

[REDACTED]

---

**From:** no-reply@mbie.govt.nz  
**Sent:** Friday, 25 October 2019 4:10 p.m.  
**To:** [REDACTED]; Hydrogen  
**Subject:** Hydrogen green paper - submission

Submission on Hydrogen green paper received:

## **Introduction**

### **Name**

Chris Fleck

### **Email**

cfleck@realjourneys.co.nz

### **Business name or organisation (if applicable):**

Real Journeys Ltd

### **Position title (if applicable):**

Asset & Engineering Manager

### **Is this an individual submission or on behalf of a group or organisation?**

Behalf of group or organisation

### **Please give the name of the group or organisation this submission is on behalf of.**

Real Journeys Ltd

### **What is the role of Government in developing hydrogen for storage and distribution?**

Real Journeys believe the Government's role in developing hydrogen for storage and distribution include:

- Providing clarity and certainty that hydrogen produced from renewable sources is a key element in the Government's strategy towards reducing NZ carbon footprint.
- Provide strategic guidance as to how the Government envisages hydrogen being utilised to contribute to lowering emissions aligned to the targets stipulated in the Zero Carbon Bill providing industry with certainty.
- Provide a regulatory framework that aligns with the Government's strategic vision hydrogen.
- Create the cornerstone hydrogen generation, storage and distribution infrastructure that demonstrates the Government's commitment towards achieving the targets of the Zero Carbon Bill aligned with its strategic vision for a hydrogen economy.
- Support industry in the early stages of the development of a hydrogen economy through funding and incentive programmes that enable hydrogen to be considered as a comparable cost fuel but zero emission fuel.

### **What are the challenges for using hydrogen for storage and distribution?**

Real Journeys considers the challenges for using hydrogen for storage and distribution include:

- No strategic vision that enable industry to have confidence that hydrogen forms part of the solution to achieving the Government's targets under the Zero Carbon Bill.
- A regulatory framework that enables the development of both large and small scale hydrogen generation, storage and distribution capabilities.

- Ensuring the RMA does not become an impediment for development
- The current cost of hydrogen generation, storage, and distribution technology is cost prohibitive at the point of early adoption.

### **What are the opportunities for using hydrogen for storage and distribution?**

Real Journeys considers the opportunities for utilising hydrogen for storage and distribution include:

- A shift from total reliance on offshore companies providing NZ fuel needs to self-reliance and de-risking the NZ economy accordingly.
- The maturity of hydrogen storage and distribution technology offers the government a low risk zero emissions alternative fuel option in support of the Zero Carbon Bill.
- Hydrogen storage and distribution provides an alternative zero emissions fuel source for remote locations with limited/no access to an electrical supply.
- The ability to generate, store and distribute green hydrogen in NZ opens the opportunity for export opportunities.

### **What is the role of Government in developing the complementary role of electricity and hydrogen?**

Real Journeys believes the Government's role in developing the complementary and integrated roles that electricity and hydrogen include:

- The production of green hydrogen is inextricably linked to the electricity sector.
- The electricity generation and distribution network within NZ is a strategic asset both partially owned and regulated by the state.
- Accordingly, the Government should use its ability to influence and regulate the electricity sector to promote the cost effective production of green hydrogen.

### **What are the challenges for achieving this complementary role of electricity and hydrogen?**

Real Journeys considers the challenges for achieving this complimentary role of electricity and hydrogen include the following:

- Without a clear strategic vision, the will, and motivation, electricity suppliers will not see a role in the generation of green hydrogen other than to supply electricity demanded by the market.
- Demand for hydrogen will remain low until heavy FCEVs become commercially available and a viable alternative.

### **What are the opportunities for this complementary role of electricity and hydrogen?**

Real Journeys considers the opportunities for New Zealand in developing a complementary role of electricity and hydrogen include:

- Ability to optimise the electrical generation and distribution network to produce significant volumes of cost effective green hydrogen for both domestic and international markets.
- Demonstrates NZ's commitment to carbon reduction domestically and internationally.

### **What is the role of Government in supporting hydrogen use for the transport sector?**

The role of Government in supporting hydrogen use for the transport sector includes:

- Providing clarity and certainty that green hydrogen is a key element in the Government's strategy towards reducing NZ carbon footprint with respect to the transport sector.
- Provide strategic guidance as to how the Government envisages hydrogen being utilised within the transport sector to contribute to lowering emissions aligned to the targets stipulated in the Zero Carbon Bill providing industry with certainty.
- Provide a regulatory framework that aligns with the Government's strategic vision hydrogen as it relates to the transport sector and ensure existing agencies responsible for regulating the transport

sector update their regulations in a timely manner to support the adoption of hydrogen technologies rather than hinder it.

