



PARLIAMENT OF NEW SOUTH WALES

JOINT STANDING COMMITTEE ON NET ZERO FUTURE

2024 Annual Report of the Net Zero Commission

Report 1

March 2025



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Joint Standing Committee on Net Zero Future

2024 Annual Report of the Net Zero Commission

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2024 Report of the Net Zero Commission

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Chair: Hon Jeremy Buckingham MLC



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Terms of reference

That the committee inquire into and report on the 2024 Annual Report of the Net Zero Commission.

The terms of reference were self-referred by the committee on 13 December 2024.¹

¹ *Minutes*, NSW Legislative Council, 11 February 2025, p 1978.

Committee details

Committee members

Hon Jeremy Buckingham MLC	Legalise Cannabis Party	<i>Chair</i>
Ms Liza Butler MP	Australian Labor Party	<i>Deputy Chair</i>
Hon Mark Buttigieg MLC	Australian Labor Party	
Ms Trish Doyle MP	Australian Labor Party	
Hon Wes Fang MLC	The Nationals	
Mr James Griffin MP	Liberal Party	
Ms Sue Higginson MLC	The Greens	
Hon Jacqui Munro MLC	Liberal Party	
Hon Cameron Murphy MLC	Australian Labor Party	
Mr Michael Regan MP	Independent	
Hon Emily Suvaal MLC	Australian Labor Party	
Ms Liesl Tesch MP	Australian Labor Party	

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Chair's foreword

This inquiry into the 2024 annual report of the Net Zero Commission is significant for several reasons: the 2024 report is the first annual report delivered by the commission since its establishment, and it is the first inquiry conducted by the Joint Standing Committee on Net Zero Future since being established in June 2024.

Over the course of the inquiry, it was clear that the Net Zero Commission has the support of the community. Stakeholders noted the observations of the commission on the state's progress towards net zero, and expressed concern about the sectors which are not tracking towards the targets. Stakeholders provided a wide range of ideas, recommendations and solutions to help New South Wales meet the net zero targets.

The committee wishes to thank the various stakeholders who participated in the inquiry and assisted the committee in its consideration of the 2024 annual report. The evidence provided was highly valuable and brought broad perspectives for the committee to consider.

I would also like to thank my fellow committee members for their thoughtful input into the inquiry. I am pleased to provide this report, including its recommendations arising from the inquiry to consider, and I look forward to working with the Net Zero Commission in future years to assist the state in reaching our emissions reduction goals.

Hon Jeremy Buckingham MLC
Committee Chair

Findings

Finding 1

26

The 2024 annual report of the Net Zero Commission was produced in a short time frame while the commission was being established, which limited the amount of stakeholder engagement that could be undertaken, but the commission plans to conduct improved stakeholder engagement for future reports.

Finding 2

26

The 2024 annual report of the Net Zero Commission was broadly supported by stakeholders, who look forward to engaging with the commission on future reports.

Finding 3

27

This committee finds that there is considerable uncertainty regarding whether emissions targets can be achieved - particularly the 2030 and 2035 interim targets - given what the Net Zero Commission describes as a 'sizeable pipeline' of new coal expansions currently being assessed by the NSW Department of Planning, Housing and Infrastructure.

Recommendations

Recommendation 1

27

That the government:

- ensures the commission is well resourced and supported by other departments and agencies in order to deliver its legislated objectives for the state of New South Wales, and
- responds with careful consideration to the observations and advice of the commission.

Recommendation 2

27

That the government supports the commission to use their legislated functions to provide a further report on the resources sector, including methane abatement technology and fugitive emissions, as a matter of urgency.

Recommendation 3

27

That the government consider implementing regulatory changes to encourage the earlier adoption of low emissions technologies.

Recommendation 4

28

That the government implement changes as discussed at 2.53 in regards to energy ratings for existing homes that could be disclosed at point of sale or lease to provide buyers or renters information on energy efficiency before making the decision to buy or lease the property.

Conduct of inquiry

The terms of reference for the inquiry were self-referred by the committee on 13 December 2024.

The committee received 88 submissions, three supplementary submissions, and 15 pro forma submissions.

The committee held one public hearing at Parliament House in Sydney.

Inquiry related documents are available on the committee's website, including submissions, hearing transcripts, tabled documents and answers to questions on notice.

Chapter 1 Background

This chapter introduces the Net Zero Commission, including what it is, its functions, how it was established, the guiding principles which it must consider, how it will report to Parliament, and the existing legislative framework in which it operates.

Net Zero Commission

- 1.1** The Net Zero Commission ('the commission') was established in December 2023 under the *Climate Change Net Zero Act 2023* ('the Act').² The commission replaced the Net Zero Emissions and Clean Economy Board.³ The following sections briefly detail the commission's functions, constitution, guiding principles and annual reporting requirements.
- 1.2** According to the Hon Penny Sharpe MLC, Minister for Climate Change, the commission will 'advise on the environmental, social and economic impacts of proposed actions to address climate change in New South Wales, highlight emerging opportunities and advise on the implementation of New South Wales Government strategies, policies and programs'.⁴
- 1.3** The Net Zero Commission is comprised of between five and seven permanent commissioners appointed on the basis of 'their collective skills, qualifications and experience in the best available climate science, economics, technologies, the impacts and effects of climate change and the interests of Aboriginal communities'.⁵ The permanent commissioners are assisted by the NSW Chief Scientist and up to three temporary commissioners.⁶

Functions of the commission

- 1.4** Minister Sharpe explained that the commission is intended to:
- provide 'strong, independent expert advice' on 'developing and accelerating plans' to reduce greenhouse gas emissions
 - increase the resilience of communities, industry and government in New South Wales to the effects of climate change

² NSW Government, *Net Zero Commission* (2025), <https://www.energy.nsw.gov.au/nsw-plans-and-progress/government-strategies-and-frameworks/net-zero-commission>

³ *Climate Change (Net Zero Future) Act 2023*, Part 2 (3). Note, the final meeting of the Net Zero Emissions and Clean Economy Board was held 1 May 2024 (*Minutes*, Net Zero Emissions and Clean Economy Board, 1 May 2024).

⁴ The Hon Penny Sharpe MLC, Minister for Climate Change, Second reading speech: Climate Change (Net Zero Future) Bill 2023, 12 October 2023.

⁵ The Hon Penny Sharpe MLC, Minister for Climate Change, Second reading speech: Climate Change (Net Zero Future) Bill 2023, 12 October 2023.

⁶ *Climate Change (Net Zero Future) Act 2023*, s 13 (1).

- provide increased accountability and timely feedback for the state to remain ‘on track’ towards net zero targets.⁷

1.5 Part 3, Division 2 of the Act sets out the functions of the commission. Its key functions include:

- to monitor, review and provide recommendations on progress towards the primary emissions targets for the state, specifically:
 - a 50 per cent reduction on 2005 levels by 2030
 - a 70 per cent reduction on 2005 levels by 2035
 - net zero by 2050
- to monitor, review and provide recommendations on progress towards the adaptation objective
- to monitor and review action currently being taken in New South Wales to address climate change
 - with a focus on the environmental, social and economic impacts
 - and a specific focus on the strategies, policies and programs of the government
- to identify and recommend action that should be taken by the government
- to educate and inform the government, business, organisations and individuals to promote action to address climate change.⁸

1.6 In regard to the emissions reduction targets, during the second reading stage, Minister Sharpe and the Hon Jihad Dib MP, Minister for Emergency Services, advised that these targets are intended as a minimum reduction rather than a maximum (i.e. a floor rather than a ceiling).⁹ This is consistent with the Act which makes provision for the emissions reduction targets to either be brought forward or increased by prescribing a higher percentage.¹⁰

Establishment of the Net Zero Commission

1.7 The commission is constituted by the Climate Change (Net Zero Future) Act 2023.¹¹

1.8 Sections 12-14 of the Act set out the constitution of the commission, including membership and staff.

1.9 In July 2024, the NSW Government announced the appointment of the inaugural commissioners:

- Dr Paul Grimes PSM (Chair)

⁷ The Hon Penny Sharpe MLC, Minister for Climate Change, Second reading speech: Climate Change (Net Zero Future) Bill 2023, 12 October 2023.

⁸ *Climate Change (Net Zero Future) Act 2023*, s 9 and s 15.

⁹ The Hon Penny Sharpe MLC, Minister for Climate Change, Second reading speech: Climate Change (Net Zero Future) Bill 2023, 12 October 2023; The Hon Jihad Dib MP, Minister for Emergency Services, Second reading speech: Climate Change (Net Zero Future) Bill 2023, 29 November 2023.

¹⁰ *Climate Change (Net Zero Future) Act 2023*, s 9(2).

¹¹ *Climate Change (Net Zero Future) Act 2023*, s 12.

- Ms Maria Atkinson AM
- Mr Oliver Costello
- Professor Hugh Durrant-Whyte¹²
- Professor Frank Jotzo
- Ms Katerina Kimmorley
- Ms Meg McDonald
- Professor Andy Pitman AO.¹³

Guiding principles

1.10 Section 8 of the Act contains guiding principles. The commission is required to consider these guiding principles in carrying out its functions.¹⁴ In its annual report, the commission said it was 'committed' to consultation with all interested stakeholders, and to fulfil its accountabilities with respect to addressing these guiding principles.¹⁵

1.11 These guiding principles include that 'there is a critical need to act to address climate change, which is a serious threat to the social, economic and environmental wellbeing of New South Wales'.¹⁶ This section also provides guidance on how action to address climate change should be taken, specifically:

(3) Action to address climate change should be taken as early as possible to minimise the cost and adverse impacts of climate change.

(4) Action to address climate change should be taken in a way that—

(a) is fiscally responsible, and

(b) promotes sustainable economic growth, and

(c) considers the economic risks of delaying action to address climate change, and

(d) considers the impact on rural, regional, and remote communities in New South Wales.

(5) Action to address climate change should be consistent with the right to a clean, healthy and sustainable environment.

¹² In accordance with s 13(c) of the Act, the Commission includes NSW Chief Scientist, Professor Hugh Durrant-Whyte, as an ex-officio member to provide whole-of-government scientific advice.

¹³ Media release, The Hon Penny Sharpe MLC, Minister for Climate Change, 'Net Zero Commission launched with inaugural Chair and Commissioner appointments', 9 July 2024.

¹⁴ *Climate Change (Net Zero Future) Act 2023*, s 16(a).

¹⁵ Net Zero Commission, *2024 Annual Report* (2024), p 5.

¹⁶ *Climate Change (Net Zero Future) Act 2023*, s 8(2).

(6) Action to address climate change should be consistent with the principles of ecologically sustainable development described in the *Protection of the Environment Administration Act 1991*, section 6(2).

(7) Action to address climate change should involve appropriate consultation with affected persons, communities and stakeholders.

(8) Action to address climate change should take into account the following—

- (a) the knowledge and perspectives of Aboriginal communities,
- (b) the best available science,
- (c) the knowledge of rural, regional and remote communities in New South Wales,
- (d) the need to support local communities, including Aboriginal communities, who may be affected by the action, including by—
 - (i) considering the impact on local employment and industries, and
 - (ii) diversifying local economies, and
 - (iii) encouraging local procurement, and
 - (iv) optimising job creation and employment transition opportunities, and
 - (v) considering the impact on the amenity of local communities,
- (e) the need for education and skills diversification,
- (f) the need to ensure essential utilities and infrastructure are provided, including energy, water, telecommunications and transport,
- (g) the impact of the action on consumer costs in New South Wales, including energy costs,
- (h) the need to reduce the risk climate change poses to human health,
- (i) equity and social justice impacts on socially disadvantaged groups and economically vulnerable regions,
- (j) the need to reduce the risk climate change poses to the survival of all species.

(9) Action to address climate change should take into account the impact on animals.

