

Draft NSW Climate Change Policy and draft Action Plan 2022-2025

Submission by the Australian Air Quality Group (AAQG)

To: climatechange.review@epa.nsw.gov.au

Thank you for the opportunity to comment on the Draft NSW Climate Change Policy and draft Action Plan 2022-2025. The Policy and Action Plan contain some very good proposals, which could be made even better by adopting the suggestions set out below.

There is great community concern about the impacts of global warming, as demonstrated in the Armidale Region by [Council's Climate Emergency Declaration](#) and the legal action by the community confirming that the EPA has [a duty to develop environmental quality objectives, guidelines and policies to ensure the protection of the environment in NSW from climate change](#).

Australia's warming from 1910-2019 was 1.44C according to a [CSIRO study in 2020](#). [It has also been noted that](#): "exceeding 1.5 degrees of warming means that we will lose the Great Barrier Reef, have widespread and sustained drought, more extreme weather events, and catastrophic bushfires will become the norm."

Incorporating the suggestions below into the EPA's Climate Action Plan, could help avoid some of the most damaging and disastrous impacts of Global Warming.

Summary of Key Points to improve the Action Plan

- Ensure climate impacts are reported over 20 years, as well as 100 years, to help people understand that CO₂ accounts for only about half of global warming, and why we need to tackle the other 50% to avoid climate tipping points
- Prioritise strategies, such as reducing SLCP emissions, that will have with the greatest benefits in slowing the global temperature rise and avoiding climate tipping points
- Consider Community Representation on the EPA Board
- Formally recognise the polluter-pays principle as a key principle of ecologically-sustainable development
- Use funds raised from the polluter-pays principle to reduce pollution, e.g. subsidies to improve energy efficiency in homes and replace wood and gas heating with efficient heat pumps/reverse cycle air-conditioners (EHP/RAC)
- Note the co-benefits of replacing wood heaters with EHP/RAC amount to thousands of dollars per year for every wood heater replaced.
- Gain social licence for NSW's Renewable Energy Zones (REZ) by developing generous community benefit-sharing schemes
- Include low-cost renewable electricity as a community benefit to residents of REZ
- Develop innovative network tariffs as another benefit to REZ residents
- Set out a strategy to 'Electrify Everything'
- End unprofitable, environmentally-damaging, logging of NSW native forests

1. Report Climate Impacts over 20 years, as well as 100 years to help people understand that CO₂ accounts for only about half of global warming and why we need to tackle the other 50% to avoid climate tipping points

[Global temperatures are likely to exceed 1.5 degrees Celsius over preindustrial levels by 2035](#) and 2°C by 2050 and substantially increase the risk of passing climate tipping points if the focus is merely on reducing CO₂ emissions without equal consideration of the [half of global warming caused by substances other than CO₂](#)

The Climate and Clean Air Coalition also argue that the [best path to net zero is to cut Short-lived Climate Pollutants \(SLCP\)](#).

A study published in the prestigious journal [PNAS](#) explains that the best way to slow the global temperature rise and avoid passing climate tipping points is to simultaneously devise strategies targeting CO₂ and non-CO₂ pollutants like methane, black carbon, hydrofluorocarbons (HFC), tropospheric ozone and nitrous oxide.

The simplest way to simultaneously devise strategies to target CO₂ and non-CO₂ pollution is to calculate the impact of emissions over 20 years (the critical time period in which we are likely to exceed 1.5 degrees), with a view to minimising the impacts over 20 years, as well as 100 years.

2. Prioritise strategies, such as reducing SLCP emissions, that have the greatest benefits in slowing the global temperature rise & avoiding climate tipping points

Methane and black carbon are known as short-lived climate pollutants (SLCP) because they remain in the atmosphere for much shorter periods of time than CO₂. Consequently, reducing methane and black carbon emissions has a much greater immediate impact to slow global warming over the next 20 years (the critical time period in which we are likely to exceed 1.5 degrees) than reducing CO₂ emissions and buy time to effect the transition to 100% renewable energy and develop cost-effective measures to reduce atmospheric CO₂ levels without passing a climate tipping point.

