

2025 consultation

Submission type	Upload
Submitter	Illawarra Knitting Nannas Against Greed
Response ID	277304

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The Commissioners
Net Zero Commission
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Thank you for preparing the Consultation paper on net zero, and for inviting submissions.

The Illawarra Knitting Nannas Against Greed (IKNAG) are only too aware of the impacts of climate change, and that it is being experienced from the local Illawarra region, to the planet as a whole. IKNAG lobbies local MPs on climate change, undertakes research and works with the local community. We aim to raise awareness of the importance of working towards net zero as quickly as possible.

We note that NSW is not on track to meet any of the legislated targets, including 2030 and 2035 targets.

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?

In April 2024 severe weather including torrential rain caused extensive damage across Wollongong, resulting in a Natural Disaster Declaration. The severe weather damaged private property, businesses, roads and footpaths and storm water infrastructure.¹ Sea Cliff Bridge was closed due to damage, landslides closed Lawrence Hargrave Drive and the Illawarra Highway was closed in two places. Hospitals were understaffed due to the road closures.² Rail links were cut. Coal fines and rubbish was washed from the Russell Vale coal mine into adjacent residential yards and swimming pools.

IKNAG members and their families were affected; by road closures preventing access to workplaces, houses being inundated by floodwaters, and school closures.

We ask the Commission to reflect on the impacts of climate change on communities across NSW – the danger to wellbeing and life from intense heat, cold, storms and rainfall, the loss of housing during our housing crisis, the dangers to native flora and fauna, the fact that many homes across NSW are uninsurable, and the need for a just transition for workers from fossil fuel to renewable energies. On this issue we ask that transition authorities be independent, well-funded and community led.

Addressing climate change is not just incredibly important, it is incredibly urgent. The vulnerable people in our community are those most at risk. Every fraction of a degree less warming makes a difference.

¹ Wollongong City Council Ordinary Meeting of Council 27 May 2024

² ABC News A couple have had a lucky escape after the Wollongong granny flat they were staying in was washed away. H Hogan, T Fernandez, L Oatway. ABC Illawarra Topic: Floods, 6 April 2024.

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?

Local community groups – there are a large number of local environmental groups active in the Illawarra such as IKNAG, Good for the Gong, Electrify Illawarra, Protect our Water Catchments Inc, 350.org, Australian Youth Climate Change (AYCC), University of Wollongong sustainability staff etc. These groups work together and rely on donations to hold information days, market stalls, information hubs, family fun days and other activities to inform the community on climate change mitigation and related issues. Even tiny amounts of funding to cover costs such as venue hire would assist in organising more community events. Events like family days can reach community members who are too time poor to think about climate change.

Councils - The Commission can speak to Councils across NSW regarding policies such as electrification of all new builds, flood-prone property buy-back schemes, micro-grids, community renewable electricity hubs, refitting of current buildings to electrical appliances, upgrading rental properties to improve energy efficiency, encouraging community and kerbside gardens, funding affordable housing near SES bases, hospitals and other emergency services, expanding FOGO and many other issues.

Free information hubs - The Commission could consider investing in free, accessible information hubs on electrification across NSW, for example in shopping centres. We acknowledge that the NSW Government's current view is that the market is taking its course in the uptake of solar panels and batteries. However there is a large section of the community, including renters, apartment dwellers and people on low or fixed incomes, who would definitely benefit from free information on electrification and reducing residential fossil fuel consumption. We feel that just access to information is very important.

Work with universities - the Commission could work with the sustainability and innovation departments at universities across NSW, for example the University of Wollongong's Research and Sustainable Futures Division.

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?

We would encourage the Commission to engage First Nations staff.

A quick search finds research which can be built on, for example *How Aboriginal culture can help us understand climate change*³, and *Indigenous-led knowledge and response to climate*

³ <https://www.climatechange.environment.nsw.gov.au/stories-and-case-studies/how-aboriginal-culture-can-help-us-understand-climate-change>

change.⁴ No doubt there are examples of research from other countries as well, perhaps from Canada.

Question 5: What additional information and evidence should the commission consider when assessing progress towards NSW's targets for reducing net greenhouse gas emissions?

The Illawarra Knitting Nannas are concerned that fugitive emissions are not being accurately measured or reported. Underestimated methane emissions from current coal mine projects, and unmeasured and unreported emissions from closed mines, could be significantly impacting the true NSW picture on greenhouse gas emissions. We request that the Commission support a review of Method 2.

