AUSTRALIAN HYDROGEN COUNCIL

Position statement:

Hydrogen Certification

The need to certify hydrogen

Hydrogen can be made several ways, and hydrogen production may or may not involve carbon emissions. Renewable, or 'green' hydrogen is generally made from water and renewable electricity, and hydrogen can also be produced from coal and gas, with or without carbon capture and storage. It will be important for hydrogen customers to know what they are buying, and certification can provide this assurance.

Much of the global interest in hydrogen is driven by countries' desire to decarbonise, with green hydrogen able to replace fossil fuels for a range of applications. It will therefore be critical that there is a way for potential exporting nations like Australia to demonstrate the carbon emissions associated with hydrogen produced.

The development of a credible and transparent hydrogen certification scheme is in fact critical for Australia to reach its export objectives. Certification (or a Guarantee of Origin) provides evidence of the provenance of energy sources and supply chains. International trading partners are already asking for this.

In summary, a globally recognised certification scheme, developed by a trusted body, will ensure that buyers of Australian hydrogen understand and value the emissions characteristics of the product they are using. As the industry scales up, we can expect domestic consumers to follow suit.

What should be done

1. Understand customer needs

The terms of international trade on hydrogen are currently being set. Given this timing, and potential economic benefit to Australia of exporting clean hydrogen, we need to have certification discussions with our trading partners now.

The good news is that this is occurring, with the Australian Department of Industry, Science, Energy and Resources (DISER) working on the carbon accounting methodology to underpin a certification scheme. It is doing this with 22 other countries, via the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE).

In consulting broadly on key matters, DISER will have the ability to provide input into a scheme which meets the needs of the Australia's emerging hydrogen industry.

The DISER-led approach to international engagement will ensure that a scheme is developed in collaboration with those nations with whom we will pursue economic arrangements. These arrangements will be with Asia, the Americas, Europe and the Middle East, and consequently recognition of the scheme by all these partners will be necessary.

2. Assess existing schemes but ensure fitness for purpose

Some people say that Australia should adopt a modified version of an existing mechanism, such as the European Union's 'CertifHy' scheme.

We support the Australian Government in the view that the CertifHy scheme is not appropriate for Australian certification requirements. While CertifHy holds prominence as the world's first hydrogen certification scheme, it was developed to allow comparison between lifecycle emissions from hydrogen and other alternative transport fuels, and not as a mechanism to facilitate commodity trade. It is also unclear to what extent CertifHy will be accepted in Asian markets.

However, some elements CertifHy's underpinning methodology can be leveraged to support a certification scheme for Australian producers. We understand that CertifHy has been used as the basis for the IPHE work discussed above.

Consequently recognition of the scheme by all these partners will be necessary.

3. Start with hydrogen and aim for consistency with related products

Hydrogen products or derivatives include ammonia and e-fuels. We support a scheme that allows for consistency in carbon accounting across different hydrogen products.

However, it may be onerous to cover everything at once, so we support the Australian Government in developing an approach that starts with hydrogen and can be expanded to cover all relevant products. This will allow for the green shoots of the infant hydrogen industry to start growing sooner.

4. Draw clear boundaries around carbon emissions not hydrogen colours

We note that labelling hydrogen according to its individual emissions profile on an emission per unit basis (e.g. blue, green, brown etc) is not required as part of an effective scheme. In our view it is more important that hydrogen is termed based on whether it is renewable or non-renewable.

It is particularly important to set appropriate boundary conditions for carbon accounting; that is, deciding where the boundaries lie for emissions data capture and reporting.

For hydrogen certification, we believe that only Scope 1 and 2 emissions should be reported. This will ensure that there is no overlap or double counting of emissions, such as a producer's Scope 3 emissions also being captured as part of the consumer's Scope 1 reporting. It is also consistent with the National Greenhouse and Energy Reporting (NGERs) system, which potential producers are likely to be familiar with.

This means that the boundaries for the certification of hydrogen of should be 'well to gate' and reported at a facility level rather than a unit level.

We note that industry can undertake analysis of Scope 3 emissions using accepted emissions accounting standards without the need to have these incorporated in the hydrogen production certification scheme.

5. Focus on one carbon accounting and certification pathway for now

Such is the appetite for a certification scheme that we understand a number of other bodies are proceeding with the development of a framework outside the DISER/IPHE process.

Some proponents' desire for swifter progress with certification mechanisms is understandable. It is important, however, that there is not noise and confusion created from a proliferation of certification approaches, particularly if they cover the same ground but in different ways.

As the body tasked under the National Hydrogen Strategy (NHS) with developing an industry undertaking to address community concerns about hydrogen, AHC is sensitive to the messages that the community is receiving and the fact that confusion among the general public has the potential to breed distrust and undermine the development of an Australian hydrogen industry.

Any schemes which are seeking to play a role other than that of the single, internationally focused scheme envisaged by the NHS must be mindful of the work undertaken by the Australian Government and ensure that they do not, despite best intentions, undermine the growth of hydrogen industry.

6. Regulate through the Clean Energy Regulator

In order to provide total transparency, certification should be undertaken by an appropriately trusted and authoritative organisation. Certification by a central body is preferable to assurance by individual businesses that self-audit. This approach will grow trust in the emerging hydrogen industry from the earliest stage.

A government body would provide the highest level of accountability and trust. The Commonwealth Government's involvement (through DISER) in the development of the scheme provides a level of assurance that the needs of Australian producers will be met, but their ongoing involvement as the central assurance body will play an ongoing role as the industry and the scheme itself evolve.

We support the role of the Clean Energy Regulator to manage hydrogen certification.