Public consultation on the NSW Clean Air Regulation 2022

Bathurst Community Climate Action Network (BCCAN) is a body of 300 members. We are greatly concerned about the proposed NSW Clean Air Regulation 2022 and argue for stronger emission regulation from September 1.

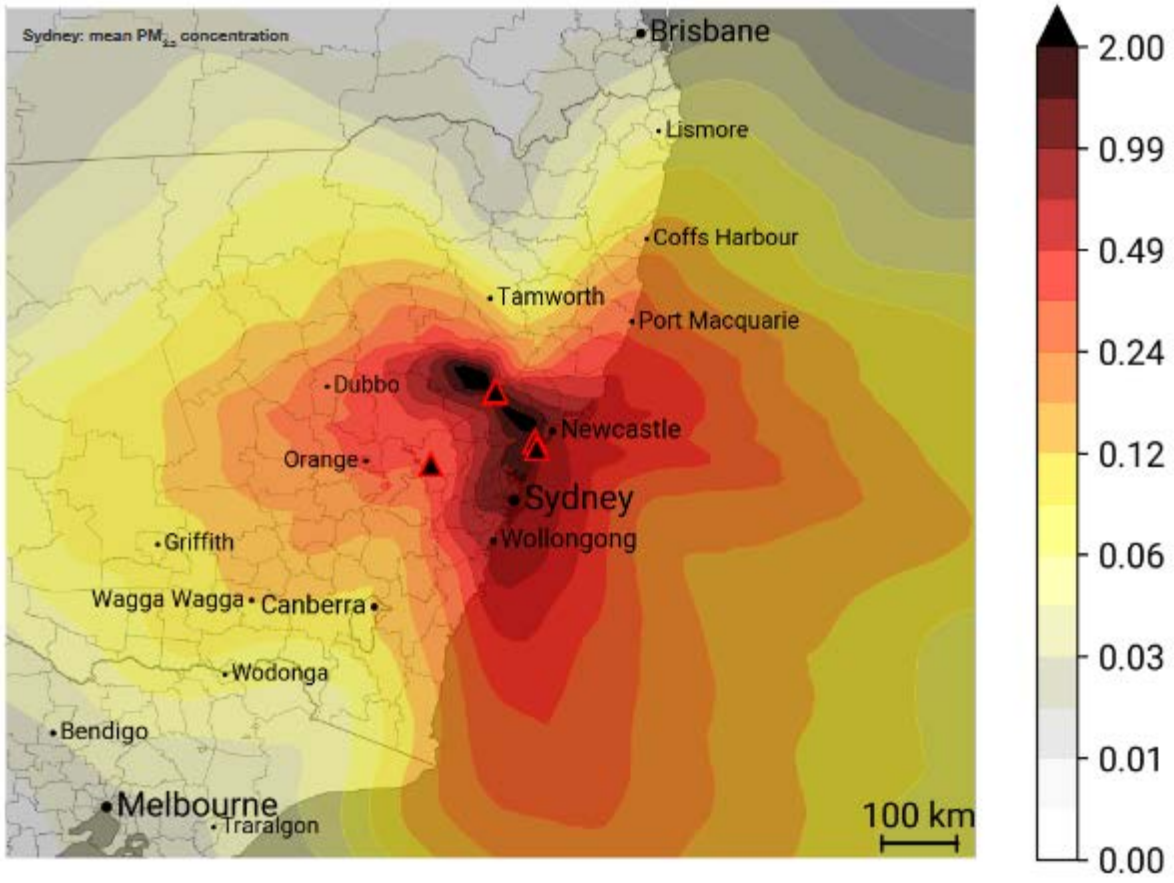
Vicinity

The edge of Bathurst, a city of over 45,000 people, is less than 40 km from Mount Piper power station. Bathurst Regional Council boundary, and the village of Sunny Corner, are 14km from the Mount Piper smokestacks. Much closer are the towns of Portland, which has two primary schools only 5 km from the smokestacks, and Wallerawang - which has one primary school 6km from the smokestacks. The larger town of Lithgow, where about 20,000 people live 17km away, has three primary schools and two high schools.