The EPA has two good strategies to address SLCPs:

Continuing action 7: 'Ensure methane emissions from EPA-licensed onshore-gas operators are minimised; review existing leak detection and repair programs'

Continuing action 8: 'Regulate short-lived climate pollutants from our licensees'

The most effective approach, consistent with the wishes of the public, would be to devise a strategy to reduce all sources of SLCP emissions, including phasing out domestic gas and wood burning by providing incentives to switch to clean, efficient, heat pumps (EHP), also called reverse cycle air-conditioners (RAC).

3. Consider Community Representation on the EPA Board

The [successful court case against the EPA by climate action group, Bushfire Survivors for Climate Action](#), suggests that the EPA has become out of touch with the community and the environmental concerns that the EPA was set up to protect. The EPA should therefore seek community representatives on its Board to create a wider understanding of what needs to be done to protect the environment and respond to the sentiments of the community.

4. Formally recognise the polluter-pays principle as a key principle of ecologically-sustainable development

An essential way to protect the environment and devise the best strategies for the entire community, is for the Action Plan to formally recognise [the polluter pays principle as a key principle of ecologically sustainable development](#)", as confirmed by NSW Land and Environment Judge [Brian Preston](#).

Polluters should not profit from creating pollution at the expense of the community. The EPA's Policy should embrace the polluter-pays principle and the Action Plan should include an additional chapter on the potential to use the polluter pays principle to mitigate and offset the costs of polluting activities and the benefits of providing funds to implement additional measures to reduce emissions and protect our health.

5. Use funds raised from the polluter-pays principle to reduce pollution, e.g. subsidies to improve energy efficiency in homes and replace wood and gas heating with efficient heat pumps/reverse cycle systems (EHP/RAC)

The Victorian Government provides subsidies to households earning less than \$90,000 per year who wish [to improve energy efficiency](#) and [replace wood or gas heating with efficient reverse cycle systems](#).

Victoria's Home Heating and Cooling Upgrades Program has multiple benefits for a relatively low cost, aiming to *"increase the comfort, wellbeing and health of vulnerable Victorians while also creating new jobs and tackling climate change."*

Implementing a similar scheme in NSW, funded by a modest polluter-pays tax, would create considerable benefits for NSW, including reduced global warming and reduced heating bills for vulnerable Australians in these difficult times. The Energy Ratings database for EHP/RAC shows that 3 cold-climate-star units can deliver 4.5 times as much heat to the home as they use in electric power, averaged over a typical cold-climate winter. This makes them very cheap to run compared to older models, even if after the predicted electricity price rises. More importantly, there is no social licence for companies already making tremendous profits to make even more profits by hiking electricity prices in Australia. Those price increases will not happen if the government [heeds the advice of former ACC boss Rod Sims](#).

6. Gain social licence for NSW's Renewable Energy Zones (REZ) by developing generous community benefit-sharing schemes

The key to a successful Renewable Energy Zone (REZ) Strategy is to encourage developers in REZ to offer generous community benefit-sharing schemes and work with local councils, as well as Essential Energy (the government-owned distributor), to provide low-cost renewable power to residents.

Experience overseas shows that high quality consultation, combined with generous community-benefit schemes is the best way to gain social licences for renewable energy developments.

Finding the best ways to protect the environment, preserve visual amenity and share the benefits with local communities will help create the social licence needed to achieve the NSW Government's objective of ensuring everyone in NSW benefits from sustainable, renewable energy.

7. Note the co-benefits of replacing wood heaters with EHP/RAC amount to thousands of dollars per year for every wood stove replaced.

There is increasing recognition that wood heaters [speed up global warming as well as damaging our health](#), particularly when [the climate impacts of methane, black carbon and carbon monoxide emissions are considered](#).

The [draft NSW Clean Air Strategy](#) attributes 42% of population-weighted exposure to PM_{2.5} pollution in Sydney to wood heaters, despite only a small proportion of households using wood as main heating. Estimated health costs of wood heating vary from over [\\$10,000 per heater per year in Armidale, NSW](#), to [\\$13,860 per heater per year in the Sydney Metropolitan Area](#).

The draft Action Plan mentions the co-benefits of improved air quality and health by switching from fossil fuels to renewable. The benefits of switching from wood heating to renewable electricity, which include less global warming, and substantially less harmful air pollution, should also be mentioned.

