



# Review of coal-fired power station environment protection licences

The NSW Environment Protection Authority  
**Asthma Australia response, November 2023**

## **ABOUT ASTHMA AUSTRALIA**

Asthma Australia is a for-purpose, consumer organisation that has been improving the lives of people with asthma since 1962. Asthma affects one in nine Australians or 2.7 million people. Asthma is an inflammatory condition of the airways, restricting airflow and can be fatal. There is no cure, but most people with asthma can experience good control.

Our purpose is to help people breathe better so they can live freely. We deliver evidence-based prevention and health strategies to more than half a million people each year. Asthma Australia has an ambitious goal to halve avoidable hospital presentations for asthma by 2030, with an initial focus on reducing preventable hospitalisations in children aged 5-9.

## SURVEY RESPONSE

### What do you think the EPA should consider in its review of licensing limits relating to coal fired power station licences?

Coal fired power stations produce a range of pollutants that are harmful to health, including particulate matter, nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>):

- The exposure to fine particulate matter (PM<sub>2.5</sub>) is of greatest concern as the tiny particles can penetrate deep into the lungs and directly pass into the bloodstream, causing systemic health impacts. People who have asthma and other respiratory conditions are particularly vulnerable to the negative impacts of PM<sub>2.5</sub> exposure, as are people with cardiovascular disease and diabetes, pregnant people, infants, children and older people.<sup>1</sup>
- NO<sub>x</sub> includes nitrogen dioxide, which can damage the human respiratory tract. As noted on the NSW Health website,<sup>2</sup> it can thereby increase for people with asthma the risk of lung infections, the susceptibility to asthma triggers like pollen and exercise, and asthma symptoms and attacks, while causing airway inflammation in healthy people. It can also increase the risk of developing asthma.<sup>3</sup>
- Exposure to sulphur dioxide can lead to narrowing of the airways causing shortness of breath, chest tightness and wheezing, more frequent attacks for people with asthma and the exacerbation of cardiovascular diseases (again as noted by the NSW Health website<sup>4</sup>).

Given their significant detrimental impact on human health, reducing the pollutants that coal-fired power stations produce should be the top priority for the EPA when setting emissions limits. The EPA should consider the World Health Organisation's updated (2021) air quality guidelines when setting emissions limits for these substances for coal-fired power stations, which for particulate matter, for example, are above the National Environment Protection Measures (NEPM).<sup>5</sup>

1. Centre for Air pollution, energy and health Research-CAR (2022). Bushfire smoke: what are the health impacts and what can we do to minimise exposure? Located online: <https://www.car-cre.org.au/bushfire-smoke-factsheet>
2. <https://www.health.nsw.gov.au/environment/air/Pages/nitrogen-dioxide.aspx>
3. <https://www.epa.gov/no2-pollution/basic-information-about-no2#:~:text=Health%20effects&text=Longer%20exposures%20to%20elevated%20concentrations,health%20effects%20of%20NO>
4. <https://www.health.nsw.gov.au/environment/air/Pages/sulphur-dioxide.aspx>
5. <https://www.who.int/news/item/22-09-2021-new-who-global-air-quality-guidelines-aim-to-save-millions-of-lives-from-air-pollution>

## **What do you think the EPA should consider in its review of monitoring conditions relating to coal fired power station licences?**

In relation to monitoring conditions, the EPA should consider: 1) the actions operators of the coal-fired power stations need to take, and 2) other actions needed to protect local communities affected by air pollution from coal-fired power stations.

### **1. Actions for coal-fired power stations**

Operators of coal-fired power stations in NSW should be required to:

- Employ the same technology that is used by coal-fired power stations in many other countries to reduce harmful pollutants.
- Publish all information and data on pollution levels in a timely manner so that the public can play its part in ensuring the operator is upholding high environmental standards.
- Engage with the local community so that they can have their say on future developments at the power station given its impact on their health and local environment.

In addition, it is not sufficient to simply monitor and report on air quality. There is a need for strong mechanisms to prevent non-compliance. NSW residents should be able to have faith in the air quality systems that the Government has developed to protect their health, and the absence of appropriate compliance processes in place means this is not the case.

### **2. Other actions**

The NSW Government should ensure that its air quality monitoring network covers all communities at risk of exposure from poor air quality. Currently, we know that there is a lack of air quality monitoring stations in many regional and rural areas that regularly experience bushfires. As the coal-fired power stations located in the Hunter Valley are responsible for a significant proportion of Sydney's NO<sub>x</sub> and SO<sub>x</sub> pollution, there needs to be more localised, air quality monitors, including low costs sensors, in regional and metropolitan communities affected by their pollution.

As a state, Tasmania has a more sensitive assessment for PM<sub>2.5</sub> concentrations at the lower end of the categories. That is, Tasmania has three categories ('Good', 'Fairly Good' and 'Fairly Poor') for PM<sub>2.5</sub> concentrations under 50µg/m<sup>3</sup> whereas other jurisdictions have two categories ('Good' and 'Fair') for the same concentrations.<sup>1</sup> For example, a PM<sub>2.5</sub> concentration of 25µg/m<sup>3</sup> would be categorised as 'Fairly poor' in Tasmania but 'Fair' in the rest of the states. The Tasmanian model is preferential as people with respiratory conditions, including asthma, are particularly sensitive to small fluctuations in air quality and therefore greater distinction at the lower end enables people to track air quality and take appropriate action to keep safe. The NSW Government should adopt this model.

Finally, climate plans should be added to the licenses to enable the EPA to add licence conditions on climate pollution. Conditions should include an end-date for carbon emissions, a maximum limit for them and a transition pathway to clean energy production, while maintaining energy security.

1. Tasmanian Department of Health, Air quality website. Located online:

<https://www.health.tas.gov.au/health-topics/environmental-health/air-quality>

**What do you think the EPA should consider in its review of reporting conditions relating to coal fired power station licences?**

N/A

**What else do you think the EPA should consider in its review of the *Vales Point* power station licence?**

The EPA has been granting exemptions for some emissions to the Vales Point power station for the last decade. The exemptions that Vales Point power station has been allowed means it pollutes more nitrogen oxides (NO<sub>x</sub>) than it would otherwise be allowed to under NSW law. This includes nitrogen dioxide, which as noted on the NSW Health website,<sup>1</sup> is particularly harmful to people with respiratory conditions, including asthma, as it damages the human respiratory tract. It is simply not acceptable given the risk to the health of the local community, and particularly to those residents vulnerable to NO<sub>x</sub>, that Vales Point coal mine should be granted any further NO<sub>x</sub> exemptions.

1. <https://www.health.nsw.gov.au/environment/air/Pages/nitrogen-dioxide.aspx>