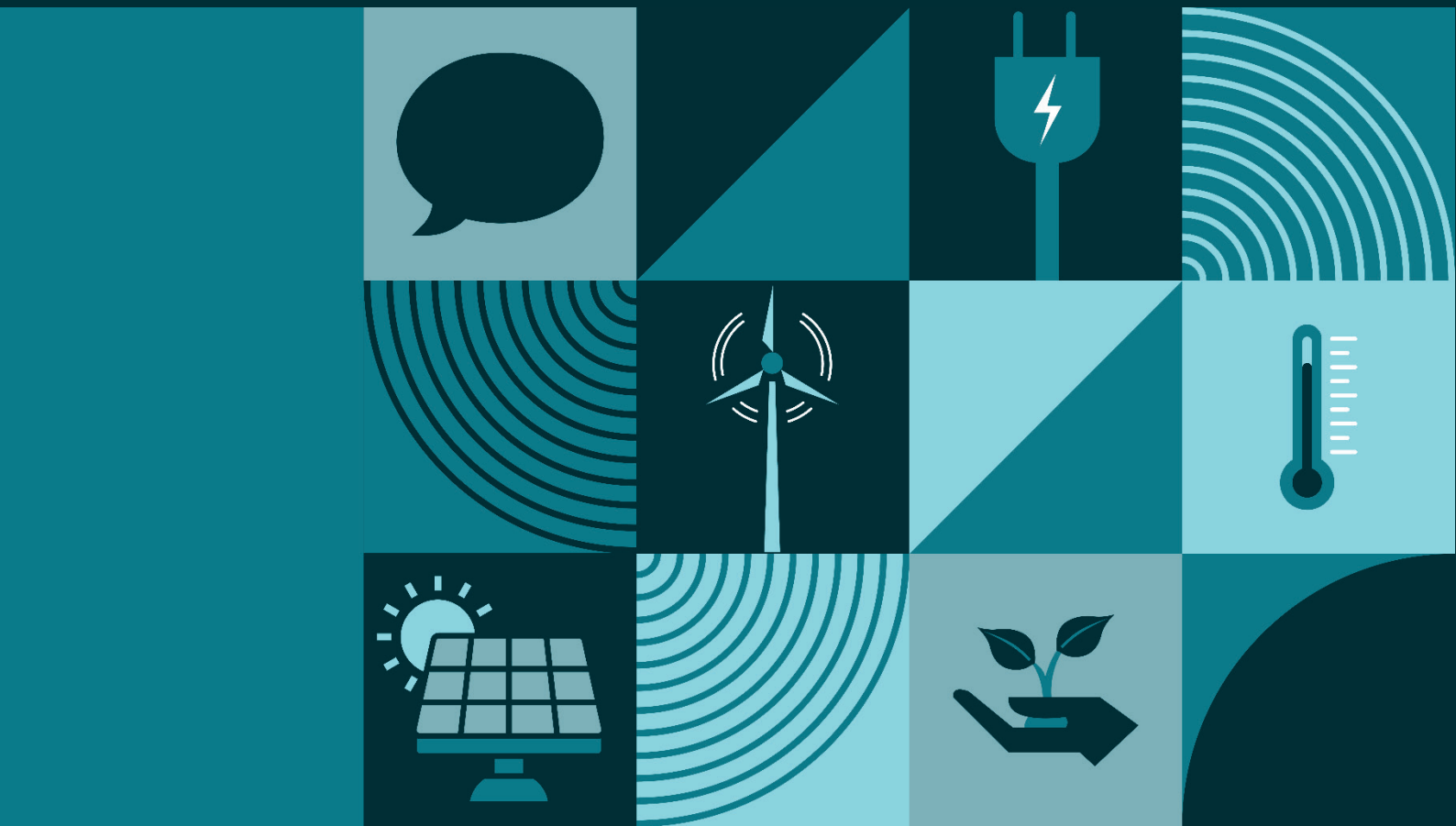


Consultation paper

Provide your input to inform our work and advice



Net Zero Commission

Acknowledgment of Country



The Net Zero Commission acknowledges the traditional custodians of the lands and waters upon which we live and work throughout NSW.

We pay respect to Elders, past, present and future, acknowledging the diversity of First Nations peoples across NSW, and we recognise their ongoing connection to land, waters, biodiversity and culture.

We recognise the practice of intergenerational care for Country and its relevance to our work. The Net Zero Commission values Aboriginal knowledge of caring for Country. We seek to listen, learn and build strong partnerships with First Nations peoples across NSW. Cultural approaches to caring for Country have existed for millennia and can teach us ways of adapting to our changing environment.

Regrowth by Chenaya Bancroft-Davis

Artist Statement:

This piece is about the regrowth you see after a bushfire. It was inspired after a drive to Grafton, NSW a few months after the bushfires. The Landscape was blackened with tiny pops of green on the charred ground.

Published by the Net Zero Commission

Consultation paper: Provide your input to inform our work and advice

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Jingela bugalbeh¹ (Hello and thank you)

Welcome! We thank you for taking part in our consultation. This is the first of many conversations that will shape the work and advice of the [Net Zero Commission](#) (the commission) as NSW transitions to a net zero, climate-resilient future.

Our inaugural 2024 Annual Report revealed that without accelerated action, NSW may not reach net zero by 2050 and will fail to meet nearer-term emissions reduction targets.² Substantial emissions reductions are needed across all sectors to meet the state's legislated targets.

As this is our first consultation, we have prepared this document to invite responses across all sectors and adaptation areas. You are invited to respond to as many or as few questions as you wish.



¹ Bundjalung, the language of Commissioner Oliver Costello

² Net Zero Commission 2024.

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Climate change is happening now

Communities and organisations across NSW are already experiencing significant consequences of climate change, including an increase in some extreme weather events such as heatwaves and short-duration rainfall intensity. NSW is projected to see increases in these and other extremes in all future climate scenarios. Climate change impacts manifest both as acute events (such as bushfires and intense storms) and slow-onset processes (like sea level rise or drought). These impacts often exacerbate existing exposures and vulnerabilities, highlighting the urgent need for adaptation action.

Question 1:

What can you tell us about your experience of the impacts of climate change and how can the commission seek to reflect and respond to this in its work?

Informing and empowering change

Achieving net zero and adapting to a changing climate are challenges that require all of us – communities, governments, businesses and individuals – to step up and act. It involves empowering everyone with the tools, resources and means to make sustainable choices and foster a shared commitment to meaningful change. This transition depends on the active participation of everyone. We want to hear from you on how we can best fulfil our role in educating and informing NSW citizens to maximise our impact and empower change.

Question 2:

What actions can the commission take to engage across the community to help drive the shifts needed for the net zero transition and for effective climate change mitigation and adaptation?