8. Make low-cost renewable electricity one of the benefits to residents in REZ

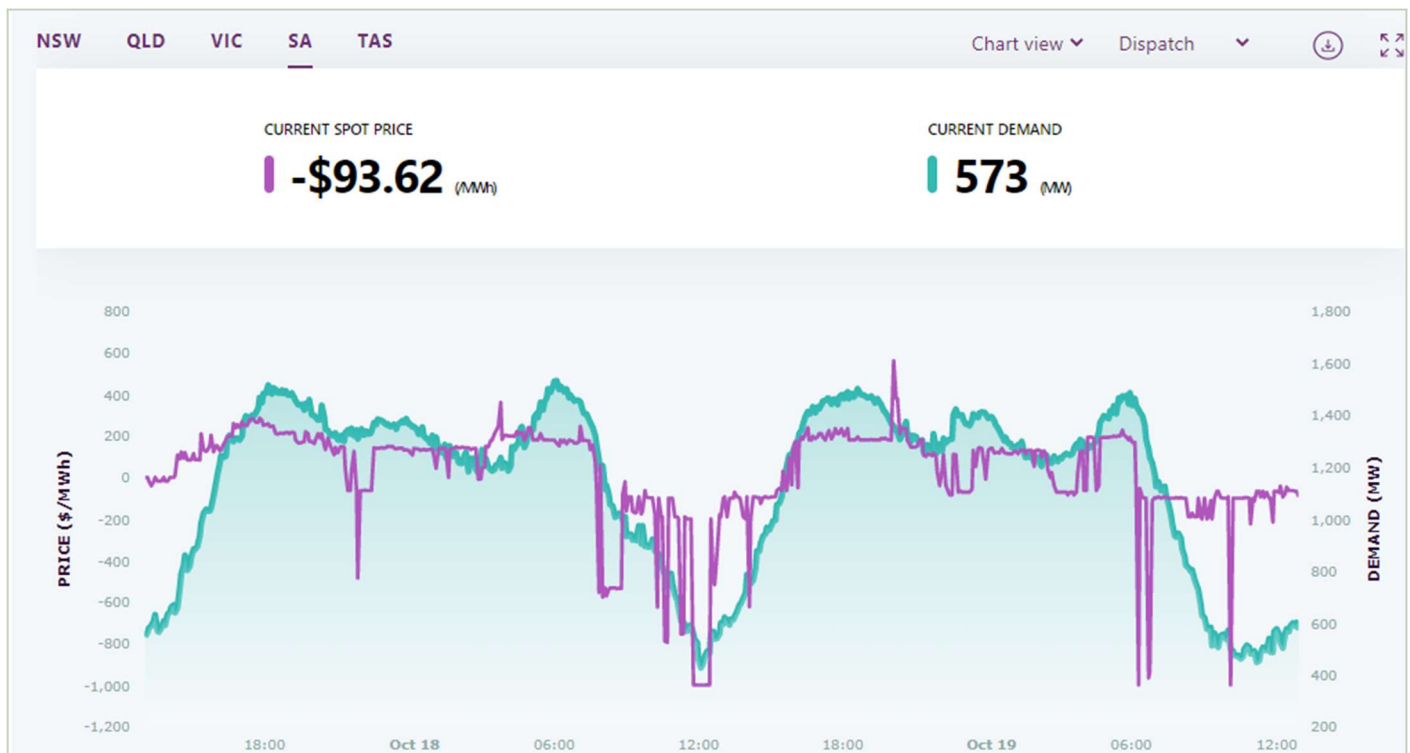
The New England Renewable Energy Zone (NE REZ) was expected to attract [\\$10.7 billion of private sector investment](#) and generate electricity worth over \$32 billion, at 2021 electricity prices.

With 4 times as many expressions of interest as the available 8 GW of transmission capacity planned for the NE REZ. More importantly, developers are likely to aim for maximum benefits from their transmission allocation, so will probably oversize generation. One estimate is that [16 GW of generation](#) will be installed to maximise the 8 GW of transmission.

