Submission No 49

INQUIRY INTO CLIMATE CHANGE (NET ZERO FUTURE) BILL 2023

Organisation: Lock the Gate Alliance

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LOCK THE GATE ALLIANCE
AUSTRALIANS WORKING TOGETHER TO PROTECT OUR LAND, WATER, AND FUTURE

25 October 2023

Ms Sue Higginson MLC (Chair)
NSW Legislative Council
Portfolio Committee No. 7 - Planning and Environment
Parliament House, Macquarie Street,
Sydney NSW 2000.

Dear Committee Chair,

Re: Submission - Climate Change (Net Zero Future) Bill 2023

Lock the Gate Alliance is a national grassroots organisation which formed in 2010 following meetings in NSW and Queensland of landholders, organisations and communities concerned about the ongoing and rapid expansion of coal and coal seam gas development. In 2023, we remain concerned about the ongoing expansion of coal in NSW and Santos' proposal to build the Narrabri Gas Project in the Pilliga and expand gas across the Liverpool Plains.

We commend Minister Sharpe and the NSW Government for introducing the Climate Change (Net Zero Future) Bill 2023 and welcome the legislating of emissions reduction targets and the establishment of the Net Zero Commission. There is much to like in this Bill. That said, some very serious and urgent problems remain in NSW that won't be resolved by this Bill in its current form - most notably the ongoing expansion of coal mining and inaction on a shift away from gas through electrification.

Summary of key points and recommendations

Key points - Climate Change (Net Zero Future) Bill 2023

1. **The Bill won't change the trajectory NSW is on towards the biggest increase in coal tonnage approved for mining since the Paris Agreement:** New coal expansions represent the single biggest threat to the global climate from all activities in NSW. Climate action in NSW will fail unless measures are introduced to address the coal project pipeline. At least 12 coal mines are seeking to expand at present including the Hunter Valley Operations - the single largest project proposed in NSW since the Paris Agreement - see Table 1 below. Lifecycle emissions of the proposed expansions are likely to exceed 2 billion tonnes of carbon dioxide equivalent, which equates to more than 15 years of NSW emissions at current rates.

Well in excess[1] of 40 Mt CO2-e in Scope 1 and 2 emissions would be added to NSW's GHG inventory if these projects proceed and operate to the end of their intended lives. Unless something is done about the coal expansion pipeline, other industry sectors like transport and agriculture will be forced to make deeper cuts in emissions to offset increases from coal.

Projections on the NSW Net Zero Emissions Dashboard predict that from 2029, fugitive emissions (~95% of fugitive emissions are from coal mining) will be a bigger GHG problem than emissions from our entire electricity generation sector.

