt a year from direct fossil fuel use for heating.

According to MBIE gas and oil statistics, household consume 7.2PJ and 3.8PJ of natural gas and LPG, respectively, which equates to a combined 620kt of emissions using MfE's Emissions Guidance advice. Assuming 90% of this is used for heating, that gives 560kt per year from natural gas and LPG for heating.

According to the Gas Association of New Zealand, around 550,000 homes use either natural gas or LPG. On average, these dwellings will be emitting 1t from gas heating per year. (this is lower than the 1.4t average for new natural gas connections because only heating is being covered and lower per customer usage of LPG in PJ terms - although many users would also move from gas cooking).

A rapid electrification programme could look to replace gas heating with electric heating at a rate of 50,000 homes per year (a \$1,000 subsidy per home would cost \$50m/yr). The programme could be initially focused on only reticulated users to maximise natural gas savings. In conjunction with a programme directed at commercial users, the programme could be targeted by region for controlled wind-down of the network.

Gas and emissions savings would rapidly accumulate (it is assumed that new electricity generation to meet the resulting increase in demand is all renewable).

	Annual Savings		Cumulative Savings	
	Natural Gas & LPG (PJ)	Emissions (CO ₂ e kt)	Natural Gas & LPG (PJ)	Emissions (CO ₂ e kt)
2025	0.90	52	0.90	52
2026	1.80	103	2.70	155
2027	2.70	155	5.40	309
2028	3.60	206	9.00	516
2029	4.50	258	13.50	774
2030	5.40	309	18.90	1083
2031	6.30	361	25.20	1444
2032	7.20	413	32.40	1857
2033	8.10	464	40.50	2321
2034	9.00	516	49.50	2836
2035	9.90	567	59.40	3404

Electrifying commercial heating from gas

There are around 16,000 commercial natural gas customers, according to the Gas Industry Company.

The Climate Change Commission’s model for ERP1 shows the commercial sector is emitting 1000kt a year from direct fossil fuel use for heating. Note, this does not include gas used for cooking in restaurants or process heat used in manufacture.

Based on MBIE’s energy balance tables, 47% of the commercial sector’s fossil fuel use (excluding transport) is natural gas or LPG. Assuming that proportion holds for heating, that would imply around 90% of the 9.5PJ gas used by the commercial sector is used for heating. Average heating emissions from gas is 29t per commercial consumer. That number will be highly variable.

It is worth noting that the Government’s all-of-government piped gas contract, which consumes 1.8PJ of natural gas is included in the commercial sector figures.

A programme to reduce commercial gas use for heating could start with the public sector, with the aim of electrifying all commercial gas heating by 2035.

Commercial reduction subsidies could be aligned with the residential programme to manage the wind-down of the network.

	Annual Savings		Cumulative Savings	
	Natural Gas & LPG (PJ)	Emissions (CO ₂ e kt)	Natural Gas & LPG (PJ)	Emissions (CO ₂ e kt)
2025	0.77	43	0.77	43

2026	1.55	85	2.32	128
2027	2.32	128	4.64	256
2028	3.10	171	7.74	426
2029	3.87	213	11.61	640
2030	4.64	256	16.25	896
2031	5.42	299	21.67	1194
2032	6.19	341	27.86	1535
2033	6.97	384	34.83	1919
2034	7.74	426	42.57	2346
2035	8.51	469	51.08	2815

Savings - electrifying buildings in NZ could deliver cumulative savings of 119 PJ of natural gas and LPG by 2035

Other countries have faced similar issues. Lets learn from them.

- i) Last year Australia faced a similar gas shortage challenge. Analysis by the Institute for Energy Economics and Financial Analysis (IEEFA) was undertaken on the gas shortage.

The [research](#) conducted in November 2023 found "a deeper focus on the demand-side of the equation could potentially eradicate the gas supply gap while reducing energy bills, thereby easing cost-of-living pressures.... There is a much stronger financial case for supporting energy efficiency and electrification than investing in costly new supply options."

"IEEFA modelled nine illustrative energy efficiency and electrification opportunities in southern states' residential buildings and industry. While the modelling is indicative only and does not fully capture the potential benefits, it nonetheless illustrates the size of the potential.

The modelled interventions deliver significant gas use reductions in the long term: residential buildings' gas use decreases to zero by the early 2040s; and industrial gas use decreases by more than 60% by 2045 compared with 2022. In total, the interventions achieve a near 80% reduction in gas use across residential buildings and industry.

