

## Submission on the *Interim Hydrogen Roadmap*

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Contact details	

### Release of information

Please let us know if you would like any part of your submission to be kept confidential.

I would like to be contacted before the release or use of my submission in the summary of submissions that will be published by MBIE after the consultation.

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## Responses to questions

### Section 1: Hydrogen is emerging as an important part of the future global energy system

**Are there other issues we should be considering in our assessment of the strategic landscape for hydrogen in New Zealand?**

1 New Zealand is a small market globally and a technology taker. It is important we are aligned with source markets and close proximity trading nations to maximise benefits for New Zealand, especially in regulation alignment, skill development, sourcing products, and trading.

We cannot import or export electricity in its raw form but we can with hydrogen, enabling a more flexible future renewable energy system.

### Section 2: The role for hydrogen in New Zealand's energy transition

**Do you agree with our assessment of the most viable use cases of hydrogen in New Zealand's energy transition?**

2 Yes

**Do you support some of these uses more than others?**

3 Yes.  
Firstly, heavy transport because it can make a big difference quickly with decarbonisation. Compared to many other countries, New Zealand can be covered geographically with a relatively small network of fuel stations that cover the vast majority of freight routes. We have a massive head start with the Hiringa network about to open.  
Network coverage enables proper commercial operations and creates momentum that can be perpetuated quickly by providing confidence to all stakeholders to invest in a system that works.  
Secondly, power backup is essential for situations requiring stationary, standby, or emergency power in areas lacking electricity infrastructure or where cabling costs are prohibitively high. It is particularly advantageous because the hydrogen does not degrade over time.

**4 What other factors should we be considering when assessing the right roles for hydrogen in New Zealand's energy transition?**

The roadmap mainly focuses on decarbonisation, self-reliance, and export opportunity. However, with Australia likely to be a large exporter of green hydrogen the ability to draw from our nearest large market certainly must provide additional energy security as well.

**5 Do you agree with this assessment of the potential for hydrogen supply and demand in New Zealand?**

Generally, yes.

6	<p><b>Do you agree with the key factors we have set out that are likely to determine how hydrogen deployment could play out?</b></p>
	<p>Generally, yes.</p>
7	<p><b>What do you think needs to happen to address these factors?</b></p>
	<p>Strong and clear leadership with policy and incentive (long-term and cross-party).</p>
8	<p><b>Do you have any evidence to help us build a clearer picture?</b></p>
9	<p><b>Do you agree with our findings on the potential for hydrogen to contribute to New Zealand’s emissions reduction, energy security and resilience and economic outcomes?</b></p>
	<p>Yes</p>
10	<p><b>Do you have any insights we should consider on what is needed to make hydrogen commercially viable?</b></p> <p>We believe this is already quite close in transport. The fuel needs to have parity with fossil fuel which will come with scale and technology advances. In the near term, we need to urgently get consumption to a critical mass operationally and vehicles in commercial operation. This needs Government support to drive the initial momentum.</p> <p>NZ currently collects 18c per litre of diesel from transport under the ETS scheme, yet none of this is reinvested to support transitioning transport away from fossil fuel consumption. The revenue collected (or a portion) needs to go directly back into the transition of the relevant sector away from fossil fuel. It would take less than ten cents / litre of the ETS revenue already collected to adequately incentivise up to 10% of new trucks P/A to be ZE.</p>
11	<p><b>Is there any further evidence you think we should be considering?</b></p> <p>Incentive works – the recent accelerated uptake of ZE cars shows how well this works.</p> <p>Also, regulation to drive low emission transition with hard dates. For example, the decision by Auckland Council in 2016 mandating all new public service buses to be ZE from 2024 has provided strong direction for all stakeholders to make a clear plan for their own transition. Over time it has been adopted by other councils.</p>
<p><b>Section 3: Government position and actions</b></p>	
12	<p><b>Do you agree with our policy objectives?</b></p> <p>Yes</p>

13

**Do you agree with our positioning on hydrogen’s renewable electricity impacts and export sector?**

Yes

14

**Do you agree with the proposed actions and considerations we have made under each focus area?**

Yes, it is particularly critical to continue (and expand) on the market development actions and off-take initiatives already started. Price and long-term support provide certainty for early adopters, infrastructure providers, and product suppliers which is needed for investment and getting to critical mass.

15

**Is there any evidence we should be considering to better target actions in the final Hydrogen Roadmap?**

### General comments

New Zealand has a very good opportunity (almost unique) with hydrogen.

Our base of highly renewable energy and a future plan for additional generation from new wind and solar is well suited to hydrogen. As is the ability to over-build capacity to provide New Zealand with powerful options for energy flexibility, resilience, increased self-reliance, carbon reduction, pollution reduction, skill development, and export opportunity.

We already have an advanced green hydrogen focus without having to implement a blue phase. We have a world-class network starting to roll out and our first trucks and buses on the roads. We have an incredible opportunity to capitalise on these assets early.

A strong and decisive policy is required to cement this direction.

Fuel cell technology also purifies air by removing other pollutants. We have circa 180,000 trucks in operation (or 80,000 high utilisation trucks less than ten years old) emitting a lot of harmful pollutants each day. Anecdotally every fuel cell truck will purify the air for 100 + humans to breathe each day. 50,000 fuel cell trucks could clean enough air for the population of New Zealand to breathe each day. While this is only anecdotal data, it is clear our respiratory health issues have a high human and financial cost that could be reduced with a focus on the transition to fuel cell technology and ZE heavy transport.

We tend to view our strategies through the lens of greenhouse gas reduction and carbon is penalised with the ETS. However, New Zealand does not adequately recognise some of the other factors i.e. the other pollutants from combustion engines e.g. NOx, smell, oil, heat, and noise pollution. The benefits of a successful hydrogen roadmap for New Zealand are far-reaching.

Trucks make up 4% of our fleet, yet are responsible for 25% of emissions. Hydrogen trucks can operate high mileage 24/7 the equivalent of 112 cars.

Hydrogen also serves as an excellent medium for energy storage and transportation due to its lightweight nature and resistance to degradation.

We can make a big difference faster by accelerating hydrogen heavy transport.