(10) The Government of New South Wales is responsible for—

- (a) urgently developing and implementing strategies, policies and programs to address climate change, and

(b) ensuring the Government of New South Wales pursues best practice in addressing climate change.¹⁷

Annual reporting

1.12 In accordance with s 21 of the Act, the commission's annual reports must be provided to the Minister for Climate Change by 1 November each year. Moreover, the annual report should include information about the following actions taken during the previous financial year:

- New South Wales's progress towards the primary and interim emissions reductions targets
- New South Wales's progress in relation to the adaptation objective
- a summary of all reports given to the Minister by the commission during the financial year
- other matters prescribed by the regulations.¹⁸

1.13 The Act also includes the following provisions regarding the commission's annual report:

- the Minister must table the report in Parliament within 28 days,¹⁹ and
- the Minister must provide a response to it within four months.²⁰

2024 Annual Report

1.14 The commission released its first annual report in November 2024. The commission noted that the report has not been informed by significant stakeholder consultation as it had only recently been established. It expects to undertake more in-depth stakeholder engagement for future reports:

The report is constrained in its scope and depth of analysis given the Commission has had very limited time to both become established and to consider a very broad range of matters. This timing has also meant that this first annual report is not informed by the depth of stakeholder engagement the Commission expects to undertake as a fundamental part of its functions in future years.²¹

1.15 Nonetheless, the commission explained that its report outlines the current New South Wales position in relation to the legislated targets and provides a template for engagement with New South Wales Government agencies going forward.²²

¹⁷ *Climate Change (Net Zero Future) Act 2023*, ss 8(3)-(10).

¹⁸ *Climate Change (Net Zero Future) Act 2023*, s 21(1).

¹⁹ *Climate Change (Net Zero Future) Act 2023*, s 20(2).

²⁰ *Climate Change (Net Zero Future) Act 2023*, s 21(4).

²¹ Net Zero Commission, *2024 Annual Report* (2024), p 5.

²² Net Zero Commission, *2024 Annual Report* (2024), p 6.

- 1.16** The commission provided its 2024 annual report to the Minister for Climate Change on 1 November 2024, it was subsequently tabled out of session on 29 November 2024, and reported in the Legislative Council on 11 February 2025.²³
- 1.17** The Joint Standing Committee on Net Zero Future commenced its inquiry into the 2024 Annual Report of the Net Zero Commission on 13 December 2024.²⁴ Details about the establishment of the committee are set out in the following section.

The Joint Standing Committee on Net Zero Future

- 1.18** On 20 June 2024, the Legislative Council resolved to establish the Joint Standing Committee on Net Zero Future ('the committee').²⁵ The resolution details the functions of the committee, its constitution, including identifying specific committee members from the Legislative Council and their roles, and its operating procedures, such as quorum, powers to publish committee documents and conduct committee activities. The resolution is reproduced below:
- (1) That a joint standing committee be established to inquire into and report on Net Zero Future, in particular:
 - (a) to monitor and review the exercise of the Net Zero Commission's functions under the Climate Change (Net Zero Future) Act 2023,
 - (b) to examine each annual report, and other reports of the Net Zero Commission as the Committee sees fit and to report to both Houses of Parliament on any matter appearing in or arising out of, any such report,
 - (c) to inquire into any question in connection with the Committee's functions which is referred to it by both Houses of Parliament and to report to both Houses on that question, and
 - (d) any other related matters.
 - (2) That, notwithstanding anything to the contrary in the standing orders of either House, the committee consist of 12 members comprising:
 - (a) five members of the Legislative Assembly, and
 - (b) seven members of the Legislative Council, of whom
 - (i) three are government members, being Mr Cameron Murphy, Ms Emily Suvaal and Mr Mark Buttigieg,
 - (ii) four are non-government members, being Mr Wes Fang, Ms Jacqui Munro, Ms Susan Higginson and Mr Jeremy Buckingham.
 - (3) That the Chair of the committee be Mr Jeremy Buckingham and that the Deputy Chair be appointed by the Legislative Assembly.

²³ *Minutes*, NSW Legislative Council, 11 February 2025, p 1960.

²⁴ *Hansard*, NSW Legislative Council, 11 February 2025, p 51 (Jeremy Buckingham).

²⁵ *Minutes*, NSW Legislative Council, 20 June 2024, pp 1298-1300.

- (4) That, notwithstanding anything in the standing orders of either House, at any meeting of the committee, any seven members of the committee will constitute a quorum, provided that at least one member of each House is present at all times.
- (5) The committee have leave to make visits of inspection within the New South Wales and elsewhere in Australia.
- (6) That, unless the committee decides otherwise:
 - (a) all inquiries are to be advertised via social media, stakeholder emails and a media release distributed to all media outlets in New South Wales,
 - (b) submissions to inquiries are to be published, subject to the Committee Clerk checking for confidentiality and adverse mention and, where those issues arise, bringing them to the attention of the committee for consideration,
 - (c) attachments to submissions are to remain confidential,
 - (d) the Chair's proposed witness list is to be circulated to provide members with an opportunity to amend the list, with the witness list agreed to by email, unless a member requests the Chair to convene a meeting to resolve any disagreement,
 - (e) the sequence of questions to be asked at hearings alternate between opposition, crossbench and Government members, in that order, with equal time allocated to each,
 - (f) transcripts of evidence taken at public hearings are to be published,
 - (g) supplementary questions are to be lodged with the Committee Clerk within two business days following the receipt of the hearing transcript, with witnesses requested to return answers to questions on notice and supplementary questions within 21 calendar days of the date on which questions are forwarded to the witness,
 - (h) answers to questions on notice and supplementary questions are to be published, subject to the Committee Clerk checking for confidentiality and adverse mention and, where those issues arise, bringing them to the attention of the committee for consideration, and
 - (i) media statements on behalf of the committee are to be made only by the Chair.
- (7) That a message be sent acquainting the Legislative Assembly with the resolution and requesting the Legislative Assembly appoint five of its members to serve on the committee including appointing a Deputy Chair.²⁶

1.19 Following agreement to this resolution in the Legislative Assembly on 20 June 2024,²⁷ the committee was established with the following membership:

- Hon Jeremy Buckingham MLC
- Ms Liza Butler MP

²⁶ *Minutes*, NSW Legislative Council, 20 June 2024, pp 1298-1300.

²⁷ *Votes and Proceedings*, NSW Legislative Assembly, 20 June 2024, pp 704-706.

- Hon Mark Buttigieg MLC
- Ms Trish Doyle MP
- Hon Wes Fang MLC
- Mr James Griffin MP
- Ms Sue Higginson MLC
- Hon Jacqui Munro MLC
- Hon Cameron Murphy AM, MLC
- Mr Michael Regan MP
- Hon Emily Suvaal MLC
- Ms Liesl Tesch AM, MP.

1.20 The committee commenced its inquiry into the 2024 Annual Report of the Net Zero Commission on 13 December 2024.²⁸

National and state-level emissions reductions frameworks

1.21 The Net Zero Commission operates within national and state-level emissions reductions frameworks. In particular:

- Australia has made a commitment to the Paris Agreement, an international treaty which seeks to hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C.²⁹
- The *Climate Change Act 2022* (Cth) which established national emissions reduction targets, specifically, a 43 per cent reduction of emissions by 2030 and net zero emissions by 2050.³⁰
- The *Climate Change (Net Zero Future) Act 2023*, as previously discussed, this legislation:
 - establishes guiding principles for action to address climate change
 - sets targets for the reduction in net greenhouse gas emissions in New South Wales
 - sets an objective for New South Wales to be more resilient to a changing climate
 - establishes the Net Zero Commission.
- The *NSW Climate Policy Framework* (2016) which sets 'aspirational' long-term objectives of achieving net zero by 2050 and making the state more resilient to climate change.³¹
- The *Net Zero Plan* (2020 and updated in 2021) which sets out priorities and actions for New South Wales to reach zero emissions by 2050.³²

²⁸ *Hansard*, NSW Legislative Council, 11 February 2025, p 51 (Jeremy Buckingham).

²⁹ United Nations Framework Convention on Climate Change (UNFCCC), *The Paris Agreement*, Paris Climate Change Conference – November 2015, COP 21.

³⁰ *Climate Change Act 2022* (Cth), s 10.

³¹ NSW Government, *NSW Climate Change Policy Framework* (2016), p 1.

³² NSW Department of Planning, Industry and Environment, *Net Zero Plan Stage 1: 2020-2030* (2020), p 2; Office of Energy and Climate Change, *Net Zero Plan Implementation Update 2022* (2022), pp 6-7.

- *NSW Electricity Strategy*
- *NSW Transmission Infrastructure Strategy*
- *NSW Electric Vehicle Strategy*
- *NSW Hydrogen Strategy*
- *Electricity Infrastructure Roadmap*
- *Climate Change Policy* (NSW Environmental Protection Authority)³³
- the Energy and Utilities Administration Regulation 2021.

1.22 Additionally, the Australian Government, South Australian Government and the Australian Capital Territory Governments have similarly established independent agencies to advise their respective governments on reaching net zero emissions.³⁴

The inquiry into the Climate Change (Net Zero Future) Bill 2023

1.23 The Climate Change (Net Zero Future) Bill 2023 was referred to the Legislative Council Portfolio Committee No. 7 - Planning and Environment on 12 October 2023 for inquiry and report. The recommendation of the inquiry was that matters raised during the course of the inquiry should be considered by the House in debate on the bill.³⁵

1.24 The inquiry heard from a wide range of stakeholders, who were broadly supportive of the bill.³⁶

1.25 Debate during the inquiry heard a range of suggestions for strengthening the bill such as:

- calls for more ambitious targets, or ‘front loaded’ reductions in emissions³⁷
- reducing reliance on offsets to reduce emissions, or disallowing their use altogether³⁸
- the inclusion of indirect emissions,³⁹ and

³³ NSW Environmental Protection Authority, *Climate Change Policy*, 1 January 2023.

³⁴ *Climate Change Authority Act 2011* (Cth); *Climate Change and Greenhouse Emissions Reduction Act 2007* (SA) ss 9-13; *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT) ss 16-22.

³⁵ Portfolio Committee No. 7 - Planning and Environment, NSW Legislative Council, *Climate Change (Net Zero Future) Bill 2023* (2023), p 26.

³⁶ For example, two per cent of respondents to the online questionnaire were opposed to the bill.

³⁷ Portfolio Committee No. 7 - Planning and Environment, NSW Legislative Council, *Climate Change (Net Zero Future) Bill 2023* (2023), p 13. For example, representatives from the ANU Institute for Climate, Energy, and Disaster Solutions, the Australian Academy of Technological Sciences and Engineering, the Australian Research Council, Centre of Excellence for Climate Extremes, University of New South Wales all spoke in support of strong targets.

³⁸ Portfolio Committee No. 7 - Planning and Environment, NSW Legislative Council, *Climate Change (Net Zero Future) Bill 2023* (2023), pp 17-18.

³⁹ Portfolio Committee No. 7 - Planning and Environment, NSW Legislative Council, *Climate Change (Net Zero Future) Bill 2023* (2023), p 19.

- assigning responsibilities on a minister or other consequences in the event targets are not met.⁴⁰

⁴⁰ Portfolio Committee No. 7 - Planning and Environment, NSW Legislative Council, *Climate Change (Net Zero Future) Bill 2023* (2023), p 15.

Chapter 2 The 2024 Annual Report

This chapter surveys key issues raised by stakeholders about the 2024 annual report of the Net Zero Commission. It outlines key findings of the 2024 annual report, then discusses the views provided by stakeholders to the inquiry in response to the commission's report. The chapter begins with a discussion of emissions reduction in New South Wales, examining the state economy sector by sector in order of the net contribution to emissions. That is followed by a section which discusses strategies for increasing the state's resilience to climate change. The chapter finishes with recommendations and findings of the committee.

