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Submission By Air Future Ltd

To

Moving the light vehicle fleet to low-emissions:

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Thank you for the opportunity to provide our views on the “Moving the light vehicle fleet to low emissions:” discussion document.

1. Executive Summary – Who we are

Air Future Limited is a New Zealand public company holding the exclusive rights to the Australasian/Pacific Island territory to manufacture and sell MDI compressed air, clean vehicles and electricity generation and energy storage products and solutions.

Our technology partner MDI of Luxembourg, with its research and development operations in France is a world leader in the application of compressed air energy storage applied to both clean vehicles and electricity generation. MDI holds global patents for their products and their energy storage (“battery”) is based on compressed air instead of chemicals. Their vehicles are lightweight clean vehicles. Manufacture will take place locally (i.e. in a number of factories in New Zealand) and both the energy storage and vehicles are priced for the masses to afford. MDI has joint ventures and alliances with some of the most powerful companies in the world such as Tata Motors and Veolia, who are now industrialising the MDI technology.

MDI vehicles are **completely pollution free, with cold exhaust.**

The Air Future group of companies’ immediate intentions is to commence manufacture and sales within New Zealand for the range of MDI vehicles as they become available by MDI commencing with the AirPod.¹²

¹ <https://www.airfuture.co.nz/our-vision>

² <https://www.mdi.lu/airpod2-en>

We see the New Zealand Government, people and businesses having enormous benefits through the rapid introduction of the MDI vehicles to New Zealand; **AND without many of the debilitating economic costs of subsidies.**

New Zealand has the early global opportunity to demonstrate and implement transport and energy products that are affordable for the masses, emission free, highly efficient, and a delight to use.

2. Government Objectives

The government has introduced a consultation document and is requesting comments regarding its proposal to introduce two policies aimed at increasing the supply of and cost reduction of fuel efficient and electric vehicles:

- 1) Clean Car Standard (which is a vehicle efficiency standard) requiring vehicle importers to bring in progressively more fuel efficient and electric vehicles.
- 2) Clean Car Discount (which is a feebate scheme) making fuel efficient and electric vehicles more affordable for New Zealanders to buy.

We support the underlying philosophy of both the Clean Car Standard and the Clean Car Discount proposals, these being a catalyst to promote a reduction in New Zealand's dependence on imported fossil fuels for transport, a reduction in greenhouse gas emissions, and encouraging sustainable alternatives in order for New Zealand to meet its commitments under the:

- Electric Vehicle (EV) target for 2021
- Achieving its emissions target of 105 grams of CO₂ per kilometer by 2025
- Aligning with New Zealand's target under the Paris Agreement to reduce greenhouse gas emissions by 30 per cent below 2005 levels by 2030
- Aligning with the 2050 target under the Paris Agreement to reduce greenhouse gas emissions to 50 per cent below 1990 levels by 2050

As identified in the Ministry of Transport discussion document:

"Taking steps today to reduce light vehicle emission is critical to ensuring that New Zealand plays its part in reducing climate damaging pollution in the coming decades. The light vehicles that enter New Zealand over the next five years will lock in emissions until at least 2043. This is because a new vehicle is driven until it is, on average, 19 years old.

Light vehicle emissions are projected to keep rising until around 2022. There is significant uncertainty about the contribution vehicle technology will make to reducing light vehicles emissions after this date. Even the best case projections for EV uptake do not result in light vehicle emissions reducing in line with our 2030 or 2050 climate targets. Today, New Zealand

is not on track to meet the EV target for 2021 set by the previous Government.”³

Our MDI vehicles have completely pollution free emissions are affordable and intended to be locally manufactured.

The government is providing leadership to achieve its commitments.

However in regard to vehicles available to the public, New Zealand is out of step with the majority of the world in respect of its city vehicle fleet.

3. This Submission

This submission includes references, links and documents to further introduction.

We hope to be able to engage to jointly consider the many applications, of our products.

Importantly we wish to emphasise the current government regulatory road blocks that puts New Zealand out of step with the majority of the world consequently restricting New Zealanders from accessing vehicles that are very affordable, can be locally made, contribute no emissions and capable of an immediate contribution to the reduction in CO₂ emissions at the forefront of New Zealand’s commitments to taking decisive action to protect our climate by reducing greenhouse gas emissions.

There are further initiatives that must be taken in tandem with the recommendations of the consultation document.

