

Secretary Senate Standing Committee on Community Affairs  
PO Box 6100  
Parliament House  
Canberra, ACT, 2600  
Via email: [community.affairs.sen@aph.gov.au](mailto:community.affairs.sen@aph.gov.au)

8 March 2013

**Submission to the Senate Committee Inquiry into the impacts of air quality on health.**

Dear Sir/Madam,

The Nature Conservation Council of NSW (NCC) is the peak environment body for New South Wales, representing over 100 organisations across the state. We have long-standing experience in state environmental assessment, planning and pollution monitoring and welcome the opportunity to comment on the Senate Committee Inquiry into the impacts of air quality on health.

**Particulate matter, its sources and effects**

Particulate matter (PM) that is generated from coal fired power stations and coal mining, can cause serious health impacts including asthma, respiratory and cardiac disease, damage lungs and increase the risk of premature death.

Particulate matter (PM<sub>10</sub>) and fine particulate matter (PM<sub>2.5</sub>) that is smaller than 10 micrometers and 2.5 micrometers respectively can be a mixture of the materials including metals, dust, soot, dirt, and pollen. Man-made forms of particulate matter can also be derived from coal and diesel dust, mainly from mining operations and the combustion of diesel (such with diesel powered trains and trucks) and coal fuels (at coal-fired power stations).<sup>1</sup>

Those whose health is most at risk from prolonged exposure to particulate matter are infants, children and teenagers, people aged over 65, people with heart or lung diseases, which can occur after short- and long-term exposure to particulate matter<sup>2</sup>.

Short-term exposure to particulate matter pollution can lead to diminished lung function, damage and inflammation of lung tissue of children and young adults, increased mortality rates in children and young adults, aggravation of asthma symptoms, heightened risk of cardiac arrhythmias, heart attacks and other cardiovascular issues. This can lead to

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<sup>1</sup> American Lung Association. (2013). *Particle Pollution*. Retrieved from State of The Air 2012; Health Risks: <http://www.stateoftheair.org/2012/health-risks/health-risks-particle.html>

<sup>2</sup> American Lung Association. (2013). *Particle Pollution*. Retrieved from State of The Air 2012; Health Risks: <http://www.stateoftheair.org/2012/health-risks/health-risks-particle.html>

increased hospitalisation for asthma-related issues, respiratory ailments and cardiovascular disease<sup>3</sup>.

Long-term exposure to particulate matter can be more deadly. Long-term exposure to particulate matter pollution has reportedly led to increased hospitalisation for asthma attacks among children, slowed lung growth in children and young adults, damage to the small airways in the lungs, increased risk of dying from lung cancer and cardiovascular disease<sup>4</sup>.

Coal-fired power stations are also a major source of harmful gases, particularly sulphur dioxide and nitrogen dioxide. Exposure to sulphur dioxide causes cough and can exacerbate asthma. It can also cause increases in heart and lung illnesses and an increased death rate in exposed communities. Nitrogen dioxide causes increases in asthma, hospital admissions and emergency department attendances for respiratory symptoms and increased deaths from heart and lung disease.

### **NSW communities at risk**

All Australians deserve clean water to drink and clear air to breathe. However, communities in locations across Australia suffer from the adverse health impacts due to poor air quality. In NSW, communities next to open-cut coal mines, coal-burning power stations and along train lines that carry uncovered coal cars bear the brunt of the health impacts of coal mining.

Communities in the Hunter Valley are surrounded by coal mining and its related activities including coal transport by rail. The adverse effects of such large-scale coal mining have led to a significant deleterious impact on air quality in the Hunter Valley and increased the associated health risks<sup>5</sup>.

Dust particles and other atmospheric particulates associated with current coal mining in the Hunter Valley far exceeded the National Environmental Protection Measures (NEPM) levels 114 times in 2012. Some recorded levels of particulate matter smaller than 10 micrometers (PM<sub>10</sub>) at concentrations of 88.7 µgm<sup>-3</sup> at Mt Thorley, 81.6 µgm<sup>-3</sup> at Camberwell, 87.7 µgm<sup>-3</sup> at Maison Bleu and 85.2 µgm<sup>-3</sup> in North West Singleton on more than 20 occasions<sup>6</sup>. These high levels of dust pollution far exceed the national standard of 50 µgm<sup>-3</sup> of PM<sub>10</sub> with a maximum five days a year for allowable exceedances<sup>7</sup>.