The Net Zero Commission's initial assessment on emissions reduction in New South Wales

- 2.1** In its 2024 report, the Net Zero Commission found that New South Wales has made 'considerable progress' in reducing its emissions since 2005. However, it warned that achieving emissions targets for 2030 and 2035 are 'far from assured' and will require 'considerable upscaling and acceleration' in effort.⁴¹ The commission put that all sectors of the economy will require significant progress to meet the net zero targets, along with commitment across government 'in their policies and decision-making'.⁴²
- 2.2** As per the figure below, the commission notes that the most recent projections suggest the state will 'barely' reach net zero targets for 2030 and 2035, 'only under the most optimistic assumptions modelled'.⁴³ The commission notes that in light of these projections, the Hon Penny Sharpe MLC, Minister for Climate Change committed the government to a redoubling of efforts to reduce emissions.⁴⁴

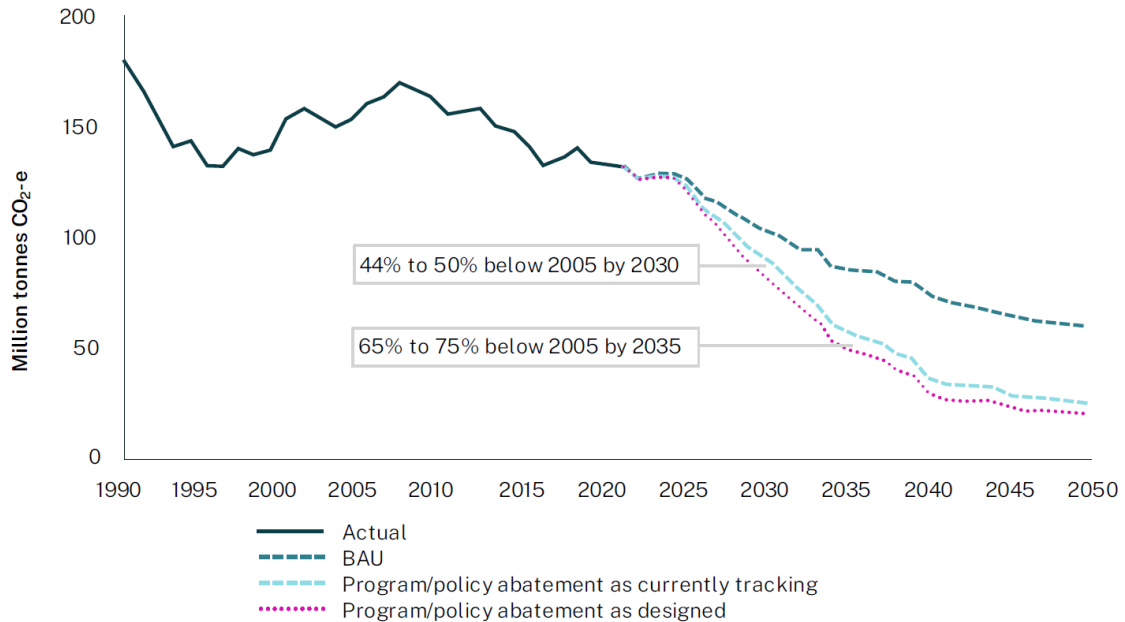
⁴¹ Net Zero Commission (NSW), *2024 Annual Report* (2024), pp 9 and 11.

⁴² Net Zero Commission (NSW), *2024 Annual Report* (2024), p 11.

⁴³ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 10.

⁴⁴ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 10.

Figure 1 New South Wales emissions trajectory comparing business as usual (BAU) with projected reductions in emissions with abatement programs.



Source: Net Zero Commission (NSW), 2024 Annual Report (2024), p 10.

- 2.3** Generally stakeholders were approving of the 2024 report and the assessments of the commission. The Nature Conservation Council of Australia agreed with the commission’s assessments and ‘support the call for faster and more significant progress to be made’ on emissions reduction in order to meet the net zero targets.⁴⁵ The National Environmental Law Association commended the commission on its work to date,⁴⁶ while the Citizens’ Climate Lobby lauded the commission’s independent and frank assessment of New South Wales’s current progress towards meeting emissions reduction targets.⁴⁷
- 2.4** The Net Zero Commission noted that the 2024 report was ‘constrained in its scope and depth’ due to the limited timeframe ‘to both become established and to consider a broad range of matters’.⁴⁸ Indeed, there was only a matter of months between appointment of commissioners (July 2024)⁴⁹ and the statutory deadline for the provision of the report to the Minister (1 November 2024).⁵⁰
- 2.5** In particular, the commission noted the 2024 report was not able to be ‘informed by the depth of stakeholder engagement the commission expects to undertake as a fundamental part of its functions in future years’.⁵¹ Stakeholders acknowledged the short time frame in which the 2024

⁴⁵ Submission 42, Nature Conservation Council of Australia, p 1.

⁴⁶ Submission 54, National Environmental Law Association, p 1.

⁴⁷ Submission 1, Citizens’ Climate Lobby, p 1.

⁴⁸ Net Zero Commission (NSW), 2024 Annual Report (2024), p 5.

⁴⁹ Media release, The Hon Penny Sharpe MLC, Minister for Energy and Climate Change, ‘Net Zero Commission launched with inaugural Chair and Commissioner appointments’, 9 July 2024.

⁵⁰ Climate Change (Net Zero Future) Act 2023, s 21.

⁵¹ Net Zero Commission (NSW), 2024 Annual Report (2024), p 5; see also Chapter 1, section 1.15.

report was produced did not allow for external consultation and confirmed that they look forward to engaging with the commission in the consultation for subsequent annual reports.⁵²

2.6 Regarding consultation, stakeholders noted that while there is broad community support for a transition to renewables, certain stakeholder groups may be experiencing consultation or engagement fatigue, particularly in the Renewable Energy Zones.⁵³ As such, the Justice and Equity Centre recommend that the commission should be aware of, and seek to leverage existing community engagement programs planned for 2025, such as that being organised by the Energy and Water Ombudsman, as well as take advantage of submissions already made to similar recent rounds of consultation for the:

- NSW Legislative Council Portfolio Committee No. 4 – Regional NSW's inquiry into the impact of Renewable Energy Zones (REZs)
- Australian Energy Infrastructure Commissioner's (AEIC) review of community engagement practices
- Australian Government's First Nations Clean Energy Strategy.⁵⁴

2.7 Another suggestion from some stakeholders was that the Net Zero Commission consider developing and reporting on a 'carbon budget' in the course of annual reporting, with an analysis provided across each industry sector, outlining the budget that would remain if New South Wales is to meet 2030, 2035 and 2050 emissions reduction targets.⁵⁵ Stakeholders suggested that a budget would assist with transparency, tracking progress and guiding policies across sectors. The National Environmental Law Association suggested that a binding emissions budget could be established by regulation under the *Climate Change (Net Zero Future) Act 2023*, and noted that the *Climate Change Act 2022* (Cth) has established an emissions budget at the Commonwealth level for the period from 2021-2030.⁵⁶

Pathways for reducing emissions in New South Wales

2.8 The bulk of the 2024 annual report examines the current trends in the reduction in the intensity of greenhouse gas emissions in New South Wales, along with the policy settings which may be moderating those reductions in emissions.

2.9 The report relies on emissions data as reported in the Australian Government's National Greenhouse Accounts 2022: State and Territory Greenhouse Gas Inventory. The commission explains that for the 2024 report they have followed the approach taken by the Australian Government in the inventory and focused on scope 1 emissions (direct emissions) except where scope 2 (indirect emissions) warrant particular mention.⁵⁷

⁵² Submission 33, Justice and Equity Centre, p 5; Submission 54, National Environmental Law Association, p 6.

⁵³ Submission 33, Justice and Equity Centre, p 7.

⁵⁴ Submission 44, Justice and Equity Centre, pp 7-11.

⁵⁵ Submission 42, Nature Conservation Council, p 3; Submission 33, Justice and Equity Centre, pp 6-7; Submission 53, Lock the Gate Alliance, p 5; Submission 54, National Environmental Law Association, p 3.

⁵⁶ Submission 54, National Environmental Law Association, p 2.

⁵⁷ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 16.

2.10 The commission, in the annual report, discussed and analysed the state's emissions by dividing emissions to the following seven categories (which comprise respectively 100 per cent of the New South Wales's estimated emissions):

- Electricity and energy (40 per cent)
- Transport (22 per cent)
- Agriculture (20 per cent)
- Industry and waste (18 per cent)
- Resources (12 per cent)
- Built environment (7 per cent)
- Land (-19 per cent).⁵⁸

2.11 In the sections to follow, this report will outline the main findings of the commission and responses or comments from inquiry stakeholders using the same categorisation.

Electricity and energy sector

2.12 The Net Zero Commission observed that the electricity and energy sector is the largest source of emissions in New South Wales, comprising 40 per cent of the state's emissions, or the equivalent to 44 million tonnes of carbon dioxide (Mt CO₂-e) in 2022.⁵⁹

2.13 The commission's report suggested for the electricity and energy sector to meet the net zero goals, New South Wales will need to:

- rapidly deliver underwriting agreements for the remainder of the NSW Government's 2020 Electricity Infrastructure Roadmap, of which only 17 per cent has been commissioned to date⁶⁰
- accommodate 'progressive reduction and closure' of coal power generation, with new renewables generation capacity, firming with utility scale batteries or gas peaking generators or pumped hydroelectric generation⁶¹
- secure broad community support for utility-scale renewable generation and transmission projects, which have been subject to increasingly negative community responses over recent years, and
- make use of 'consumer energy resources' to reduce demand during evening peaks. This term refers to small scale technologies, connected to the grid, which can delay or defray peak load, and include for example heat pumps, electric batteries and vehicles.⁶²

⁵⁸ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 17, using data from the Australian Government *National Greenhouse Accounts 2022: State and Territory Greenhouse Gas Inventory (2024)*.

⁵⁹ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 17.

⁶⁰ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 21.

⁶¹ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 22.

⁶² Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 25.

- 2.14** In response to questions from the committee about what New South Wales is doing well to reduce electricity sector emissions, the Climateworks Centre noted the value in having a ‘storage target’ and the ‘steps taken already to meet that storage target’ in NSW.⁶³ Ms Kylie Turner, System Lead, Sustainable Economies, Climateworks Centre, explained that any such programs that reduce peak demand for electricity will allow folding in of more renewable energy and a decrease in the use of fossil fuels.⁶⁴
- 2.15** In their submission to the inquiry, Ausgrid agreed with the view expressed by the Net Zero Commission that the New South Wales Government plays a key role in progressing initiatives to make greater use of consumer energy resources.⁶⁵
- 2.16** The Justice and Equity Centre suggested that the government should focus on ensuring access to community energy resources and efficiency upgrades in general are available to renters, social housing tenants, low-income households, and those in regional and remote communities.⁶⁶
- 2.17** Mr Raymond Kelly, Chairperson and Councillor for Sydney Newcastle Region, Aboriginal Land Council stated ‘the clean energy transition presents a significant economic opportunity for our communities, particularly in regional and remote communities’.⁶⁷ Mr Kelly noted that Aboriginal people have retained legal ownership of approximately 250,000 hectares of land across New South Wales, which provide an ‘opportunity for caring for Country through climate mitigation and renewable energy projects, and through biodiversity and habitat stewardship’.⁶⁸
- 2.18** To that end, Mr Kelly explained that 200 locations suitable for renewable energy projects on Aboriginal owned land have been identified, with a shortlist of approximately 50 sites proximate to Renewable Energy Zones, and a similar number of ‘end of the grid’ locations.⁶⁹
- 2.19** However, Mr Stephen Hynd, Executive Director, NSW Aboriginal Land Council, noted that engagement and discussion of opportunities in relation to renewable energy is often at first overly ‘general’ or ‘amorphous’, in ‘drips and drabs’ before moving onto a ‘compulsory acquisition type process’ which is not the optimal outcome.⁷⁰
- 2.20** Mr Kelly noted that consultation and engagement with Aboriginal communities only goes ‘so far’ and that active participation in, and contribution to, the net zero economy would be a preferable aim.⁷¹

⁶³ Evidence, Ms Kylie Turner, System Lead, Sustainable Economies, Climateworks Centre, 14 March 2025, p 17.

⁶⁴ Evidence, Ms Kylie Turner, 14 March 2025, p 17.

⁶⁵ Submission 40, Ausgrid, p 5.

⁶⁶ Submission 33, Justice and Equity Centre, p 12.

⁶⁷ Evidence, Mr Raymond Kelly, Chairperson and Councillor for Sydney Newcastle Region, Aboriginal Land Council, 14 March 2025, p 34.

⁶⁸ Evidence, Mr Raymond Kelly, 14 March 2025, p 34.

⁶⁹ Evidence, Mr Raymond Kelly, 14 March 2025, p 35.

⁷⁰ Evidence, Mr Stephen Hynd, Executive Director, NSW Aboriginal Land Council, 14 March 2025, p 36.

⁷¹ Evidence, Mr Raymond Kelly, 14 March 2025, p 34.

