

## **Clean Air for New South Wales**

### **Submission from Asthma Foundation Queensland and New South Wales**

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#### **Introduction**

Asthma Foundation Queensland and New South Wales (AFQN) is a strong advocate for clean air and has conducted many high-profile campaigns on the need to reduce various kinds of air pollution including unflued gas heaters, road tunnels, coal-fired and gas power stations, wood-fired heaters, traffic and bushfire emissions.

Air pollution is clearly identified as a significant public health risk with the NSW Clean Air Consultation paper citing that in the Greater Metropolitan Region of Sydney, air pollution causes the following per year:

- 520 premature deaths
- 1180 hospital admissions and
- An estimated \$6.4 billion in health costs.

#### **Proposed actions in the Clean Air for NSW Consultation Paper**

AFQN commends the identification of a broad range of priority areas encompassing the variety of polluting mechanisms in Australia including industry, transportation, households, the impact of exposure and acknowledgement of energy advancements and global warming.

With a specific focus on respiratory illness, AFQN provides commentary on the following two priority areas identified in the Clean Air for NSW Consultation Paper:

- 1) Reducing wood smoke emissions and
- 2) Reducing the health impacts of hazard reduction burning and other open burning on metropolitan and regional NSW communities.

#### **Reducing wood smoke emissions**

##### **Action 1: Update the Clean Air Regulation**

*It is proposed that changes to the wood heater regulatory framework will adopt the updated Australian/New Zealand standards for new wood heaters which set more stringent emission limits and new efficiency limits.*

##### **Action 2: Investigate other measures to reduce wood smoke emissions**

*The EPA is undertaking further research (in a collaboration with NSW Health, CSIRO and the Centre for Air Quality and Health Research and Evaluation), into the impacts of wood heaters across the greater metropolitan region and lower emission standards.*

*It is proposed the EPA will investigate further improvements to the wood heater regulatory framework for consideration by Government, as well as education, training and replacement programs.*

## **Background**

The health effects of PM<sub>2.5</sub> are well researched and documented, causing significant respiratory and cardiac disease, with young children, older people and people with existing respiratory conditions such as asthma and Chronic Obstructive Pulmonary Disease (COPD) being most affected. However, the impact of air pollution on healthy adults is also well documented.

A substantial body of peer-reviewed Australian and overseas scientific studies conducted over the past 20 years have cited the toxins, gases and fine particulate matter produced by the burning of wood as a major risk factor for people with asthma. It exacerbates asthma symptoms and has been associated with higher rates of asthma in areas where wood burning takes place over a sustained period each year (*Oxidative stress, DNA damage and inflammation induced by ambient air and wood smoke particulate matter in hum A549 and THP-1 cell lines. Danielsen et al. Chem Res Toxicology 2011 Feb 18; 24 (@): 168-84. Epub 2011 Jan 14*).

A 2013 study of 312 000 people in nine European countries produced conclusive scientific proof that there are no safe levels of PM<sub>2.5</sub>. Unexpectedly, the new study found a cancer risk at every level and confirmed that the higher the level, the greater the risk (*Air pollution and lung cancer incidence in 17 European cohorts: prospective analyses from the European Study of Cohorts for Air Pollution Effects (ESCAPE), The Lancet Oncology, Early Online Publication, 10 July 2013*).

Despite being used by less than 5% of households in Sydney as their main form of heating, the Clean Air for NSW Consultation Paper shows that residential wood heating is responsible for more than 50% of PM<sub>2.5</sub> emissions in Sydney, compared to 14.4% from road traffic related emissions. Strict regulations in NSW have seen motor vehicle emissions reduce, however, a lack of regulatory framework has seen emissions from the domestic sector rise in absolute terms and as a proportion of all emissions.

## **Recommendation by AFQN**

AFQN actively supports **the introduction of legislation** to prevent installation of unsafe wood heaters and to enable progressive phasing out of wood heaters in urban areas of New South Wales.

This is in line with the recommendations of the NSW Chief Medical Officer in 2014 to:

1. Ban the installation of new wood heaters in urban areas and
2. Require existing wood heaters in urban areas to be removed when houses are sold with the aim of phasing out wood heaters within seven years.

Our recommendations also complement, although are more stringent, than some of those made in the NSW Wood Smoke Control Options report 2012 which advocated for:

1. the removal of existing heaters that do not meet a health based standard when houses are sold,

2. not allowing the installation of new heaters that do not meet a health based standard and
3. the introduction of a tax to cover the cost of wood smoke reduction programs with assistance for people whose health or lifestyle has been affected by woodsmoke.