These peaks coincided with increased hospital admittances for asthma and other respiratory in the Upper Hunter areas. Muswellbrook has the highest rate of asthma-related hospital

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<sup>3</sup> American Lung Association. (2013). *Particle Pollution*. Retrieved from State of The Air 2012; Health Risks: <http://www.stateoftheair.org/2012/health-risks/health-risks-particle.html>

<sup>4</sup> American Lung Association. (2013). *Particle Pollution*. Retrieved from State of The Air 2012; Health Risks: <http://www.stateoftheair.org/2012/health-risks/health-risks-particle.html>

<sup>5</sup> NSW Department for Health; Population Health Division. (2010, May 21). *Respiratory and Cardiovascular Diseases and Cancer Among Residents in the Hunter New England Area Health Service*. Retrieved from NSW Department for Health; Publications: [http://www0.health.nsw.gov.au/pubs/2010/pdf/HNE\\_Respi\\_Cardio\\_Disease.pdf](http://www0.health.nsw.gov.au/pubs/2010/pdf/HNE_Respi_Cardio_Disease.pdf)

<sup>6</sup> NSW Environment Protection Agency. (2013, January 18). *Upper Hunter air quality data results for 2012*. Retrieved from NSW Government Environment & Heritage: <http://www.environment.nsw.gov.au/resources/aqms/20130037HunterAir2012.pdf>, p.5

<sup>7</sup> Australian Government; Department of Sustainability, Environment, Water, Population and Communities. (2012, December 06). *Air quality standards*. Retrieved from Environment, Atmosphere, Air Quality: <http://www.environment.gov.au/atmosphere/airquality/standards.html>

admissions for 0-34 year olds in the Hunter region, while Singleton ranks high in other age groups within the Hunter region<sup>8</sup>. Despite these health risks Port Waratah Coal services has proposed building a fourth coal terminal in Newcastle port. The health factors associated with coal mining and the movement of coal through the Hunter region and Newcastle have not been taken into account by the proponents of a fourth coal terminal (T4). If built, the fourth coal terminal would add about 107 coal train pass-bys per day<sup>9</sup>, increasing coal dust and diesel particulates, with consequent health impacts.

### **Inadequacies with the state pollution monitoring and control**

Each year, industrial facilities across NSW release hundreds of millions of kilograms of pollution into our air, water and soil. Over the last decade, industrial facilities have self-reported thousands of breaches of pollution licences, and compliance audits conducted by the Environment Protection Authority (EPA) routinely revealed unreported breaches. No one knows the cumulative impact of this pollution on the environment and people's health.

The current pollution management system in NSW is deeply flawed. There are extensive deficiencies ranging from the process of approving and licensing polluting facilities and the limited opportunities for community engagement, to deficient systems for monitoring, reporting, and enforcing compliance with air pollution controls, standards and regulations by Environmental Protection Authority (EPA).

In order to protect communities impacted by poor air quality, Australia must adopt a standard for PM<sub>2.5</sub> and more vigorously enforce standards for PM<sub>10</sub>. In 2005, the World Health Organisation recommended a set of 'interim targets' for PM<sub>2.5</sub>. Australia must adopt the most stringent of these (IT3), a 24-hour average PM<sub>2.5</sub> concentration of 25µgm<sup>10</sup>.

In 2011, the Nature Conservation Council of NSW and the NSW Environment Defender's Office of NSW released the report *Clearing the Air, Opportunities for improved regulation of pollution in NSW*<sup>11</sup>. The report demonstrated that the current state system had significant short-comings as a regime for protecting human health and the environment. It detailed a set of recommendations for monitoring, reporting on and enforcing compliance with current air, water, and soil regulations. A summary of the recommendations to improve state management of pollution is included as Appendix A of this submission.

The report recommends that procedures for assessing environmental impacts must require that proponents provide detailed information on cumulative impacts, and decision-makers must be equipped with relevant expertise to analyse this information. When determining pollution licence applications, Environmental Impact Statements (EISs) are not required by

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<sup>8</sup> NSW Department for Health; Population Health Division. (2010, May 21). *Respiratory and Cardiovascular Diseases and Cancer Among Residents in the Hunter New England Area Health Service*. Retrieved from NSW Department for Health; Publications:

[http://www0.health.nsw.gov.au/pubs/2010/pdf/HNE\\_Respi\\_Cardio\\_Disease.pdf](http://www0.health.nsw.gov.au/pubs/2010/pdf/HNE_Respi_Cardio_Disease.pdf)

<sup>9</sup> Based on each train carrying a maximum of 6,100 tonnes of coal 2/08/12 1:50 PM, residents living in proximity to the rail corridor can expect an additional 39,344 train pass-bys per year (107 per day) from T4 alone.

