

**SUBMISSION**  
**DRAFT PROTECTION OF THE ENVIRONMENT OPERATIONS**  
**(CLEAN AIR) 2022**  
**BY CLEAN AIR CANBERRA**

Clean Air Canberra (CAC) writes in response to calls for public feedback on the draft [Protection of the Environment Operations \(Clean Air\) Regulation 2022](#).

CAC is a community group based in the Australian Capital Territory. Its aim is to inform and educate the ACT community about the environmental health impacts of residential air pollution. CAC is putting forward this submission because there is no safe level of PM<sub>2.5</sub> pollution and governments have a duty of care to protect their citizens for all major sources of hazardous pollution for which the costs greatly outweigh the benefits.

The Department of Environment and Energy's [National Pollution Inventory](#) shows that domestic solid fuel burning is responsible for more than two thirds of PM<sub>2.5</sub> fine particle air pollution in Canberra. The same report shows that motor vehicles are responsible for 10.1% of particle air pollution. The ACT Government's own figures show that fine particle air pollution in Tuggeranong in Canberra's south increases nearly threefold in the cooler months of the year. We regularly breach current and future national air pollution standards and World Health Organisation Guidelines, which were exceeded 37 times from April to August last year at the ACT Government's air monitoring station at Monash, but not during any other months of that year. From April to September last year, our fine particle air pollution averaged 9.56 micro grams per cubic meter compared to 4.1 micro grams per cubic meter for Jan to March and Oct to Dec 2021.

In August 2021 the Centre for Air Pollution and Health Research (CAR) published a position paper '[Reducing the health impacts of wood heaters in Australia](#)' written by 11 well-qualified health researchers. It states that "*Current Australian wood heater standards are insufficient to protect health*" and recommends "*The introduction of rigorous emissions standards for "real world" heater operation.*"

As long ago as April 1991 the ACT Government's own Standing Committee on Conservation, Heritage and Environment warned in its discussion paper, [The Burning Question](#), "*That a potential health risk of pollutant emissions by solid fuel heaters is intensified by their near ground level release from the suburban household chimney, and a lack of control existing over their contribution to fine particle pollution has implications for public health.*" (Page 4). In the [Fuelwood Heating Report](#) released in September the same year the committee said, "*It is clear to the committee that the extent of fuel wood heating in the ACT, coupled with poor heater operating practices and local weather conditions leads to significant levels of air pollution which causes physical discomfort for many residents, and in some cases, exacerbates health problems.*" (Page 2)

It is well documented that fine particle air pollution goes deep into our lungs and can cause serious health damage, including heart attacks, strokes, lung disease, asthma attacks, premature births, stunted lung development in children, genetic damage in babies and reduced IQ and behavioural problems in children.

A private air pollution monitor (Purple Air) in Canberra's south regularly measures the highest fine particle air pollution in Canberra, higher than the ACT Government's own air monitoring station in the same area. At 1.12pm on 30 May 2022 it recorded air pollution levels almost twice as high as those recorded by the ACT Government. The private monitor also records air pollution equal to many woodsmoke hotspots in NSW such as Armidale, Wagga, Albury, Bathurst, Orange and parts of Sydney.

Less than five percent of Canberra households burn wood as their primary source of heating. For the rest, wood heaters supplement gas or electric heating or it is simply comfort heating. This is the case in many metropolitan and regional areas of New South Wales. Despite millions of Australian taxpayers' dollars being spent on education campaigns year after year, they are still being used incorrectly. So, we have a situation, in Canberra and in New South Wales, where a small number of households generate the majority or a large amount of our air pollution in the cooler months of the year and cause considerable damage to our health.

People say well, what about bushfire or tobacco smoke? Just like smoke from a bushfire or tobacco, wood heater smoke is hazardous and especially for those with a pre-existing heart or lung condition. The difference is smoke from a wood heater is generated within close proximity, next door or across the road, it's continuous and it's concentrated. Smoke from a bushfire is a rare event, we get advanced warning and we are all aware of the health dangers from second hand tobacco smoke and governments have introduced tough legislation to protect us from it.

Think about it. The wood smoke season in Canberra and parts of New South Wales runs for five to six months, from mid-April to about early or mid-October. In 2021 we still had wood heaters burning in Canberra till early November. Many wood heaters go 24/7, left to smoulder during the day and cranked up again in the late afternoon and run all night. The smell of smoke fills the air and seeps into our houses and into our lungs.

While the ACT Government says our overall air quality is good the fact is we are not complying with World Health Organisation Guidelines that call for an annual average of just 5 micro grams per cubic meter and no more than 15 micro grams per cubic metre in a 24-hour period.

