Dear Sir/Madam,

Clean Air for NSW Consultation Paper

I write to provide a submission in response to the Clean Air for NSW Consultation Paper. My submission focuses on the proposed actions in the Consultation Paper to address emissions from transport, engines and fuels.

Ultrafine particles

The Consultation Paper does not adequately address the health risks associated with ultrafine particles from vehicles and other sources.

Current regulatory attention in respect of particles focuses on PM10 and PM2.5, however smaller particles which make up a minor fraction of the total mass of particulate matter carry higher health risks. This is because of the broader distribution of ultrafine particles and their propensity to be absorbed deeply into the human respiratory system. Despite the clear evidence of their harmfulness, there are no standards in place in Australia to regulate ultrafine particles from vehicles or other sources, nor are they subject to measurement or monitoring by government authorities.

A major source of ultrafine particles is vehicle emissions, particularly from light and heavy diesel vehicles. Unlike other pollutants, concentrations of ultrafine particles do not decrease exponentially as a function of distance from the road. Since the late 1990s there have been several studies in Australia of pollution from roadways. A landmark study was Hitchins et al which found that ultrafine or nanoparticles from motorways did not reach background levels during daytime until around 300 metres from a motorway.

The conclusions of this study have been confirmed in other settings in Australia and overseas. Studies in the United States have also shown that ultrafine particles remain at elevated concentrations for up to up to 1000 metres at night time and during pre-sunrise hours despite lower traffic volumes.
The NSW Government should undertake monitoring of ultrafine particles in sensitive locations such as schools and hospitals near major motorways. This would provide individuals with information on their exposure, and help inform appropriate responses by government. Schools such as Fort Street Public School, situated immediately adjacent to Australia’s most trafficked road, the Bradfield Highway (AADT 155,063 in 2016), should be given priority in this process.

**Emissions from Diesel Vehicles**

Diesel vehicles make a disproportionate contribution to air pollution in NSW. In June 2012, the World Health Organization International Agency for Research on Cancer reclassified diesel exhaust as having a definite link to cancer. Diesel exhaust now ranks alongside smoking, asbestos and UV radiation as posing identifiable cancer risks.

Diesel vehicles are growing rapidly as a proportion of the total vehicle fleet in NSW and nationally. Diesel vehicles make up around a fifth of the national fleet. In 2015, diesel powered vehicles increased by 1.2 per cent to 21 per cent of the national fleet, and remain the fastest growing fuel type for all vehicles. Unlike multiple other jurisdictions there are no policies in Australia to reduce the number of diesel vehicles in service. The Commonwealth government is currently reviewing vehicle emissions standards. Despite the health risks from diesel vehicles, Australia’s national emissions standards for diesel vehicles are weak, and not effectively enforced by the Commonwealth or by the States.

An illustration is the ongoing Volkswagen vehicle emissions issue. In response to Volkswagen’s deliberate circumvention of US emissions standards, the US Environment Protection Agency has banned the sale of new Volkswagen diesel vehicles. Volkswagen may not resume the sale of these vehicles in the US even if permitted to do so.

In Australia, Volkswagen has voluntarily agreed to recall diesel vehicles fitted with ‘defeat’ devices and to suspend their sale. However, despite reports of other makes of diesel vehicles that do not comply with emissions standards, the Australian government has not taken steps to test vehicles for compliance with Australian Design Rules (ADRs).

The Australian Automobile Association has stated that the actions of Volkswagen have ‘called into question Australia’s emissions compliance regime and highlighted the fact that no independent vehicle compliance testing is performed in Australia to protect consumers, or the environment.’ It is well past time for a Third National In-Service Vehicle Emissions Study, particularly given that the Second Study (undertaken in 2009) only tested petrol vehicles.

The capacity of NSW authorities to address vehicle pollution is highly constrained. The EPA has only limited enforcement capacity to address vehicle emissions. Under Part 4 of the Protection of the Environment Operations (Clean Air) Regulation 2010 the definition of excessive air impurities is limited to visible emissions. The EPA does not have enforcement power in relation non-visible pollutants. Moreover, the EPA does not test vehicles for compliance with ADR standards. The NSW Roads and Maritime Services is responsible for the administration of the Road Transport (Vehicle Registration) Regulation 2007. Division 3 of Schedule 2 of this Regulation outlines the requirements relating to compliance with the ADRs. However, RMS does not have the capability to conduct laboratory-based ADR testing on motor vehicles.
The EPA’s smoky vehicle reporting system is an antiquated approach to the serious challenge of vehicle emissions. It takes a nineteenth century approach to a twenty-first century challenge given that non-visible pollutants carry health risks as serious as visible pollutants.

The Consultation Paper does not set out concrete proposals that would have any significant impact in reducing vehicle emissions. The NSW government should consider actions such as higher registration fees for diesel vehicles, the introduction of anti-idling laws such as those in place in California, the introduction of ultra-low emissions zone in Sydney modelled on approach taken in London, and, in conjunction with the Commonwealth and the other States, a timetable for phasing out diesel vehicles over the longer term.

Yours sincerely,

Tim Stephens

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1 See, e.g, Raaschou-Nielsen et al, ‘Air pollution from traffic and cancer: A Danish cohort study’ (2011) 10 Environmental Health 67; Morawska et al, ‘Ambient nano and ultrafine particles from motor vehicle emissions’ (2008) 42(35) Atmospheric Environment 8113 and Health Effects Institute, Traffic-Related Air Pollution (2010)).
8 https://tfl.gov.uk/modes/driving/ultra-low-emission-zone