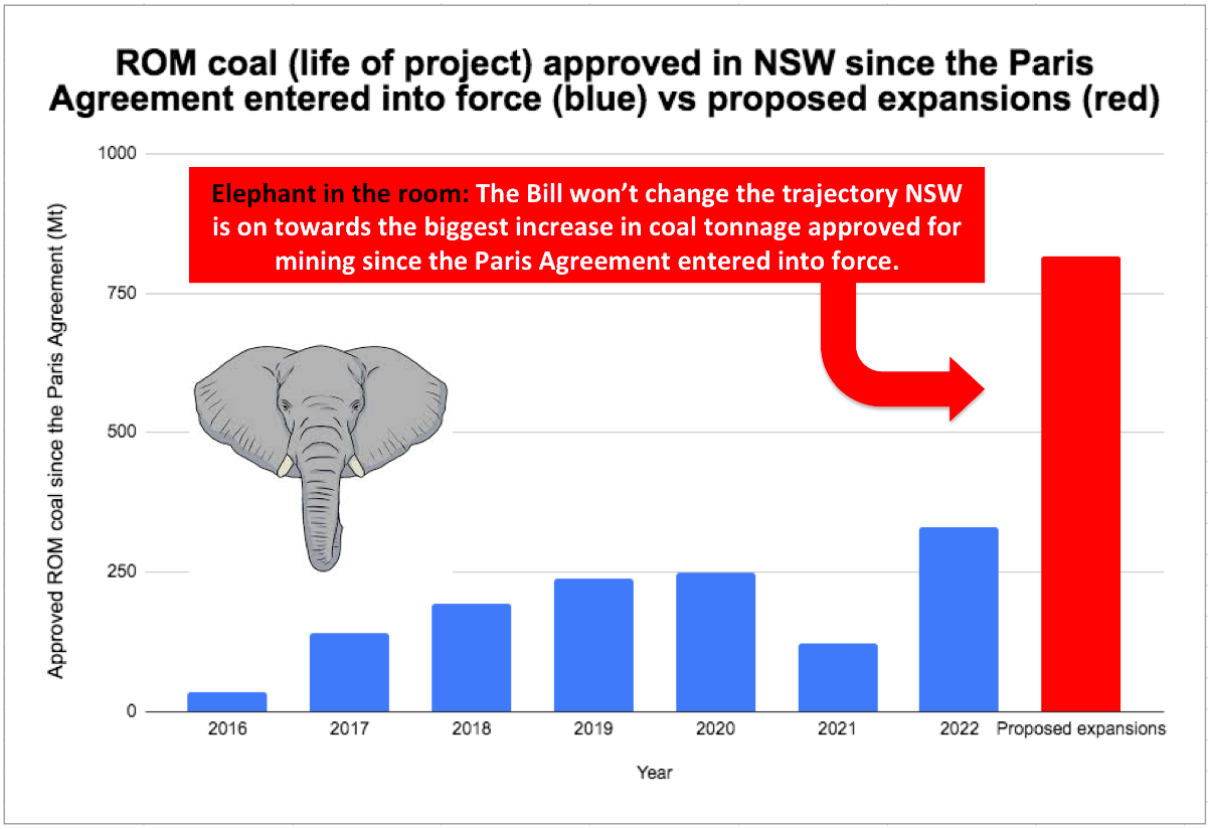

Table 1: List of coal mines currently seeking expansions in NSW (as at October 2023)

List of coal mines in NSW currently seeking expansions				
#	**Mine**	**Expansion Project**	**Total GHGs (lifetime) Mt CO2~e**	**Additional ROM coal proposed (Mt)**
1	Hunter Valley Operations	Hunter Valley Operations Continuation Project	1202.02	400
2	Mt Arthur	Mt Arthur Coal MOD 2 (Pathway to 2030)	138.92	88

[1] We include 7 of the 12 mine expansions in the 40 Mt CO2-e number above. This estimate will only rise as the other five complete and publish their EIS documents.

3	Moolarben	Moolarben OC3 Extension Project	86.61	40
4	Boggabri	Boggabri MOD 8	62.66	28.1
5	Ulan	Ulan Coal Mod 6 - u/ground extension	64.97	27.5
6	Newstan	Newstan Mine Extension Project	65.36	25.9
7	Chain Valley	Chain Valley Colliery Consolidation	25.35	9.5
8	Angus Place	Angus Place West	17	8.5
9	Rix's Creek	Rix's Creek North Continuation Project	127	63.5
10	Maules Creek	Maules Creek Continuation Project	240	120
11	Wilpinjong	Wilpinjong Extension Project	?	?
12	Clarence	Clarence MOD 8	?	?
			2,029.89	**811**

Notes about Table 1 above:

- *Data in black is sourced from documents on NSW DPE's website provided by proponents*
- *Data in orange is a conservative estimate based on data that is on the public record*
- *The Wilpinjong Extension Project and Clarence MOD 8 have not produced Scoping Reports yet, so we are unable to estimate their emissions*
- *In addition to the 12 Projects above, another 2 coal expansions (so 14 now in total) have been flagged. They are Clarence Continuance Project and Ulan West Continued Operations. Not enough information is available yet on which to base GHG estimates for these projects.*

2. **The functions of the Net Zero Commission should be amended so the Commission is required to provide advice on all new emissions-intensive developments, such as fossil fuel projects.** This means it would have a role in decisions on proposed coal mine expansions, including taking into account lifecycle emissions.

3. **A moratorium on proposed fossil fuel expansions should be in place until the Net Zero Commission is established** and has the capacity to advise the government on these expansion proposals.

4. **The Bill needs to be complemented by other measures to constrain dangerous new coal expansions.** Policies that promote emissions-intensive coal-mine expansions all the way out to 2050, like the 'Strategic Statement on Coal' introduced by former Deputy Premier John Barilaro, should be scrapped. Special exemptions on considering climate targets in major projects contained in the current Net Zero Plan exacerbate this problem.