Residential woodsmoke pollution impacts our health and quality of life. In New South Wales pollution from wood heaters is estimated to be responsible for more than 100 premature deaths. Just one wood heater adds thousands of dollars each year to the state's health bill. The Health Promotion Journal of Australia has estimated that one slow combustion wood heater adds over \$8-thousand dollars to the ACT's annual health bill.

On 17 May 2013 a Canberra resident addressed the Senate Committee of inquiry into the impact on health from air pollution. In her statement to the Committee, she told Senators.....

*"There are a number of houses in close proximity to me that have wood fires, they produce copious amounts of smoke almost all day.*

*Even using my oxygen, it affects my breathing to a debilitating level, which restricts my ability to perform a myriad of simple tasks such as washing up, bed-making, cooking and cleaning. Once the wood fires are started up, in order to limit the time, I spend outside in the supposedly “fresh air”, I order my groceries on line, have a hairdresser attend my house and only watch my grandsons play soccer if I can remain in the car. My life is virtually on hold during the wood fire season and for someone like me who believes in staying involved, it is frustrating to be incapacitated by something which could be better controlled.”*

That gives you a sense of the impact residential wood smoke had on the life of just one person back in 2013. But there are many Canberra and NSW residents who, even today in 2022, are imprisoned in their homes because of the smoke from wood heaters.

The wood heating industry claims that new models are much cleaner and more efficient than older models. The CSIRO conducted a study on the efficiency of wood heaters in Launceston after that city was the target of a long running Federally government funded education campaign. It concluded that people still operated their wood heaters incorrectly and there was little difference in emissions between old and new wood heaters when operating under **real life conditions**.

Some people will have you believe burning wood for heating is cheap, sustainable and climate friendly. These claims are disputed. Quite simply, when a tree is cut down and burnt it releases carbon into the atmosphere. This contributes to global warming and it takes decades for a new tree to grow and absorb the carbon that has been released. This is supported in a study by Stanford environmental engineering [Professor Mark Z. Jacobson](#), who says soot, or black carbon, from burning fossil fuels, including wood, may be responsible for 15% to 30% of global warming. It is also supported by UK Environmental Policy analyst and adviser to the United Nations and European Union, [Duncan Brack](#), who says for an equal amount of heat or electricity, wood burning releases more CO2 than burning gas, oil and even coal, adding to climate change. And, we burn more wood than we log, chip and export for paper manufacture.

The majority of Australians want wood heaters phased out and believe they do not belong in suburbia.

[An Asthma Australia](#) survey of 25,000 people just last year found;

- More than 75% agree that wood heaters should not be allowed in urban or built-up areas and over half agree they should be phased out or banned completely.
- Only 28% of the general population and 18% of people with asthma said they are able to protect themselves from wood heater smoke when present.
- People with asthma reported they were twice as likely to get respiratory symptoms when wood heater smoke was in the air.

## CONCLUSIONS AND RECOMMENDATIONS

- The proposed changes do not address the MAJOR source of NSW's hazardous air pollution and the RIS does not comply with Better Regulation Principles set out in Appendix A of the RIS.
- Better Regulation Principle 3 (RIS, page 53) requires the impact of government action to be properly understood by considering the costs and benefits of a range of options. The failure to consider highly cost-effective and beneficial options in the RIS such as recommendations 1 & 2 below violates Better Regulation Principle 3. This failure should be corrected as a matter of urgency.
- Running costs of modern, efficient reverse cycle heater-air-conditioners (a few hundred dollars per year) pale into insignificance compared with the health costs of using wood heating. A brand-new wood heater installed in 2021 has estimated health costs (over 15 years) of \$48,528 in the Greater Sydney Metro Region (GMR) if burning 2 tonnes of firewood per year, and \$80,844 if burning 3.43 tonnes per year (Sydney average, Federal Government's Consultation Regulation Impact Statement, 2013, Table 2.2).

**Recommendation 1.** The POEO needs a major upgrade informed by a cost benefit analysis evaluating whether new wood heaters with estimated health costs of thousands of dollars per heater per year should be permitted on residential blocks smaller than 2 hectares that have electricity grid connections. In the interim, local councils need improved guidance and legislation to manage the installation of new wood heaters, including requirements to consult neighbours whose health might be impacted by the pollution.

**Recommendation 2.** NSW residents whose health is being damaged by other peoples' wood heater pollution are largely unable to protect themselves ([Asthma Australia study](#)). The POEO needs major revisions to include effective provisions to assist residents who are currently suffering damage to their health or lifestyle because of other peoples' wood smoke.

See:

- European research that indicates even the most modern wood heaters create as much pollution as 750 HGVs:  
<https://www.theguardian.com/environment/2021/oct/09/eco-wood-stoves-emit-pollution-hgv-ecodesign>
- Evidence suggests wood burner create almost half of the urban air pollution cancer risk: <https://www.theguardian.com/environment/2021/dec/17/wood-burners-urban-air-pollution-cancer-risk-study>

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