



NSW Parliamentary Inquiry into the Clean Air Bill (2021)

Submission Guide

Right now, the NSW Upper House is undertaking an inquiry into the proposed *Protection of the Environment Operations Amendment (Clean Air) Bill 2021* (Clean Air Bill).

The Clean Air Bill aims to significantly reduce the amount of nitrogen oxides, sulfur dioxide, particle matter and mercury that coal fired power stations can emit. The inquiry will investigate the issues addressed by the Clean Air Bill and make recommendations based on the evidence gathered.

The Clean Air Bill has been introduced to Parliament by Upper House Greens member Abigail Boyd. It is not a Government bill, so is unlikely to pass Parliament and become law. However, the inquiry process is an opportunity to shine a light on the unacceptable levels of pollution currently permitted and build momentum to fix the laws and protect public health.

Add your voice by making a submission to the inquiry **by Wednesday 30th June**.

Why should I make a submission to the inquiry?

We know air pollution is toxic and that coal fired power stations are the biggest source of controllable air pollution in NSW. Toxic emissions from coal fired power stations cause serious illnesses like heart disease, lung cancer and asthma. This health burden is concentrated in the Central Coast and Hunter Valley but extends to Sydney and beyond. Technology that can reduce pollution from coal fired power stations exists and is used widely in other countries. What is missing here is the political will.

Coal fired power stations can have devastating health impacts. This parliamentary inquiry is an important opportunity to highlight the benefits of reduced air pollution for the community. The inquiry will generate media coverage and strengthen the case for change. The inquiry is one way we can ensure parliament knows the community wants best practice air pollution standards.

Parliamentary inquiries are only as strong as the evidence they receive. It is important that the inquiry committee hears from a range of individuals and organisations. This includes everyday citizens as well as experts.

Submissions from people who are living with the impacts of air pollution are particularly valuable. Individual stories help put a face on the human cost of the Government's failure to properly regulate toxic emissions from coal fired power stations.

By sharing your lived experience, personal perspective and other relevant information, you influence the content covered by the inquiry, help move the hearts and minds of members of Parliament and ultimately influence recommendations and future policy.

Written submissions are just the first stage of the inquiry. By making a submission you may have the opportunity to appear at a hearing and talk to members of Parliament face-to-face.



How do I make a submission to the Inquiry?

Make your submission by completing the webform or uploading a document through the NSW Parliamentary website here:

<https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2812#tab-submissions>

Make your submission by Wednesday 30th June.

What should I include in my submission?

The committee will be interested in hearing from people with expertise or lived experience of the impacts of air pollution from coal fired power stations in NSW.

In your submission, we recommend you:

- Describe your experience of the impacts of air pollution from coal fired power stations
 - Do you live near a coal fired power station? If so, which one?
 - How does air pollution effect you, your family, or your community?
 - What does this impact look and feel like day-to-day?
- State that you support the proposed Clean Air Bill 2021 and the strict best practice pollution controls it would mandate.
- Explain how you, your family and community would benefit from less pollution from coal fired power stations.

Points you may wish to raise in your submission

Pollution from emissions from coal fired power stations impacts human health

- The most recent analysis of health impacts caused by coal fired power stations in Australia has found that they contribute to 845 babies being born with low birth-weight, 14,434 children with asthma, and 785 premature deaths each year.¹
- Children and older people are most vulnerable to the health impacts of air pollution.
- There is abundant evidence that fine particle exposure can cause adverse health effects and increased risk of death.² There is no lower threshold for these effects.³
- Nitrogen dioxide is strongly associated with childhood asthma and impaired lung development, which can lead to lifelong adverse health effects and premature death.⁴
- Long term exposure to sulfur dioxide, even at low concentrations, has been associated with cardiorespiratory mortality.⁵

The impact of air pollution is costly

- Not only does air pollution costs lives, but it costs the economy. The economic cost of premature death attributed to ambient air pollution in Australia has been estimated at up to AUD\$24 billion per year.⁶
- The health cost to the Australian economy from coal fired power stations alone is \$2.4 billion dollars annually.⁷



- In addition to adopting the Clean Air Bill, the Government should ensure the Load Based Licencing review is finalised as soon as possible and in a way that effectively internalises the health cost of pollutants emitted by coal fired power stations.

Australian air pollution standards are weak compared to many other countries

- Power stations in NSW are licenced to emit toxic air pollution at concentrations far greater than power stations in other jurisdictions. For several decades the US, EU, South Korea, China, Japan and other nations have required increasingly effective pollution controls for particle matter, nitrogen oxides, sulfur dioxide and mercury.
- Table 1 below indicates the difference in the emissions limits between NSW coal fired power stations and the limits that apply in international jurisdictions.

| | SO ₂ (mg/m ³) | NO _x (mg/m ³) | PM (mg/m ³) | Hg (ug/m ³) |
|-------------|--------------------------------------|--------------------------------------|-------------------------|-------------------------|
| China | 35 | 50 | 10 | 30 |
| Japan | 68.3 | 57.5 | 14.3 | 10 |
| South Korea | 142.5 | 102.5 | 10 | 50 |
| EU | 130 | 150 | 8 | 2.0/4.0 |
| US | 640 | 640 | 23 | 1.7/15.3 |
| NSW | 1700/1900 | 1100/1500 | 50 | 50 |