5. **The targets in the bill should be strengthened.** Unfortunately, the targets proposed in the bill are not science-based targets. The goal for net zero in NSW should be brought forward - if not to align with what the science says is required to preserve a safe climate - then at least to match the Victorian government's commitment of net zero by 2045. In addition, the current NSW target of 70% emissions reduction by 2035 should be included as a minimum target for 2035 in the Bill. A mechanism should also be provided to require the Net Zero Commission to

set targets for each five-year period, that can be implemented via regulation - this would need to be accompanied by a provision in the Bill that there can be no regression in targets through that process. Notably, the Victorian Climate Change Act requires the Government to set targets for each five-year period, highlighting that a similar approach could be taken in NSW (see Victorian Climate Act 2017).

6. **The Bill should enable the NSW Government to set sectoral methane targets, and for the Commission to provide advice on those targets.** A new report from the IEA says that *"[t]argeted actions to tackle methane emissions from fossil fuel production and use are essential to limit the risk of crossing irreversible climate tipping points."* The IEA recommends a target to cut energy sector methane emissions by 75% by 2030. Analysis by Ember has found that Australia's coal mines could almost halve methane emissions by investing just 1% of annual profits in abatement.

7. **The Bill should be complemented by action by the NSW Environment Protection Authority to include constraints on methane and carbon dioxide emissions in Environmental Protection Licences for coal and gas mining projects.** There is a great deal of evidence that the current regulatory regime is failing to abate emissions at coal mines (currently responsible for about 14% of all emissions in NSW). Lock the Gate analysis found that in 2021-22, Scope 1 GHG pollution increased at 8 of the 10 most polluting coal mines in NSW (including by 61% at Bengalla and 45% at Ashton). The NSW EPA should directly regulate and progressively reduce greenhouse gas pollutants, including methane, from existing coal mines, as follows:

    a. Rapidly amending Environment Protection Licences for coal and gas projects to list methane and carbon dioxide as pollutants and to set binding and rapidly declining limits on emissions, with a view to have controls in place on all projects by 30 June 2024.

    b. Requiring best practice measurement, reporting and verification of methane emissions.

8. **The Bill should embed climate change action as a core feature of all government decision-making.** The bill should include requirements that climate impacts are considered in all government policy and decisions. One potential model is the Victorian Climate Change Act (Part 3) which embeds climate considerations into seven other acts.

9. **The Bill needs to be complemented by immediate action to put NSW on a pathway to switch away from gas.** The Net Zero Commission should have a role to provide clear direction to policy makers in relation to gas decarbonisation. The Gas Roadmap promised by the NSW government should be developed urgently and must guide NSW towards the goal of largely phasing out the use of fossil gas by 2035.

10. **The Bill needs to be complemented by accelerated action to diversify regional economies, create new jobs and deliver extensive skills and training**

opportunities. In the lead-up to the NSW election, NSW Labor committed to the creation of statutory authorities to facilitate economic diversification and structural adjustment planning, and it is crucial that these authorities are implemented rapidly and provided with sufficient resources to catalyse real change. To be successful, these authorities need to be based in regional communities and have genuine community ownership and participation.

11. **NSW coal mines must be required to report an annual breakdown of their GHG emissions to the NSW Government.** This could be achieved via S 9.40 (2) (a) of the EP&A Act. About 8 coal mines in NSW do not report their Scope 1 and 2 emissions at all to the NSW Government. About another 24 coal mines provide incomplete information which would be of limited use to the proposed Net Zero Commission in monitoring, reviewing and reporting on abatement of GHGs.

New coal expansions are the largest climate threat in NSW

Legislating targets and setting up the Commission - while welcome - are not enough. John Barilaro's Strategic Strategic Statement on Coal Exploration and Mining in NSW must be scrapped and an enormous pipeline of new coal expansions should not be assessed until the Climate Bill has been legislated, the Commission is empowered to advise decision makers and the NSW government has ended the practice of bypassing the Independent Planning Commission to approve large new coal projects in-house.

Largest expansion of new coal capacity since Paris under assessment

Current proposed expansions to coal mining in NSW represent an immense climate threat, both globally and domestically.

At least 12 coal mines are seeking to expand at present including the Hunter Valley Operations - the single largest project proposed in NSW since the Paris Agreement - see Table 1 above). Lifecycle emissions of the proposed expansions are likely to exceed 2 billion tonnes of carbon dioxide equivalent, which equates to more than 15 years of NSW emissions at current rates.

