

## SUBMISSION ON “New Zealand’s second Emissions Reduction Plan (2026-30)”



Submitter: Intelligent Transport Systems New Zealand Limited

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About this organization. Intelligent Transport Systems New Zealand (ITSNZ) is the peak body association for Intelligent Transport Systems (ITS) in New Zealand. It represents organisations and individuals from a broad spectrum of government, private sector and education entities involved or interested in application of ITS. Consisting of over 50 members, ITSNZ represents private sector, government, and education entities in the transport sector. Our members not only consume and provide transport products and services, but also contribute to the research, development, deployment and support of Intelligent Transport Systems and/or Future Transport solutions within New Zealand and internationally. ITSNZ supports and advocates for the development and adoption of solutions to achieve the outcomes of safety, sustainability and efficiency.

Note: Our Central Government members have not been involved with this submission.

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## **General feedback on New Zealand’s second Emissions Reduction Plan (2026-2030)**

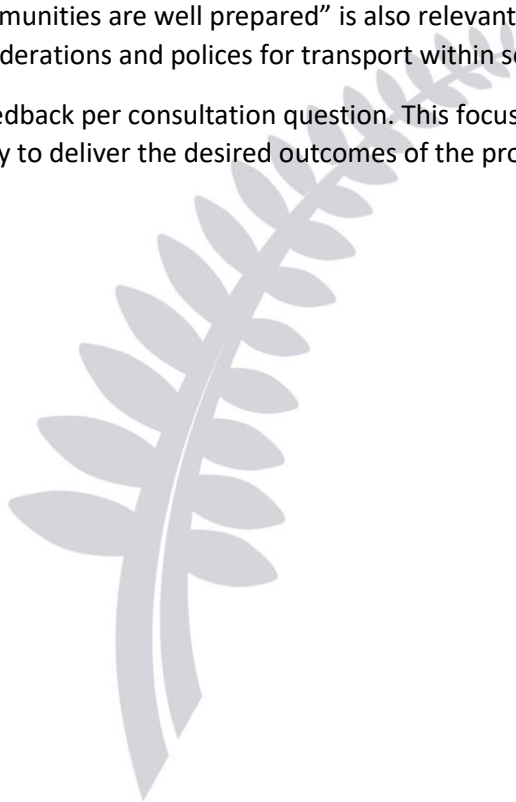
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ITS New Zealand (ITSNZ) wishes to submit feedback on the New Zealand’s second emissions reduction plan dated July 2024 on behalf of its members. ITSNZ is broadly supportive of the least-cost, net-based market-led approach to maximise emissions reduction for our country.

In particular, we have reviewed the plan specific to the transport sector and commend the work done to produce the proposed approach for transport emissions reduction. While ITSNZ agrees with the general direction of the approach and its supporting actions, there are number of things we would like to submit which we think will add value to the plan.

Our initial feedback relates to the opening section ‘Transport sector at a glance’. The plan notes “Clean energy is abundant and affordable” and “Credible markets support the climate transition” as relevant strategic pillars for the transport sector, and we agree. It is worthwhile noting however that pillar 1 “Infrastructure is resilient and communities are well prepared” is also relevant. We appreciate the inclusion of related climate adaptation considerations and polices for transport within section 11.

The following pages outline our feedback per consultation question. This focuses on the application of technology to strengthen the ability to deliver the desired outcomes of the proposed approach for transport.



## Consultation Feedback per Question

### **Question 6.1: Do you support the proposed actions on EV charging infrastructure?**

We agree that Government should encourage the achievement of ambitious but realistic targets and removal of regulatory barriers for light vehicle fleet electrification. However, we are concerned that there is too much risk in relying on a single technology (BEV) for reducing emissions from our light vehicle fleet. The target should be looked at in balance with forecasted charging demand based on current and projected vehicle import and uptake rates to 2030. This will help ensure it is achievable and commercially viable through private investment with limited available Government co-investment. Environmental impacts from existing internal combustion vehicles being displaced as a result of increased electric vehicle uptake should also be considered.

The mandatory inclusion of C-ITS technologies should also be considered as part of the EV charging infrastructure to ensure future proofing for a range of scenarios. Smart technology can assist in the optimisation of heavy and PT vehicle fleet charging and timetable and logistics – to maximise the use of cheaper and greener available charging.

### **Question 6.2: What are the three main actions the Government can take to reduce barriers to and enable the development of a more extensive public EV charging infrastructure in New Zealand (without adding to much cost for households and businesses)?**

We agree with the proposed actions in the plan to review co-investment and the Government approach to private sector engagement, regulatory and policy support, and supporting standards. A co-investment model that considers New Zealand's unique geography, electricity grid composition, and commercial landscape will be important to support more extensive public EV charging infrastructure.

As part of this, a comprehensive review of barriers and opportunities should be conducted with a longer-term view that encourages smarter ways of doing things. We suggest this includes further consideration of smart-charging standards and network design that leverages digital technology to enable a more seamless user experience. This could include charging standards and protocols that reduce existing complexities for electric vehicle charging and payments, and policies that increase charging supply side flexibility.