Table 1: emissions limits at NSW coal fired power stations compared to international jurisdictions

Technologies to reduce pollution from coal fired power station emissions are well established and should be standard practice

- Various forms of technology exist to reduce emissions from coal fired power stations such as:
 - wet scrubbers, or flue gas desulfurisation which can remove up to 99% of sulfur pollution and also remove mercury;⁸ and
 - selective catalytic reduction methods which can be added to power stations to reduce over 90% of oxides of nitrogen from emissions.⁹
- Emissions limits that apply to the NSW coal fired power stations must be reduced to force the power stations to install these best practice pollution reduction technologies.

No coal fired power station should be exempt from the standards proposed in the Clean Air Bill

- Under current legislation, some NSW power stations, such as Vales Point, are given an exemption from tougher air pollution emissions limits that would otherwise apply to them under the *Protection of the Environment Operations Act (Clean Air) Regulation 2010* (Clean Air Regulation).¹⁰ This means some station operators do not have to substantially improve pollution control technology as the power station get older, which is what certain provisions in the Clean Air Regulation are intended to achieve.¹¹



- The Clean Air Bill would go to ensuring that all coal fired power stations are required to install best practice pollution control technology regardless of their age.

References

¹ Dr. Aidan Farrow, Andreas Anhäuser and Lauri Myllyvirta, Lethal Power: How Burning Coal is Killing People In Australia (August 2020), pp 22-24. Available at:

<https://www.greenpeace.org.au/wp/wpcontent/uploads/2020/08/GPAP-Lethal-Power-full-report.pdf>.

² Dockery, Douglas W., et al., (1993) An Association between Air Pollution and Mortality in Six U.S. Cities, New England Journal of Medicine, 329(24): 1753-1759.

<https://www.nejm.org/doi/full/10.1056/NEJM199312093292401>; Krewski D., et al., (2005) Reanalysis of the Harvard Six Cities Study, part I: validation and replication. Inhalation Toxicology 2005 Jun-Jul;17(7-8):335-42. Available at: <https://doi.org/10.1080/08958370590929402U>

³ World Health Organization. Regional Office for Europe. (2006). Air quality guidelines global update 2005: particulate matter, ozone, nitrogen dioxide and sulfur dioxide. Copenhagen: WHO Regional Office for Europe. Available at: <https://apps.who.int/iris/handle/10665/107823>.

⁴ Knibbs, Cortés de Waterman, Toelle, Guo, Denison, Jalaludin, Williams. (2018). The Australian Child Health and Air Pollution Study (ACHAPS): A national population based cross-sectional study of long-term exposure to outdoor air pollution, asthma, and lung function. Environment International, 120, 394-403; Bowatte, G., Lodge, C., Knibbs, L., Erbas, B., Perret, J., Jalaludin, B., Dharmage, S. (2018). Traffic related air pollution and development and persistence of asthma and low lung function. Environment International, 113, 170-176; Gauderman WJ, Urman R, Avol E, et al. (2015). 'Association of improved air quality with lung development in children'. NEJM 2015;372;10:905-913.

⁵ Wang, X., Hu, W., & Tong, S. (2009). Long-term exposure to gaseous air pollutants and cardio-respiratory mortality in Brisbane, Australia. Geospatial Health, 3(2), 257-263.

⁶ See: Australian Institute of Health and Welfare (AIHW) (2016). Australian burden of disease study: impact and causes of illness and death in Australia 2011, AIHW, Canberra; Begg, S. (2007). The burden of disease and injury in Australia 2003, PHE 82, AIHW, Canberra; Access Economics (2008). The health of nations: the value of a statistical life, Australian Safety and Compensation Council, Australian Government Department of Education, Employment and Workplace Relations, Canberra.

⁷ Johnson, Chris et al, 'Costs of Negative Health Outcomes Arising from Air Pollution from Coal-fired Power stations', Actuaries Institute of Australia Annual Hackathon, 19 August 2020.

⁸ Leon Walker, Wet Scrubbing 'Most Versatile, Cost Effective Air Pollution Control, (21 January 2014) Environmental Leader. Available at: <https://www.environmentalleader.com/2014/01/wet-scrubbing-most-versatile-cost-effective-air-pollution-control/>

⁹ Clean Air Technology Center, Technical Bulletin: Nitrogen Oxides (NOx), Why and How They are Controlled (1999) United States Environmental Protection Agency. Available at: <https://www3.epa.gov/ttn/catc1/dir1/fnoxdoc.pdf>

¹⁰ The NSW EPA will be seeking submissions on the current exemption afforded to Vales Point in the near future. Please see further information here:

- <https://www.epa.nsw.gov.au/news/media-releases/2021/epamedia210210-media-statement-update-on-vales-point-power-station>;
- <https://www.nature.org.au/media-releases/2021/01/coal-power-should-not-be-above-the-law-on-clean-air/>

¹¹ *Protection of the Environment Operations (Clean Air) Regulation 2010*, cl 32-35.