Globally there is a move to phase out inner city fossil fuel vehicles. Currently this is being achieved through restricting and/or banning fossil fuel vehicles and at the same time providing advantages for alternative transport (bicycles, scooters, busses and microcars - being small vehicles classed as L6e and L7e Quadricycle) ⁴

Quadricycles.⁵

In recent years, a new class of compact vehicles has been emerging and wide spreading all around Europe: the quadricycle. These four wheeled

³ <https://www.transport.govt.nz/clean-cars/>

⁴ <http://www.mercuryarv.co.uk/licence-requirements.html>

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<https://www.google.co.nz/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=2ahUKEwiPxJGrgoTkAhVp6XMBHYU7Au4QFjACegQIBxAC&url=https%3A%2F%2Fwww.lowcvp.org.uk%2Fassets%2Fother%2FL-Category%2520Vehicles%2520Workshop%2520presentations.pdf&usg=AOvVaw3lyvlzyAcYgx9YAsQ9139J>

motor vehicles, are small and a fuel efficient and economical means of transportation used as an alternative to motor bikes or city cars or special purpose service vehicles.⁶

They are road-legal and a full drivers license may not be required to drive them. Technically classed as light quadricycles (L6e) or heavy quadricycles (L7e), these vehicles do not have to pass the stringent safety tests that apply to normal passenger cars. As a safety feature they can be restricted to speed and limited to driving on roads within a city only.

In his paper to the NZ Transport Agency ("Low-emission fuel-efficient light vehicles **November 2009** – NZ Transport Agency research report 391) Dr. J de Pont, TERNZ Ltd Auckland recommended:

"Smaller low-powered electric vehicles exist in significant numbers in other countries; for example quadricycles in Europe, neighbourhood electric vehicles in the US, and higher-powered mobility scooters in Europe and elsewhere. At present, there is no provision for these vehicles to be used on New Zealand roads. We recommend a review regarding the potential role of these vehicles for lower-speed urban transport in New Zealand, and as a viable alternative to the car for older drivers. The review would need to include considerations of the safety features that these vehicles need, the speed limits and road access restrictions that should apply, and what the driver license requirements should be, to establish a consistent set of principles for such vehicles."

Whilst several other 'reports' and discussions are certain to have taken place since the above recommendation was written, in that interim period there continues to be little visible output at Government or Ministry of Transport or NZTA level to facilitate within New Zealand Dr. de Pont's recommendation as to any recommended admittance of quadricycles to inner city New Zealand.

There is a growing global trend of inner city quadricycles throughout the world as a means to reduce and/or eliminate within city environments fossil fuel emissions.

4. Summary and Conclusion

The Ministry of Transport consultation document states:

"There is considerable uncertainty about the possible pace of EV uptake. Even if there is a favorable uptake of EV's under business as usual, emissions will still be 12 percent above 2005 levels in 2030 and it would take until

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https://www.researchgate.net/publication/287521319_General_considerations_on_regulations_and_safety_requirements_for_quadricycles

2040 to reach 33 percent below 2005 levels. This pace of decline would not be consistent with a target of net zero emissions by 2050.”⁷

“If we want a largely electric fleet by 2050, nearly all newly registered vehicles would need to be electric by the early 2030’s. The Ministry of Transport projections suggest that only around 40 percent of vehicles entering New Zealand will be electric in 2030 without further government intervention or incentives.”⁸

New Zealand is out of step with most of the rest of the world in not having an L7e category. It is therefore limiting the opportunity for New Zealanders to adopt new clean vehicles and contribute to urgent alternative solutions in an affordable and environmentally friendly manner.

Such avoidance of the introduction of the L7e category and/or the failure to facilitate activities permitting the use of quadricycles, even constrained to city boundaries or speed limit, is incongruous and therefore conflicts with the current government initiative being the subject of this Ministry of Transport consultation document.

REFERENCES & LINKS

1) Relevant Company Web sites:

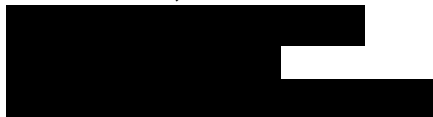
Air Future Limited - <http://www.airfuture.co.nz/>

Air Volution Limited - <http://www.air-volution.com.au/>

MDI - <http://www.mdi.lu/>

2) Contact:

Russell Fitts, Executive Chairman.



⁷ <https://www.transport.govt.nz/assets/Import/Uploads/Our-Work/Documents/11de862c28/LEV-consultation-document-final.pdf>

⁸ <https://www.transport.govt.nz/assets/Import/Uploads/Our-Work/Documents/11de862c28/LEV-consultation-document-final.pdf>