First Nations and climate action

First Nations people have a deep, long-standing relationship with the land, holding climate and ecological knowledge that has been refined over millennia. This knowledge and the practices of caring for Country are essential in guiding how NSW adapts to a changing climate and could be pivotal in reaching our net zero targets by 2050.

First Nations communities are disproportionately vulnerable to the impacts of climate change, largely due to historical policies creating geographical exposure to risks and socio-economic inequities that restrict resilience. Despite this, empowering First Nations communities will accelerate and support NSW in a just transition to a net zero, climate-resilient future. The commission seeks to engage and partner with First Nations communities to ensure their perspectives and expertise help shape decision-making processes.

The renewable energy transition provides an opportunity for First Nations communities to decide how they want to participate in sustainable energy projects and solutions while strengthening economic self-determination. For example, in Canada, First Nations people are the second largest asset owner of energy infrastructure, providing them with income and employment.

First Nations people, through the Aboriginal Land Rights Act 1983, Native Title Act 1993 and other processes of self-determination, have significant land holdings. Increasingly these lands are managed for conservation through Indigenous Protected Areas (IPAs) or partnerships with other land managers, such as Joint Management Agreements with NSW National Parks and Wildlife Service (NPWS). These provide valuable opportunities to learn from Indigenous-led approaches to caring for Country that can support improved climate mitigation, adaption, disaster risk reduction, carbon farming and biodiversity conservation. Understanding and incorporating Indigenous knowledge to support First Nations leadership in these areas can strengthen efforts for a more sustainable future.

Question 3:

How should the commission best engage with First Nations people to learn about cultural knowledge and practices to support adaptation, and what information and evidence should it draw on to inform its understanding of these practices?

Question 4:

What additional mechanisms, support, or incentives can meaningfully empower and enhance First Nations people's involvement in climate mitigation, adaptation and environmental stewardship?

Accelerating emissions reductions

Sector-specific focus areas

Our 2024 Annual Report assessed emissions reduction progress across the 6 sectors: electricity and energy; transport; agriculture and land; industry and waste; resources; and built environment (Figure 1). It found that achieving NSW's legislated 2030 and 2035 targets is not assured, and an acceleration in effort will be required to keep them within reach.

This section highlights specific areas from the 2024 Annual Report where we seek your input on action across the economy to reduce emissions and meet our targets for reducing greenhouse gas emissions. We also welcome insights on other sectoral issues outside the questions raised below.

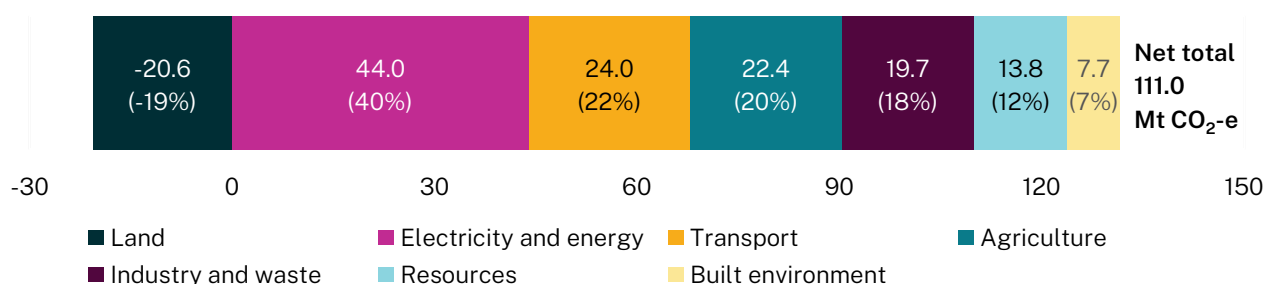


Figure 1: NSW net emissions by sector in Mt CO₂-e in 2022 (the latest year of available data)³

Question 5:

What additional information and evidence should the commission consider when assessing progress towards NSW's targets for reducing net greenhouse gas emissions?

Electricity and energy

40% of NSW net emissions in 2022

The electricity and energy sector is currently the largest source of emissions in NSW, with electricity accounting for 98.4% of this sector's total emissions. Emissions from this sector are on a downward trend due to substitution from fossil fuel-based electricity by renewables and are expected to contribute the largest proportion of emissions reductions in the coming decade.

³ Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.



To achieve the 2030 Roadmap target of

12 GW of renewable generation capacity by **2030**, almost **9 GW** still needs to be commissioned.

Decarbonising this sector is pivotal as it enables emissions reductions in other sectors. Broad initiatives across government, the private sector and communities are underway to accelerate the electricity sector's transition and support community engagement, and to accelerate the adoption of small-scale consumer energy resources.

Construction of renewable generation capacity is accelerating but remains well below the required levels, partly due to delayed new transmission infrastructure (Figure 2).⁴

In February 2025, the NSW Government commenced an independent review of transmission planning arrangements in NSW to reduce duplication and ensure coordination between relevant entities.⁵ The Central West Orana Renewable Energy Zone reached financial close in April 2025 and is expected to start construction in coming months. Recent underwriting commitments from the Australian Government and through the [NSW Electricity Infrastructure Roadmap](#) aim to accelerate new projects.⁶ Currently around a third of the Roadmap target is committed (Figure 3) but commissioning timelines are uncertain.

In February 2025, the NSW Government announced that the first mandate of the \$1 billion Energy Security Corporation is to invest in large-scale battery storage, community batteries, virtual power plants and pumped hydro.⁷ The goal is to close gaps in critical short- and medium-duration storage at both the large-scale and consumer energy resources level.