Well in excess[2] of 40 Mt CO2-e in Scope 1 and 2 emissions would be added to NSW's GHG inventory if these projects proceed and operate to the end of their intended lives.

The Hunter Valley Operations coal expansion alone is so emissions intensive that other parts of the economy will need to decarbonise faster if it goes ahead

DPE Science, Economics and Insights Net Zero Emissions Modelling (NZEM) team's submission on the HVO expansion (dated 27 Feb 2023) was published online on Monday 1 May 2023. This submission states that:

[2] We include 7 of the 12 mine expansions in the 40 Mt CO2-e number above. This estimate will only rise as the other five complete and publish their EIS documents.

"the large increase in emissions from this Project in the mid-2040s will require other parts of the NSW economy to decarbonise to remain on track with the NSW Government's target of net zero emissions by 2050".

The current planning processes for coal projects are not independent

Prior to the election, NSW Labor promised that *"[n]ew coal mine projects must be subject to an independent approval process"*.[3]

The current planning process for coal projects is not independent, because:

1. Many projects are treated as 'modifications' which are not referred to the Independent Planning Commission for decisions (including the massive Mt Arthur expansion which has gone on exhibition this week)

2. Communities do not have rights to test coal mine decisions in the independent Land and Environment Court on their merits due to the practice of the Planning Minister referring every coal mine for a public hearing by the IPC, which removes appeal rights

3. The Independent Planning Commission is bound by policies that 'tie its hands' when it comes to considering the climate impacts of proposed coal mine expansions.

Current NSW policy is driving coal expansions and preventing fulsome and proper weighting of climate impacts

Current NSW government policy is to continue "coal exploration, extraction and export" without properly considering climate impacts

Current NSW government policy direction is unambiguously to double down on *growing* the problem, and fails to properly consider climate impacts of new projects. As the NSW Independent Planning Commission put it bluntly when they approved the enormous Mt Pleasant coal expansion in September 2022 (doubling capacity to potentially make this one of the biggest coal mines in NSW): *"The current strategic direction of the NSW government, as set out in its policies, seeks to continue coal exploration, extraction and export."*[4]

Net Zero Plan Stage 1: new coal projects carved out from emissions reduction objectives

Inclusion of the last line below in the Net Zero Plan - in our view - was the product of coal industry lobbying. It's purpose is to deter decision makers from refusal of coal expansions due to concerns that they may not be consistent with climate targets:

"The emissions reduction projections do not assume, and the NSW Government

[3] Written policy platform response to Lock the Gate, 'Survey Response - Lock The Gate - March 2023'
[4] NSW Independent Planning Commission, Mount Pleasant Optimisation Project SSD 10418 Statement of Reasons, 06.09.2022, pg 26, https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/05/mt-pleasant-optimisation-project-ssd-10418/determination/220906-mount-pleasant-optimisation-project-ssd-10418--statement-of-reasons.pdf

does not intend, that all sectors of the NSW economy will abate at the same rate. The NSW Government's projections also find that the State is on track to achieve this objective on current policy settings. In light of this, the NSW Government policy is that the NSW Government's objective set out in this Plan, to reduce emissions by 50% below 2005 levels by 2030, ***is not to be considered in the assessment or determination of development and infrastructure applications under the Environmental Planning and Assessment Act 1979****."*[5]

Strategic Statement On Coal Exploration And Mining

The Strategic Statement on Coal Exploration and Mining in NSW (Department of Regional NSW 2020) sets out the NSW's Government's approach.

> "*the NSW Government will:* ***recognise existing industry investment by continuing to consider responsible applications to extend the life of current coal mines****, and by streamlining the process for exploring new areas and areas adjacent to current mining operations to deliver a better economic return to NSW."*

Case study: Ulan MOD 6 coal expansion (August 2023)

Glencore state that refusal of new coal projects *"on climate change grounds alone"* would be *"inconsistent with both a responsible approach to global net zero targets and NSW Government policy."*

On 17 August 2023, NSW DPE published Glencore's Response to Submissions for the Ulan MOD 6 expansion. This expansion proposes to mine an additional 40 million tonnes of new thermal coal that would generate another 86.6 million tonnes of CO2-e (which includes an additional 380,000 t CO2-e in Scope 1 and 2 emissions to mine the 40 Mt of new coal).