Bathurst receives a significant amount of wind from the direction of Mount Piper; interpolating BOM data gives the figure of 8.6% of the time. (#1)

As shown below, there are 24 categories of emissions that Mount Piper power station must report. Because much of the emissions are not visible (#2), we suggest that their presence and potency are inclined to be unrecognised and thus underappreciated.

The illustration below, taken from Greenpeace's 'Lethal Power' (#3), gives a sobering image of how small particulate emissions from the Sydney power station group are heavily dispersed over a large swathe of our state's most densely populated areas.



The above image is of fine particulate matter or fine particles (PM2.5) emissions. (These) 'are solid particles smaller than 2.5µm. PM2.5 is a dangerous air pollutant which - due to its small size - can pass deep into lungs, hearts and veins, infiltrating every part of the human body. Chronic exposure to PM2.5 increases the risk of cardiovascular and respiratory diseases, as well as of lung cancer.' (#3)

'Despite extensive epidemiological research, there is currently no evidence of a threshold below which exposure to particulate matter does not cause any health effects.' (#4)

In the figure, the red triangle to the east of Orange is Mount Piper Power Station. Bathurst is close to halfway between Orange and Mount Piper. The pollution from Mount Piper, as shown below, is taken from the National Pollution Inventory, 2020/2021.

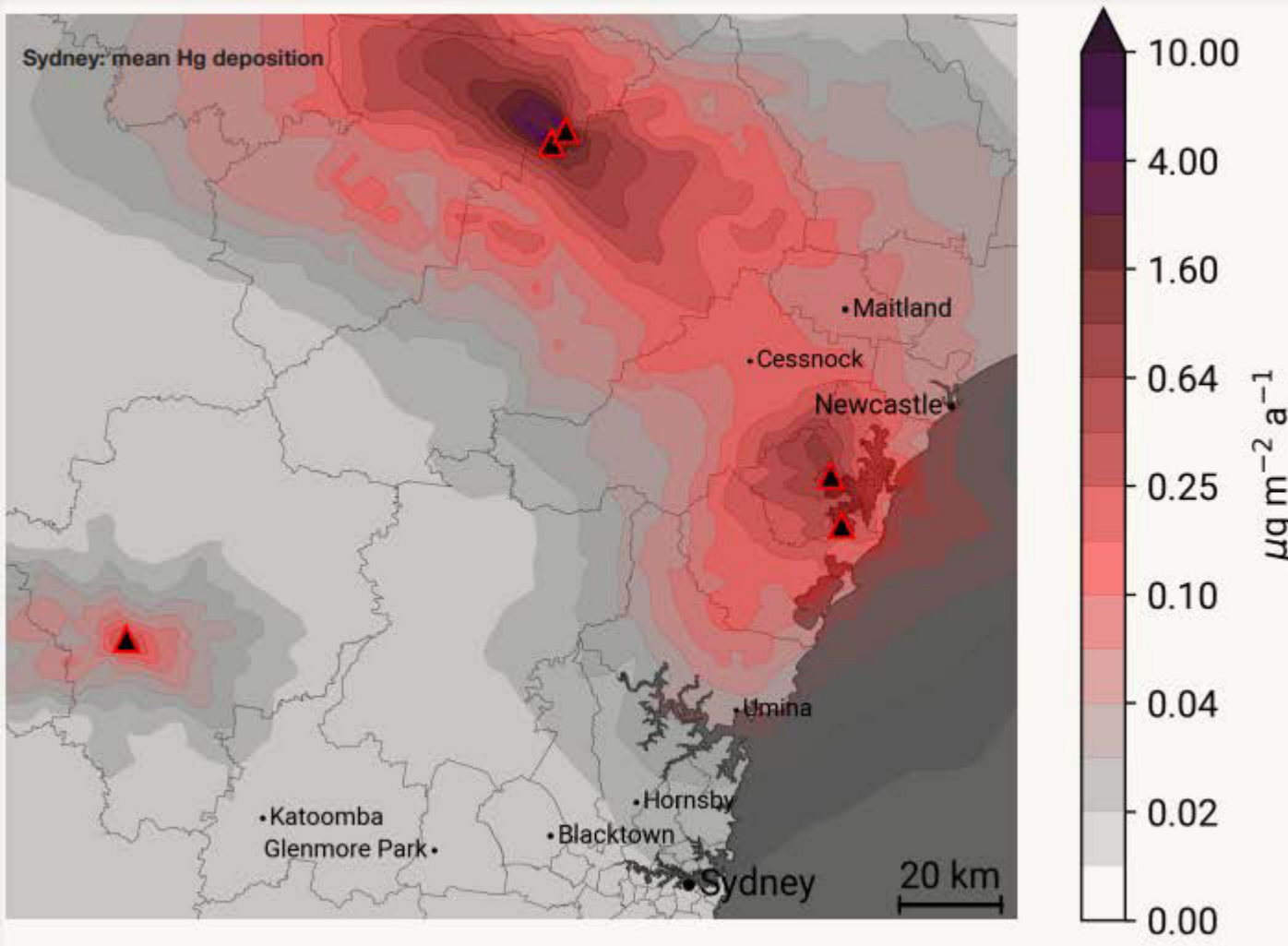
Substance	Air Total (kg)[1][2]		Air F
Arsenic & compounds		12	
Beryllium & compounds		3.4	
Boron & compounds		29,000	
Cadmium & compounds		5.0	
Carbon monoxide	equals 730 tonnes	730,000	
Chromium (III) compounds		37	
Chromium (VI) compounds		0.65	
Copper & compounds		16	
Cumene (1-methylethylbenzene)		9.3	
Fluoride compounds		140,000	
Hydrochloric acid		460,000	
Lead & compounds		34	