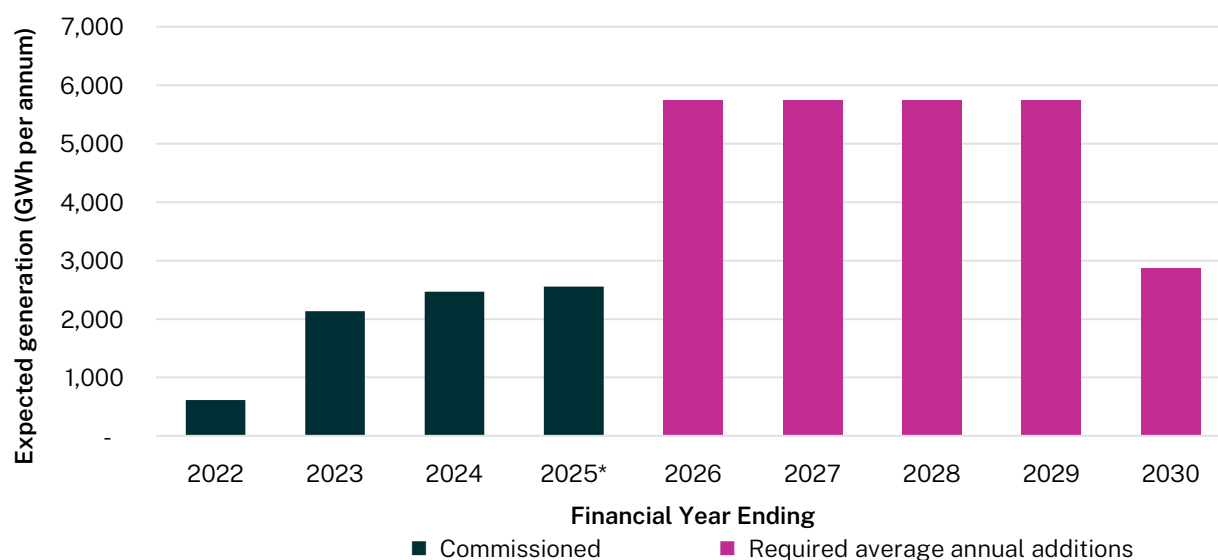


Figure 2: Utility-scale power generation projects commissioned in the NSW electricity grid. 2025* = Predicted capacity based on current project status⁸

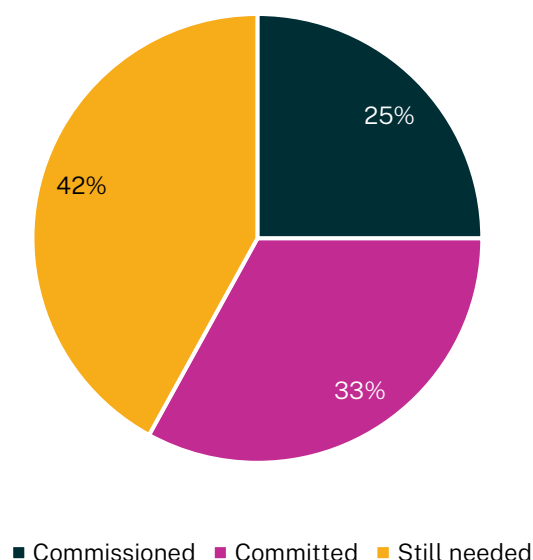
⁴ Net Zero Commission 2024.

⁵ www.energy.nsw.gov.au/sites/default/files/2025-02/2025-Transmission-Planning-Review-2025-Instrument-of-Authorisation.pdf

⁶ AEMO Services 2024.

⁷ Clean Energy Council 2025.

⁸ Source: Figures provided by the NSW Department of Climate Change, Energy, the Environment and Water.



Community support is important to the delivery of new electricity infrastructure, such as transmission lines. Community opposition to proposals has grown in recent years.⁹ In November 2024, the NSW Government *Renewable Energy Planning Framework*¹⁰ and the *Benefit Sharing Guideline*¹¹ for solar, wind and rural battery energy storage systems came into effect. These provide formal guidance for large-scale projects and benefit sharing with host communities. Additionally, the Australian Government’s *First Nations Clean Energy Strategy*¹² was released in December 2024. It outlines key actions to protect First Nations’ rights and interests in the clean energy transition.

Figure 3: Status of generation capacity development as a proportion of the Roadmap generation target, in gigawatts¹³

Question 6:	The speed of deployment of electricity generation and infrastructure is a key risk to emissions reduction targets. What more could be done to fast-track deployment?
Question 7:	Are the measures now in place sufficient to ensure community engagement and benefit sharing from the build out of infrastructure for the energy transition?
Question 8:	Are First Nations communities adequately engaged and included in sharing the benefits of the transition? What more could be done, and by whom?

Transport

22% of NSW net emissions in 2022

Transport is NSW’s second-highest emitting sector, and emissions continue to rise. In 2022, road transport (cars, light commercial vehicles, heavy vehicles, buses and motorcycles) accounted for 87% of the sector’s emissions. Between 2005 and 2022, emissions from light commercial vehicles rose by 41%, while emissions from heavy vehicles increased by 22%.

⁹ Net Zero Commission 2024.

¹⁰ NSW Department of Planning, Housing and Infrastructure 2024a.

¹¹ NSW Department of Planning, Housing and Infrastructure 2024b.

¹² Australian Government n.d.

¹³ Source: Figures provided by the NSW Department of Climate Change, Energy, the Environment and Water.



In 2024, **7.6%**
of new light vehicle sales in
NSW were **battery electric
vehicles**, but uptake is not
accelerating.

Electric vehicle (EV) adoption is growing – battery EVs accounted for 7.6% of new light vehicle sales in 2024, up from 1% in 2021 (Figure 4). But challenges remain, including high costs and limited charging infrastructure. Policies such as financial incentives, co-funded charging stations, and the [New Vehicle Efficiency Standard](#) that commenced on 1 January 2025 aim to boost uptake.

Market availability of EV options for utility vehicles ('utes') remain scarce and present an ongoing challenge.

Larger, more emissions-intensive vehicles including utes are increasingly popular.¹⁴ There is some evidence that business tax concessions may have contributed to this trend.¹⁵