The NSW Government's Strategic Statement on Coal Exploration and Mining in NSW (NSW Strategic Statement) is cited 9 times as a policy document which Glencore says supports an approval of Ulan Mod 6 RTS. A specific section of the Net Zero Plan Stage 1: 2020-2030 is also cited as further evidence that current NSW policy settings ban decision-makers from refusing new coal projects "on climate change grounds alone".

Glencore then summaries the NSW Government's policy position as prohibiting decision-makers from refusal of new coal expansions on climate grounds alone:

1. *"It is therefore clear that the current NSW climate change policy framework specifically acknowledges the importance of ongoing coal production in NSW, not just from the NSW economy perspective, but also from the perspective of the preference for using higher quality coal relative to lower value coal in terms of realistically meeting a global net zero target by 2050. Accordingly,* ***the assertion that any new coal mining or extensions to existing operations should be refused on climate change grounds alone is inconsistent with both a responsible approach to global net zero targets and NSW Government policy."***[6]

[5] Net Zero Plan Stage 1: 2020–2030 Implementation Update (Oct 2021), pg 28
[6] Ulan Coal Modification 6 – Underground Mining Extension, Submissions Report, pg 55

The substitution/displacement argument used in the NSW Government's Strategic statement has been discredited

The Strategic Statement on Coal is based on outdated modelling of global thermal coal demand and it gives considerable weight to the 'substitution' argument which has been discredited. The following is instructive from Waratah Coal Pty Ltd v Youth Verdict Ltd & Ors (No 6) [2022] QLC 21 where President Kingham of the Land Court of Queensland recommended refusal of applications by Waratah Coal Pty Ltd for a mining lease and an environmental authority in relation to a proposed thermal coal mine in the Galilee Basin.

> *[1026] The evidence about the perfect substitution proposition does not satisfy me the mine would have no bearing on GHG emissions. I cannot find that the same amount of coal will be combusted regardless of whether the mine proceeds. Some displacement/substitution is possible. However, demand for coal-fired electricity is falling, driven by international and national policy, and reduced cost and uptake of renewable energy sources and other technologies.*

Chief Judge Brian Preston of the NSW Land and Environment Court also rejected the market substitution argument in the Rocky Hill case

Preston rejected the market substitution argument, describing it as "flawed". He noted that there was no certainty that overseas mines would substitute for the Rocky Hill coalmine. Given increasing global momentum to tackle climate change, he noted that other countries may well follow his lead in rejecting future coalmine proposals. He famously stated that:

> *"…an environmental impact does not become acceptable because a hypothetical and uncertain alternative development might also cause the same unacceptable environmental impact."*[7]

Functions of the Commission

The Net Zero Commission must provide advice on all new fossil fuel projects

The functions of the Net Zero Commission should be amended so the Commission is required to provide advice on all new emissions-intensive developments, such as fossil fuel projects. This means it would have a role in decisions on proposed coal mine expansions, including taking into account lifecycle emissions.

[7] Landmark Rocky Hill ruling could pave the way for more courts to choose climate over coal Published: February 11, 2019, *https://theconversation.com/landmark-rocky-hill-ruling-could-pave-the-way-for-more-courts-to-choose-climate-over-coal-111533*

Methane - we need a 2030 target for the energy sector

Rapid methane cuts from the energy sector are crucial to avoid climate tipping points

A new report from the IEA finds that rapid cuts in methane emissions from fossil fuels – alongside deep cuts in carbon dioxide (CO2) emissions – are essential to achieve global climate targets. The IEA says at 75% reduction by 2030 is required, and notes that:

> *"[t]argeted actions to tackle methane emissions from fossil fuel production and use are essential to limit the risk of crossing irreversible climate tipping points."*

Fugitive emissions (95% from coal mining): the only sector growing from 2020 - 2030

Projections on the NSW Net Zero Emissions Dashboard predict that from 2029, fugitive emissions will be a bigger GHG problem here in NSW than emissions from our entire electricity generation sector. In NSW, about 95% of fugitive emissions are from coal mining.