They also achieve significant gas demand reductions in the short term, with a reduction in gas demand of about 22% by 2027 and a 42% reduction by 2030 compared with 2022. The reduction in gas demand is particularly high in Victoria, with reductions of 30%, 52% and 93% respectively in 2027, 2030 and 2045 compared with 2022. This is due to the strong probable decrease

in gas use for oil and gas production and associated chemicals production over the next two decades.

We found that these reductions could eradicate the gas supply gap. They could also reduce the requirement to redirect northern gas supplies to meet southern states' demand.

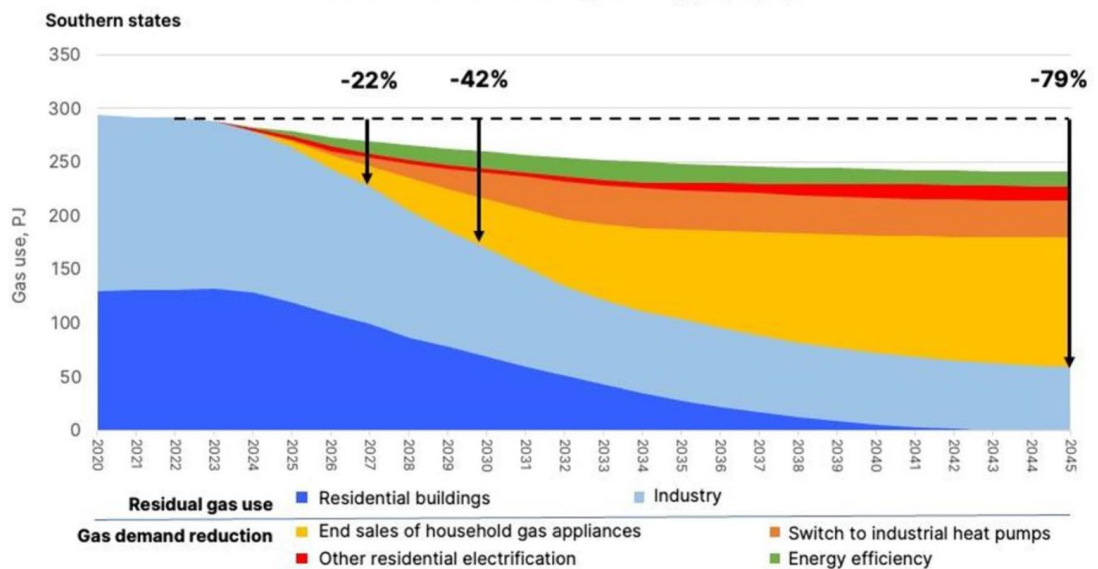
The alternative to delivering this reduction in gas demand would be to develop costly and emissions intensive new gas fields and infrastructure.

Three solutions are being considered: importing liquified natural gas (LNG); pipeline upgrades to deliver more gas from northern states; and developing new gas fields in southern states. Building import facilities just to be able to receive liquified natural gas (LNG) in Victoria would cost between \$250 million and \$499 million.

This is in addition to the high cost of LNG itself. LNG production is also extremely energy-intensive, adding about 20% to the emissions from gas combustion. Upgrading or building new pipelines is likely to be cost-prohibitive, with high capital costs required to be amortised over a short period of time.

Transmission costs already represent a significant share of the cost of gas coming from Queensland to Victoria, and the long distances involved (more than 1,000km) mean it is an energy- and emissions-intensive task.

Cost-effective interventions could slash Southern states' gas demand and eradicate the gas supply gap



“The Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) are clear that achieving the objectives of the Paris Climate Agreement requires no new oil and gas developments. Therefore, developing new fields in Victoria is not an acceptable solution.”

This [2023 report from the Grattan Institute of Australia](#) is also very useful. The paper discusses the challenge that *“all-electric homes are cheaper to run, electric appliances are often more expensive to buy than the gas alternatives. To close this cost gap, and for a limited period, governments should provide low-interest loans or similar financing arrangements for homeowners, and tax incentives for landlords to replace gas appliances with electric ones.*

Governments will also have to ensure the gas network is safely decommissioned, and the electricity network is expanded and upgraded so it can cope with higher demand.”

Taking these steps are a better route to meeting NZs energy needs. They also help achieve our international climate and trade obligations and provide more stable prices for kiwi families and businesses.

We strongly urge the Government to reconsider its policy and not to pass the Crown Minerals Amendment Bill into law. We are happy to engage with you on any aspect of this submission.

Nga mihi nui,

Andrew Eagles and the NZ Green Building Council