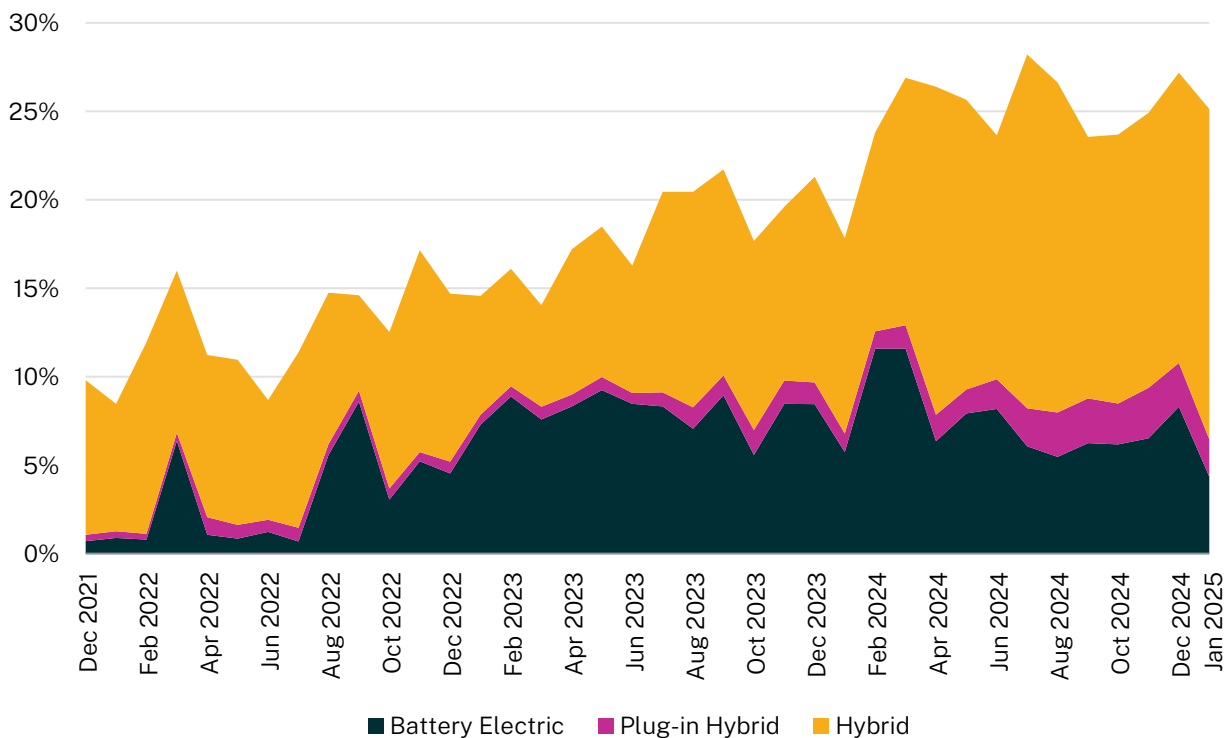


Figure 4: Percentage of new light vehicle sales in NSW that are battery electric, plug-in hybrid and hybrid vehicles¹⁶

In December 2024, the NSW Government announced 319 new battery electric buses as part of Transport for NSW's zero-emissions bus program.¹⁷ The program aims to have 1,700 battery electric buses in service (approximately 20% of the total public bus fleet) by 2028.

¹⁴ National Transport Commission 2024.

¹⁵ See [ABS stats: Investment jumps as tradies rush on ute tax break](#) (Australian Financial Review, 31 August 2023) and [Federal tax breaks to continue ute boom - carsales.com.au](#) (12 March 2021)

¹⁶ Source: Transport for NSW analysis of new vehicle sales data from the Federal Chamber of Automotive Industries VFACTS New Vehicle Sales Reports and the Electric Vehicle Council's [EVC Vehicle Sales Report](#). Used with permission.

¹⁷ [Transition to Net Zero accelerates with purchase of 319 Zero Emission buses | Transport for NSW](#)

Decarbonising heavy freight vehicles is difficult due to long vehicle lifespans and high costs, underscoring the need for accelerated commercialisation and uptake of low-emissions alternatives and timely provision of supporting infrastructure and their supply chains.

Question 9:

What are likely to prove the most effective approaches to accelerate rapid decarbonisation across freight and passenger transport?

Agriculture and land

Agriculture

20% of NSW net emissions in 2022

Since 2005, emissions from agriculture¹⁸ have remained largely unchanged beyond drought-related fluctuations (Figure 5). In fact, the sector faces significant challenges due to the direct relationship between emissions and livestock numbers, diverse production conditions, as well as technical, logistical, and financial barriers to adopting emissions reduction strategies.



Over **75%**
of agriculture emissions
come from animals,
mainly methane from
cattle and sheep.

Several state and federal government initiatives aim to support emissions reductions in the sector, but action has been fragmented and has not fully addressed the sector's complexity. The forthcoming Emissions Reduction Roadmap for NSW Land and Primary Industries, to be released later in 2025, is expected to outline emissions reduction and carbon storage pathways for agriculture. There are also strong market drivers emerging in the agriculture sector as part of efforts to decarbonise local and global food and fibre supply chains.

¹⁸ Agriculture emissions come from enteric fermentation in livestock (the release of methane from digestion) 64%, fertiliser and urea application (16%), manure management (6%), fuel use and other activities on farms (14%).

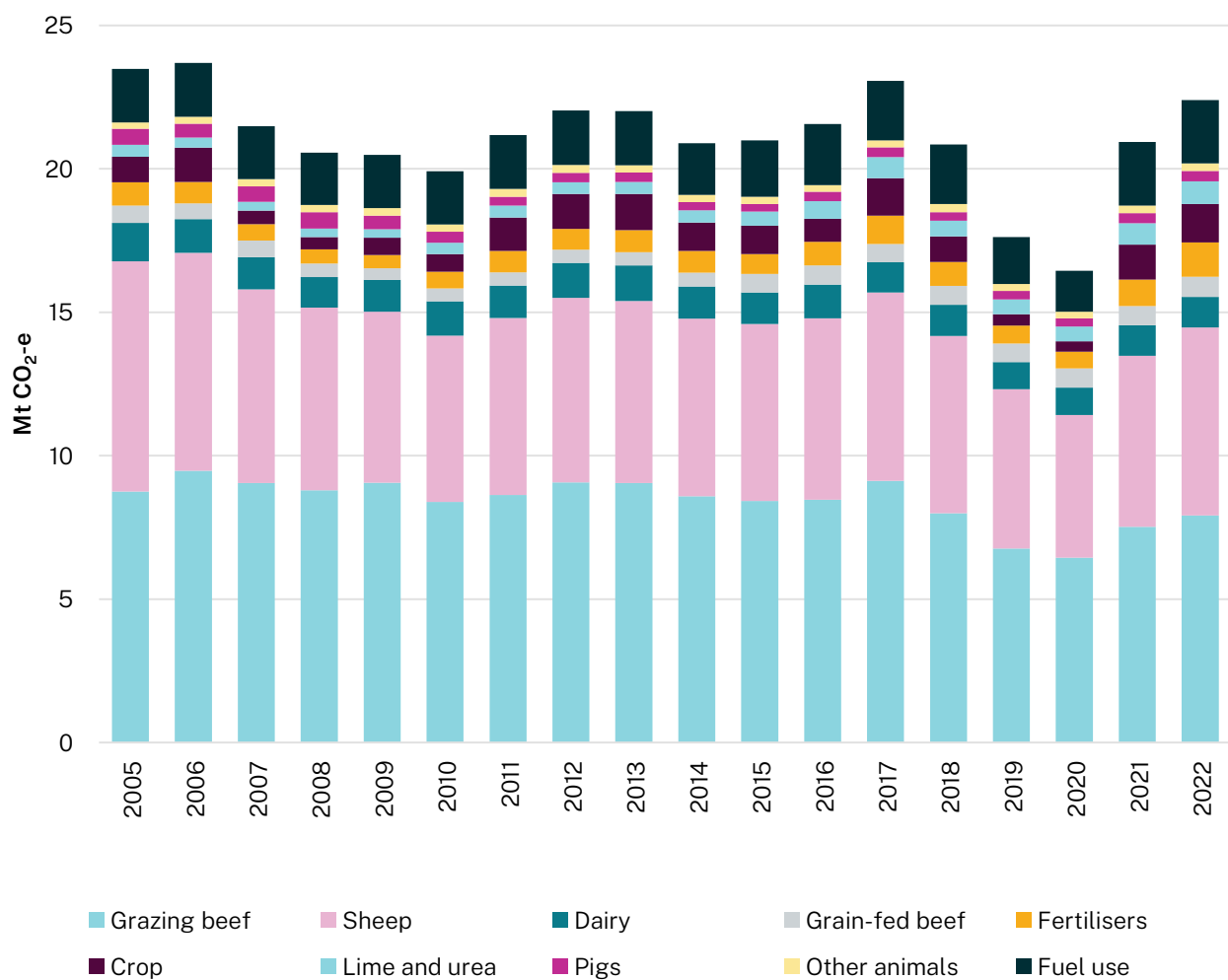


Figure 5: Historical agricultural sector emissions based on inventory estimates (2005-2022)¹⁹

Question 10:

What specific actions or policies could increase uptake of emissions reduction strategies in agriculture, both in the short and long term?