<sup>10</sup> World Health Organization. (2006). *Air quality guidelines - global update 2005*. Retrieved from Public Health and Environment (PHE) : [http://whqlibdoc.who.int/hq/2006/WHO\\_SDE\\_PHE\\_OEH\\_06.02\\_eng.pdf](http://whqlibdoc.who.int/hq/2006/WHO_SDE_PHE_OEH_06.02_eng.pdf)

<sup>11</sup> *Clearing the Air, Opportunities for improved regulations of pollution in new South Wales*, Nature Conservation Council of NSW and Environmental Defenders Office, November 2011

the EPA, although legislation provides that it is to take into account any EIS, or other statement of environmental effects, prepared or obtained by the applicant under the Environmental Planning and Assessment Act. A requirement that EISs provide detail on cumulative impacts would therefore require both the EPA and the consent authority to consider these impacts. Consideration of cumulative impacts is also critical at the licensing stage.

Health impact assessments (HIA) have developed as another important assessment tool to help determine the impacts of potentially polluting projects. However, HIAs are not required under current arrangements, and consequently, planning decisions are being made without an adequate assessment of the social and economic costs and benefits.

Since the release of the *Clearing the Air* report, the NSW Government has not changed its approach to pollution management. There is a systemic failure at both state and federal levels to adequately protect public health and the environment from damaging air and water pollution. It is the role of government to regulate polluters and to minimize and where possible eliminate pollution from entering the environment to protect public health.

However, despite clear exceedances in air pollution, the NSW Government has done little to address the problem. NCC believes the government should:

- Set binding, science-based limits on cumulative air and water pollution from coal and gas developments;
- Reject the fourth coal terminal in Newcastle (T4);
- Require all coal train wagons to be fully covered; and
- Require real-time and transparent monitoring of air, noise and water pollution with material penalties when limits are exceeded.

It is time the Federal Government adopted strict pollution standards for particulate matter in accordance with World Health Organisation standards. Further, the NSW Government must implement binding pollution control systems that protect public health and the environment.

Yours sincerely,

Pepe Clarke  
Chief Executive Officer

## **Appendix A:**

### **Recommendations from *Clearing the Air, Opportunities for improved regulation of pollution in NSW***

#### **Improving the overarching pollution regulation framework**

1. The EPA's responsibilities for regulating air, water and land pollution should be specified in the legislation as enforceable duties. These duties should require that the EPA sets and reviews lists of pollutants and emissions standards, and impose best practice standards on all licenced facilities.
2. Legislation should impose a general duty on all facility operators to prevent or minimise environmental harm arising from their activities.

#### **Improving strategic planning for polluting activities**

3. Decisions on strategic planning, development assessment and pollution control should be integrated to manage the cumulative impacts of existing and emerging pollution sources in a strategic manner.
4. Measurable limits must be set on the cumulative amounts of pollution allowable at a State, catchment and site level.
5. Decision-makers should be required to take into account a project's cumulative impacts in any decision on whether to approve it, and must reject the project if these impacts will degrade the receiving environment.
6. The EPA's independence in issuing and setting conditions on pollution licences should be reinstated for all classes of development, including major projects.

#### **Improving pollution management and licensing**

7. Licensing of polluting facilities should be based on objective standards that maintain environmental health, rather than procedural requirements that do not consider the receiving environment. For example, the EPA should be required to reject a pollution licence application unless the applicant can demonstrate there will be no net degradation in the quality of the receiving environment. Additional considerations, such as whether the licence holder is a fit and proper person, and long-term impacts of the proposed facility, should also be considered.
8. Legislation should state that, unless a pollution licence expressly authorises the discharge of pollutants, any such discharge is unlawful.
9. The EPA should utilise the strong regulatory tools available to it, and implement:
  - Protection of the Environment Policies, so that all regulatory agencies are required to ensure ambient environmental conditions are met;
  - Financial assurances to ensure that polluters remain financial responsible for minimising pollution and repairing associated environmental degradation;
  - Capping and allocating the amounts of pollutants that can be emitted into a particular zone, based on the capacity of the receiving environment to maintain its environmental values (bubble licenses); and

