[redacted]

From: no-reply@mbie.govt.nz
Sent: Friday, 18 October 2019 5:57 p.m.
To: [redacted] Hydrogen
Subject: Hydrogen green paper - submission

Submission on Hydrogen green paper recevied:

Introduction
Name

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Business name or organisation (if applicable):
Position title (if applicable):
Is this an individual submission or on behalf of a group or organisation?

Individual

Please give the name of the group or organisation this submission is on behalf of.
What is the role of Government in developing hydrogen for storage and distribution?

Storage and industrial use may be appropriate
There is no place for Hydrogen in land transportation

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

Storage - yes - distribution? - almost certainly not

What are the opportunities for using hydrogen for storage and distribution?
What is the role of Government in developing the complementary role of electricity and hydrogen?

The government needs to encourage Solar and wind as primary energy sources
Hydrogen may be a useful addition when we have enough wind and solar for use in the winter and it may be a valuable "byproduct"

What are the challenges for achieving this complementary role of electricity and hydrogen?
What are the opportunities for this complementary role of electricity and hydrogen?
What is the role of Government in supporting hydrogen use for the transport sector?

None as it is not appropriate

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

None as it is not appropriate

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

Hydrogen cars are believed to have an advantage over battery vehicles because of the faster re-fuelling time

When you look at this the advantage actually disappears

(1) IC car (or hydrogen)
Weekly fill up - takes at least 10 minutes, 5 minutes to fill up and five minutes to get to and from the fuel station

52 weeks times 10 minutes is 520 minutes
Longer journeys - let's have eight fuel stops of 10 minutes each
Total time taken - 600 minutes or 10 hours

(2) Battery Electric vehicle
Plug in every night - unplug every morning - 20 seconds times 360 days - 120 minutes or two hours
Longer journeys - let's have the same eight fuel stops but make them 40 minutes each - 320 minutes
Total time taken - 440 minutes or 7 hours and 20 minutes

So the battery car SAVES two hours and 40 minutes - it takes a lot LESS time to charge than the Petrol/Hydrogen car takes

The actual situation is WORSE than that - for the eight 40 minute fuel stops with an EV you don't stand holding the pump for 40 minutes
you simply plug in and walk away - visit the toilet and or the cafe

The paradigm changes with an electric car - it is already faster to charge than a petrol car (or hydrogen car) is to re-fuel

Green Hydrogen - is all very well but a BEV will drive about three times as far on the same energy - some of that is "engineering" and we may be able to fix it - but a lot of the difference is "physics" - and we will NOT be able to fix that

Long term storage is a possible use for hydrogen - summer/winter - but that will require industrial level storage

There may well be uses for hydrogen - but not in land transport!!!

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

Long term storage - seasonal

What are the challenges for using hydrogen in industrial processes?
What are the opportunities for the use of hydrogen in industrial processes?
What is the role of Government in encouraging hydrogen uptake for decarbonisation of our natural gas uses?
What are the challenges for hydrogen to decarbonise the applications using natural gas?
What are the opportunities for hydrogen to decarbonise our gas demand?
What is the role of Government in producing hydrogen in sufficient volume for export?
What are the challenges for hydrogen if produced for export?
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.
What are the opportunities for hydrogen if produced for export?

We should FIRST look at re-organising our power market to fully utilise the existing potential to "store" power using existing Hydro power
The current market does NOT do that

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. Can we include your submission on the website?

Yes

Can we include your name?

Yes

Can we include your email address?

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Can we include your business name or organisation?

No

Can we include your position title?

No

Can we include the group or organisation your submission represents (if submitting on behalf of a group or organisation)?
If there are any other parts to your submission that you do not want public on the website please note them below:
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