¹⁹ Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.

Land

Negative net emissions due to carbon storage in forestry and soils



Estimated emissions from deforestation have **reduced**

by **78%** from 2005 to 2022 but net emissions vary widely year on year.

The land sector's gross emissions have apparently fallen, largely due to a sustained decrease in deforestation from 2005 to 2022 and possible increase in net carbon storage in vegetation and soils (Figure 6). While net carbon storage in the sector appears to have grown over time, changes to estimations, accounting methods and calculation uncertainties make consistent and transparent reporting a challenge. Additionally, climate change threatens the stability of stored carbon in the land sector.

Current government policies to increase carbon storage and reduce emissions largely rely on the Australian Government's Australian Carbon Credit Unit (ACCU) Scheme through a range of funding programs and strategies. The Emissions Reduction Roadmap for NSW Land and Primary Industries is expected to identify broader actions beyond the ACCU scheme to optimise land-based carbon in the context of a changing climate.

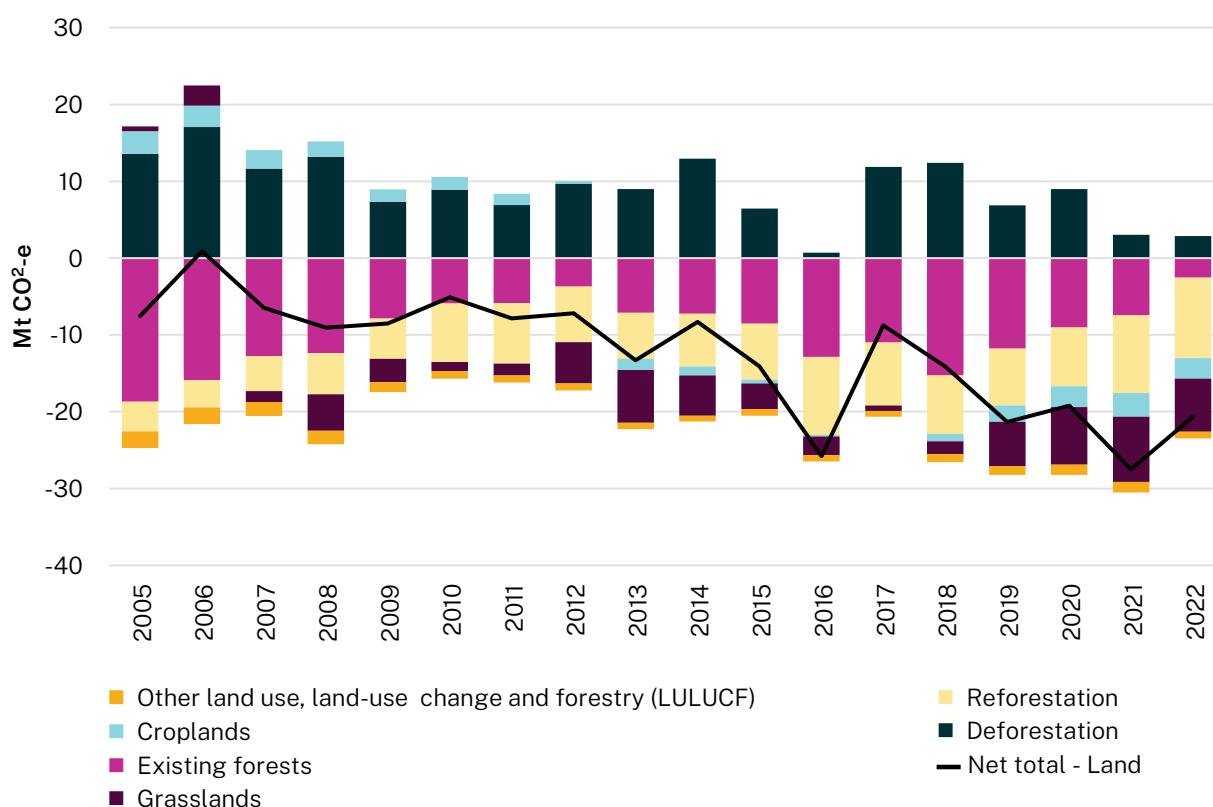


Figure 6: Historical total land sector emissions and carbon storage by subsector based on inventory estimates (2005-2022)²⁰

²⁰ Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.

Question 11:

Given the uncertainties in land-sector net emissions, how should NSW incorporate this sector into the state's climate policy and emissions profile?

Question 12:

What specific actions could increase carbon storage and resilience of the existing carbon stock in the land sector and meaningfully enhance the application of First Nations people's knowledge and practices?

Industry and waste

18% of NSW net emissions in 2022

The industry and waste sector accounted for 18% of NSW net emissions in 2022 (Figure 7). This includes emissions from large-scale or heavy industries, such as lime and cement, smaller-scale industries like food and beverage manufacturing and methane emissions from landfills.



Figure 7: Historical industry and waste sector emissions by industry category based on inventory estimates (2005-2022)²¹

²¹ Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.

Large-scale or heavy industry



In NSW, **6** industrial facilities account for around **two-thirds** of industry sector emissions.

Decarbonising heavy industries, like steel or cement production, is challenging. This is partly because they involve emissions-intensive processes with limited commercially viable abatement technologies available at scale.²² This is compounded by complex global supply chains, high investment costs and, in many cases, exposure to international price pressures.

Given these challenges, governments are developing targeted sectoral plans and funding support.

