Queensland Hydrogen Regulation

March 2024

H2Q HYDROGEN QUEENSLAND

QREC Queensland Renewable Energy Council

Introduction

The Queensland hydrogen industry is at a significant juncture, fuelled by the state's vast renewable energy resources and a collective ambition to establish a leading role in renewable hydrogen production by 2030. This strategic direction, underscored by the Queensland Hydrogen Industry Strategy 2019-2024 and the Energy and Jobs Plan is aimed at leveraging the state's potential to support renewable resources, drive job creation, and enhance the economy.

The state has embraced hydrogen as a versatile, clean energy carrier that could revolutionize transport, power supply, and various industrial processes as well as representing potential future export opportunities reminiscent of the LNG era. The recent developments of Queensland's first publicly accessible hydrogen refueller and the establishment of the Hydrogen Industry Development Fund showcase the state's commitment to accelerating hydrogen projects and fostering industry growth. The project announcements position Queensland to realise the aspirations of a generation in decarbonisation of hard to abate sectors and growth in economic outcomes for the whole of Queensland:

- The Australian Government has committed $70 million to the Townsville Region Hydrogen Hub, aiming to leverage a total of $140 million with private sector investments to boost the region's hydrogen projects.
- In Gladstone, the Yarwun Hydrogen Calcination Pilot Demonstration, a collaboration between Rio Tinto and Sumitomo Corporation supported by $32.1 million from ARENA, is set to start construction in 2024. This initiative aims to integrate hydrogen in alumina refining to reduce emissions.
- Additionally, the H2-Hub™ Gladstone project, with an investment of $4.7 billion, is set to position Gladstone as a hydrogen leader, aiming to create significant employment opportunities. The project is backed by fully renewable energy sources.
- Fortescue Future Industries plans to establish a major hydrogen equipment manufacturing facility in Gladstone, further bolstering the region's role in the global hydrogen supply chain and contributing to Queensland's industry advancements.
- The Queensland Government has allocated $8.5 million to the Abbot Point Activation initiative to advance the master planning, development and infrastructure arrangements that are needed for Abbot Point to become a hydrogen export super hub including planning for the water and power supplies needed to produce hydrogen at scale in North Queensland. Supporting the development of projects such as HyNQ North Queensland Clean Energy Project and Han-Ho H2 project.

H2Q, representing Hydrogen Industry Queensland, stands as an industry-led, not-for-profit organization dedicated to advancing Queensland's hydrogen adoption and supporting the sector's growth domestically and globally. H2Q fosters a collaborative ecosystem, offering networking, collaboration opportunities, and active support for innovation and investment. The organization is instrumental in driving the engagement, collaboration, and growth of the hydrogen industry in Queensland, working towards regional prosperity and the decarbonization of industries and communities. It is in the spirit of partnership that H2Q has approached the opportunity for collaboration with the Queensland Renewable Energy Council (QREC) on this submission, to amplify the renewable energy industry's collective voice. Our collaborative endeavours with QREC have enabled us to harness diverse perspectives and expertise across the entire renewable energy and decarbonisation value chain, fostering a united front in advocating for regulatory frameworks that genuinely reflect the industry's needs and potential.

Industry Response

The Queensland Renewable Energy Council (QREC) and Hydrogen Queensland are pleased to be able to provide a submission in response to the Queensland Government's consultation paper "*An effective regulatory framework for Queensland's hydrogen industry*" (**Consultation Paper**).

QREC and Hydrogen Queensland have undertaken consultation with industry stakeholders and has consolidated feedback received to provide the below responses to the specific questions raised in the Consultation Paper, as well as other relevant feedback regarding the regulation of Queensland's hydrogen industry.

Planning Framework

Queensland has an effective and robust planning system. The industry is generally of the view that no substantial changes are required to the existing framework to enable the delivery of a Queensland hydrogen industry.

The State significance of hydrogen projects may, however, warrant a consistent state-wide planning approval process. The industry recognises that investors would benefit from the certainty of a coordinated and consistent assessment process that also provides for consistent assessment benchmarks for hydrogen projects. This would provide further support to industry in addition to the guidance material already published to assist with the navigation of the planning framework. This likely requires a relatively low threshold for State assessment (as opposed to local government) so that most (if not all) hydrogen projects are subject to the same level of assessment.