Manganese & compounds		80	
Mercury & compounds		17	
Nickel & compounds		110	
Oxides of Nitrogen	49 tonnes/day avge	18,000,000	
Particulate Matter 10.0 um	equals 150 tonnes	150,000	
Particulate Matter 2 5 um	equals 47 tonnes	47,000	
Polychlorinated dioxins and furans (TEQ)		0.000015	
Polycyclic aromatic hydrocarbons (B[a]Peq)		29	
Sulfur dioxide	equals 29,000 tonnes	29,000,000	
Sulfuric acid	equals 270 tonnes	270,000	
Total Volatile Organic Compounds		89,000	
Zinc and compounds		130	

From #5.

One emission is 'Mercury ... a potent neurotoxin that can cause severe health problems, even at very low doses, and poses serious risks to the cognitive and neurological development of children. The WHO considers mercury to be one of the top ten chemicals of major public health concern. Coal

burning is a key source of mercury discharge into the environment globally. Once in the environment, mercury is a persistent pollutant.' (#3)

Our Bathurst region receives significant deposits. The black triangle in red placed bottom-left in the image below is Mount Piper; Bathurst LGA's border is the jagged line to the west of it.



The largest emission on the table, Nitrogen oxides 'have numerous impacts on human health, notably on the cardiovascular system and respiratory system, and they exacerbate symptoms of asthma, chronic obstructive pulmonary disorder, and other respiratory diseases.' A staggering average of 49 tonnes per day were put into the atmosphere from this power station.

Other submissions will surely detail more of the health impacts of other toxic chemicals, such as arsenic and lead.

Emissions from Australia's 22 coal-fired power stations are 'responsible for around 14,000 annual incidences of asthma attacks in children and young adults aged 5-19; for 850 cases of low birth weight, and 800 premature deaths a year.' (#3) This health burden is ongoing, obvious and expensive to the health system.