The Australian Government has recently announced funding measures under the Future Made in Australia Plan, namely the [Green Aluminium Production Credit](#)²³ and [Green Iron Innovation Fund](#).²⁴ The NSW Government is currently reviewing its Net Zero Industry and Innovation Program (NZIIP) due to challenges in achieving targeted emissions reductions.²⁵ The NSW Environment Protection Authority (EPA) released its [large emitters guide](#), requiring emissions mitigation strategies to be included in planning applications. State and national commitments to expand circular economy opportunities can also help decarbonise heavy industry.²⁶

Question 13:

What policies or programs at a sectoral level could complement the Safeguard Mechanism to support the accelerated decarbonisation of heavy industry in NSW?

Smaller-scale or light industries

Mature, commercially available and cost-effective technologies exist today that can electrify and decarbonise industrial processes, particularly those using low or medium temperature process heat, such as boilers. Government supports this through white certificate schemes like the NSW [Energy Savings Scheme](#) and the recently launched [Net Zero Planning Grants](#).

Question 14:

What measures could accelerate industrial heat electrification in NSW, where technology is viable?

²² Climate Change Authority 2024.

²³ Australian Government Department of Industry, Science and Resources 2025.

²⁴ Australian Government Department of Industry, Science and Resources. "New Fund Will Position Australia at the Centre of the Global Green Iron Market," 2025. <https://www.industry.gov.au/news/new-fund-will-position-australia-centre-global-green-iron-market>.

²⁵ NSW Department of Climate Change, Energy, the Environment and Water 2024.

²⁶ Australian Government Department of Climate Change, Energy, the Environment and Water 2024a; Investment NSW 2025.

Waste

Emissions from the waste sector largely stem from the disposal of organic waste and methane generation in landfills. Generating less organic waste, increasing recycling and improving landfill gas capture rates can reduce these emissions.



In 2022, the rate of **landfill gas** capture in NSW was

39%.²⁷

NSW aims to reduce waste generation per capita by 10% by 2030.²⁸ However, reaching this target will require systemic changes to the way households and businesses manage their waste.

To divert more organic waste from landfill, the NSW Parliament passed the *Protection of the Environment Legislation Amendment (FOGO Recycling) Bill 2024*. This mandates food waste collection from households starting 1 July 2030 and from some businesses starting 1 July 2026.

However, NSW landfills already contain organic waste, and not all organic waste will be diverted, so landfills will continue to emit. To address this, the NSW Government is considering ways to increase the proportion of landfill gas captured across the state.

Question 15:

What short to medium term measures could be prioritised to address the systemic challenges regarding waste generation and resource recovery?

Resources

12% of NSW net emissions in 2022

The commission expressed concern at the risks to the state's targets from increased emissions from the resources sector through proposals to extend and expand existing NSW coal mines. The potential emissions associated with these proposals have drawn significant public attention. The commission identified this as an area requiring its specific attention in 2025.²⁹ Managing legacy emissions from closed coal mines also presents regulatory challenges.

The expected decline of coal mining will have social and economic implications for a number of NSW communities and regions. The NSW Government has committed to establishing Future Jobs and Investment Authorities³⁰ comprising local representatives in each coal-reliant region. In 2024, the NSW Department of Primary Industries and Regional Development

²⁷ NSW Department of Climate Change, Energy, the Environment and Water 2024.

²⁸ NSW Department of Planning, Industry and Environment 2021.

²⁹ Net Zero Commission 2024.

³⁰ www.nsw.gov.au/regional-nsw/future-jobs-and-investment-authorities

consulted with regional communities on the final Future Jobs and Investment Authorities model to reflect community feedback in its design.³¹



Emissions from **coal mining**

make up **97%**
of the direct emissions
of the resources sector.³²

The Australian Government’s Safeguard Mechanism is the primary tool to reduce emissions in the resources and industry sectors, and has started to provide incentives to reduce facility-level emissions following reforms to the mechanism in 2023.³³ The extent to which it will drive decarbonisation in resources industries is not yet known. Enhancing transparency in how coal mines meet their Safeguard Mechanism obligations, and analysis of facilities’ investment and operational responses, is essential to fully understand their impact.

The Australian Government established the Expert Panel on Atmospheric Measurement of Fugitive Methane Emissions to advise on enhancing methane emissions estimation in the coal, oil, and gas sectors through advanced atmospheric measurement techniques. Its work aims to improve the accuracy of Australia's National Greenhouse Accounts and inform effective climate policies.

The NSW EPA is progressing initiatives to strengthen regulation and will be engaging with the state’s existing coal mine licensees on proposed requirements. It recently published a large emitters guide, and a greenhouse gas mitigation guideline for coal mining is currently under development.

Question 16:	How could transparency of how coal mines meet their Safeguard Mechanism obligations be improved?
Question 17:	What measures would lead to coal mines prioritising on-site abatement over offsetting?
Question 18:	What measures should be considered beyond the Safeguard Mechanism to reduce emissions of the resources sector, particularly methane emissions, to meet NSW’s emissions reduction targets?

Built environment

6% of NSW net emissions in 2022

³¹ See the summary of public consultation at www.nsw.gov.au/sites/default/files/noindex/2024-12/Future-Jobs-and-Investment-Authorities-Issues-paper-consultation-outcomes.pdf

³² Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.

³³ Net Zero Commission 2024.

On-site emissions from the built environment – incorporating all homes, buildings and infrastructure – accounted for 6% of NSW emissions in 2022. These on-site emissions, generated from fossil fuel use and refrigerant leaks, have nearly doubled since 2005 (Figure 8). The largest direct source of emissions from the built environment sector is fossil fuel use (53%), mainly gas for hot water, heating and cooking. Options to reduce gas demand from buildings include energy efficiency measures and electrification (using electricity instead of gas). Despite the environmental and health benefits of electrification and support for electrification from consumer groups, the number of gas connections continues to rise. Unlike some Australian jurisdictions, NSW has not banned new gas connections.

