26th May 2023

Department of Infrastructure, Transport, Regional Development,
Communications and the Arts,
GPO Box 2154,
Canberra ACT 2601

By email: cleanercars@infrastructure.gov.au

Dear Director,

**Re: Consultation on the design of a fuel efficiency (CO2) standard by the Fuel Efficiency Standards – Surface Transport Emissions and Policy Division**

Lung Foundation Australia strongly support implementation of Fuel Efficiency Standards (FES) in Australia and are pleased to have the opportunity to respond and provide input to the consultation held by The Department of Infrastructure, Transport, Regional Development, Communications, and the Arts. Australia continues to fall behind international standards for fuel and vehicles, being only one of two developed nations without fuel efficiency standards. There is no safe level of air pollution and Australia must do more lower air pollution emissions to protect the health of the environment and Australians. Lung Foundation Australia strongly support the introduction of FES which will significantly reduce the amount of air pollution emitted by Australian vehicles and subsequently improve air quality and prevent premature deaths. We acknowledge the National Electric Vehicle (EV) Strategy released in April 2023 and the commitment to introduce FES to increase the supply of affordable and accessible EVs as part long term goals in achieving net zero in Australia.[1]

## About Lung Foundation

Lung Foundation Australia (LFA) is the only national charity and leading peak-body dedicated to supporting anyone with a lung disease including lung cancer. For over 31 years we have been the trusted national point-of-call for patients, their families, carers, health professionals and the general community on lung health. There are over 30 different types of lung disease currently impacting 1 in 3 Australians. Our mission is to improve lung health and reduce the impact of lung disease for all Australians. We will continue working to ensure lung health is a priority for all, from promoting lung health and early diagnosis, advocating for policy change and research investment, raising awareness about the symptoms and prevalence of lung disease and championing equitable access to treatment and care. As a patient representative charity, we have partnered with patients, health professionals, researchers, medical organisations and the Australian community to drive reform in the delivery of health services in Australia to benefit more than 7 million Australians impacted by lung disease and lung cancer.

## The Environment and Health

The health of the environment directly influences human health. Improving environmental health can prevent poor human health outcomes and in turn reduce the economic burden placed on the health system. According to The World Health Organisation in 2016, 24% of global deaths were linked to the environment, accounting for 13.7 million deaths a year.[2] The physical, chemical, and biological factors external to a person exert an influence on health and wellbeing and this notion, known as environmental health, aims to address the health risks linked to our environment, including air, water, and food quality.[3] Improving the quality of the environment in key areas such as air can prevent disease and improve human health, as our health and wellbeing are thoroughly linked to the state of

the environment.[4] In 2018, Australia recorded more than 3,200 deaths due to particle matter air pollution, signifying the need for strong implementation of environmental legislation and consistent work to maintain healthy environments.[5] Furthermore, air pollution is estimated to cost Australia $16 billion annually.[6]

## Air Pollution and Health

### Pollutants:

Vehicle emissions are the combination of a range of air pollutants and in Australia is one of the most widespread sources of anthropogenic air pollution.[7] Emissions from tailpipes incorporate black carbon and toxic gases with the main air pollutants emitted by motor vehicles including carbon monoxide (CO), nitrogen oxides (NOx), particulate matter (PM) and volatile organic compounds (VOC). Vehicle exhaust and evaporative emissions of petrol account for the largest proportion of VOC emissions.[8] Ground ozone is created as a secondary pollutant by the chemical reaction between nitrogen oxides (NOx) and volatile organic compounds (VOCs) in the presence of sunlight.[9] On-road vehicles increase the level of fine particle concentration in the atmosphere, particularly particulate matter (PM) 2.5 and PM10.[10] Particulate matter can go deep into lungs and bloodstream, as well as cause adverse human health effects.[11] We highlight the importance of FES standards to reduce current air pollution levels and protect the health of the public. Air pollution has been linked to serious health effects and the Australian Government needs to take further action to promote clean air.