Methane is 85 times more potent than CO₂ over 20 years. A report by Common Capital found that methane emissions from coal are predicted to rise by 75% by 2035 in NSW, despite the International Energy Agency saying they must reduce by 75% by 2030 if the world is to avoid climate chaos.⁵ Methane abatement requirements to reduce emissions from existing coal mines must be mandated.

In Australia coal production grew in 2024, yet reported coalmine emissions were static.⁶ Unlike in underground coalmines, gas emissions are not directly measured from open-cut coal mines. For open-cut mines, the gas in the surrounding ground is estimated as a proxy for what will be released when the coal is mined.

The Department of Climate Change, Energy, the Environment and Water (DECCW) recently determined that Method 1 reporting⁷ for large miners should be phased out from 2026/27. DECCW also recommended that Method 2 be reviewed urgently.⁸ All open-cut mines in NSW have moved to Method 2, and some have dramatically reduced the emissions they are reporting.

Under Method 2, reported rates for methane emissions, which are the most prevalent, have fallen dramatically. In NSW, reported methane emissions are 80% lower under Method 2 estimations compared with Method 1 default factors.⁹

We ask that the Commission provide advice to the Independent Planning Commission regarding the Moolarben and Hunter Valley Operations coal mine extensions that are currently under review. We would welcome the Commission setting standards for greenhouse gas assessments that reflect the Commission's views on the risks posed by coal projects to NSW.

⁴ Climate Systems. National Environmental Science Program.

<https://nesp2climate.com.au/research/indigenous-led-knowledge-and-response-to-climate-change/>

⁵ Report by Common Capital, June 2025. This report found significant problems with the Safeguard Mechanism.

⁶ Australia's coalmine methane mirage: The urgent need for accurate emissions reporting. https://ember-energy.org/app/uploads/2025/03/Rising-Coal-Production-Falling-Emissions_24032025.pdf

⁷ Method 1 has been the default method of estimating emissions based on state average, benchmark levels.

⁸ Method 2 involves the estimation of emissions, based on industry data and/or international standards.

⁹ <https://ieefa.org/resources/australias-coalmine-methane-mirage-urgent-need-accurate-emissions-reporting>

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 fasttrack deployment?

The Illawarra Nannas believe that community education on the impacts of climate change could help fast track renewable generation, infrastructure and batteries.

We still hear constantly ‘of course it’s hot, it’s summer’, ‘droughts have always been with us’ or ‘we’ve always had rain this time of year’. However we are starting to hear more from people in towns and cities or on farms that they’ve never previously seen or heard of anything like the disasters they’re now experiencing. It’s time for ordinary people across NSW who are impacted by unprecedented rain intensity, drought, heat or cold to be given a platform to speak about ever worsening climate impacts on their homes, livelihoods and physical and mental health. They need to speak to their communities and colleagues about why renewable energy and associated infrastructure is so urgent.

In the Illawarra we have a proposed offshore wind farm which, if it goes ahead, will in future years support local heavy industry as well as domestic renewable energy needs. The virulent opposition to the proposal has been shocking, with unscientific stories of pristine ocean views being spoilt, whales dying, fraudulent submissions against the proposal, the decimation of the local fishing industry and many more. The Commission could learn from the local grass roots group Good for the Gong¹⁰ and its many supporting groups as to how these myths can be addressed, and respect for science be restored.

There could be more media stories about the different options available to accelerate renewable infrastructure, for example, the deployment of renewable energy microgrids across regional Australia¹¹ is improving energy security, reliability, equity and emissions reduction. Microgrids offer a viable alternative to the national electricity grid¹², and are of particular importance for remote First Nations communities.

We need more avenues for young people, through groups such as the AYCC, to have their input into renewable generation and infrastructure. It is the children and future generations that will bear the full brunt of the impacts of climate change.

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?

Preventing deforestation and land clearing, encouraging the planting of trees and shrubs and promoting the benefits of carbon farming appear to be appropriate actions to take across NSW.