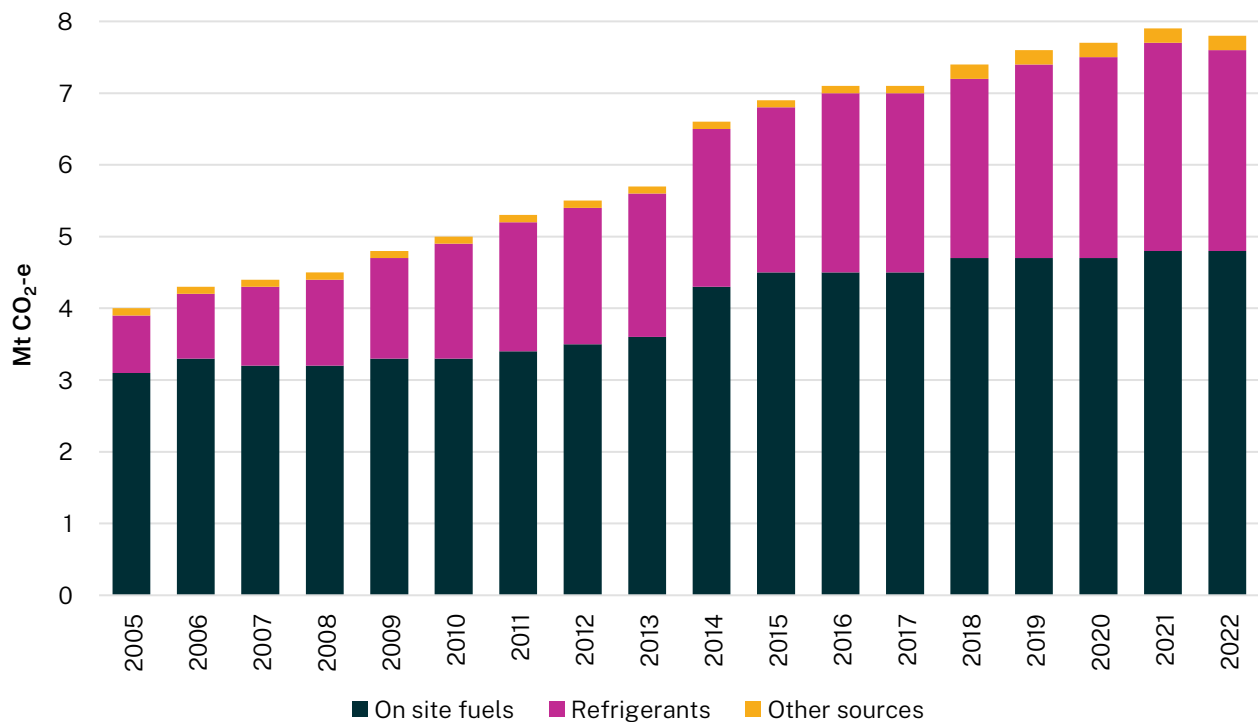


Figure 8: Historical built environment sector emissions by source based on inventory estimates (2005-2022)³⁴

Retrofitting existing buildings and requiring new builds to be fully electric are strategies used in other jurisdictions to reduce building emissions. The success of these measures depends on several factors, including better access to renewable resources, coordination with the Housing Accord targets and affordability. Electrification raises a range of equity issues, such as customers remaining on the gas network being more exposed to the cost of maintaining it.

The statutory review of the Sustainable Buildings State Environmental Planning Policy (SEPP) and development of the Gas Decarbonisation Roadmap are relevant policy developments in 2025–2026.

Question 19:

What additional measures could accelerate electrification and increase energy efficiency of new and existing buildings?

³⁴ Commission analysis of Australian Government Department of Climate Change, Energy, the Environment and Water 2024.

Question 20:

How could social equity be better addressed in the transition to an electrified built environment?

Refrigerants



Emissions from refrigerants have **more than tripled** since 2005.

The second largest, and fastest growing, source of emissions in the built environment is refrigerants used in equipment such as commercial refrigeration and air-conditioning (Figure 8).³⁵

The Australian Government is implementing a phase-down of high-global warming potential refrigerants. The pace of the phase-down, coupled with the growing uptake of heat pumps, suggests that significant quantities of refrigerants will be emitted over the next decades.

Given that alternatives with a GWP below 10 are available, there may be scope for a more ambitious phase-down.

Question 21:

What approaches could NSW consider to eliminate refrigerants with a GWP >10 from buildings?

Developing our monitoring framework to assess progress

The commission is developing a monitoring framework for emissions reductions to ensure it can fulfil its mandate to monitor progress towards NSW's emissions reduction targets, address the guiding principles in section 8 of the Act and be adaptable to evolving policy environments. The commission expects it to include whole-of-economy and sector-specific metrics and indicators, enabling benchmarking against the estimated emissions reductions needed to achieve NSW's targets. We are reviewing best practice from other jurisdictions to understand both emissions related and non-emissions related indicators and metrics.

Question 22:

What should be included in a monitoring framework for NSW in the context of the transition to net zero, including any specific metrics and indicators?

³⁵ Net Zero Commission 2024.

Building foundations for future whole-of-economy action

All sectors of the economy need to play their part in meeting NSW's legislated targets of a 50% reduction in greenhouse gas emissions from 2005 levels by 2030, a 70% reduction by 2035 and net zero emissions by 2050. This requires ongoing cooperation from governments at all levels, businesses of all sizes, households and the wider community. While different parts of government are best placed to lead and be responsible for specific sectors, coordination across the economy is critical and needs to be consistent with the social, economic and environmental considerations set out in section 8 of the *Climate Change (Net Zero Future) Act 2023 (NSW)*.

To create and guide this economy- and society-wide action, other jurisdictions have taken a whole-of-economy approach by developing modelled pathways and sector budgets to demonstrate how collective climate targets can be met. Many use scenario modelling and pathway analysis to inform decision-making. For example, [California's 2022 Scoping Plan](#)³⁶ sets out a sector-by-sector pathway, while the UK uses legally binding [5 year carbon budgets](#).³⁷

The Australian Government is developing sector decarbonisation plans as part of a whole-of-economy approach and has set an emissions budget.³⁸ NSW will ultimately need similar mechanisms to ensure the state's climate action is adhering to the guiding principles in the Act and is coordinated, transparent and effective.

The commission looks forward to working with all stakeholders to inform and collaborate on building whole-of-economy emissions reduction policies and plans.

Adapting to a changing climate

The commission's 2024 Annual Report assessed progress towards NSW's adaptation objective, based on the implementation of the [NSW Climate Change Adaptation Strategy 2022](#) (the strategy). The NSW Department of Climate Change, Energy, the Environment and Water provided a self-assessment of progress against the strategy's actions through a formal information request made under section 18 of the Act. The commission found that completing the NSW Climate Change Risk and Opportunity Assessment (CCROA), due in 2023, should be prioritised following the recent delivery of the [NSW Climate Change Adaptation Action Plan 2025-2029](#) and the updated [NSW and Australian Regional Climate Modelling \(NARClIM2.0\)](#).

³⁶ California Air Resources Board, 2022. Available at <https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf>

³⁷ UK Parliament, 2025. Available at <https://commonslibrary.parliament.uk/what-are-carbon-budgets/>

³⁸ See [Net Zero - DCCCEW](#) for sector plans and [Climate Change Act 2022 \(Cth\)](#) for carbon budgets.

The NSW Government's Climate Change Adaptation Strategy has 4 objectives to make NSW more resilient and adapted to the impacts of climate change



The commission is now seeking views on how to measure progress towards the adaptation objective. This has been challenging in other jurisdictions and is largely based on limited qualitative measures. A well-established framework for measuring progress on climate change adaptation is yet to be established and it may take several years to develop and implement a monitoring framework for NSW.