Huge potential to cut coal mine methane by investing just 1% of profits

According to Ember's analysis (March 2023), *"Australia's coal mines could achieve significant methane emissions reductions for just $500 million AUD annually, approximately 1% of the annual profits of the Australian coal industry."* Ember is an independent energy think tank which maintains that Australia's coal mines could almost halve methane emissions by investing just 1% of annual profits in abatement.

The IEA estimates that actual methane emissions are 60% higher than reported

"In February 2023, The International Energy Agency (IEA) published its 2023 Methane Tracker Report, finding that Australia's coal mines produced 1673 thousand tonnes of methane in 2022. This is 60% higher than the official 2020 figures from the Australian government."[8]

The NSW EPA should regulate direct emissions from coal mining via EPLs

The NSW EPA Climate Policy proposed that it may consider direct regulation in future, but the matter is urgent for coal and gas mines and there is no timeframe to implement it or even a clear commitment to do so at present.

[8] Ember, Annika Reynolds, Climate Policy Advisor - Coal Mine Methane, 2 March 2023, Tackling Australia's Coal Mine Methane Under the Safeguard Mechanism is Cost Effective and High Reward

Targets

2050 is too late for Net Zero

Many organisations are calling on developed economies to reach net zero well before 2050. Most recently, in September 2023, The Australian Academy of Technological Sciences and Engineering (ATSE) called for net zero greenhouse gas emissions in Australia by 2035. The organisation, representing nearly 900 of Australia's most distinguished engineers and applied scientists, has stated that immediate, substantial and concerted action is needed to rescue the diminishing window of limiting global warming to 1.5 degrees Celsius.

We encourage the Minns Government to act on the best available science, or at least to match Victoria's more ambitious target of net zero by 2045.

Legislating NSW's existing 70% by 2035 target as a minimum

Current policy: achieve a reduction of at least 70% of 2005 emissions levels by 2035

The Energy and Utilities Administration Regulation 2021 - Current version for 30 June 2023 to date (accessed 16 October 2023 at 8:57) states that:

> *(2) In exercising its functions, the Net Zero Emissions Board must consider the emissions reduction objectives of the State, which are—*
>
> > *(i) to achieve net zero emissions by 2050, and*
> > ***(ii) to achieve a reduction of at least 70% of 2005 emissions levels by 2035**, and*
> > *(iii) to achieve a reduction of at least 50% of 2005 emissions levels by 2030*

The Net Zero Plan Implementation Update 2022 (December 2022) affirmed that "the NSW Government is adopting a target to reduce emissions by 70% below 2005 levels by 2035".

NSW EPA's Climate Change Action Plan 2023–26 also states that current government policy is for a *"70% reduction in emissions (compared to 2005 levels) by 2035".*

Minister Scully affirmed the 70% target in May 2023

Paul Scully, NSW Minister for Planning advised via a letter to Lock the Gate supporters on 23 May 2023 that the NSW Government has *"set an interim goal to achieve a 47 to 52 per cent emissions reduction by 2030, compared to 2005 levels, and a 70 per cent reduction by 2035."*

Cumulative emissions and importance of the existing 2035 target

The Bill should legislate the current target of a 70% reduction in GHG emissions by 2035 compared to 2005 levels. Since global warming is linearly related to the accumulated concentration of carbon dioxide in the atmosphere, the pathway towards 2050 has a significant impact on whether temperature goals will be achieved. A pathway that uses an interim 70% target in 2035 guarantees earlier emissions reductions and so will have less

cumulative emissions over the period 2023-2050, than a pathway that delays those emissions reductions. This is particularly important for short-lived climate forcers like methane.

While emissions targets are generally expressed in changes in annual emissions rates, it is crucial for the Committee to consider the effect of policy settings on cumulative emissions over the period to 2035 and the period to 2050.

For example, in the Government's emissions projection modelling update in 2022, they apply a "Current policies" scenario to account for new committed policies. The difference in annual projected emissions 2050 between the Base case and Current Policies scenarios, not including LULUCF, is 34Mtpa. Cumulatively, over the period 2022-2050, the difference between the two scenarios is over a gigatonne of emissions not in the atmosphere.

This is not a precise calculation of the difference the 70% target for 2035 makes, but a demonstration of the importance of interim targets as a means of reducing cumulative emissions on the pathway to net zero.

