Submission by

MITSUI & CO.

Mitsui & Co NZ Limited

to the

**Ministry of Business,
Innovation & Employment**

On

Consultation on
Interim Hydrogen Roadmap

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About Mitsui

Mitsui & Co NZ Limited welcomes the opportunity to comment on Aotearoa New Zealand's Interim Hydrogen Roadmap.

As one of the oldest Japanese trading and investment houses in New Zealand, Mitsui & Co. Ltd. ("Mitsui") has played an important role in promoting exports of key commodities and importing items supporting the New Zealand industry over many decades. Nowadays we concentrate on ESG with a special focus on Decarbonization and Sustainability in Hydrogen, Mobility and Circular Economy.

Mitsui signed a Strategic Alliance Agreement with Hiringa Energy Limited (Hiringa) in June 2020. After close discussions with Hiringa, Mitsui invested in Hiringa in March 2021, and Hiringa, Mitsui, K1W1 and Green Impact Partners formed Hiringa Refuelling New Zealand Ltd. in September 2021 to build a nationwide hydrogen refuelling station network for Heavy Fuel Cell Electric Vehicles (FCEV).

GENERAL

STRATEGIC LANDSCAPE

- We agree that heavy transport and hard-to-abate industries are important areas to focus on and would expand the list of relevant applications to include backup generators.
- We also consider this to be an opportunity for New Zealand to be a leader in workforce development in this sector and there is an opportunity for the government to support this.
- There is also potential for marine hydrogen applications to be developed in New Zealand and exported, such as the example of the Emirates Team New Zealand chase boat.
- Regarding selected hydrogen projects shown on the strategic landscape map, we would add Global Bus Ventures (GBV), which is a leading New Zealand integrator with deep experience in the integration of fuel cells on vehicles including the chase boat.

Heavy and Special transport

Transitioning the heavy vehicle fleet to zero-emission technology presents a critical opportunity to help New Zealand meet emission reduction budgets and green hydrogen has a key role to play in reducing transport (and energy/industry) emissions.

Heavy transport is not limited to just trucks and buses, and we see there are several other opportunities:

- seaport cargo handling equipment
- forestry equipment and vehicles
- bunkering for international shipping
- aviation decarbonisation

COMMENTS TO PLANNED ACTIONS

Governance, oversight and monitoring

We welcome industry engagement by the government and are keen to participate. We look forward to more guidance on these details, including how we can participate and when this will commence.

Regulatory settings and standards

Current regulations are not fit for purpose and as such, exemptions have to be relied upon. This adds unnecessary delay, cost, complexity and risk to deployment.

As such, the introduction of regulatory settings and standards, which may be based on existing overseas standards, is important for the expansion of the industry and a clear plan to finalize these standards is essential.

If this process is expected to take a lot of time, it could be worth considering an interim basic framework, addressing issues such as how hydrogen should be treated in places of operation where the public has access (fuel stations, generators etc.)

Building a market for hydrogen

This is an area where the government can influence the hydrogen market direction by stepping up to become an owner of hydrogen-fuelled vehicles and equipment as well as a procurer of hydrogen as a fuel. We are aware of interest in hydrogen across government agencies and ministries such as Defence, Police, DoC, MPI, MoT, MBIE and MFE, so a coordinated approach under the Carbon Neutral Govt Programme could be an efficient way to realise decarbonisation opportunities for hard-to-electrify use cases. Potential areas for action include:

- Review the vehicle fleet across government departments and ministries to identify the best use cases for hydrogen. Which vehicles are used daily the most? Which vehicles travel to regions with limited supply for EV charging? Which vehicles need to be reliably working 24/7, especially if the electricity network is down?
- Purchase by the government of a fleet of hydrogen-powered vehicles and emergency power-supply equipment.

- Potential implementation of requirements for 'green freight' in government logistics contracts, to reward and encourage those freight operators who choose zero-emission solutions for moving cargo.

Support for price and long-term certainty to allow hydrogen to scale for key use cases

We believe that this is a necessary and effective measure that will bring down the OPEX costs for early adopters of hydrogen-fuelled vehicles, which will in turn drive the transition from diesel to hydrogen. (For more details of our comments, please refer to our feedback provided to MBIE on the Consultation on Regional Hydrogen Transition initiative.)

Support for capital investment for hydrogen projects

We welcome support for capital investment, but it is possible that only a small percentage of vehicle operators will opt for a hydrogen-powered vehicle. Heavy vans as well as the majority of buses and trucks under 40MT will likely adopt EV technology. This will likely result in very little of the NZD30 million fund being left over for hydrogen-powered heavy vehicles.

- We suggest that more focus of the funds on heavy trucks (those over 40MT) would give a bigger "bang for the buck" in terms of emissions reductions since heavy trucks constitute 25% of transport emissions, but only account for 6% of the annual road vehicles km travelled.
- We also see there is merit in allowing those wanting to purchase a fleet to make a combined application for both the Clean Heavy Vehicle Grant and the Just Transition Fund.

Government as a purchaser of goods and services

As we outlined in Building a Market for Hydrogen, we welcome this initiative and believe the government should build on the success of the NZ Post truck and consider the purchase of a fleet of vehicles and generators.

Workforce, skills and training

A well-trained workforce is important in the success of the hydrogen ecosystem, and possibly gaining leadership internationally.

While we understand that some polytechnic schools in Waikato and Tauranga are working on hydrogen content to be included in their curriculum, better coordination of different initiatives (possibly through the sector coordination body) as well as surveys on industry workforce requirements and higher education institutions' views on training and education are important steps in developing the required workforce.

Planning and Infrastructure

We agree that this requires more study, and should include details such as timelines, plans to include international investors, budgets and non-fiscal government support, such as streamlining of the consenting process and fast consenting for renewable generation projects that are coupled with hydrogen production projects.

Deployment and scaling of hydrogen technology is a key step to its broader adoption

There is the potential to activate hubs within sectors like forestry, construction, seaports and aviation, as well as bringing different sectors together profiting from each, as demonstrated in the Hydrogen Valley concept.

There is also the need to scale Power-to-X if we are to decarbonise today's liquid fuels and industrial fossil fuel use.

A lot more renewable electricity will be required quickly to ensure that enough is off-peak available to produce hydrogen.