In the interim, the commission is exploring ways to track progress, including quantitative measures where feasible. The NSW Climate Change Risk and Opportunity Assessment, expected to be published later in 2025, may inform the commission's approach. The whole-of-government climate-related financial disclosure for NSW Government, which was delayed from its 2023 due date, may also be a useful input.

Question 23: The adaptation objective is for NSW to be more resilient to a changing climate. The Act allows for regulations to further define the adaptation objective. What does a more resilient NSW look like to you?

Question 24: What additional information and evidence should the commission consider when assessing progress towards the adaptation objective?

Effective use of climate change projections

In the 2024 report, the commission stated that NSW Government agencies should engage and make better use of the latest climate change projections to ensure that decisions account for the future vulnerability of NSW communities to climate change. We are looking at whether capability within government, and other organisations, is a barrier to their effective use.

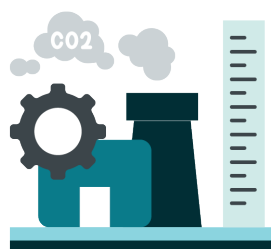
Question 25:

How can adaptation planning better use the NSW Government's climate change projections (NARClIM)?

Question 26:

What other information or tools are needed to support decision-makers in NSW?

Exploring NSW's preparation and responses to extreme heat events



Under a low emissions scenario, the number of **hot days (35°C or over)** per year are projected to increase by **14.8 days by 2050**ⁱ

Low emission scenario SSP1-2.6, relative to the 1990-2009 baseline.



Each year, **700,000 – 2.7 million** working days will be lost due to heatwaves by 2060-61ⁱⁱ



\$6.8 billion annual costs (health, productivity, energy) in Western Sydneyⁱⁱⁱ

Energy use triples on days 35°C and hotter^{iv}



More than one third of heat-related deaths were caused by climate change over the last 3 decades^v



- i AdaptNSW Interactive climate change projections map.
- ii NSW Treasury 2021-22. NSW Intergenerational Report.
- iii Committee for Sydney 2024. Burning Money: The rising costs of heatwaves to Western Sydney.
- iv Western Sydney Regional Organisation of Councils 2018, Turn Down the Heat Strategy and Action Plan.
- v Vicedo-Cabrera AM et al. 2021. 'The burden of heat-related mortality attributable to recent human-induced climate change', Nature climate change, 11(6):492-500.

Temperature is a key climate change indicator, and NSW faces an increasing risk of extreme temperatures. Heatwaves are responsible for more deaths than any other natural hazard in Australia.³⁹ Humidity can exacerbate heat stress and, in combination with extreme heat, is extremely dangerous to human health. The commission is exploring how NSW prepares for and responds to extreme heat events, with a focus on available information and data sources.

Question 27:

What initiatives should the commission consider in assessing NSW's preparation and responses to extreme heat and humidity events in NSW?

³⁹ Coates et al. 2014

References

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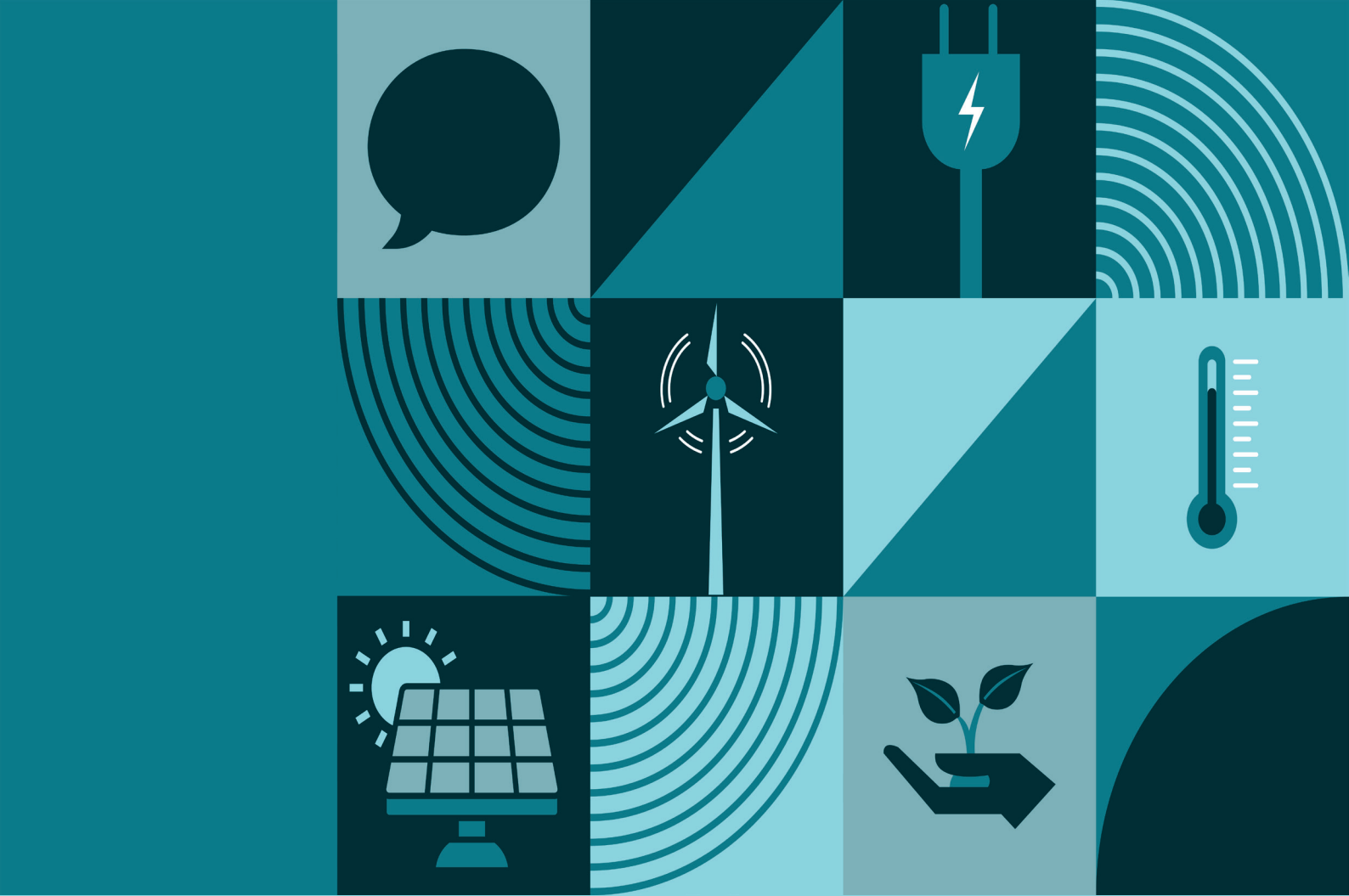
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