Dept of Infrastructure and Regional Development
111 Alinga St Canberra ACT 2601
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4th April 2016

Re: Ministerial Forum on Vehicle Emissions

To The Department of Infrastructure and Regional Development,

I am writing in regards to emission standards and regulations on non-road diesel engines, primarily those used in the agricultural industry.

First, allow me to introduce myself. I am a sheep farmer who has spent the last week de-stocking due to one of the worst droughts in living memory gripping the region. I am also an agricultural scientist undertaking a PhD on how climate change is impacting agriculture. I am a next generation food producer, who hopes to run my own farm one day and help ensure food security for our nation. I am the Australian Young Farmer of the Year.

Representing Australian farmers at the United Nations Climate Conference in Paris last year, I learnt of the challenges faced by farmers - those who live and work closest to the environment – right around the world.

Farmers are at the coalface of a changing climate, and have huge pressure upon their shoulders to feed a growing global population, with less resource footprint, amidst unprecedented changes in their environment. Farmers acknowledge they are contributors to climate change, but they are ready and willing to be part of the solution.

I write to you today in regards to one aspect of the agricultural industry that needs urgent attention and serious action. My concern, along with people throughout the agricultural industry, is with non-road diesel emissions. I am referring to tractors and other self-propelled machinery that release highly damaging and dangerous emissions.

Currently there are no regulations or standards in place to control emissions from non-road diesel engines.

Agricultural emissions

Diesel engines used in agriculture contribute a significant proportion of the total greenhouse gas (GHG) emissions generated on farm.

The potential negative health impacts from diesel emissions are well known. **Diesel emissions are a particularly dangerous subset of combusted carbon products[1] and are listed by the International Agency for Research on Cancer (IARC) as a class 1 carcinogen in their own right[2]**. Exposure to high concentrations of diesel emissions has been linked to an increased likelihood of the development of lung cancers. Airborne contaminants are a primary cause of respiratory disease and can exacerbate pre-existing conditions, such as asthma and Chronic Obstructive Pulmonary Disease. In Australia, the most recent analysis dates back to 2003, where 3,000 deaths per year were attributed to air pollution[3]. There is also evidence that the DNA damage and mutations caused by diesel pollution also occurs in sperm cells[8] thereby extending the harmful effects of ambient air pollution onto future generations of Australians. The Australian Medical Association has argued that it is necessary to introduce standards for off-road diesel emissions[4].

Emission control legislation

Across the globe, stringent emission control legislation is applied to tractors and other agricultural machinery. **Unfortunately, a lack of emission control legislation in Australia leaves us lagging behind the rest of the world.** In 2010, the Cleaner Non-road Diesel Engine Project final report (ENVIRON Report)[5] was released. Its key findings included:

- The non-road diesel sector (excluding rail and marine transport) consumes a similar volume of automotive diesel oil as the on-road diesel vehicle sector;
- Nationally, non-road diesel engines are estimated to emit around 13,500 tonnes of PM_{10} per annum; a similar magnitude to emissions from the on-road vehicle sector;
- When emission profiles of new non-road diesel engines sold in Australia was assessed against US and EU standards, it was found that Australian machinery was below par;
- Only 5% of engines were reported by industry as meeting the 2008 US standards;
- A quarter of off-road diesel engines sold in NSW in 2008 were non-compliant with EU and US off-road standards;
- **PM_{10} emission reductions achievable through compliance with latest US standards are estimated to be between 5,600 and 10,200 tonnes per annum to 2020, increasing to 7,300 to 14,100 tonnes per annum by 2030; and**
- **Annual environmental health benefits associated with PM_{10} and NO_X emission reductions are estimated to be in the range $2.5 to $4.7 billion (2008 AUD) by 2030.**

Regulating non-road diesel emissions

In 2013, the Senate Community Affairs Committee presented a report[6] outlining the need to tackle air quality in Australia.

It is recognised by the National Environment Protection Council (NEPC) that Australia lags behind international competitors when it comes to regulating harmful emissions from off-road diesel sources. As noted by the NEPC "*Regulated emissions limits for [non-road diesel engines] have been enforced in the US and EU since the mid-1990s, and more recently in Canada, Japan, China and India*[7]*."*

The NSW EPA has highlighted non-road diesel engines are significant emitters and supports the develop of standards for new diesel equipment: "*As part of the national process that is going on for the National Plan for Clean Air, we are very keen to see the development of standards for new diesel equipment*[8]*.*"

The evidence is incontrovertible that diesel emissions are harmful to human health and the health of our planet. Diesel emissions should be minimised as far as possible through regulation. In the international agricultural sector the technology already exists to radically improve emission profiles from diesel engines. We need to create a market that embraces these new and exciting technologies to help us build greener farming production systems.

In conclusion, farmers call for ambitious emission standards to be put in place, that regulations are enforced by local and national governments and are designed to be consistent with international emission regulations.

Yours sincerely,

Anika Molesworth
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References

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