70% by 2035 may drive more decarbonisation this decade than no 2035 target

Quick analysis by Dr Brad Smith at the NSW Nature Conservation Council suggests that the 2035 target is likely to drive faster and deeper cuts than would be the case without this target. A deceleration of decarbonisation would be highly undesirable. Two years ago, the Australian Academy of Science called on the Australian Government to “accelerate Australia’s transition to net zero greenhouse gas (GHG) emissions over the next 10 to 20 years to play our part in avoiding the worst impacts of climate change”.

Embed action to address climate change as a core feature of all government decision-making

The bill should embed action to address climate change as a core feature of all government decision-making. The actual impacts of the bill are limited because the bill and commission aren’t embedded into other laws. The bill should include requirements that climate impacts are considered in all government policy and decisions. One potential model is the Victorian Climate Change Act (Part 3) which embeds climate considerations into seven other acts.

We understand that the Committee will receive detailed submissions on this issue from organisations including the EDO.

A pathway to switch away from gas

As soon as the NSW Government models gas demand reduction measures, it will realise that gas decarbonisation is possible in the next 10-15 years

NSW currently consumes ~115 PJ of gas per annum. Almost all of this gas is produced in Victoria, South Australia and Queensland. If we implemented gas demand reduction measures identified in Northmore Gordon's independent NSW Gas Demand Analysis Report, we could reduce gas demand by 25% to ~86 PJ by 2028. By 2033 (10 years from now) we could reduce demand for gas in NSW by 70% to ~35 PJ of gas.

Gas security until we fully decarbonise is not dependent on Narrabri Gas

The Aug 2023 energy review commissioned by the NSW Minister for Energy and Climate Change found that while *"[t]here were differing views about whether gas supply for NSW would be problematic … few believed Narrabri could address forecast shortfalls in the required time."*

Development of the promised Gas Roadmap should commence ASAP

Minister for Energy Penny Sharpe clarified the government's position on the promised Gas Roadmap on 19 October 2023:

> *The Gas Roadmap will provide clarity to industry and households on gas decarbonisation, including supporting business and household electrification and energy bill reduction.*

In regard to timing and ambition of the Gas Roadmap, we know only that the Government will deliver a Gas Roadmap in this term of government and, as part of the Roadmap's development, will consider including targets. We believe the Net Zero Commission should have a role in delivering the gas decarbonisation roadmap.

Regulation of existing coal mines requires urgent reform

The process of *mining* coal is GHG intensive

The process of *mining* coal in NSW consumes large amounts of fossil fuels producing GHG emissions from the combustion of diesel fuel. Coal mining also requires lots of electricity (very little of which is sourced currently from renewable energy generation). Extracting coal from the ground also releases very large amounts of fugitive methane emissions.

Direct emissions from NSW coal mines are already in the vicinity of ~14% of the total greenhouse gas inventory[9] and fugitive emissions (95% of which are attributable to coal mining) are the only sector predicted to increase emissions in NSW between 2020 and 2030.

The current regulatory regime is failing to abate emissions at coal mines

Section 4.17 of the EP & A Act provides the power to impose a condition on a development. All coal mines in NSW are - in theory - conditioned to require the implementation of all 'reasonable and feasible' measures to minimise the release of greenhouse gas emissions from coal mining. In practice however, these conditions are vague, generally unenforceable and ineffective.

There is a great deal of evidence that the current regulatory regime is failing to abate emissions at coal mines:

- In at least one case - Hunter Valley Operations - abatement measures simply do not not exist. Lock the Gate research published in the Newcastle Herald in July of this year - Hunter Valley Operations coal mine had no greenhouse gas conditions listed in abatement strategy found that one of the largest open cut coal mines in NSW has been operating for years without being required to implement any abatement actions at all. Unsurprisingly, emissions at this mine increased by 3% in 2021-22.

- Lock the Gate analysis of data published by the Clean Energy Regulator in Canberra found that in 2021-22, Scope 1 GHG pollution (methane and diesel emissions) increased at 8 of the 10 most polluting coal mines in NSW (see Table 2 below). A brief analysis of this - mine by mine - is available to the Committee on request.