### **Question 6.3: Do you support the Government's proposals to reduce emissions from heavy vehicles?**

We agree that co-investment through a heavy vehicle contestable fund can provide early adopters stimulus to help overcome upfront cost barriers and accelerate the uptake of hybrid or zero-emissions vehicles. We would like to suggest the inclusion of non-fuel technology within the design of the fund and suggest investment cost/benefit comparison with stimulus provided by the ETS to ensure each investment is cost effective. Non-fuel-type technology solutions could include intelligent transport systems that optimise heavy fleet logistics and operations to improve productivity and decrease emissions.

### **Question 6.4: What are the three main actions the Government can do to make it easier to switch to low- and zero-emissions heavy vehicles (without adding too much cost for households and businesses)?**

We support the streamlining of regulation and the review of rules to expedite the deployment of low- and zero-emissions heavy vehicles and related infrastructure. Electronic Road User Charges (E-RUC) and other intelligent pricing mechanisms could support the balancing of any system changes that would otherwise incur inequitable road maintenance cost increases (including vehicle dimensions and mass rule changes).

**Question 6.5: Do you support the Government proposals to reduce emissions from aviation and shipping?**

We are broadly supportive of the identified actions to facilitate industry discussions through existing forums, reviewing regulatory barriers and ensuring New Zealand's interests are represented appropriately on the international stage.

Consideration should be given to economies-of-scale options that enable the increased uptake of low carbon fuels by the wider transport sector as these are likely to increase affordability. We also envisage smart infrastructure and demand forecasting will be important to optimize and increase uptake.

In relation to taking advantage of new technologies, we would also like to encourage consideration of technology options other than purely fuel type for aviation and shipping.

**Question 6.6: What opportunities might there be from rolling out new technologies to reduce emissions from aviation and shipping**

We see the opportunity of rolling out new technologies to reduce emissions as one of economic growth. Investments in new technologies such as electric charging and hydrogen refueling stations for aviation and shipping can also support broader adoption if these are strategically positioned with the ability to also serve land transport (for example at ports and airports). The use of digital technology to better enable planning, design, implementation and operation of required physical infrastructure increases the value that can be obtained from these investments.

Increased use of new technologies can also support certainty of investment in innovation, with the advancements in battery and technology and hybrid propulsion systems opening new possibilities for the movement of freight and people. Electric vertical take-off and landing (eVTOL) aircraft, for example is emerging as a promising solution for urban air mobility<sup>2</sup>.

From a road-based transport stand point there is the potential for the rollout of new technologies to also include C-ITS technologies which create opportunities for increased safety, efficiency and network improvements through congestion reduction.

**Question 6.7: What are the three main actions for Government to make it easier to reduce emissions from aviation and maritime fuels (without adding too much cost for households and businesses)**

The Emissions Reduction plan has identified actions to facilitate industry discussions through existing forums, reviewing regulatory barriers and ensuring New Zealand's interests are represented appropriately on the international stage. Reviewing and aligning goals with incentives (government investment, tax relief, subsidies) for Research and Development could support emissions reduction through the uptake of new physical and digital technology.

## 6.8 Additional feedback on the Government's thinking about how to reduce emissions in the transport sector

### Demand Management for Congestion Reduction and Low Emissions Transport System Investment

Congestion in Auckland has been measured to cost our largest city up to 1.3 billion dollars every year and this is expected to increase (according to the 'The Congestion Question' report released by Auckland Council and Central Government)<sup>1</sup>. Congestion is also attributed to increased emissions, as a result of vehicles spending over 30% longer on roads in our largest cities.

While it has been briefly noted in the public transport section of the approach, we think additional consideration of demand management including road pricing would be valuable as part of an equitable emissions reduction plan.

Currently, Auckland is completing planning on its approach to congestion charging to reduce congestion and this is expected to result in the identification of positive externalities including emissions reduction. A system-wide review of demand management and road pricing options and related positive externalities relating to emissions reduction would be valuable. Revenue collected from demand management can also support investments that improve public and active transport as part of the wider transport system.

### An Integrated National Transport Network that Optimises Travel Routes and Provides Better Travel Choices

We submit that an integrated and reliable low emissions national public transport network supports emissions reduction. It also supports an increase in active mode share. The government should continue to work with business and local council to ensure this transport network is developed accounting for regional circumstances. There are existing regional mode shift plans that focus on growing the share of travel by walking, cycling and public transport (Auckland, Tauranga, Hamilton, Wellington, Christchurch and Queenstown) that can support this. Existing programmes of work should also be acknowledged to ensure investment in an integrated national transport network is aligned (for example the Auckland Transport Alignment Project).

Further to this, first and last mile solutions, including on-demand and shared vehicle and bike services, and secure park and ride solutions at public transport form part of a well-established integrated transport system. Research and modelling conducted by Waka Kotahi highlights that the growing use of micro-mobility could also contribute to an additional increase in public transport use of up to 9% by 2030 with corresponding private car use decreasing by 2%.<sup>2</sup> This should be factored into national transport network design to ensure maximum benefits can be achieved. Expectations should be placed on councils that first and last mile solutions are low emission, affordable, and provide equitable access to citizens. In addition, behaviour change could be encouraged through public education campaigns.