Transport sector

- 2.21** The commission noted that transport is the ‘second highest’ emitting sector in New South Wales, has only made ‘limited progress’ in reducing emissions, and that road transport specifically is responsible for 87 per cent of transport emissions.⁷²
- 2.22** The Citizens’ Climate Lobby noted that with approximately 4.5 million passenger vehicles registered in New South Wales and given that cars are kept for 10 years on average, it may be difficult to meaningfully reduce emissions from road transport in order to reach emissions reductions targets while combustion engine vehicles continue to be sold in large numbers.⁷³
- 2.23** Doctors for the Environment Australia (DEA) noted that encouraging ‘active transport’ such as walking or cycling would reduce transport emissions whilst also paying a public health dividend.⁷⁴ DEA noted in their submission that NSW Health recently published the NSW Active Transport Health Model,⁷⁵ which provides estimates of health-related benefits for walking or cycling to work. The model suggests that for each additional kilometre walked or cycled to work there is a health benefit of \$5.24 or \$2.95-2.97 respectively.⁷⁶ The DEA further observed that while the 2024 report notes that active transport is key to avoiding emissions, it is only a brief mention in the report.⁷⁷
- 2.24** The Climate Council said that in some sectors, such as transport, due to the length of time that a vehicle is put into service, the earlier that regulatory changes to encourage the purchase of new low emissions vehicles rather than those powered by fossil fuels can be made, the sooner the benefit in terms of emissions reduction can be seen:

Some of the sectors are going to take a long time. Capital stock turnover of housing and housing stock, for example—20 to 30 years of cars, 20 years. It’s one of those things where, for example, if EV charging rollout throughout New South Wales was accelerated by regulation, legislation, whatever, that begins to make an effect year by year. Some of the areas—transportation being one, obviously—can move incrementally every single year, which is great.⁷⁸

- 2.25** Dr Hermoine Parsons, Chief Executive Officer and Managing Director, Australian Logistics Council, said that the commission's 2024 annual report ‘doesn't really consider freight’ but provided an example of a recent decarbonisation success story in the freight sector:

I'll give an example of the freight logistics chain from NSW Ports Port Botany ... you have a dedicated freight line from Port Botany ... By doing this, you cut out hundreds and hundreds of trucks per day ... and rail has 16 times less greenhouse gas emissions than road ... This type of a system connecting ports, road, rail and distribution centres

⁷² Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 26.

⁷³ Submission 1, Citizens’ Climate Lobby, p 3.

⁷⁴ Submission 14, NSW Branch of Doctors for the Environment Australia, p 1.

⁷⁵ Submission 14, NSW Branch of Doctors for the Environment Australia, p 1.

⁷⁶ Centre for Population Health, NSW Health, *NSW Active Transport Health Model Reference Outcome Values* (18 December 2024).

⁷⁷ Submission 14, NSW Branch of Doctors for the Environment Australia, p 2.

⁷⁸ Evidence, Mr Gregory Bourne, Councillor, Climate Council, 14 March 2025, p 12.

is a marvellous opportunity to decarbonise a lot of the freight moving to and from the port in Sydney.⁷⁹

- 2.26** The Australian Logistics Council argued that regulation might need review in order to encourage broader adoption of these systems, as the current ‘charging mechanism basically gives advantage to road transport’.⁸⁰

Agriculture and land sector

- 2.27** The commission provided a précis of emissions across the agriculture and land sectors since 2005, advising that:

- there has been ‘limited’ overall progress in reducing emissions in the agriculture sector, with a temporary decline in emissions between 2017-2020 only due to drought affecting most of the state⁸¹
- as of 2022 agriculture currently comprises about 17 per cent of the state's emissions, however the commission noted that without accelerated reductions, is ‘likely to be the largest source of remaining emissions in 2050’⁸²
- a reduction in emissions from the land sector ‘could’ make major contributions to emissions reduction in New South Wales, however the commission cautioned there is ‘considerable uncertainty’ in estimates, as ‘advances in estimation methods have frequently produced major recalculations of historical emissions’.⁸³ The commission noted there is also uncertainty about the ‘degree of performance’ of land-based emissions reductions, particularly in a changing climate.⁸⁴

- 2.28** The Citizens’ Climate Lobby Australia suggested that given the commission’s observation that there is significant uncertainty associated with the land sector’s emissions, that these should not be relied upon to create a ‘false impression of progress’ towards the net zero targets.⁸⁵

- 2.29** Wilderness Australia observed that biodiversity and carbon emissions are closely linked and suggested that protecting and restoring areas of high ecological integrity will minimise emissions from the land whilst also protecting endangered species such as Koala and Greater Glider.⁸⁶ As such Wilderness Australia recommend cessation of logging in key areas, development of a forest ecosystem recovery plan and providing funding for regional communities to be involved in supporting forest recovery efforts.⁸⁷ Cessation of native forest logging as a strategy to support

⁷⁹ Evidence, Dr Hermoine Parsons, Chief Executive Officer and Managing Director, Australian Logistics Council, 14 March 2025, pp 24-25.

⁸⁰ Evidence, Dr Parsons, 14 March 2025, p 25.

⁸¹ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 29.

⁸² Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 29.

⁸³ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 33.

⁸⁴ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 33.

⁸⁵ Submission 1, Citizens’ Climate Lobby Australia, p 1.

⁸⁶ Submission 87, Wilderness Australia, p 8.

⁸⁷ Submission 87, Wilderness Australia, pp 4-9.

emission reductions was widely proposed by a number of stakeholders,⁸⁸ with the North East Forest Alliance suggesting that as older trees sequester exponentially more carbon, cessation of logging in forests could sequester ‘an additional 2 million tonnes of CO₂ per annum over the next hundred years’.⁸⁹

2.30 In response to questions from the committee on leveraging Aboriginal landholdings and knowledge to reach net zero, Professor Andrew Pitman noted that there is ‘very good evidence’ from the Northern Territory that Indigenous land practices help store carbon, and that it would be worthwhile seeking to develop similar evidence in New South Wales.⁹⁰

2.31 The Net Zero Commission made note of a number of government strategies and plans to reduce emissions from agriculture, outlined below:

Table 1 Recent government initiatives to reduce carbon emissions in the agricultural sector noted in the 2024 annual report of the Net Zero Commission

Government or Agency	Program	Output(s)
Australian Government	Methane Emissions Reduction in Livestock (MERiL) Net Zero Plan	<ul style="list-style-type: none"> Livestock Emissions Framework for Feed Technologies (2023) Agriculture and Land Sectoral Plan
NSW Department of Climate Change, Energy, the Environment and Water	Primary Industries Productivity and Abatement Program (PIPAP) (2022)	<ul style="list-style-type: none"> NSW Net Zero Plan Stage 1: 2020-2030 NSW Land and Primary Industries Emissions Reduction Roadmap

Source: Net Zero Commission (NSW), 2024 Annual Report (2024), pp 31-32.

2.32 In response to questions from the committee, Dr Georgina Woods, Head of Research and Investigations, Lock the Gate Alliance noted the challenge of reducing emissions from agriculture, ‘because agriculture is a very diffused source’.⁹¹ Dr Woods said that while ‘agriculture has done a lot of work’, it has not achieved ‘great emissions reduction’, and suggested there may therefore be value in the government shifting its focus to the industrial sectors.⁹²

⁸⁸ Submission 57, Sydney Knitting Nannas, p 2; Submission 7, North East Forest Alliance, p 1; Submission 42, Nature Conservation Council of NSW, pp 6-7.

⁸⁹ Submission 7, North East Forest Alliance, p 4.

⁹⁰ Evidence, Professor Andrew Pitman AO, Commissioner, Net Zero Commission, 14 March 2025, p 48.

⁹¹ Evidence, Dr Georgina Woods, Head of Research and Investigations, Lock the Gate Alliance, 14 March 2025, p 7.

⁹² Evidence, Dr Georgina Woods, 14 March 2025, p 7.

Industry and waste sector

- 2.33** The Net Zero Commission noted an estimated 26 per cent reduction in emissions across the industry and waste sectors between 2005 and 2022.⁹³
- 2.34** The commission noted that the emissions reductions from heavy industries can largely be attributed to an overall decline in industrial production, such as the closure of a blast furnace in Port Kembla in 2011, rather than by the adoption of emissions abatement options.⁹⁴
- 2.35** The Australian Industry Group commented on the opportunities for industrial processes like steel production to move towards net zero. Mr Tennant Reed, Director, Climate Change and Energy at Australian Industry Group, explained there are ‘pathways’ for producing steel with near-zero emissions, either using hydrogen or molten oxide electrolysis.⁹⁵ Mr Reed explained that ‘both of those processes currently look expensive compared to using coking coal’ and although there will be innovation and improvement, in the long term will still likely bear a cost premium of perhaps ‘10 to 15 per cent’.⁹⁶ Mr Reed suggested that in order to move the industry to net zero with that in mind, voluntary demand, government procurement, changing standards, and price instruments would all play a role, and if implemented may ‘level the playing field over time between high carbon and cleaner production’.⁹⁷
- 2.36** Regarding the waste sector, the commission observed that it has reduced emissions by capturing emissions from landfill, which may have further capacity for emissions reduction, along with similar opportunities to reduce emissions by diverting organics from landfill or reducing waste altogether.⁹⁸
- 2.37** The National Environmental Law Association suggested a mix of policy and technology development may be required to increase diversion of organic wastes from landfill (where it is a source of methane) and promote retrofitting or replacement of large-scale industrial infrastructure (such as iron and aluminium production, or other high temperature processes).⁹⁹

Resources sector

- 2.38** The commission noted that largely due to the closure of several ‘gassy’ underground coal mines, there has been a 34 per cent decline in ‘direct emissions’ from the resources sector since 2005, but that there is a risk of increased emissions due to a ‘sizeable pipeline’ of coal mine extension and expansion projects.¹⁰⁰

⁹³ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 38.

⁹⁴ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 38.

⁹⁵ Evidence, Mr Tennant Reed, Director, Climate Change and Energy, Australian Industry Group, 14 March 2025, p 31.

⁹⁶ Evidence, Mr Tennant Reed, 14 March 2025, p 31.

⁹⁷ Evidence, Mr Tennant Reed, 14 March 2025, p 31.

⁹⁸ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 38.

⁹⁹ Submission 54, National Environmental Law Association, p 4.

¹⁰⁰ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 43.

- 2.39** Many submissions reflected the commission’s concerns about the pipeline of coal projects, the subsequent emissions over the decades to follow and the contradiction any approvals would have to the legislated emissions reduction goals.¹⁰¹
- 2.40** The Institute for Energy Economics and Financial Analysis noted that coal mining in New South Wales may present particular risks for emissions reduction, as a producer of largely thermal coal, for export, with limited understanding of, or controls on, fugitive methane emissions.¹⁰²
- 2.41** Lock the Gate Alliance NSW expressed concern that 21 coal mine expansions are proposed in New South Wales, and put the view that miners may be ‘banking’ approvals for expansions that may not begin until the 2030s.¹⁰³
- 2.42** Both the commission and other stakeholders noted that the current regulatory environment for coal mine emissions (principally the Commonwealth’s Safeguard Mechanism) is permissive in relation to the use of offsets which may be reducing the impact of net zero targets on the industry and may delay true progress towards actual emissions reduction and decarbonisation.¹⁰⁴
- 2.43** The Commonwealth’s Safeguard Mechanism regulates emissions from facilities with direct emissions of 100 kt of CO₂ per annum, effectively 27 of 59 coal licences in New South Wales.¹⁰⁵ Both the commission and contributors to the inquiry noted that under the Safeguard Mechanism, broad flexibility for coal miners to make use of offsets has reduced the incentive to invest in emissions mitigation technologies.¹⁰⁶
- 2.44** The Environmental Defense Fund (EDF) recommended the government consider requiring coal mines to install methane abatement technology such as regenerative thermal oxidisers or using a ‘performance standard or levy’ to do so, to complement the Safeguard Mechanism.¹⁰⁷ The EDF noted that other submissions to the inquiry provide details of the technology.¹⁰⁸
- 2.45** The Institute for Energy Economics and Financial Analysis provided analysis which suggests coal miners are choosing to use a method for estimating emissions that produces a low estimate of their emissions, and found that, using these low estimates, under the Safeguard Mechanism ‘most [miners] will be allowed to increase emissions intensities unencumbered’.¹⁰⁹

¹⁰¹ For example: Submission 57, Sydney Knitting Nannas, p 1; Submission 72, Mrs Sarah Lukeman, p 1; Submission 4, Mr Barry Hadaway, p 1; Submission 5, Healthy Futures, p 1; Submission 16, Wollar Progress Association, pp 1-3; Submission 31, Bathurst Community Climate Action Network, p 2; Submission 65, Geni Energy, p 1; Submission 82, Australian Conservation Foundation, p 10; Submission 88, Environmental Defense Fund, pp 1-2.

