

Response ID ANON-FTZ1-69JQ-F

Submitted to **Hydrogen Certification Survey**

Submitted on **2020-06-22 12:33:13**

Privacy Collection Statement

1 Do you agree to the Privacy Collection Statement?

Yes, I agree

Consultation on hydrogen certification

1 What is your name?

Name:

Max Hewitt

2 What is your email address?

Email:

max@smartenergy.org.au

3 What is your organisation?

Organisation:

Hydrogen Australia

4 Who are you answering on behalf of?

Industry

About your company

1 Which of the following best describes the current or intended operations of your business?

Other (please describe)

Other:

Support Hydrogen industry and connect industry, government and research

2 Where are your company's headquarters located?

Australia

Other:

3 Which sector best describes your organisation's operations in Australia?

B Mining:

C Manufacturing:

D Electricity, Gas, Water and Waste Services:

F Wholesale Trade:

G Retail Trade:

I Transport, Postal and Warehousing:

M Professional, Scientific and Technical Services:

Other (please specify):

Not for profit

4 Is your organisation currently a liable entity under the National Greenhouse Energy & Reporting Scheme

I'm not sure

Certification

1 Which do you consider more important for your Australian operations?

Both are equally important

2 For the scheme you nominated above, what is the ideal date to have it in place by?

Select year, starting from 2021:

2021

Why?:

The global market for technologies to support renewable power generation, energy storage and hydrogen production was calculated at 508 billion euro in 2016 and is projected to almost double by 2025, to 897 billion euro.

Australia will need to accept the market of the initial buyers and that will likely be Japan, South Korea, Singapore and even countries in Europe (e.g. Germany). These countries have major challenges decarbonizing their economies in line with Paris goals.

These markets are increasingly likely to certification of 'green hydrogen' as they decarbonize their economies in line with Paris goals.

According to the German National Hydrogen Strategy released on 10 June 2020, "only hydrogen produced on the basis of renewable energies ('green' hydrogen) is sustainable in the long term." As its Covid stimulus package, Germany intends to expand the role of green hydrogen to help end the country's reliance on coal. The government has agreed on the plan and to spend the €9 billion earmarked for the project. The plan for Germany is to see green hydrogen eventually make up about 10% of the country's total electricity capacity.

Australia needs to move as soon as practicable to develop and implement a hydrogen certification scheme which is suitable for these international markets.

In this context and making Hydrogen certification as simple as possible in the first instance, keeping costs to a minimum, a certification scheme akin to 'Green Power' (first developed in the 1990s) is recommended for 'Green Hydrogen' certification in Australia.

3 If the ideal date was not achievable, what would be the latest date a certification scheme could be in place by without adversely affecting your Australian operations?

Select year, starting from 2021:

2021

Why?:

As soon as practicable after 2021. An interim measure is for Australia to develop and implement a clear methodology for measuring, monitoring and verifying greenhouse gas emissions in the production of Hydrogen. The Australian National Greenhouse and Energy Reporting System is a suitable vehicle for this.

4 If both domestic and international schemes are important (Q7), should there be separate schemes or a single scheme? If there are separate schemes, what elements would be the most important to align and what linkages need to occur?

If both domestic and international schemes are important (Q7), should there be separate schemes or a single scheme? If there are separate schemes, what elements would be the most important to align and what linkages need to occur?:

Given the imperative to link with international markets, it is unlikely that there would be sufficient value in creating a domestic (only) certification scheme (an exception could be domestic demand for green fertilizer (derived from 'green hydrogen')).

A domestic certification scheme (if developed first) should work in parallel with international standards to promote Australian hydrogen and the industry more generally. An international scheme should be developed first, but there is an opportunity for Australia to develop a domestic scheme which follows, (or even leads) international guidelines.

A single scheme is preferred to avoid unnecessary duplication and cost.

Whilst designing the scheme to be flexible and potentially count emissions from each stage of the life-cycle – including emissions from transportation of Hydrogen and embodied energy (each of which might be required by trading partners) – it will be important to keep the scope tight in the first instance to keep costs down and a level playing field where possible. For example, it would not be reasonable to count the emissions from transportation of Hydrogen via ships but not LNG.

Again it is recommended that the certification scheme be kept simple in the first instance and use a comprehensive education and communication showing the advantages of producing Green Hydrogen in Australia (along the line of 'Green Power' in the 1990s).