- Pollution Reduction Programs should be imposed as a standard, mandatory licence condition. These should require industry to conform to continuous improvement of technology to reduce pollution. Their effectiveness should be audited and assessed at the five-yearly licence review.
10. The EPA should cease to rely on measures such as Pollution Reduction Programs to enforce compliance with pollution licences, and these should not be included as a regulatory option in compliance policies and guidelines.
  11. Revise Schedule 1 to the POEO Act to ensure it includes a current list of all activities with potential for environmental impact.
  12. The load based licensing system should be extended to include a more comprehensive list of pollutants. For load based fees:
    - Revenue derived from load based fees is allocated to an EPA-managed or independent trust fund, and allocated specifically to environmental remediation projects to mitigate harm from industrial pollution.
    - The load based fee schedule should be revised to properly reflect the long-term costs to human health and the environment.
  13. The EPA should be empowered to immediately suspend pollution licences where prescribed emission levels are exceeded.
  14. Revise the pollution licences in a number of ways to ensure that:
    - the applicant has demonstrated compliance with best practice principles of waste management;
    - licence conditions are 'SMARTER';
    - licence limits reflect the capacity of the receiving environment to bear the impacts of pollution without degradation;
    - licensees commit to continual improvement;
    - offsets are imposed on unavoidable discharges to achieve 'no net degradation' in the long term;
    - licences are reviewed in industry clusters to facilitate meaningful public participation; and
    - the community has a clear understanding of the industry and discharges.
  15. The level of detail and comparative data reported in facility operators' annual returns should be increased. Raw monitoring data is made publicly available to the community on the POEO Register, but the annual return should also include a report (provided by the licence holder) that interprets the results in a contextual and meaningful way for the community.
  16. Ensure that the five-yearly review of pollution licences includes a commitment to implementing Best Available Technology.
  17. Ensure that end of project licence revocation does not occur until an independent audit has ensured that all pollution (current and potential) has ceased.

### **Increasing community engagement**

18. Reinstate the role of community and local council representatives on the EPA Board.
19. The EPA should work with local communities to ensure best practice transparency, and access to 'relevant and meaningful' information on pollution, in line with state goals and pollution law objectives.
20. Legislation should provide that a formal community consultation process is required for pollution licence reviews, for decisions relating to the issue, transfer or surrender of pollution licenses, and for licence variations which do not improve environmental outcomes.

21. Ensure that the quality and effectiveness of community engagement, including community consultation committees, is monitored and reported on.
22. Ensure that such community consultative committees seek out the aims, needs and preferences of the community and the environment, and can effectively contribute to policy and decisions on pollution control.
23. Third party appeal rights should be implemented in relation to pollution licensing decisions.
24. The EPA's public register should be expanded to provide for publication of all relevant details of the licensing process. This includes:
  - licence variation applications
  - any public submissions received in relation to licensing decisions
  - reasons for all licensing decisions.

### **Improving compliance and enforcement**

25. The EPA should be empowered to immediately suspend pollution licences where prescribed emissions levels are exceeded.
26. Penalty notices for pollution offences should be used more frequently, and higher maximum penalties introduced
27. Move civil enforcement of breaches of the POEO Act to an 'own costs' jurisdiction in the Land and Environment Court, to remove costs barriers and increase access to justice by the community.
28. Upgrade the effectiveness of the EPA's response to industry audits and focus on benchmarking its methods and performance. This should align with the Audit Office's 2010 recommendations on improved internal analysis. The progress of these improvements should be publicly reported by the EPA or the Environment Minister.
29. Given the likelihood that pollution breaches are often unreported:
  - risk-based compliance audits should be undertaken more regularly,
  - the findings for each facility should be published on the internet, and
  - compliance action should be taken in response to identified breaches.
30. Consider imposing a duty on the EPA (accompanied by sufficient resources) to investigate pollution incidents for which local councils are the appropriate regulatory authority, in circumstances where all other mechanisms at council level have been exhausted.
31. Undertake a review of the EPA's compliance and enforcement approach and policy to ensure that it improves compliance and minimises harm to the environment.
32. The NSW Bureau of Crime Statistics and Research should be asked to undertake a comprehensive review of the enforcement of environmental offences. This review could include consideration of:
  - the use of penalty notices and the appropriate financial penalty to be imposed by these notices;
  - how the EPA's prosecution policy could be improved, to more effectively deter environmental pollution offences;
  - how alternatives to financial penalties could be better used to improve enforcement of lower level offences; and
33. Make alternative enforcement orders available, including:
  - orders which allow the Court to insist that a corporate defendant undertake satisfactory internal disciplinary action;
  - equity fines, where shares from a convicted corporation go to a public interest trust fund.





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