¹⁰² Submission 62, Institute for Energy Economics and Financial Analysis, p 3.

¹⁰³ Submission 53, Lock the Gate Alliance, p 4.

¹⁰⁴ Submission 87, Wilderness Australia 2, p 2; Submission 61, Ember, p 6.

¹⁰⁵ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 44.

¹⁰⁶ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 44; Submission 61, Ember, p 4; Submission 87 Wilderness Australia, p ; Submission 1, Citizens’ Climate Lobby, p 1.

¹⁰⁷ Submission 88, Environmental Defense Fund, p 2.

¹⁰⁸ Submission 88, Environmental Defense Fund, p 2; See for example: Submission 61, Ember, p 11; Submission 80, Peak Carbon, pp 4-5.

¹⁰⁹ Submission 63, Institute for Energy Economics and Financial Analysis, p 5.

- 2.46** Submissions to the inquiry highlighted results from independent satellite-based datasets suggesting that methane emissions from coal mines in Australia may have been significantly under-estimated.¹¹⁰
- 2.47** The Superpower Institute submitted that these latest estimates suggest emissions from coal mining in Australia may be around double those recorded in the national greenhouse gas inventory, and claimed these results align with ‘monitoring work by the Australian atmospheric chemistry research community and analysis by global organisations’.¹¹¹ As such, the establishment of a national emissions monitoring network was proposed as a way to verify facility-level modelling and aggregated regional reporting.¹¹²
- 2.48** Ember, an independent energy think tank, re-iterated the Superpower Institute’s concerns about a likely underestimation of fugitive emissions from coal mining across the state, and suggested that open-cut miners have reduced their reported emissions by 65-70 per cent after changing their estimation methodology over the last decade.¹¹³ Ember noted further that any such under-reporting of emissions creates ‘significant short term price risk for Australia’s carbon credit submarket, as satellite evidence becomes increasingly hard to deny’.¹¹⁴
- 2.49** A contrasting view was put by the NSW Minerals Council who suggested the regulation of the ‘majority’ of the state’s coal industry by the Commonwealth’s Safeguard Mechanism precludes the need for additional regulation by New South Wales.¹¹⁵ It noted the recent Vogel-McFerran Review commissioned by the Western Australian Government which recommended minimising ‘duplicative’ regulation where entities may be already regulated by the Safeguard Mechanism.¹¹⁶
- 2.50** The current examination of coal mine emissions by the commission is focused on direct emissions (also known as ‘fugitive’ or ‘scope 1’ emissions). Stakeholders put forward the view to the committee that ‘downstream’ (also known as scope 2) emissions should be considered in the planning approval process,¹¹⁷ observing that indirect emissions do still have ‘a significant and deleterious’ impact on the New South Wales population and environment.¹¹⁸

¹¹⁰ Submission 51, Ember, p 3; Submission 56, The Superpower Institute, p 2; Submission 53, Lock the Gate Alliance, pp 2-3; Submission 58, Environmental Defenders Office, p 5-6; See also: Media release, Superpower institute, ‘Groundbreaking satellite monitoring tool shows significant underestimation of methane emissions from fossil fuel sites’, 9 October, 2024.

¹¹¹ Submission 56, The Superpower Institute, p 3.

¹¹² Submission 56, The Superpower Institute, p 3.

¹¹³ Submission 61, Ember, p 3.

¹¹⁴ Submission 61, Ember, p 3.

¹¹⁵ Submission 38, NSW Minerals Council, p 4.

¹¹⁶ Submission 38, NSW Minerals Council, p 4; See also Department of Jobs, Tourism, Science and Innovation (WA), *Independent report: A list of recommendations from the Vogel-McFerran Review* (11 October 2024).

¹¹⁷ Submission 53, Lock the Gate Alliance, p 5; Submission 5, Healthy Futures, p 5; Submission 35, Climate Change Balmain-Rozelle, p 2.

¹¹⁸ Submission 58, Environmental Defenders Office, p 5.

Built environment sector

- 2.51** The Net Zero Commission noted in the 2024 annual report that emissions from the built environment sector increased by 91 per cent between 2005 and 2022, and that these are predominantly from use of onsite fossil fuels in homes and buildings, mostly gas and diesel fuel.¹¹⁹
- 2.52** The Property Council of Australia noted that buildings account for 50 per cent of Australia's electricity use and 23 per cent of all emissions and is therefore essential to meeting emissions reduction goals.¹²⁰
- 2.53** The Property Council of Australia provided in their submission to the inquiry a copy of the 2023 report titled 'Every Building Counts', jointly prepared with the Green Building Council of Australia, which provides a collection of policy recommendations to decarbonise the property sector.¹²¹ This report recommends the development of energy ratings for homes that could be disclosed at point of sale or lease, providing buyers or renters information on energy efficiency before making the decision to purchase or rent a property,¹²² which was a recommendation supported by other stakeholders¹²³.
- 2.54** The Green Building Council of Australia submission commended Property and Development NSW and Schools Infrastructure NSW on their 'commitments and achievements' to such rating systems and suggest all new government projects should have such schemes applied.¹²⁴
- 2.55** The Net Zero Commission noted that a wide range of academics and industry bodies advocate policies that encourage replacement of gas appliances with all-electric technologies, a position also shared by the Climate Change Authority and 'several jurisdictions comparable to NSW' including the European Union, Victoria, and the ACT.¹²⁵
- 2.56** In evidence provided to the inquiry, Doctors for the Environment Australia noted that phasing out indoor gas use will have consequential benefits for public health, noting for example that 'gas kitchen stoves are estimated to cause 12 per cent of childhood asthma in Australia', and commended the Net Zero Commission for considerable attention given to household electrification in the 2024 annual report.¹²⁶
- 2.57** The Property Council of Australia also supported electrification, and specifically proposed:
- disallowing new gas connections in the National Construction Code 2025
 - phasing out gas in existing buildings and appliances

¹¹⁹ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 48.

¹²⁰ Submission 55, Property Council of Australia, p 1.

¹²¹ Submission 55, Property Council of Australia, p 1.

¹²² Submission 55, Property Council of Australia, p 1.

¹²³ Submission 33, Justice and Equity Centre, p 13; Submission 42, Nature Conservation Council of NSW, p 6.

¹²⁴ Submission 59, Green Building Council of Australia, p 7.

¹²⁵ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 49.

¹²⁶ Submission 14, NSW Branch of Doctors for the Environment Australia, p 1.

- establishing incentives for retrofitting existing buildings
- development of the skilled workforce to support electrification
- supporting local manufacturing in electric technologies.¹²⁷

2.58 Phasing out of gas appliances in homes and buildings was widely supported by a number of submissions to the inquiry.¹²⁸

2.59 Ms Francesca Muskovic, National Policy Director, Property Council of Australia told the committee that due to the long life-cycle of the built environment, acting now to prevent new gas connections will save costs in the long run:

Every new building built today with fossil gas is one that's going to need to be electrified in future at a greater cost, and New South Wales really doesn't have any of the policy in place to act with a response on that ... At a minimum, New South Wales should ban the connection of fossil gas to new homes¹²⁹

2.60 Mr Tennant Reed, Director, Climate Change and Energy, Australian Industry Group, explained that for industry, there will always be a need for process heat, currently predominantly fuelled by gas, and not all industrial processes will be suitable for electrification.¹³⁰ Mr Reed said that 'we're going to need to adopt more and more different alternatives over the next couple of decades', such as biomethane or clean hydrogen, and suggested that the government can contribute via procurement practices or by lifting state or national standards to drive demand for low-emission metals and building materials.¹³¹

2.61 The Justice and Equity Centre made the suggestion that the government could have a stronger focus on access to energy efficiency upgrades and community energy resources for 'renters, low-income households, and those in regional and remote communities'.¹³²

Climate change adaptation in New South Wales

2.62 In its annual report, the commission explained that climate change adaptation means making adjustments to prepare for 'the actual or expected effects of climate change'.¹³³ The commission stated that adaption 'plays a key role in reducing exposure or vulnerability to climate change'.¹³⁴ It can be proactive, reactive, incremental or transformational.¹³⁵

¹²⁷ Submission 55, Property Council of Australia, pp 21-26.

¹²⁸ Submission, Healthy Futures, p 3; Submission 33, Justice and Equity Centre, p 13; Submission 14, Doctors for the Environment Australia, p 3; Submission 57, Sydney Knitting Nannas, p 2.

¹²⁹ Evidence, Ms Francesca Muskovic, National Policy Director, Property Council of Australia, 14 March 2025, p 27.

¹³⁰ Evidence, Mr Tennant Reed, 14 March 2025, p 28.

¹³¹ Evidence, Mr Tennant Reed, 14 March 2025, p 28.

¹³² Submission 33, Justice and Equity Centre, p 33.

¹³³ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 53.

¹³⁴ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 52.

¹³⁵ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 53.

- 2.63** The commission observed that New South Wales is already experiencing impacts of climate change such as heatwaves and flooding; and it has already warmed by 1.4 degrees since national records began in 1910.¹³⁶ The commission said it is projected the state will see ‘increases in these and other extremes in all future climate scenarios’.¹³⁷
- 2.64** The commission examined the approach to climate adaptation taken in other states of Australia, by the Commonwealth, and internationally. As a result the commission described a widely adopted approach known as ‘the adaptation cycle’ which includes:
- identifying climate risks and undertaking risk assessments
 - formulating policies or plans to support climate adaptation
 - an implementation phase
 - monitoring and evaluation.¹³⁸
- 2.65** In Australia, states and territories are largely responsible for climate change adaptation.¹³⁹ The two main climate adaptation policies in New South Wales are:
- the NSW Climate Change Policy Framework (2016) which sets the objective of making NSW more resilient to a changing climate, and
 - the NSW Climate Change Adaptation Strategy (2022) which sets out the NSW Government’s long-term approach to adaptation and includes 20 actions supported by \$93.7 million in funding from 2022 to 2030.
- 2.66** Additionally, the AdaptNSW website has, according to the commission, ‘been a source of information on climate change adaptation for over 10 years’.¹⁴⁰
- 2.67** Further, the Climate Change (Net Zero Future) Act 2023 requires the commission to ‘monitor and review, and provide advice and recommendations on, progress in relation to the broad adaption objective: “NSW is more resilient to a changing climate”’.¹⁴¹
- 2.68** Dr Will Rayward-Smith, Executive Director, Net Zero Commission, made clear that the commission will be working on adaptation and climate resilience in New South Wales:
- The office of the commission is staffed by a team of highly experienced individuals... ready to provide independent, expert advice to ensure New South Wales is on a clear path to net zero and to achieving the adaptation objective.¹⁴²
- 2.69** The commission acknowledged the ‘important role’ of Aboriginal peoples in informing and guiding adaptation policy and programs in NSW.¹⁴³ The Citizens’ Climate Lobby Australia

¹³⁶ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 52.

¹³⁷ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 52.

¹³⁸ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 54.

¹³⁹ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 55.

¹⁴⁰ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 56.

¹⁴¹ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 56.

¹⁴² Evidence, Dr Will Rayward-Smith, Executive Director, Net Zero Commission, 14 March 2025, p 44.

