#17

COMPLETE

Page 4: Privacy Information

Q1

Privacy information

Respondent skipped this question

Page 5: Submitter information

Q2

Name

Q3

Organisation and role (if submitting on behalf of a company or organisation)

Horticulture NZ, Environmental Policy Advisor

Q4

Email Address

Q5

Are you happy for MBIE to contact you, if we have questions about your submission?

Yes

Q6

Please clearly indicate if you are making this submission as an individual, or on behalf of a company or organisation.

Company/Organisation

Page 6: Strategic context

Q7

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

It will take an enormous amount of renewable energy to produce hydrogen fuels at scale. This energy use is in addition to all of the increased demand from electrification as sectors across the country decarbonise.

Page 7: Use cases for hydrogen

Q8

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

Yes,

Please provide further explanation to your response:
Yes, we agree with the assessment of industrial processes and transport applications as the most viable use cases. The horticulture industry is particularly supportive of hydrogen use in trucking, marine shipping and aviation for to support our export industries. We also support applications to reduce emissions from fertiliser (urea and ammonia) production. The sector is particularly reliant on trucks as a mode of transport between the orchard/farm, packhouse, and/or processing facility and port. The distributed nature of horticulture and the perishability of fresh product creates limitations on the use of rail and coastal shipping, particularly for domestic distribution. Airfreight transportation is used for fruits with a short shelf life. Beyond the orchard gate, trucks are frequently used to transport fruit and vegetables to New Zealand consumers or ports, and some growers have their own truck fleets. We could be an early adopter of hydrogen-based trucking if it was affordable. As mentioned in this consultation document, H.W. Richardson is already trialling hydrogen-diesel trucks which have the potential to reduce trucking carbon emissions by 40%. Low and zero-emissions maritime fuels can fast-track the decarbonisation of international shipping and reduce New Zealand's vulnerability to fluctuating global fossil fuel prices. Without shipping alternatives, global emissions pricing will increase fuel costs, driving up the prices of imported food and reduce market access for our exported goods. New Zealand should prioritise and invest in lower emissions maritime shipping to bolster our country's reputation as a sustainable producer. Low or zero-emissions ships will be bigger, so New Zealand ports need upgrades to reduce congestion and keep up with changing shipping expectations. Existing processes for developing ports are lethargic and costly – making the upgrades we need should have priority given their potential to enable low emissions maritime trade.

Q9

What other factors should we be considering?

New Zealand should be working to establish green shipping corridors and invest in low or zero-emissions fuels for maritime transportation. This is essential for trade with our export partners, some of whom will be assessing lifecycle carbon emissions as conditions of our trade agreements. Our exports potentially face non-tariff barriers if we cannot meet the requirements of our trading partners' domestic legislation, such as the EU Emissions Trading Scheme. This is a risk for our continued market access.

We can position ourselves as an important stop in a green shipping route if we domestically produce hydrogen fuel. Then, New Zealand will be a port to both pick up goods and refuel green ships.

The development of hydrogen-fuelled transport will require complementary policies. For instance, ports will need upgrades to allow for larger, low or zero-emissions hydrogen-fuelled shipping vessels.

Page 8: The pathway to 2050

Q10

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

Yes,

Please provide further explanation to your response.:
Trade rules from our export partners will drive demand for hydrogen shipping from New Zealand.

Q11

Do you agree with the key factors we have set out that are likely to determine how hydrogen deployment could play out?

Yes,

Please provide further explanation to your response:
Another barrier will be the speed, cost and complexity of the consent process for new energy infrastructure to produce green hydrogen. The consenting process for new hydrogen generation needs to be streamlined to allow sector growth. Many of the emissions from horticulture come from movement of products domestically and internationally. For export-based products, sea shipping carries more emissions compared to the road transport of the product during its journey to the destination country (New Zealand Avocado Lifecycle Assessment). For instance, only 6% of kiwifruit lifecycle emissions occur on orchard, while 43% come from shipping (Zespri Climate Change Adaptation Plan). Hydrogen fuel for trucking goods around the country and international shipping/air freight would be welcomed to help horticultural supply chains reduce emissions. 93% of domestic goods are shipped by road transport based on 2017/18 National Freight Demand Study, 5.9 million tonnes of supply driven commodities in this study were horticultural in 2017/18 (about 7% of total commodities considered) (p. viii – ix).

Page 9: How hydrogen could contribute to our objectives

Q12

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?

Yes,

Please provide further explanation to your response. You may comment on any or all of these objectives.:

HortNZ agrees about emissions reduction potential from transport, and that decarbonising with green hydrogen will have a positive effect on economic growth. There will also be economic benefits for NZ's fruit exports from green shipping. As it stands, horticulture is already a low-emissions industry, so it often misses out on government decarbonisation funding. This is increasing inequity in research and development between sectors, despite horticulture being an important industry for food security and human health, low environmental impact and export earnings. Research into hydrogen fuels will support horticultural businesses in a positive step toward closing that equity gap.

Q13

Do you have any insights we should consider on what is needed to make hydrogen commercially viable?

Respondent skipped this question

Page 10: Government position and actions

Q14

Do you agree with our policy objectives?

Yes

Q15

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

Yes,

Please provide further explanation to your response.:

We agree that there will be huge demand for renewable electricity generation as everyone tries to electrify, especially with the incentive of the ETS. Will need to manage impact on the grid and ensure generation infrastructure is built at pace to match demand.

Q16

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

Yes,

Please provide further explanation to your response.:

We support the budget for a Clean Heavy Vehicle Grant for zero emissions heavy vehicles, including hydrogen fuel cell heavy vehicles.

Page 11: Other Feedback

Q17

If there is anything else you'd like to tell us, please comment below.

The horticulture industry supports the decarbonisation of fertiliser production using green hydrogen.