Ensuring Australia can count and verify greenhouse gas emissions from production of Hydrogen will be a most important element of all schemes.

5 A certification scheme would measure and track the carbon emissions associated with hydrogen production. Are there any existing carbon accounting methodologies that a certification scheme should align with or adopt (e.g. the Australian National Greenhouse and Energy Reporting System?).

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System?):

This is all you need. Counting the carbon in its production will be the basis for certification scheme.

6 Are there any other existing Australian regulatory frameworks that might interact with a certification scheme?

Are there any other existing Australian regulatory frameworks that might interact with a certification scheme? :

Apart from the Australian National Greenhouse and Energy Reporting System it will be important to consider linkages with National Energy Market rule (e.g. ability to verify use of renewable energy, such as Renewable Energy Certificates, to demonstrate that the Hydrogen has been produced with renewable energy (if electricity is sourced from the NEM). It may be important to ensure alignment and integration with the National Pollutant Inventory scheme(s) – especially in context of producing ammonia as a ‘Hydrogen carrier’ or ammonia product in itself.

7 What are the three most important features a certification scheme should have?

1:

Transparency

2:

Simplicity

3:

Consistency

It will be important to keep the Hydrogen Certificate Scheme as simple as possible (especially in the first instance) and Australia should make best use of existing models from overseas. The system of Guarantees of Origin (GO) for renewable electricity was introduced in the EU with the Directive on the Promotion of Electricity from Renewable Energy Sources (2001/77/EC), and was subsequently kept and further developed in the Renewable Energy Directive of 2009 and in its recast (ECOS, 2020). Whilst not without challenges and criticisms, models in EU and other countries provide an excellent starting point for developing and linking an Australian Hydrogen Certificate Scheme.

8 What are the three most important things a scheme should avoid?

1:

Complexity and compliance burden

2:

Lack of flexibility initially

3:

Wasting taxpayer money

It will be important to have an in-depth understanding and knowledge of the hydrogen market(s) so that expenses incurred in the development and implementation of a hydrogen certification scheme are proportionate to the size of the market and opportunity for Australia.

Therefore, using standard carbon accounting and reporting methodologies with increased focus on how they will be applied to hydrogen production will be a ‘no regrets’ approach.

Australia should understand and advocate that to sell Hydrogen and ammonia (derived from Hydrogen etc) it must disclose the additional emissions included in its production.

9 Is there anything else you would like to bring to our attention?

Is there anything else you would like to bring to our attention?:

For hydrogen to be truly ‘clean’ it must be made with renewables, not fossil fuels. If Australia is to maximise the potential for hydrogen exports to countries including Japan, South Korea and Germany – it is critically important that trading partners have confidence in the quality of our hydrogen. A well-designed hydrogen certification scheme in Australia which meets international requirements is absolutely needed.

The Australian National Hydrogen strategy uses the term “clean hydrogen” for hydrogen produced from renewable electricity, and from coal or gas with carbon capture. And it assumes a “best-case” scenario where 90-95% of carbon dioxide is captured from fossil fuels. These capture rates are optimistic. Australia has invested hundreds of millions of dollars into trying to make big cuts in emissions from brown coal power generation (including Carbon Capture and Storage) since the late 20th century to no avail. In order to meet the necessary climate budget(s) to limit global warming in line with Paris goals – we need to make the jump to zero emissions green hydrogen as quickly as possible.

Another risk is that ‘carbon capture will not be able to achieve the best-case rates for technical or cost reasons’ - allowing large amounts of greenhouse gas to enter the atmosphere – similar to the Gorgon LNG case in Western Australia. This has the potential to diminish Australia’s brand for producing and exporting clean-green hydrogen.

Therefore, many like-minded people are advocating for Australia to invest in hydrogen initiatives, including certification schemes, which promote clean hydrogen and not hydrogen from fossil fuels. To do so otherwise – would be a fool’s errand.

10 Commercially sensitive information

If you wish your answers to be treated as commercial-in-confidence, please tick this box:

No

11 Participating in the technical advisory group

If you would like to be considered for membership of the technical advisory group, please tick this box.:

Yes

If you would like to use an alternate email to the one you provided at the beginning please enter your email address.:

12 Thank you for taking the time to complete this survey.