¹⁴³ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 57.

suggested that engagement with local government will be key for effective adaptation strategies, and further noted that local government may be able to ensure effective engagement with Aboriginal communities.¹⁴⁴

- 2.70** The commission noted that measuring progress on climate change adaptation is 'extremely challenging'.¹⁴⁵ It said that for future annual reports, it will endeavour to articulate a clear approach to measuring progress, including quantitative measures where possible.¹⁴⁶
- 2.71** The National Environmental Law Association reiterated with concern the challenge in measuring progress on adaptation.¹⁴⁷ It suggested the commission could use the NSW Climate Change Adaptation Action Plan 2025-2029 as the basis for tracking adaptation in New South Wales.¹⁴⁸ The commission did not have the opportunity to review this plan for the 2024 Annual Report.¹⁴⁹
- 2.72** The commission noted that disaster risk reduction is a key element of climate change adaptation, and that to that end the NSW Reconstruction Authority was established in 2022, and subsequently released the first State Disaster Mitigation plan in 2024.¹⁵⁰ The commission further noted that NSW Treasury estimated extreme weather 'could cost NSW up to \$17.2 billion per year, on average, by 2060-61'.¹⁵¹ The commission further observed that 'every dollar appropriately invested in climate change adaptation and disaster risk reduction saves between \$2 and \$10 in recovery.'¹⁵² As such, the commission advised it has 'requested more information on investment in adaptation and related programs across the NSW government'.¹⁵³
- 2.73** Mr Raymond Kelly, NSW Aboriginal Land Council, made the point that developing well thought out renewable energy sources in regional and remote communities can contribute to both to emissions reduction while also adapting communities to be more resilient to a changing climate:

The point I want to make about the grid stability and resilience is that it's also important for regional and remote communities—Aboriginal and non-Aboriginal people alike—as we saw in the recent catastrophic transmission failure at Broken Hill.¹⁵⁴

¹⁴⁴ Submission 1, Citizens' Climate Lobby Australia, p 3.

¹⁴⁵ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 59.

¹⁴⁶ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 59.

¹⁴⁷ Submission 54, National Environmental Law Association, p 4.

¹⁴⁸ Submission 54, National Environmental Law Association, p 5.

¹⁴⁹ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 65.

¹⁵⁰ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 58.

¹⁵¹ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 63.

¹⁵² Net Zero Commission (NSW), *2024 Annual Report* (2024), p 63.

¹⁵³ Net Zero Commission (NSW), *2024 Annual Report* (2024), p 63.

¹⁵⁴ Evidence, Mr Raymond Kelly, 14 March 2025, p 35.

- 2.74** In October 2024 Transgrid reported that transmission towers supplying Broken Hill failed due to a severe storm event,¹⁵⁵ which is now the subject of an inquiry by the Legislative Assembly Committee on Environment and Planning.¹⁵⁶
- 2.75** Similarly in the housing sector, in relation to building standards, Commissioner Professor Andrew Pitman made the point that housing can be constructed to meet both aims of reducing emissions and increasing climate resilience:

There is no doubt that you can build houses to higher standard to both make them more energy efficient and much more resilient... I think there's a very considerable amount of work that could be done to enhance resilience.¹⁵⁷

Committee comment

- 2.76** The Net Zero Commission is an important body that will play a key role in guiding New South Wales as it transitions to a net zero future. The committee acknowledges that having been recently established, the commission had a short time frame to produce the 2024 annual report, and this limited the amount of stakeholder engagement that could be undertaken. However, we understand that the commission plans to conduct more thorough stakeholder engagement for future reports.

Finding 1

The 2024 annual report of the Net Zero Commission was produced in a short time frame while the commission was being established, which limited the amount of stakeholder engagement that could be undertaken, but the commission plans to conduct improved stakeholder engagement for future reports.

-
- 2.77** In general, there appeared to be broad support among inquiry participants for the 2024 annual report of the Net Zero Commission. It is clear many that stakeholders across the community, business and government sectors are keen to engage with the commission in the future.

Finding 2

The 2024 annual report of the Net Zero Commission was broadly supported by stakeholders, who look forward to engaging with the commission on future reports.

-
- 2.78** Noting the support for the commission's work so far, the committee recommends that the government ensures the commission is well resourced and supported by other departments and

¹⁵⁵ Independent Pricing and Regulatory Tribunal of NSW, *IPART's investigation into the Broken Hill tower failures and power outages*, 16 December 2024, <https://www.ipart.nsw.gov.au/broken-hill-tower-failures-and-power-outages>

¹⁵⁶ *Hansard*, NSW Legislative Assembly, 11 February 2025, p 20 (Clayton Barr).

¹⁵⁷ Evidence, Professor Andrew Pitman AO, 14 March 2024, p 50.

agencies in order to deliver its legislated objectives for the state of New South Wales, and responds with careful consideration to the observations and advice of the commission.

Recommendation 1

That the government:

- ensures the commission is well resourced and supported by other departments and agencies in order to deliver its legislated objectives for the state of New South Wales, and
 - responds with careful consideration to the observations and advice of the commission.
-

2.79 The Joint Standing Committee notes the Net Zero Commission's commitment to 'closely examine developments in the resources sector', 'given the criticality of this sector for achievement of NSW existing and future net zero emissions targets'.¹⁵⁸

Finding 3

This committee finds that there is considerable uncertainty regarding whether emissions targets can be achieved - particularly the 2030 and 2035 interim targets - given what the Net Zero Commission describes as a 'sizeable pipeline' of new coal expansions currently being assessed by the NSW Department of Planning, Housing and Infrastructure.

Recommendation 2

That the government supports the commission to use their legislated functions to provide a further report on the resources sector, including methane abatement technology and fugitive emissions, as a matter of urgency.

2.80 As discussed at 2.24, the Climate Council recommended that due to the length of time that a vehicle is put into service, the earlier that regulatory changes to encourage the purchase of new low emissions vehicles, the sooner the benefit of emissions reduction will be realised.

Recommendation 3

That the government consider implementing regulatory changes to encourage the earlier adoption of low emissions technologies.

2.81 As discussed at 2.53, the Property Council, and other stakeholders, recommended the development of energy ratings for existing homes for potential buyers or renters to evaluate.

¹⁵⁸ Net Zero Commission (NSW), *2024 Annual Report (2024)*, p 46 and 43.

Recommendation 4

That the government implement changes as discussed at 2.53 in regards to energy ratings for existing homes that could be disclosed at point of sale or lease to provide buyers or renters information on energy efficiency before making the decision to buy or lease the property.

Appendix 1 Submissions

No.	Author
1	Citizens' Climate Lobby Australia
2	Mr John Edwards
3	Nimbin Environment Centre
4	Barry Hadaway
5	Healthy Futures
5a	Healthy Futures
6	Derek Finter
7	North East Forest Alliance
8	Mr Stephen Morris
9	Ms Sharyn Munro
10	Dr Claudia Koller
11	Rev Janet Dawson
12	Hunter Jobs Alliance
13	Mrs Meg K Nielsen
14	Doctors for the Environment
15	Name Suppressed
16	Wollar Progress Association
17	Name Suppressed
18	Name Suppressed
19	Name Suppressed
20	Tibor Kovats
21	Name Suppressed
22	Mr Micheal Streatfeild
23	Henry Schneebeli
24	Mr Timothy Carroll
25	Christopher Pont
26	Name Suppressed
27	Miguel Heatwole
28	Ross Liddle
29	Dr Rod Anderson
30	Name Suppressed
31	Bathurst Community Climate Action Network
32	Gab McIntosh
33	The Justice and Equity Centre

No.	Author
34	Name Suppressed
35	Climate Change Balmain-Rozelle
36	Dr Anthony Martin
37	Name Suppressed
38	NSW Minerals Council
39	Jennifer Brewer
40	Ausgrid
41	Mrs Marie Woolnough
42	Nature Conservation Council of NSW
42a	Nature Conservation Council of NSW, Greenpeace Australia Pacific, Risingtide Australia, 350.org, Australian Conservation Foundation, WWF-Australia
43	Name Suppressed
44	Mr Russell Jennings
45	Solar Citizens
46	Miss Kupakwashe Matangira, Tegan Clark, Anoopjot Gill, Remi Lynch, Eezu Tan, Fatima Merchant and Georgia Shakeshaft
46a	Miss Kupakwashe Matangira, Tegan Clark, Anoopjot Gill, Remi Lynch, Eezu Tan, Fatima Merchant and Georgia Shakeshaft
47	Name Suppressed
48	Mr Peter Foster-Bunch
49	Ms Beverley Atkinson
50	Stephen Spencer
51	Darren Johnson
52	Name Suppressed
53	Lock the Gate Alliance
54	National Environmental Law Association
55	Property Council of Australia
56	The Superpower Institute Ltd
57	Sydney Knitting Nannas
58	Environmental Defenders Office (EDO)
59	Green Building Council of Australia
60	Canterbury Bankstown Climate Action Network
61	Ember
62	Mudgee District Environment Group
63	Institute for Energy Economics and Financial Analysis
64	Ms Angela Michaelis
65	Geni Energy
66	Mr Steve Garthwin

No.	Author
67	Name Suppressed
68	Dr Julia Imrie
69	Name Suppressed
70	Colleen Wysser-Martin
71	Dr Jennifer Nicholls
72	Mrs Sarah Lukeman
73	Karen Taylor
74	Mr Les Johnston
75	Denman Aberdeen Muswellbrook Scone Healthy Environment Group Inc
76	Clean Energy Investor Group (CEIG)
77	Name Suppressed
78	Investor Group on Climate Change
79	The Australian Sustainable Built Environment Council
80	Peak Carbon
81	Ms Suzanna Page
82	Australian Conservation Foundation
83	Ryde Gladesville Climate Change Action Group
85	Ms Jennifer Gray
86	Mr Graeme Batterbury
87	Wilderness Australia
88	Environmental Defense Fund

Appendix 2 Witnesses at hearings

Date	Name	Position and Organisation
Friday, 14 March 2025, Parliament House Sydney, Jubilee Room	Mr Howard Witt	Director, Citizens' Climate Lobby Australia
	Mr Richard Weller	Member, Citizens' Climate Lobby Australia
	Ms Virginia Young	Director, Wilderness Australia
	Mr Nic Clyde	NSW Coordinator, Lock the Gate Alliance
	Dr Georgina Woods	Head of Research and Investigations, Lock the Gate Alliance
	Mr Roderick Campbell	Research Director, The Australia Institute
	Ms Kylie Turner	Climateworks Centre
	Mr Gregory Bourne	Councillor, Climate Council
	Dr. Hermione Parsons	Chief Executive Officer and Managing Director, Australian Logistics Council
	Mr David Frith	Director Policy, NSW Mining (NSW Minerals Council)
	Ms Francesca Muskovic	National Policy Director, Property Council of Australia
	Ms Alison Scotland	Chief Executive Officer, Australian Sustainable Built Environment Council
	Mr Tennant Reed	Australian Industry Group
Mr Raymond Kelly	Chairperson and Councillor for Sydney Newcastle Region, NSW Aboriginal Land Council	
Mr Stephen Hynd	Executive Director, NSW Aboriginal Land Council	

Date	Name	Position and Organisation
	Dr Jason Crean	A/Group Director of Climate and Natural Resources, Agriculture & Biosecurity, Department of Primary Industries and Regional Development NSW
	Dr Annette Cowie	Senior Principal Research Scientist, Climate, Department of Primary Industries and Regional Development NSW
	Ms Katerina Kimmorley	Commissioner, Net Zero Commission
	Ms Meg McDonald	Commissioner, Net Zero Commission
	Professor Andrew Pitman AO	Commissioner, Net Zero Commission
	Dr Will Rayward-Smith	Executive Director, Net Zero Commission

Appendix 3 Minutes

Minutes no. 1

Friday 2 August 2024

Joint Standing Committee on Net Zero Future

Room 1136, Parliament House, Sydney, 12.02 pm

1. Members present

Mr Buckingham, *Chair*

Mr Buttigieg

Mr Fang (via videoconference)

Mr Griffin (via videoconference)

Ms Higginson

Ms Munro

Mr Murphy

Ms Suvaal (via videoconference)

Ms Tesch

2. Apologies

Ms Doyle

3. Tabling of resolution establishing the committee

The Clerk tabled the resolution of the House establishing the committee, which reads as follows:

1. That a joint standing committee be established to inquire into and report on Net Zero Future, in particular:
 - a. to monitor and review the exercise of the Net Zero Commission's functions under the *Climate Change (Net Zero Future) Act 2023*,
 - b. to examine each annual report, and other reports of the Net Zero Commission as the Committee sees fit and to report to both Houses of Parliament on any matter appearing in or arising out of, any such report,
 - c. to inquire into any question in connection with the Committee's functions which is referred to it by both Houses of Parliament and to report to both Houses on that question, and
 - d. any other related matters.
2. That, notwithstanding anything to the contrary in the standing orders of either House, the committee consist of 12 members comprising:
 - a. five members of the Legislative Assembly, and
 - b. seven members of the Legislative Council, of whom
 - i. three are government members, being Mr Cameron Murphy, Ms Emily Suvaal and Mr Mark Buttigieg,
 - ii. four are non-government members, being Mr Wes Fang, Ms Jacqui Munro, Ms Susan Higginson and Mr Jeremy Buckingham.
3. That the Chair of the committee be Mr Jeremy Buckingham and that the Deputy Chair be appointed by the Legislative Assembly.
4. That, notwithstanding anything in the standing orders of either House, at any meeting of the committee, any seven members of the committee will constitute a quorum, provided that at least one member of each House is present at all times.