For decades, coal-fired power stations have been polluting. Liddell, the oldest of the five stations operating now, was commissioned in 1971-73. Logically, the accumulation of some pollutants may have been larger than the environment can safely absorb, and has likely trickled-down to impact the health of the environment that supplies our fish and grows our food.

Applying for exemptions

Provision in the present regulations allow for operators to apply for exemptions from higher standards. Delta Electricity has now obtained three exemptions for Vales Point Power Station, totalling a period of 15 years. This has set a precedent, and this means to evade upgrading a power stations to bring about higher standards has to be more carefully examined. Exemptions circumvent emission regulations. Meanwhile, the community suffers.

Indigenous perspective

We note with compassion, respect and strong agreement, as Taylah Gray, a young Wiradjuri woman said this week: 'Our ancestral lands are bleeding from ecological violence.' (#6) We hear their pain, recognise and agree with their desire to minimise damage to people and the ecological web that gives us life. It is Reconciliation Week.

State regulations

The present regulatory limits have not changed since 1997. Since that time, an increasing and much more detailed body of evidence has been amassed, evidencing the damage and deaths caused. Therefore, the standards proposed do not reflect the health-based evidence of safety. 'There are no safe levels of air pollutants. So, the more stringent the emission guidelines, the greater the potential public health benefit.'

In assessing setting the new emission concentration figures to be in place from September 1, we argue that the health costs borne by governments and the community of effects of coal-fired power generation be taken into account.

Although power station closures earlier than originally planned may eventuate, this reason should not excuse continued pollution and the imposition of health problems on the community.

Internationally

'Clean air is a basic human right.' (#7) The WHO's emission concentration standards are much higher, as do countries including the EU, China and Japan. Australia has lagged behind.

There are existing technologies that can reduce air pollution from coal fired power stations. These have been applied to many power plants overseas (#8). Best practice pollution reduction equipment should be installed.

Conclusion

Bathurst, along with much of NSW, bears the emissions of coal-fired power generation. It is largely preventable. We call on the EPA to make significant changes to the proposed regulations.

Following Greenpeace's advice to state governments, BCCAN requests that the EPA:

- significantly tighten emission limits in existing power stations equivalent to the lower atmospheric emission limit described by the European Industrial Emission Directive best available technique conclusions, until their closure.
- Ensure any load-based licensing or pollution fee schemes reflect the damage to human health and costs to the healthcare system caused by air pollution, to ensure these costs are no longer externalised by electricity generators.
- Adopt the advice of peak health organisations on the appropriate science-based values for ambient air quality standards for sulfur dioxide, nitrogen dioxide and ozone. (#3)

References:

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http://www.bom.gov.au/cgi-bin/climate/cgi_bin_scripts/windrose_selector.cgi?period=Annual&type=9&location=63005

#2. The Conversation, 'Why coal-fired power stations need to shut on health grounds' 28.11.2016 https://theconversation.com/why-coal-fired-power-stations-need-to-shut-on-health-grounds-68809#:~:text=Pollutants%20and%20health,5).

#3. Dr. Aidan Farrow, Andreas Anhäuser and Lauri Myllyvirta, 'Lethal Power: How Burning Coal is Killing People In Australia' August 2020, p9.
https://www.greenpeace.org.au/wp/wp-content/uploads/2020/08/GPAP-Lethal-Power-full-report.pdf

#4. NSW Health, 'Common air pollutants and their health effects' 25.6.2021
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#5. National Pollution Inventory, Results, Mount Piper Power Station
http://www.npi.gov.au/npidata/action/load/emission-by-individual-facility-result/criteria/state/NSW/year/2021/jurisdiction-facility/104

#6. Channel 7 News, 1.6.2022 https://7news.com.au/news/indigenous-australians/opinion-our-ancestral-lands-are-bleeding-from-ecological-violence-c-7011728

#7. World Health Organisation, 'What are the WHO Air quality guidelines' 22.9.2021
https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines

#8. USA Environmental Protection Authority, 'Cleaner Power Plants' 1.2.2022
https://www.epa.gov/mats/cleaner-power-plants