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<sup>1</sup> [TheCongestionQuestionMainFindings.pdf \(transport.govt.nz\)](#)

<sup>2</sup> [Climate Change Commission Draft Advice 2021](#)

<sup>2</sup> [Research Report 674 Mode shift to micromobility | Waka Kotahi NZ Transport Agency \(nzta.govt.nz\)](#)

## Advanced Traffic Management Systems

Transport is one of the largest carbon emission emitters within our cities contributing between 45 – 70%<sup>3</sup> of carbon emissions in our three main cities Christchurch, Wellington and Auckland. Advanced traffic management technologies (ATMS) such as adaptive traffic control and traffic analytics could significantly decrease traffic congestion levels and greenhouse gas (GHG) emissions. ATMS should have visibility of not just traffic but the wider transport system to enable communication and ensure co-ordination across transport authorities (e.g. emergency services and public transport). In addition, a robust data collection and monitoring system to track progress on emission reduction goals from transport systems could support evidence-based policy for increased emissions reduction.

One of the benefits of the network operations optimisation is the reduction of the need for (or at least the deferment of) new construction, reducing carbon and emissions associated with construction. Additionally, the ability to initially defer the need for construction to take place increases the time in which the benefits of demand management and mode shift can take place, further reducing the need for investment.

On a separate note, in relation to ATMS, many jurisdictions (e.g. Transport for New South Wales - TfNSW) are beginning to use technology to reduce heavy vehicle wait times at intersections on main freight routes. This supports carbon and particulate emissions reduction. Auckland Transport are already working towards this, and other jurisdictions within New Zealand could also benefit from it.

A review of the existing traffic management systems could be conducted to obtain a clearer view of where and how much the extension of existing systems or new systems may further reduce congestion and related emissions. Looking internationally for example, Pittsburgh in the United States utilises a decentralised system of video and radar detection to detect vehicle traffic and adjust signals in real-time using artificial intelligence-driven software. Results from the implementation have been substantial: travel times have been reduced by 25%, wait times at intersections are down 40 percent and vehicle emissions as a result have been reduced by 20% in the city<sup>4</sup>.

## Increased Focus on New Technologies and Innovation

In addition to the above, we would like the Government to consider an increased focus on innovation in its policy recommendations and objectives. Innovation is a key driver for solutions that de-carbonise the transport sector, and as such actions should be included that incentivise it.

One action could be the refinement of Government investment frameworks for transport innovation in conjunction with industry. This could help ensure measurable outcomes including carbon emissions reduction are achieved from research and development investment. Increased government and private sector funding for research and development of suitable transport technology would support the adoption of emerging technology that maximises the efficacy and de-carbonisation of our existing and future transport network. Frameworks could also support increased connection to international investors and venture capital to maximise R&D investment in New Zealand.

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<sup>3</sup> [Climate change - Our plan to become a zero carbon capital - Wellington City Council Auckland's greenhouse gas emissions \(GHG\) profile \(aucklandcouncil.govt.nz\)](#)

<sup>4</sup> [Surtrac Allows Traffic To Move at the Speed of Technology \(cmu.edu\)](#)  
[Surtrac Smart Traffic Signals: Adaptive Traffic Control System \(rapidflowtech.com\)](#)

Another action could be the setup of a “center of excellence”, a model adopted by governments overseas, that encourages and facilitates collaboration between Government, industry and academia would support transport emission reduction objectives. Some examples include:

- i. Australia (AIMES)<sup>5</sup>
- ii. UK (Connected Places Catapult, formerly Transport Systems Catapult)<sup>6</sup>
- iii. Singapore (CETRAN)<sup>7</sup>

Examples of further investment in innovation that maximise value from assets and decrease emissions from transport include smart motorways and city technologies (including but not limited to aforementioned C-ITS, V2X, ATMS, sensor technologies, fibre and 5G), and other ITS ClimateTech. Auckland Transport is an example local government authority already leveraging some of these opportunities through investment in innovation, and there is significant opportunity for further investment not only for Auckland, but for wider New Zealand. Furthermore, data collection and exchange from these types of systems complements transport management and is useful in informing transport management and policy decisions.



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<sup>5</sup> [Australian Integrated Multimodal EcoSystem,; Faculty of Engineering and Information Technology, The University of Melbourne \(unimelb.edu.au\)](https://www.unimelb.edu.au)

<sup>6</sup> [Connected Places Catapult - Driving Innovation in Urbanism and Mobility](#)

<sup>7</sup> [CETRAN - Centre of Excellence for Testing and Research of Autonomous Vehicles - NTU](#)



Driving the Future Transport Conversation

GOLD MEMBERS



SILVER MEMBERS



BRONZE MEMBERS



EDUCATION AND RESEARCH MEMBERS



Note: Our Central Government members have not been involved in this submission.

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