These three measures alone were estimated to reduce the \$8b health cost of woodsmoke in New South Wales by 75% over 20 years, and this without a complete ban on installation of woodsmoke burners. One can only assume the gains would be greater if installation of woodsmoke burners was banned altogether.

Whilst the undertaking of additional research into the impact of wood heaters and lower emission standards, as proposed above, is positive, it cannot be a standalone initiative. Australians respond better to legislation than education. The success of anti-smoking programs highlight this. Whilst education was useful in supporting the campaign, its success was primarily driven by legislation that has progressively banned smoking from public areas.

There is considerable evidence that **education/awareness programs on their own are ineffective in changing behaviour related to wood burner use**. A 1999 survey in Armidale reported that 52% of residents with wood heaters believed the statement "emissions from open fires and solid fuel heaters contain substances harmful to humans" was false. This was despite a \$46 000 wood smoke education program by the NSW EPA in Armidale a couple of years earlier.

Careful consideration must be given to the manner in which to **share the key learnings from this proposed research** with the general community to encourage positive action. Previous education campaigns could be considered too confusing and difficult to understand for the average consumer, with messages such as "the average new wood heater emits 100 to 400 times as much PM2.5 pollution as the average new diesel car" not being well understood by the general public, despite them being factual.

To reflect on learnings from the Launceston experience, their woodsmoke program reduced wintertime deaths from respiratory disease by 28% and cardiovascular disease by 20%. The focus of this program was on replacing wood stoves with non-polluting heating and explaining the health effects of woodsmoke pollution to residents. In contrast, programs that have focused on how to use heaters correctly to minimise pollution have not been as effective.

In summary, AFQN strongly supports a legislative approach that bans the installation of new wood heating devices in urban areas and enables the phasing out of existing heaters in a timely fashion. To complement this, a consumer education program that gains support for this legislation through improving understanding of the health impacts of woodsmoke is recommended.

## Reducing the health impacts of open burning on metropolitan and regional NSW communities

### Action 1

*Proposed actions include improving cross sector collaboration, supporting research into impacts and management strategies; enhancing forecasting and modelling capabilities; improving communication and awareness of health impacts from smoke across government, private sector and community; promoting conservation farming and increasing community understanding of appropriate conditions for burnoff.*

### Background

Smoke generated from hazard reduction burnoffs can be a significant cause of concern for people with asthma by triggering asthma symptoms. The elderly and children are most at risk, however, anyone can be negatively impacted by hazard reduction burnoffs. The risks are not only posed to those with respiratory conditions but can also impact those with cardiac and other chronic diseases. Not only people in the immediate area of the fire are affected as winds can carry smoke long distances.

The Sydney experience of May 2016 highlighted just how dangerous hazard reduction burns can be. Data from the NSW Office of Environment and Heritage, Australian Bureau of Statistics and the NSW Ministry of Health estimated that 14 premature deaths, 29 cardiovascular hospitalisations and 58 respiratory hospitalisations were attributable to the smoke that sat over Sydney for a six day period. *(Mitchell, C. Health effects of hazard reduction burning "serious". MJA InSight 43, 7 Nov 2016).*

### Recommendation by AFQN

The Clean Air for NSW Consultation Paper proposes that the NSW Government will improve collaboration across government agencies and with local communities and industry to minimise impact.

AFQN recommends the Government **consider broadening this consultation to include consumer health organisations** who can firstly, assist by ensuring government authorities are delivering the current, evidence based recommendations on management of a disease to support consumer health during a burnoff and secondly, support the Government authorities by communicating these key messages to their constituents.

Feedback provided to AFQN by consumers in the past has indicated that people are not provided sufficient notice of planned burnoffs to enable them to make appropriate adjustments. For example, people may be able to adjust their work schedule to work from home during a planned burnoff. However, as some report only minimal notice of a planned burnoff, they have been unable to make the required changes.

AFQN strongly encourages the NSW Government to **communicate planned hazard reduction burns to the community with ample notice** to enable adjustments to be made to lifestyle to reduce potential impact of smoke.

Hazard reduction burnoffs are a crucial strategy in managing the risk posed to the Australian community through bushfires. However, improved planning, greater coordination between bodies and streamlined information provision to community members may help to reduce the impact of hazard reduction burns on people with asthma and other chronic diseases.