### Health Impacts of Air Pollution

Lung Foundation Australia strongly advocate for lung health, and we note the significant impacts of air pollution and the need to improve air quality. There is no safe level of air pollution and even exposure to small amounts of air pollution can cause health impacts.[12] The significant health impacts associated with vehicle pollution is a substantial economic burden for the government, with exposure linked to serious health harms and premature deaths. In 2015, The International Council on Clean Transportation estimated that transport related air pollution caused an economic cost of about $10 billion in Australia.[13] Exposure to air pollutants can result in a wide range health effects including asthma, heart disease, stroke, lung cancer, and chronic obstructive pulmonary disease.[14] New research from the University of Melbourne demonstrates that the health impacts resulting from vehicle emissions are worse than previously thought and may cause:

- 11,105 premature deaths in adults per year;
- 12,210 cardiovascular hospitalisations per year;
- 6,840 respiratory hospitalisations per year;
- 66,000 active asthma cases per year.[15]

Air pollution disproportionally impacts the health of those who are vulnerable, including the 1 in 3 Australians living with a lung disease. Air pollution plays a significant role in the onset and exacerbation of the symptoms in patients with pre-existing lung diseases and air pollutants such as particulate matter can induce inflammation in the respiratory tract and lung, reducing the pulmonary function of COPD patients and lead to worsening of the symptoms.[16]

Health impacts are observed for all levels of exposure to many air pollutants. This includes PM2.5 and PM10, which are emitted from light vehicles.[17] Air pollution causes detrimental effects to the respiratory system including decreased pulmonary function, increased infections, increase in respiratory symptoms (cough, phlegm, and wheeze), acute exacerbations of chronic obstructive pulmonary disease (COPD), asthma, increased respiratory hospitalisations, higher prevalence of childhood asthma and premature mortality in people with chronic lung disease.[18] Ambient air pollution can also cause significant health impacts including ischaemic heart disease, stroke, and lung cancer.[19]Furthermore, air pollution has been linked to poor brain health with increased incidence of

neurological and psychiatric disorders such as cognitive decline, dementia, anxiety, depression, schizophrenia and attention deficit hyperactivity disorder (ADHD).[20]

Additionally, children, the elderly and unborn babies (pregnant women) can be particularly impacted by air pollution.[21] Pregnant women, children and older persons are more susceptible to air pollution[22]. Pregnant women exposed to high levels of air pollution over time may experience adverse pregnancy outcomes such as reduced birth weight or preterm birth.[23] Children are especially vulnerable as their lungs are growing and developing, immune and metabolic systems are developing, they suffer from frequent respiratory infections, they breathe at a higher rate, and they typically spend more time outdoors and closer to the ground where pollutants fall.[24] Older people are also more likely to be affected by air pollution due to weaker immune systems, or undiagnosed respiratory or cardiovascular health conditions.[25]

## The Implementation of FES

We again highlight the continual health impacts due to exposure to vehicle air pollution. We support and urge the department to immediately commence FES and to enable the benefits for both the environment and health to occur as soon as possible. This is vital to ensure industry must align with these standards as soon as possible and take the necessary action to protect public health. Noting that legislation reform is a long process itself, the industry will have sufficient time to make required changes. The FES will provide significant benefits for the health of the environment and Australians, and we cannot delay action and implementation. Additionally, we emphasise the need to continue to review and strengthen the FES even once implemented to ensure ongoing decline in emissions by road traffic.

By 2030, transport is projected to be Australia's largest emission source and the pathway to increase EVs by implementing FES will further help Australia to achieve reduction targets of 43% below 2005 levels by 2030 – and net zero emissions by 2050.[26] We acknowledge the importance and need of FES in Australia to provide Australians with greater access to EVs and other lower emission cars including hybrids. We need to continue to promote change within the car industry and requirements such as meeting FES standards are primary in addressing air quality in Australia and aligns with the strategic approach of the National Clean Air Agreement of emission reduction measures to reduce air pollution and population exposure to air pollution.[27]

## Air Pollution Regulations in Australia

Australian states and territories have acknowledged the importance of addressing fuel quality due to public health links and continue to improve fuel standards and support transition to EV vehicles. Regulations addressing volatility has been implemented and explored by state governments as climate change and subsequent high temperatures are causing increasing amounts of toxic emissions from vehicles. Implementing FES will result in significant reductions in air pollution producing positive benefits for both the environment and human health. We acknowledge and support the consultation for improving fuel quality standards held in November 2022 and the current consultation on managing air pollution from non-road diesel engines. These reforms will pave the way for Australia to meet international standards and ultimately play an integral role in decreasing air pollution. We note the importance of commencing FES as soon as possible and for strong implementation of these standards to ensure industry takes action and remains responsible for emission reduction.

We congratulate the federal government on its work to improve emissions from the transport sector however we must continue to do more to protect the health of Australians particularly in the light of climate change and the exacerbation of impacts to human health. Thank you for the opportunity to provide feedback. If you would like to discuss the recommendations further, please [redacted]

Yours sincerely,

**Mark Brooke**
CEO
Lung Foundation Australia

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