¹⁰ <https://goodforthegong.org/>

¹¹ <https://arena.gov.au/funding/RMP/>

¹² <https://theconversation.com/heres-how-microgrids-are-empowering-regional-and-remote-communities-across-australia-228364>

Large scale replanting of vegetation could be further encouraged and funded. Land clearing increases the runoff of sediment, nutrients and other pollutants from agricultural land into coastal waters. Human activities such as overgrazing can make the soil much more susceptible to wind erosion. Once activities like deforestation or overgrazing have eroded the topsoil away, nothing can replace it naturally. Even if local groups or communities take land management measures afterwards to prevent further damage, it will still take years to decades before any significant recovery occurs. Poor quality soil means lower soil carbon stores and reduced crop production.¹³ In Australia we have the third-highest amount of soil carbon loss in the world, mostly due to land-use change.¹⁴

We could look at tree planting as a way of fighting climate change. Trees take up carbon from the atmosphere and store it. A study published back in 2017 reported the results of a computer model of global vegetation to determine how large biomass plantations would need to be to hold the increase in global average temperature below 2° C under different emissions scenarios. The sheer scale of biomass plantations that would be required to meaningfully mitigate our carbon dioxide emissions would likely involve unbearable human or environmental costs.¹⁵ However every tree or shrub which is planted is a positive action.

It has been known for many years that changes to land management can also play a crucial role in increasing soil organic carbon. Some of these practices are grazing management, optimising the intensity of grazing, cover crops such as green manure, increasing the frequency or duration of pastures in a cropping rotation, adding carbon-rich materials such as compost, manure or biosolids, eliminating or reducing mechanical cultivation of the soil, stubble retention, and restoring degraded sites.¹⁶ Farm animal feed additives and other practice show promise for reducing methane emissions. We could not find any data on the number or percentage of farmers in NSW practicing carbon farming.

Question 15: What short to medium term measures could be prioritised to address the systemic challenges regarding waste generation and resource recovery?

The Commission could take short to medium measures including working with manufacturers to reduce packaging, and with government to massively increase the number and capacity of recycling facilities, which are linked to business which will buy recycled products for various uses. The Commission could encourage markets for recycled products.

Circular Plastics Illawarra notes that increasing the circularity of plastics is essential in meeting our climate change goals. Energy efficiency and renewable energy will only address around 55% of global greenhouse gas emissions. To reach net zero, we also need to change the way we make and use products, materials, and food. A circular economy for plastics

¹³ <https://www.erizon.com.au/what-is-soil-erosion/>

¹⁴ [https://www.bushheritage.org.au/what-we-do/our-challenge/land-](https://www.bushheritage.org.au/what-we-do/our-challenge/land-clearing?srsltid=AfmBOopwT9JlvM7zlwXlpbwwUD6DstyQ5MZui9icWNYP6ScDiHydeqh__)

[clearing?srsltid=AfmBOopwT9JlvM7zlwXlpbwwUD6DstyQ5MZui9icWNYP6ScDiHydeqh__](https://www.bushheritage.org.au/what-we-do/our-challenge/land-clearing?srsltid=AfmBOopwT9JlvM7zlwXlpbwwUD6DstyQ5MZui9icWNYP6ScDiHydeqh__)

¹⁵ [https://www.anthropocenemagazine.org/2017/05/we-cant-possibly-plant-enough-trees-to-stop-climate-](https://www.anthropocenemagazine.org/2017/05/we-cant-possibly-plant-enough-trees-to-stop-climate-change/?utm_source=google&utm_medium=cpc&utm_campaign={campaignname}&utm_term=&utm_content=713435553260&gad_source=1&gad_campaignid=1618338427&gbraid=0AAAAADqM5AF1WRBKqlM30tfGmNeM2pczG&gclid=EAlalQobChMI98qAql6qjgMVX9QWBR1DIQf2EAAYASAAEgKwlfD_BwE)

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¹⁶ NSW Government. Local Land Services. TEN WAYS to build soil carbon. 2021.

helps firstly by reducing consumption, which reduces greenhouse gas emissions across the whole value chain. Secondly, circulating plastic products through reuse or recycling retains their embodied energy.¹⁷

At Shoalhaven City Council's plastics recycling facility in West Nowra, expanded polystyrene is granulated, melted into blocks and sold to a recycler. Soft plastics including textiles are mixed with glass fines to manufacture into tiles and other products.¹⁸ Recycled plastics are transformed into pellets which can be incorporated into road base.

Recycling wind farm turbines and solar panels

In addition to the need for more recycling across all consumer goods, IKNAG sees an urgent need to look at the recycling of wind turbine blades and solar panels. The time to address this is right now. These are emerging technologies which require immediate funding.