5. The committee have leave to make visits of inspection within New South Wales and elsewhere in Australia.
6. That, unless the committee decides otherwise:
 - a. all inquiries are to be advertised via social media, stakeholder emails and a media release distributed to all media outlets in New South Wales, Resolution – Joint Standing Committee on Net Zero Future
 - b. submissions to inquiries are to be published, subject to the Committee Clerk checking for confidentiality and adverse mention and, where those issues arise, bringing them to the attention of the committee for consideration,
 - c. attachments to submissions are to remain confidential,
 - d. the Chair's proposed witness list is to be circulated to provide members with an opportunity to amend the list, with the witness list agreed to by email, unless a member requests the Chair to convene a meeting to resolve any disagreement,
 - e. the sequence of questions to be asked at hearings alternate between opposition, crossbench and Government members, in that order, with equal time allocated to each,
 - f. transcripts of evidence taken at public hearings are to be published,
 - g. supplementary questions are to be lodged with the Committee Clerk within two business days following the receipt of the hearing transcript, with witnesses requested to return answers to questions on notice and supplementary questions within 21 calendar days of the date on which questions are forwarded to the witness,
 - h. answers to questions on notice and supplementary questions are to be published, subject to the Committee Clerk checking for confidentiality and adverse mention and, where those issues arise, bringing them to the attention of the committee for consideration, and
 - i. media statements on behalf of the committee are to be made only by the Chair.
7. That a message be sent acquainting the Legislative Assembly with the resolution and requesting the Legislative Assembly appoint five of its members to serve on the committee including appointing a Deputy Chair.

4. **Conduct of committee proceedings**

The committee noted the Broadcast of Proceedings resolution (as amended by the Legislative Council on 19 October 2022), in particular the provisions relating to the filming, broadcasting, rebroadcasting and photography of committee proceedings, including:

- (4) That unless resolved otherwise by a committee, this House authorises:
 - (a) the filming, broadcasting and photography of members and witnesses in committee proceedings:
 - (i) by representatives of media organisations, including from around the committee meeting table,
 - (ii) by any member of the public, from the position of the audience, and
 - (b) the rebroadcasting of committee proceedings on the Legislative Council and Parliament's social media channels.

5. **Publication of minutes of first meeting**

Resolved, on the motion of Mr Murphy: That the committee publish the minutes of the first meeting on the committee's webpage, subject to the draft minutes being circulated to members.

6. **Net Zero Commission**

Resolved, on the motion of Mr Buttigieg: That the committee meet with Dr Paul Grimes PSM, Chair of the Net Zero Commission, and any other commissioners that would like to attend, for an informal briefing on a date to be fixed by email.

7. Adjournment

The committee adjourned at 12.10 pm, *sine die*.

Talina Drabsch
Committee Clerk

Minutes no. 2

Monday 14 October 2024

Joint Standing Committee on Net Zero Future

Room 814, Parliament House, Sydney, 1.05 pm

1. Members present

Mr Buckingham, *Chair*
Ms Butler, *Deputy Chair* (via videoconference)
Mr Buttigieg (via videoconference)
Mr Fang (via videoconference from 1.09 pm)
Ms Higginson
Ms Munro
Mr Murphy
Mr Regan (via videoconference)
Ms Suvaal (via videoconference until 1.23 pm)
Ms Tesch (via videoconference from 1.09 pm)

2. Apologies

Mr Griffin

3. Draft minutes

The committee noted that draft minutes no. 1 were confirmed via email on 6 August 2024, as per a previous resolution of the committee.

4. Correspondence

The committee noted the following items of correspondence:

Received:

- 23 August 2024 - Email from Ms Alberta McAteer, Principal Advisor – Secretariat and Stakeholder engagement Net Zero Commission, confirming that Dr Grimes and Ms Meg McDonald would both be available to attend the briefing on Monday 14 October 2024
- 20 September 2024 - Email from Ms Alberta McAteer, Principal Advisor – Secretariat and Stakeholder engagement Net Zero Commission, confirming that Commissioners Ms Maria Atkinson and Katerina Kimmorley will also attend the briefing on Monday 14 October 2024

Sent:

- 23 August 2024 - Letter from Chair to Dr Grimes, Chair of the Net Zero Commission inviting the Net Zero Commission to attend an informal briefing.

5. Net Zero Commission – private briefing

The following members of the Net Zero Commission provided a private briefing on the establishment of the Net Zero Commission and its initial work, both currently underway and planned:

- Dr Paul Grimes PSM, Chair
- Mr Oliver Costello, Commissioner
- Ms Katerina Kimmorley, Commissioner
- Professor Hugh Durrant-Whyte, Commissioner and NSW Chief Scientist and Engineer
- Professor Andrew Pitman AO, Commissioner.

6. Adjournment

The committee adjourned at 1.50 pm, *sine die*.

Jessie Halligan

Committee Clerk

Minutes no. 3

Friday 14 March 2025

Joint Standing Committee on Net Zero Future

Jubilee Room, Parliament House, Sydney at 9.01 am

1. Members present

Mr Buckingham, *Chair*

Ms Butler, *Deputy Chair*

Ms Doyle (via videoconference) (from 9.11 am)

Ms Higginson (until 12.15 pm, then from 12.31 pm until 12.45 pm, then from 1.52 pm)

Dr Kaine (via videoconference) (substituting for Ms Suvaal until 9.08 am, then from 10.53 am to 12.45 pm)

Mr Nanva (via videoconference) (substituting for Mr Buttigieg until 9.30 am, then substituting for Ms Suvaal from 9.30 am to 10.53 am, then participating from 10.53 am until 11.18 am, and from 2.03 pm to 2.51 pm)

Ms Munro (from 9.16 am)

Mr Murphy (via videoconference)

Ms Scruby (substituting for Mr Regan)

2. Apologies

Mr Fang

Mr Griffin

Ms Tesch

3. Previous minutes

Resolved, on the motion of Ms Butler: That draft minutes no. 2 be confirmed.

4. Correspondence

The committee noted the following items of correspondence:

Received:

- 25 November 2024 – Letter from Hon Penny Sharpe MLC, Minister for Climate Change, Energy, the Environment and Heritage, to Mr David Blunt AM, Clerk of the Legislative Council and Clerk of the Parliaments, advising that the 2024 Annual Report of the Net Zero Commission had been submitted and providing a copy of the report
- 25 November 2024 – Letter from Hon Penny Sharpe MLC, Minister for Climate Change, Energy, the Environment and Heritage, to Ms Helen Minnican, Clerk of the Legislative Assembly, advising that the 2024 Annual Report of the Net Zero Commission had been submitted and providing a copy of the report

- 13 January 2025 – Email from Luisa De Liseo, Principal Advisor, Net Zero Commission, to secretariat, advising that Dr Paul Grimes, Chair of the Net Zero Commission, has a prior commitment on Friday 21 February 2025, but may be able to excuse himself in the afternoon in order to attend the proposed public hearing
- 30 January 2025 – Email from Shamus Tickell, Project Officer, Ministerial and Executive Services, NSW Reconstruction Authority, to secretariat, advising that the authority has considered the terms of reference for the inquiry and will not be making a submission (*attached*)
- 11 February 2025 – Email from Zerene Catacutan, Media Advisor, Climate Council, to the secretariat, advising that the Climate Council will not be accepting the invitation to attend the public hearing on 21 March 2025 on this occasion
- 11 February 2025 – Email from Paul Stark, Policy and Engagement Officer, Farmers for Climate Action, to secretariat, advising that Farmers for Climate Action will not be accepting the invitation to attend the public hearing on 21 March 2025 due to staffing capacity
- 12 February 2025 – Email from the Kelly Berghella, Marketing and Partnerships Manager, Clean Energy Investor Group, to secretariat, advising that the Clean Energy Investor Group will not be accepting the invitation to attend the public hearing on 21 March 2025 due to a clash with another event
- 12 February 2025 – Correspondence from Peter Achterstraat AM, NSW Productivity and Equality Commissioner, to Chair, advising of the recent report, *Ensuring a cost-effective transition*, published by the NSW Productivity and Equality Commission
- 13 February 2025 – Email from Ange Nichols, Senior Advisor, Climate Change, Insurance Council of Australia, to secretariat, advising that Insurance Council of Australia will not be accepting the invitation to attend the public hearing on 21 March 2025
- 13 February 2025 – Email from the Wentworth Group, to secretariat, advising that the Wentworth Group will not be accepting the invitation to attend the public hearing on 21 March 2025 as relevant members are not available
- 13 February 2025 – Email from Aman Guar, Head of Legal, Policy and Advocacy, Electric Vehicle Council, to the secretariat, advising that the Electric Vehicle Council will decline the invitation to attend the public hearing on 21 March 2025, due to the limited discussion of electric vehicles in the 2024 Annual Report of the Net Zero Commission
- 14 February 2025 – Email from Courtney Masters, National Operations Manager, Mining and Energy Union, to the secretariat, advising that the Mining and Energy Union will no longer be able to provide a representative to attend the public hearing on 21 March 2025 due to a change in circumstances
- 14 February 2025 – Email from Carolyn Inman, Executive Assistant to Peter Achterstraat AM, NSW Productivity & Equality Commissioner, to secretariat, advising that Commissioner is not able to accept the invitation to attend the public hearing on 21 March 2025 on this occasion, but is willing to receive written questions from the Joint Standing Committee regarding the NSW Productivity and Equality Commission's work on Net Zero, and noting the NSW Productivity and Equality Commission recently released its report, *Ensuring a cost-effective transition*, available on the Commission's website
- 21 February 2025 – Email from Dr Hermoine Parsons, CEO, Australian Logistics Council, to the secretariat, advising that the Australian Logistics Council could appear at a rescheduled hearing
- 21 February 2025 – Mr Nic Clyde NSW Coordinator, Lock the Gate Alliance, to the secretariat, noting that Lock the Gate Alliance urges the committee to set a new date for the public hearing that was cancelled on 21 March 2025
- 24 February 2025 – Email from Dr Dennys E Angove, Director, Citizen's Climate Lobby Australia, to the secretariat, noting that witnesses could appear at a rescheduled hearing
- 26 February 2025 – Mr Alex Engel-Mallon, Advocacy Director, Climate Council, to the secretariat, noting that the council could appear at a rescheduled hearing
- Various dates - Postcards from individuals to the committee expressing concern about the impact of climate change and encouraging action to address this issue.

Sent:

- 18 December 2024 – Letter from Chair, to Dr Paul Grimes PSM, Chair, Net Zero Commission, advising that the inquiry into the 2024 Annual Report of the Net Zero Commission had commenced, inviting the organisation to make a submission and noting that representatives will be invited to appear as witnesses at the public hearing on 21 February 2025.

Resolved, on the motion of Ms Higginson: That the committee authorise the publication of correspondence from Mr Peter Achterstraat AM, NSW Productivity & Equality Commissioner, regarding the recent report, *Ensuring a cost-effective transition, published by the NSW Productivity and Equality Commission*, dated 12 February 2025.

5. Inquiry into the 2024 Annual Report of the Net Zero Commission

5.1 Terms of reference

The committee noted that as agreed via email, the committee has commenced its inquiry into the 2024 Annual Report of the Net Zero Commission.

The terms of reference for this inquiry are:

- (1) That the committee inquire into and report on the 2024 Annual Report of the Net Zero Commission.

5.2 Inquiry timeline and activities

Resolved, on the motion of Ms Butler: That the committee:

- call for submissions
- have the closing date for submissions be Friday 31 January 2025
- cancel the public hearing scheduled for Friday 21 February 2025
- reschedule the public hearing to Friday 14 March 2025, noting that the Legislative Council had previously resolved that this would be a committee free date
- invite representatives from the Net Zero Commission and other stakeholders to appear as witnesses at the hearing
- hold a report deliberative meeting at 4 pm on Friday 21 March 2025
- table its report by Friday 28 March 2025
- have the Chair, on behalf of the committee, write to the Net Zero Commission advising that the inquiry has commenced, inviting a submission and notifying intention to invite representatives to appear as witnesses.