- Create the cornerstone infrastructure that demonstrates the Government's commitment to hydrogen as an alternative zero emission fuel for the transport sector aligned with its strategic vision.
- Support industry in the early stages of the development of a hydrogen economy through funding and incentive programmes aimed at the transport sector that enable hydrogen to be considered as a comparable cost fuel.
- Through funding and incentive programmes and the other levers of Government (carbon tax etc), ensure the cost of ownership of a FCEV is comparable to the equivalent ICE vehicle until such a time as parity is achieved in the market place.
- Ensure the Government remains neutral in terms of the selection of BEV/FCEV technologies enabling industry to select the technology that best suits the application recognising both technology streams will pay an important part towards zero carbon emissions.
- Promote NZ as a world leader in the adoption of green hydrogen for mobility and transportation.

### **What are the challenges when using hydrogen for mobility and transport?**

Real Journeys considers the challenges when using hydrogen for mobility and transport in New Zealand include:

- The New Zealand transport sector is represented by a range of operators and supporting industries aligned to various operating contexts. Accordingly, there is no centralised voice able to represent the transport sector as a whole. This is very evident with little debate with regards to hydrogen and NZ's maritime fleet.
- There is currently no national strategy with regards to how hydrogen should be used to contribute to the reduction of emission across the transport sector.
- There is currently no roadmap that creates a network of hydrogen refuelling stations across NZ to give industry the confidence to adopt hydrogen technology.
- Heavy FCEVs, particularly trucks, will not become commercially available for some time.
- Transport regulators are able to keep up with the aspirations of industry in terms of regulatory frameworks and certification processes for FCEVs.
- The cost of FCEV technology is currently 50% higher than comparable ICE vehicles.
- Public's general lack of awareness of FCEV technology.
- The unhealthy debate over BEV versus FCEV. This emerging debate appears to want to bias BEV technology over FCEV, without understanding neither provides a 100% solution and a zero emission economy will require the advancement of both technologies in the foreseeable future.

### **What are the opportunities for using hydrogen for mobility and transport?**

Real Journeys considers opportunities for using hydrogen for mobility and transport include:

- Current FCEV technology provides the equivalent range and convenience of diesel fuel for heavy vehicles and is therefore the logical zero emission replacement fuel if commercially viable.
- The development of a network of refuelling stations aimed primarily at supporting the commercial transport sector will in turn provide the public with the option to consider FCEVs.
- Ensures transport operators operating in remote locations have a zero emission fuel choice.
- New Zealand's innovative culture lends itself towards creating a new opportunity to convert existing ICE platforms to FCEVs both in terms of heavy vehicles and vessels.
- Because of the bespoke nature of coach building, NZ's coach building industry has the potential to re-invigorate itself to ensure it remains a viable option domestically, and potentially as an export earner.
- Because the transport sector is closely intertwined with the public, the early adoption of hydrogen technology across the transport sector will assist in the development of public confidence in hydrogen are its willingness to adopt the technology.
- Promotes NZ's commitment to reducing its carbon footprint.
- Where adopted, provides NZ tourism sector with the opportunity to sell both domestic and

international tourism markets with zero/low emission experiences.

- Provides tourists with a zero carbon choice while in NZ
- Provides the opportunity to ‘offset’ or limit the carbon footprint of international holiday providing a counter argument to flight shaming, particularly where tourism providers have climate change and conservation initiatives in place.

**What is the role of Government in encouraging the use of hydrogen for industrial processes including process heat supply?**

- No comment – does not relate to Real Journeys context.

**What are the challenges for using hydrogen in industrial processes?**

- No comment – does not relate to Real Journeys context.

**What are the opportunities for the use of hydrogen in industrial processes?**

- No comment – does not relate to Real Journeys context.

**What is the role of Government in encouraging hydrogen uptake for decarbonisation of our natural gas uses?**

- No comment – does not relate to Real Journeys context.

**What are the challenges for hydrogen to decarbonise the applications using natural gas?**

- No comment – does not relate to Real Journeys context.

**What are the opportunities for hydrogen to decarbonise our gas demand?**

- No comment – does not relate to Real Journeys context.

**What is the role of Government in producing hydrogen in sufficient volume for export?**

- No comment – does not relate to Real Journeys context.

**What are the challenges for hydrogen if produced for export?**

- No comment – does not relate to Real Journeys context.

**In addition, we welcome your feedback about the opportunities of hydrogen to Māori and how this will support their aspirations for social and economic development.**

- No comment – does not relate to Real Journeys context.

**What are the opportunities for hydrogen if produced for export?**

- No comment – does not relate to Real Journeys context.

**If you wish to, you can attach a document to this submission.**

**Use and release of information**

**We intend to upload submissions to our website at [www.mbie.govt.nz](http://www.mbie.govt.nz). Can we include your submission on the website?**

Yes

**Can we include your name?**

Yes

**Can we include your email address?**

Yes

**Can we include your business name or organisation?**

Yes

**Can we include your position title?**

Yes

**Can we include the group or organisation your submission represents (if submitting on behalf of a group or organisation)?**

Yes

**If there are any other parts to your submission that you do not want public on the website please note them below:**

No

**OIA warning**

**If there is information in your submission that you wish to remain confidential, please note them below:**

No