

# A road map to ending diesel vehicle pollution

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Researchers have developed a road map to accelerate the removal of light diesel vehicles, including cars, utes and vans, from New Zealand roads in a quest to clear the air.

In an article published in the *New Zealand Medical Journal*, independent researcher Dr. John Horrocks and Professor Nick Wilson from the University of Otago, Wellington, lay out a series of measures the government could implement to remove diesel vehicles from our roads—and reduce air pollution during the transition.

They say air pollution from diesel-powered vehicles is making it harder for the country to meet its international climate change obligations and is causing substantial harm to New Zealanders' health.

University of Otago research earlier found an estimated 2,000 premature deaths in 2016 in New Zealand could be attributed to emissions of nitrogen dioxide from road traffic—much of which is from diesel vehicles. Exposure to fine particles from vehicle exhaust emissions and other sources is estimated to be responsible for a similar number of premature deaths.

Professor Wilson says diesel vehicles are also significant contributors to climate change through emissions of carbon dioxide and although they have lower fuel consumption than petrol vehicles, each liter of diesel accounts for more CO<sub>2</sub> emissions than a liter of petrol.

While later model diesel vehicles are fitted with catalytic converters to reduce emissions and have filters to control the release of hazardous fine particles, the researchers say older diesel vehicles do not meet New Zealand's current emission standards, which are far less stringent than those in other OECD countries.

Professor Wilson says the health risks of diesel vehicles are well recognized in other countries, and older diesel vehicles are banned from the centers of European cities, including Stuttgart and Paris.

"A scrappage scheme for older diesel vehicles would prevent New

Zealand becoming a dumping ground for light diesel vehicles from other countries. Financial incentives to scrap older vehicles could speed up their withdrawal from use, as well as being an equitable solution for lower-income families, who could find it difficult to replace their vehicles."

Dr. Horrocks says other initiatives to manage diesel pollution and accelerate the removal of light diesel vehicles from the country's roads could include a ban on any marketing of light diesel vehicles that do not meet the latest European emission standards.

"Car and ute dealerships should also be required to provide information about the [fine particles](#) and oxides of nitrogen emissions of the vehicles. In Britain, for example, the emission status of vehicles has been noted on registration certificates since 2018."

Dr. Horrocks says warrant of fitness inspections should include a check to ensure emission control devices on light diesel vehicles are operating as designed or have not been tampered with.

"A more radical suggestion would be to bring forward the Climate Change Commission's proposed end date of 2035 for imports of internal combustion light vehicles to 2025."

He says changing public perceptions about the value of large diesel vehicles, such as twin-cab utes, will be key to achieving change on the country's roads.

"Light [diesel vehicles](#) have enjoyed years of heavy promotion based very much on a psychological aura of dominance and outright aggression. Marketing like this is at odds with the transition to a low-emissions economy."

In order to counteract the marketing hype, the researchers say promotion of the vehicles could be limited to places they are sold, and restricted to the vehicle specifications.

They also recommend the government begins producing informational material about the health risks of diesel emissions targeted not just at motorists, but also towards organizations such as the Automobile Association, the Motor Industry Association, motoring publications and the general public.

They say further monitoring of hazardous diesel emissions throughout the country, particularly of fine particle pollution, is needed.

The article, "Diesel matters: accelerating the light [diesel vehicle](#) endgame in Aotearoa New Zealand" is published in the *New Zealand Medical Journal*.

**More information:** John Horrocks, Nick Wilson, Diesel matters: accelerating the light diesel vehicle endgame in Aotearoa New Zealand, *New Zealand Medical Journal* (2021). [journal.nzma.org.nz/journal-ar ... aotearoa-new-zealand](http://journal.nzma.org.nz/journal-ar...aotearoa-new-zealand)

Provided by University of Otago

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