If substantially more than 8 GW of generation is installed, there will be many days when generation exceeds the capacity of the transmission link to the Hunter Valley. Surplus solar and wind generation will have to be turned off, unless the surpluses can be stored or used locally. Current storage proposals (Oven Mountain, some batteries, and options for pumped hydro near Walcha) might not be enough to use up the surplus in the near term.

The graph below shows wholesale electricity prices in South Australia on 19 Oct 2022, when the spot price was negative (-\$93.63/MWh), implying that generators supplying the wholesale market had to pay

for their power to be used. When practical, solar and wind farms will switch off (and waste energy) when prices are negative, but the long periods of negative prices in SA, occasionally down to the market floor of -\$1,000 shows the potential benefits of making better use of surplus power.



Just as the ACT Government negotiated a good deal that [now provides Canberra residents with cheaper renewable power than currently available on the wholesale market](#), the NSW Government, and Energy Co (the NSW Government agency leading the delivery of the REZ), should work with local councils to negotiate with developers/gentailers and Essential Energy (the government-owned distributor) to provide low-cost renewable power to local residents. The average wholesale price from midnight to midnight in SA on 18 Oct 22 was \$4.42 per MWh (0.044 cents/kWh).

9. Develop innovative network tariffs as another benefit to REZ residents

EnergyCo could have an important role in ensuring the local community enjoys the benefits of surplus renewable power

One possible way to reduce dependence on coal-fired power and soak up surplus daytime power would be to work with Essential Energy to encourage a switch to daytime water heating. Many houses have controlled-load systems that were set up to take advantage of formerly cheap overnight coal-fired power. Changing the switching mechanism to use surplus low-cost renewable daytime power might represent a highly effective mechanism to reduce dependence on coal-fired power and also speed up the transition to 100% renewable. For off-peak meters with [ripple-control signals](#), it might be possible to use the same meters and household wiring, if energy retailers supported the change, suggesting this improvement might be effected at minimal cost.

Low-cost renewable power could also encourage more people to switch from buying firewood, using radiant electric heating, or unhealthy unflued gas heating, to clean, renewable heating, and also consider purchasing electric vehicles. To take advantage of surplus solar generation, in July 2020, South Australia Power Networks introduced a 'solar sponge' tariff, [a quarter of the price of the normal network tariff](#), from 10 am to 3 pm.

By contrast, Essential Energy's current residential charge is lowest for overnight controlled load power (2.8 c/kWh, incl GST), much of which comes from coal-fired stations, compared to 12 to 14 cents for weekday daytime power. A 'solar sponge' tariff is, however, being considered. Involving Essential Energy in the discussions, as well as the local MPs, could therefore yield the best results.

Government-owned electricity networks have a moral obligation to act in the public interest and set fair network charges that encourage surplus power to be used and not wasted. As well as demand management and innovative network tariffs, options include strategically-placed batteries to reduce bottlenecks in the network.

Residents of REZ would benefit greatly from community education programs to empower them to save money by improving energy efficiency and practices and asking retailers to install smart meters to allow them to take advantage of low-cost renewable power when it is available. As noted above, subsidies for energy efficiency improvements (such as the [Victorian Government's subsidies to replace wood, gas and radiant electric heaters with reverse cycle](#)) represent one of the best ways to maximise climate benefits for available resources.

10. Set out a strategy to 'Electrify Everything'

A major concern in the current Action Plan is Figure 4 showing almost zero emissions from electricity, but proportionately high emissions from transport and stationary energy excluding electricity. Yet Dr Saul Griffith's '[Electrify Everything](#)' strategy would allow households to be climate neutral and save a few thousand dollars every year. 'The EPA's Action Plan needs to include a strategy to provide subsidies and community education on the potential savings to residents to ensure this happens.

11. End unprofitable, environmentally-damaging logging in NSW native forests

The NSW-owned Forestry Corporation suffered a \$20 million loss last year, with [NSW taxpayers forced to pay \\$441 per hectare to log critical native forests](#). Australian researchers are also advise that it will be [essential to stop native forest logging to achieve net zero. "Forests are more flammable for up to 70 years after they are logged and regenerated, with the increased fire risk adding further to global warming."](#)

Ending unprofitable, environmentally-damaging logging of NSW native forests is therefore a win-win-win situation that will save money, help save the climate, and also help reduce the risk of fires and associated health-damaging smoke pollution.