Table 2: Scope 1 GHGs increased at 8 of the 10 most polluting coal mines in NSW

Coal Mine	Scope 1 GHGs 2020-21 (t CO2-e)	Scope 1 GHGs 2021-22 (t CO2-e)	% increase
Appin Colliery (Bulli Seams)	1,940,513	1,589,755	
Mandalong Mine	1,184,162	1,401,895	**18%**
Tahmoor Coal Mine	1,124,934	964,050	
Warkworth Mine	779,189	817,271	**5%**
Bengalla Operations	449,399	725,774	**61%**
Mount Pleasant Operations	675,893	716,841	**6%**

[9] According to the former NSW Treasurer and Minister for Energy Matt Kean, Scope 1 and 2 GHGs from coal mining in NSW in 2019-20 were **18.6 Mt CO2-e**, or ~14% of all of NSW's GHG inventory. NSW Legislative Council, QUESTIONS AND ANSWERS No. 809 FRIDAY 19 AUGUST 2022, pg 16, 9330 ENERGY—GREENHOUSE GAS EMISSIONS FROM COAL MINES—Mr Justin Field to the Minister for Finance, and Minister for Employee Relations representing the Treasurer, and Minister for Energy—, https://www.parliament.nsw.gov.au/hp/housepaper/28717/QuestionsAndAnswers-LC-809-20220819-Revised.pdf

Ashton Coal Mine	411,570	596,235	**45%**
Hunter Valley Operations mine	563,127	577,874	**3%**
Chain Valley Colliery	467,650	542,408	**16%**
Narrabri Underground Mine	384,304	519,704	**35%**

NSW DPE assessed the NSW system for regulating direct GHG emissions from coal mining in NSW in January 2022 in a whole-of-government assessment of the Narrabri Underground coal mine Stage 3 proposal. In this document, NSW DPE found that *"there are still a range of uncertainties about the specific application of the various policies to individual SSD applications under the EP&A Act, including:*

> *Mitigation measures: there is no clear guidance on how to assess potential mitigation or abatement measures (e.g. what measures are considered 'reasonable and feasible' or 'best practice'), both for current and future activities.*

NSW coal mines must be required to report their GHG emissions to the NSW Government

A quick review of Annual Reviews submitted to NSW DPE by coal mines in NSW has found that 8 coal mines in NSW do not report their Scope 1 and 2 emissions at all to the NSW Government.

We have found that approximately 24 coal mines provide incomplete information which would be of limited use to the proposed Net Zero Commission (ie no breakdown of Scope 1 emissions into fugitive and diesel emissions). If a mine claims to be implementing measures to abate diesel and / or fugitive emissions, it is either impossible or very difficult to assess the impact of these abatement measures without access to data about these emissions.

Lock the Gate understands that whilst coal mines are required to report their emissions - in a granular form - to the Clean Energy Regulator in Canberra, much of this data - by law - cannot be shared with the general public in NSW nor with the NSW Government nor the proposed Net Zero Commission.

Without access to this data, the Net Zero Commission will be unable to properly and independently monitor, review and report on progress on fugitive emissions in NSW.

Ambition is vital, because every tonne of greenhouse gases matter

Former Chief Scientist of Australia, Professor Penny Sackett provided expert evidence to the NSW IPC as a submission on the Mt Pleasant Optimisation Project about just how vital every action on climate is, underscoring the need to address the coal expansion pipeline with this Bill:

"the effects of climate change – which are caused by anthropogenic GHG emissions – are already serious; more than that, they are in fact dangerous. Furthermore, some of these effects are already irreversible and more will become so with even relatively small amounts of additional warming beyond that of 1.5°C, which is already locked in.

Every tonne of GHG emission leads to (more) dangerous warming. It is not possible to know which amount, from which source, will precipitate environmental subsystems, including those in NSW, to tip irreversibly. In this context, the Precautionary Principle certainly applies."[10]

Complementary action to accelerate diversification of regional economies

The Bill needs to be complemented by accelerated action to diversify regional economies, create new jobs and deliver extensive skills and training opportunities. In the lead-up to the NSW election, NSW Labor committed to the creation of statutory authorities to facilitate economic diversification and structural adjustment planning, and it is crucial that these authorities are implemented rapidly and provided with sufficient resources to catalyse real change. To be successful, these authorities need to be based in regional communities and have genuine community ownership and participation.

[10] Dr Penny Sackett, Distinguished Honorary Professor, ANU Institute for Climate, Energy and Disaster Solutions, 14 July 2022, 'Expert Report Regarding the Greenhouse Gas and Climate Implications of the proposed Mt Pleasant Optimisation Project (SSD - 10418)', pg 115