5.3 Stakeholder list

The committee noted that as agreed via email, the stakeholders on the Chair's proposed stakeholder list, as amended, were invited to make a submission.

5.4 Public submissions

The committee noted the following submissions were published by the committee clerk under the authorisation of the resolution appointing the committee: submission nos. 1-5, 5a, 6-14, 16, 20, 22-25, 27-29, 31-33, 35, 36, 38-42, 42a, 44-46, 46a, 48-51, 53-66, 68, 70-76, 78-83 and 85-87.

5.5 Partially confidential submissions

Resolved, on the motion of Ms Higginson: That the committee keep the following information confidential, as per the request of the author: names and/or identifying and sensitive information in submissions nos. 15, 17-19, 21, 26, 30, 34, 37, 43, 47, 52, 67, 69 and 77.

5.6 Confidential submissions

Resolved, on the motion of Ms Butler: That the committee keep submission no. 84 confidential, as per the request of the author.

5.7 Attachment to submission no. 53

Resolved, on the motion of Ms Higginson: That the committee authorise the publication of the attachment to submission no. 53.

5.8 Proformas

Resolved, on the motion of Ms Scruby: That the committee:

- accept and publish a copy of Proforma A
- identify the number of Proforma A received on the cover page of the published document.

5.9 Providing members with a copy of the Chair's draft report

Resolved, on the motion of Ms Butler: That members be provided with a copy of the Chair's draft report in less than 7 calendar days before the scheduled report deliberative date.

5.10 Return of post-hearing responses

Resolved, on the motion of Ms Higginson: That:

- there be no provision for supplementary questions for the hearing on 14 March 2025
- witnesses be requested to return responses to questions on notice and any additional information within 24 hours of the date on which questions are forwarded to them.

5.11 Public hearing

Resolved, on the motion of Ms Higginson: That the allocation of questions to be asked at the hearing be left in the hands of the Chair.

The public and the media were admitted.

The following witnesses were sworn and examined:

- Mr Howard Witt, Director, Citizens' Climate Lobby Australia
- Mr Richard Weller, Director, Citizens' Climate Lobby Australia
- Ms Virginia Young, Director, Wilderness Australia (via telephone)
- Mr Nic Clyde, NSW Coordinator, Lock the Gate Alliance
- Dr Georgina Woods, Head of Research and Investigations, Lock the Gate Alliance.

Mr Clyde tendered the following documents:

- Lock the Gate Alliance, Closure timeframes for coal mines and workforce impacts scheduled between 2025 and 2050, with source attribution to the NSW Planning Portal and Coal Services
- Lock the Gate Alliance, Chart titled 'Fugitive emissions from coal mining are the only sector projected to increase emissions out to 2030', with data source attribution to the NSW Department of Climate Change, Energy, Environment and Water *NSW greenhouse gas emissions projections 2023*
- Lock the Gate Alliance, Chart titled 'New coal approved annual in NSW since the Paris Agreement vs 21 proposed new coal-mine expansions as at Feb 2025'.

Mr Witt tendered the following documents:

- Citizens' Climate Lobby Australia, Opening statement by the Citizen's Climate Lobby Australia
- Citizens' Climate Lobby Australia, 'A climate dividend for Australians'.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr Roderick Campbell, Research Director, The Australia Institute (via videoconference)
- Ms Kylie Turner, System Lead – Sustainable Economies, Climateworks Centre
- Mr Gregory Bourne, Councillor, Climate Council.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Dr Hermione Parsons, Chief Executive Officer and Managing Director, Australian Logistics Council (via videoconference)
- Mr David Frith, Director Policy, NSW Mining (NSW Minerals Council).

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Ms Francesca Muskovic, National Policy Director, Property Council of Australia (via videoconference)
- Ms Alison Scotland, Chief Executive Officer, Australian Sustainable Built Environment Council
- Mr Tennant Reed, Director, Climate Change and Energy, Australian Industry Group (via videoconference).

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Mr Raymond Kelly, Chairperson and Councillor for Sydney-Newcastle Region, NSW Aboriginal Land Council
- Mr Stephen Hynd, Executive Director, NSW Aboriginal Land Council.

The evidence concluded and the witnesses withdrew.

The following witnesses were sworn and examined:

- Dr Jason Crean, A/Group Director of Climate Resources, Agriculture and Biosecurity, Department of Primary Industries and Regional NSW (via videoconference)
- Dr Annette Cowie, Senior Principal Research Scientist – Climate, Department of Primary Industries and Regional NSW (via videoconference).

The evidence concluded and the witnesses withdrew.

Ms Scruby declared that she has a prior friendship with Ms Katerina Kimmorley, Commissioner, Net Zero Commission.

The following witnesses were sworn and examined:

- Ms Katerina Kimmorley, Commissioner, Net Zero Commission
- Ms Meg McDonald, Commissioner, Net Zero Commission
- Professor Andrew Pitman AO, Commissioner, Net Zero Commission
- Dr Will Rayward-Smith, Executive Director, Net Zero Commission.

The evidence concluded and the witnesses withdrew.

The public hearing concluded at 4.30. The public and the media withdrew.

Resolved on the motion of Ms Higginson: That the committee accept and publish the following documents tendered during the hearing:

- Lock the Gate Alliance, Closure timeframes for coal mines and workforce impacts scheduled between 2025 and 2050, with source attribution to the NSW Planning Portal and Coal Services, tendered by Mr Nic Clyde
- Lock the Gate Alliance, Chart titled ‘Fugitive emissions from coal mining are the only sector projected to increase emissions out to 2030’, with data source attribution to the NSW Department of Climate Change, Energy, Environment and Water *NSW greenhouse gas emissions projections 2023*, tendered by Mr Nic Clyde
- Lock the Gate Alliance, Chart titled ‘New coal approved annual in NSW since the Paris Agreement vs 21 proposed new coal-mine expansions as at Feb 2025’, tendered by Mr Nic Clyde
- Citizens’ Climate Lobby Australia, Opening statement by the Citizen’s Climate Lobby Australia, tendered by Mr Howard Witt
- Citizens’ Climate Lobby Australia, ‘A climate dividend for Australians’ tendered by Mr Howard Witt.

6. Adjournment

The committee adjourned at 4.30 pm until 4.00 pm, Friday 21 March 2025 (report deliberative – inquiry into the 2024 Annual Report of the Net Zero Commission).

Stephen Fujiwara

Committee Clerk

Draft minutes no. 4

Friday 21 March 2025

Joint Standing Committee on Net Zero Future

Room 1043, Parliament House, Sydney at 4.05 pm

1. Members present

Mr Buckingham, *Chair*

Ms Butler, *Deputy Chair* (via videoconference)

Mr Buttigieg (via videoconference)

Ms Doyle (via videoconference)

Ms Higginson (via videoconference)

Ms Munro (from 4.25 pm)

Mr Murphy (via videoconference)

Mr Regan (via videoconference)

Ms Suvaal (via videoconference)

2. Previous minutes

Resolved, on the motion of Ms Doyle: That draft minutes no. 3 be confirmed.

3. Correspondence

The committee noted the following items of correspondence:

Received:

- 18 March 2025 – Email from Aristeia Onisforou, Senior Strategy Officer, Strategy and Policy, NSW Aboriginal Land Council, to the secretariat, requesting an extension until Monday 24 March, to provide the committee with responses to the questions taken on notice during the public hearing on Friday 14 March 2025.
- 20 March 2025 – Email from Ms Sheena Fardell, Head of Government and Industry Affairs, Australian Logistics Council, to the secretariat, advising that after review of the transcript arising from, and the questions taken on notice during the public hearing on Friday 14 March 2025, the Australian Logistics Council confirms that the questions were answered on the day, and as such no further answers will be provided.

Sent:

- 18 March 2024 – Email from the secretariat to Aristeia Onisforou, Senior Strategy Officer, Strategy and Policy, NSW Aboriginal Land Council, advising the chair has approved the requested extension of time until Monday 24 March 2025 to provide the committee with responses to the questions taken on notice during the public hearing on Friday 14 March 2025, while also noting that late responses may not be incorporated into the final report of the inquiry.

4. Inquiry into the 2024 Annual Report of the Net Zero Commission

4.1 Public submissions

The committee noted the following submission was published by the committee clerk under the authorisation of the resolution appointing the committee: submission no. 88.

4.2 Answers to questions on notice

Resolved, on the motion of Ms Higginson: That the committee authorise the publication of:

- Answers to questions on notice from Mr Nic Clyde, NSW Coordinator, Lock the Gate Alliance, received 18 March 2025
- Answers to questions on notice from Dr Jason Crean, A/Group Director Climate & Natural Resources, NSW Department of Primary Industries and Regional Development, received 18 March 2025

- Answers to questions on notice from Dr Will Rayward-Smith, Executive Director, NSW Net Zero Commission, received 18 March 2025
- Answers to questions on notice from Ms Alison Scotland, Chief Executive Officer, Australian Sustainable Built Environment Council, received 18 March 2025
- Answers to questions on notice from Mr Richard Weller, Director, Citizens' Climate Lobby Australia, received 19 March 2025.

4.3 Consideration of the Chair's draft report

The Chair submitted his draft report entitled *2024 Annual Report of the Net Zero Commission*, which, having been previously circulated, was taken as being read.

Resolved, on the motion of Ms Higginson: That paragraph 2.38 be amended by inserting 'largely due to the closure of several 'gassy' underground coal mines,' before 'there has been a 34 per cent decline in direct emissions from the resources sector since 2005'.

Resolved, on the motion of Ms Higginson: That the following new paragraph be inserted after paragraph 2.78:

'The Joint Standing Committee notes the Net Zero Commission's commitment to 'closely examine developments in the resources sector', 'given the criticality of this sector for achievement of New South Wales existing and future net zero emissions targets'.'

Resolved, on the motion of Ms Higginson: That the following new finding be inserted after the new paragraph 2.79:

Finding X

This Committee finds that there is considerable uncertainty regarding whether emissions targets can be achieved - particularly the 2030 and 2035 interim targets - given what the Net Zero Commission describes as a 'sizeable pipeline' of new coal expansions currently being assessed by the NSW Department of Planning, Housing and Infrastructure.'

Ms Higginson moved: That the following new recommendation be inserted after the new finding:

Recommendation X

That the government supports the Commission to use their legislated functions to provide a further report on the resources sector as a matter of urgency.'

Ms Butler moved: That the motion of Ms Higginson be amended by inserting ' , including methane abatement technology and fugitive emissions' after 'provide a further report on the resources sector'.

Amendment of Ms Butler put and passed.

Original question of Ms Higginson, as amended, put and passed.

Resolved, on the motion of Ms Butler: That the secretariat be authorised to incorporate amendments to the Committee Comment in Chapter 2 relating to low emissions technologies in the transport sector, and energy ratings for existing homes, with the wording of the amendments to be circulated and approved via email unless a meeting is required to resolve any objections.

Resolved, on the motion of Ms Doyle: That:

- The draft report as amended be the report of the committee and that the committee present the report to the House;
- The transcripts of evidence, tabled documents, submissions, correspondence, proformas and answers to questions taken on notice relating to the inquiry be tabled in the House with the report;
- Upon tabling, all unpublished attachments to submissions be kept confidential by the committee;
- Upon tabling, all unpublished transcripts of evidence, tabled documents, submissions, correspondence, proformas and answers to questions taken on notice related to the inquiry be published by the committee, except for those documents kept confidential by resolution of the committee;

- The committee secretariat correct any typographical, grammatical and formatting errors prior to tabling;
- The committee secretariat be authorised to update any committee comments where necessary to reflect changes to recommendations or new recommendations resolved by the committee;
- Dissenting statements be provided to the secretariat within 24 hours after receipt of the draft minutes of the meeting;
- The secretariat is tabling the report at 11.15 am Friday 28 March 2025;
- The Chair to advise the secretariat and members if they intend to hold a press conference, and if so, the date and time.

5. Adjournment

The committee adjourned at 4.42 pm, *sine die*.

Stephen Fujiwara
Committee Clerk