For example, researchers at the University of Sydney have developed new ways to recycle carbon fibre composites used in turbine blades (and aeroplanes, construction etc.) Thermal recycling methods as well as the use of solvents can reclaim carbon fibre to contribute to local manufacturing opportunities.¹⁹

Vestas Australia is a subsidiary of a Danish company that designs, manufactures and installs wind turbines across the world.²⁰ Vestas is seeking approval for a 2.5 GW wind farm 40 km from Hay in NSW. This project would include over 340 turbines and two big batteries.²¹ In 2023 Vestas released a newly discovered chemical technology that can be applied to blades currently in use. This process can chemically break down epoxy resin into new materials. Vestas will now focus on scaling up the chemical disassembly process into a commercial solution. When finalised, the solution will signal the beginning of a circular economy for all existing and future epoxy-based turbine blades. It has the potential to produce new turbine blades made from reused materials.²² Blade fill already in landfill can be broken down and reused.²³

Recycling of solar modules in Australia is still in its infancy, with only a handful of recycling facilities available nation-wide. Experts from the University of NSW say there's a lot to learn from European countries, who are far ahead of us in addressing the problem. Countries in

¹⁷ <https://www.circularplasticsillawarra.org/>

¹⁸ <https://www.circularplasticsillawarra.org/>

¹⁹ The University of Sydney. The looming 840,000 tonne waste problem that isn't single-use plastics, July 2023, Dr A Hadigeh, Dr Y Wei.

²⁰ Vestas Asia Pacific. Vestas successfully develops Lotus Creek Wind Farm in Australia and secures 285 MW order from CS Energy, 15 August 2024.

²¹ Renew Economy. Danish wind giant unveils plans for 2.5 GW wind and 4 GWh battery in NSW, 1 November 2024, S Vorrath.

²² WINDING UP: DECOMMISSIONING, RECYCLING AND WASTE MANAGEMENT OF AUSTRALIAN WIND TURBINES, Clean Energy Council, April 2023, K Thornton & M Barnett.

²³ Vestas. News release Vestas unveils circularity solution to end landfill for turbine blades. 8 February 2023.

Europe have built prototypes to separate out silver and other components, and have several pilot lines to test the feasibility.

In Australia we're still waiting for the waste bomb that is predicted when all these solar panels come to the end of their life. If nothing is done, we will reach the point where there won't be enough landfill to dispose of PV modules – nor will there be enough resources to build them.²⁴

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?

One of the most dangerous impacts of the severe flooding that occurred in Wollongong in April 2024 was the inadequacy and lack of maintenance of storm water infrastructure. This resulted in flooding and pollution. Replacing concrete stormwater channels with vegetated, more natural structures can reduce how fast the water flows as well as reducing pollution.

In most systems stormwater systems in Australia, overflows from sewerage systems may become part of stormwater flows. In many Australian cities stormwater runoff is seen as a nuisance to be disposed of as quickly as possible. Urban drainage systems have often been developed to minimise the risk of flooding, without consideration of other values such as resource conservation, environmental quality, public safety, and amenity. A new approach to stormwater management is needed - an approach that addresses issues of storm water quality and aquatic ecosystem health, as well as stormwater quantity. We need an approach that recognises the environmental impacts of urbanisation, community values, the links between land and water management, and community involvement.²⁵

Vegetation is also important along non-metropolitan rivers and streams. Removing vegetation can exacerbate the impacts of flooding – one of the most costly natural disasters in NSW and the country. It can cause the water to flow faster downstream, and contribute to lowland erosion.²⁶

Wollongong Library was considering opening its doors for homeless people during heat waves. More generally Councils could consider such public spaces as refuges in extremely hot or cold weather.

²⁴ <https://www.unsw.edu.au/newsroom/news/2023/06/Repair-reuse-and-recycle-dealing-solar-panels-end-their-useful-life>

²⁵ Commonwealth of Australia, National Water Quality Management Strategy Australian Guidelines for Urban Stormwater Management 2000

²⁶ https://www.bushheritage.org.au/what-we-do/our-challenge/land-clearing?srsId=AfmBOopwT9JlvM7zlwXlpbwwUD6DstyQ5MZui9icWNYP6ScDiHydeqh_

Again our thanks for the opportunity to provide a submission. If the Illawarra Knitting Nannas Against Greed can provide any further information, please don't hesitate to contact us.

Kind regards

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