



Submission on the New South Wales Protection of the Environment Operations Amendment (Clean Air) Bill 2021

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Thank you for the opportunity to comment on the *Protection of the Environment Operations (Clean Air) Regulation 2022*.

About the Centre for Air pollution, energy and health Research (CAR)

[CAR](#) is a Centre of Research Excellence funded by the National Health and Medical Research Council. The centre brings together more than 30 researchers at the forefront of their fields, based in seven of Australia's leading universities. CAR is the only group of its kind nationally to bring together researchers focusing on health impacts of air pollution, and new versus traditional forms of energy. Our centre's vision for a healthier community is the driving force behind our research.

Summary

We welcome any moves that reduce the exposure of NSW residents to pollutants and support changes in the Protection of the Environment Operations (POEO) Regulation to:

- Extend by 30 days the period of supply of lower volatility petrol to reduce ozone formation (part 4 of the Act)
- Introduce more stringent emissions standards for activities associated with older operations and premises (part 5 of the Act)
- Require stricter emission limits for volatile organic liquids in storage tanks, loading plant and tank vehicles (part 6 of the Act).

However, we remain concerned by other parts of the POEO Regulation which do not go far enough to protect the health of NSW residents. Our concerns centre around two areas:

1. The use of the National Environment Protection (Ambient Air Quality) Measure to regulate emissions; and
2. Domestic solid fuel heater smoke.

No 'safe' level of air pollution

As stated in the POEO Regulatory Impact Statement the goals of the framework used to manage air quality in NSW is to "improve regional and local air quality by meeting the air quality standards set out in the National Environment Protection (Ambient Air Quality) Measure (Air NEPM)".

However, the scientific evidence shows that health impacts from air pollutants including particulate matter occur well below the NEPM levels. In other words, there is no 'safe' level of air pollution exposure in terms of human health. Using the NEPM for regulatory purposes provides a licence for polluters to pollute up to these standards rather than protect the health of NSW residents.

Instead of the use of standards, a continuous emissions reduction framework should be introduced. For further information see [CAR's paper outlining such a framework](#).

While this development of this framework is underway, we propose that the NEPM standards be aligned with the World Health Organization's air quality guidelines which for most pollutants are now lower than the NEPM. For further information see CAR's [federal election priorities](#).

Domestic solid fuel heater smoke

In relation to domestic wood heaters, we hold serious concerns that the draft POEO Regulation is insufficient to address the health burden of domestic wood heaters in both the GMR and Sydney regions.

As highlighted in the NSW Clean Air Strategy Consultation Paper, residential wood heating is by far the largest source of anthropogenic fine particulate matter (PM_{2.5}) in Sydney and the second largest source in the GMR. Researchers affiliated with CAR have estimated that in the GMR of NSW, long-term exposure to PM_{2.5} from wood heaters causes 100 deaths per year. This is more than deaths from PM_{2.5} exposure originating from power stations (45 deaths) and traffic pollution (72 deaths).¹

The Regulatory Impact Statement assumes that "emissions will continue to fall as old heaters are replaced" presumably with new heaters adhering to AS/NZS Standard 4012 and Standard 4013. However, we are concerned that maintaining 'business as usual' (Option1) in the proposed regulation by focusing simply on adherence of wood heaters to these standards will have serious health impacts. This is because current standards do not reflect 'real world' wood heater operation. Research has shown that many factors affect how people use wood heaters and in turn how much air pollution is produced by them. That is, research has shown that while wood heaters in an idealised laboratory setting will adhere to the level of emissions specified by the standards, when people use these heaters in real life, emissions are much higher.

We are therefore calling on NSW EPA to repeal the existing regulation and replace with new regulations to introduce:

- 1) a ban of heaters in new homes in populated areas;
- 2) a wood heater replacement scheme with subsidies for less polluting forms of heating; and
- 3) the use of more stringent emissions standards for existing wood heaters.

¹ Broome RA, Powell J, Cope ME, et al. The mortality effect of PM_{2.5} sources in the Greater Metropolitan Region of Sydney, Australia. *Environ Int* 2020;137:105429. doi: 10.1016/j.envint.2019.105429 [published Online First: 2020/02/18]

These emissions standards should integrate research work done in New Zealand to reflect real world use of wood heaters (known as the Canterbury Method).

For further information see CAR's position paper on [reducing the health impacts of wood heaters in Australia](#).

For more information

This submission has been produced by the Centre for Air pollution, energy and health Research (CAR).

For more information about CAR and our work in the health impacts of air pollution: contact us at car@sydney.edu.au or visit our website: www.car-cre.org.au