These benefits need to be weighed against any issues that may arise for currently planned projects that are relying on the existing planning framework (noting though that the State may already be the assessment manager for such projects) and transitional arrangements will require careful thought. Further, the Government should consider how to ensure that local government planning considerations, including community concerns, are incorporated in any State assessment, noting that co-ordination acrtoss all stakeholders is generally within the current approach with the State Assessment and Referral Agency (SARA)

In addition to the above, there may be merit in having an alternate approval pathway for hydrogen projects that are being conducted on a petroleum or gas tenure (such as, for example, a blue hydrogen project that uses gas as a source fuel). In these instances there may be benefit for holders of a Petroleum Facility Licence (PFL) to have a hydrogen generation facility considered as an authorised activity as per that tenure. It is an acknowledgement that there is an element of the hydrogen sector that are already conducting gas processing activities and it would make sense to allow for a similar approval process (if a proponent so desires) for both hydrogen and petroleum/gas activities in this instance.

Further, given that the hydrogen pipelines have already been incorporated into the Petroleum and Gas Act 2004 (P&G Act), companies that would like their projects to be assessed at a state level (perhaps with the set production threshold proposed in Option 2), could fall under the P&G Act for other

components, including the key example of a PFL. This would only require a minor definition change in the definition of 'gas' in the P&G Act, and would not require any to the related Environmental Relevant Activity under the Environmental Protection Act 1994 (this point is also relevant to the Environment section part of the Consultation Paper).

Renewable Energy

Hydrogen projects will benefit from the work that is underway at a State and National level to alleviate some of the challenges faced by renewable energy projects, including issues such as costly and uncertain connection processes, transmission losses and other issues arising from the condition of existing transmission infrastructure. The industry supports the continued investment in transmission infrastructure, including through projects like CopperString, to encourage renewable energy supply to meet the increased demand arising from decarbonisation efforts and the energy needed to power green hydrogen projects.

In relation to the proposed option to require a hydrogen generation licence, there is concern that this may lead to differing regulatory frameworks between renewable energy projects associated with hydrogen developments, standalone renewable energy projects and non renewable energy based hydrogen production. If renewable hydrogen projects are required to go through processes more stringent than non-hydrogen projects, developers might be incentivised to structure developments in a way to avoid additional scrutiny/regulation. This would be inefficient and potentially impact the objective of supporting development of green hydrogen. The transitional or retrospective application of a new approvals regime could also have negative consequences for currently planned projects.

Further, the reference in the Consultation Paper to licensing being a pathway to ensuring renewable energy supply for the domestic market raises concerns regarding the impacts of market intervention (particularly having regard to the current attitudes towards gas market intervention on the East Coast). A licensing regime of this nature also raises the following questions for consideration:

- Would the cost basis for renewable energy generation that is planned to support hydrogen production be similar to that intended to be sold into the domestic market? If not, this would not alleviate that domestic market pressure.
- How will off-grid projects be managed? If there are to be different regimes for projects connected to the NEM, then this risks developers deliberately seeking to avoid connection of their projects to the NEM (which would be counterproductive to the ambition of introducing more renewable energy to the NEM).
- What gap is the hydrogen generation licence trying to fill? Hydrogen projects will already be subject to planning and electricity licences and approvals, like other standalone renewable projects, so it is difficult to understand how a separate licence applicable to only

hydrogen projects will incentivise or support development of the hydrogen industry.

As detailed further below, the industry has reservations around developing a new hydrogen licence where this may only be suitable for renewable hydrogen. The general preference is for consistent hydrogen regulation to be developed from the outset to avoid conflicting regimes being developed for different types of hydrogen.

Common User Infrastructure

The industry is supportive of the Government's focus on a whole of industry approach to manage common user infrastructure, especially given hydrogen projects will rely on many forms of critical infrastructure including water and energy supply, amongst others. Like all major projects, efficiencies may be achieved with appropriate co-location of transportation and export infrastructure to support offtake arrangements for hydrogen projects where appropriate access to, and risk management of, common user infrastructure can be structured in a commercially acceptable way for all parties.

REZs may be a suitable avenue to achieve coordination of common user infrastructure in specified areas. It is important though that this coordinated planning is otherwise aligned with existing regulatory processes.

The industry is generally supportive of leveraging existing frameworks where possible given the timing and efficiency challenges associated with developing new, standalone legislation.

Water

As identified above, hydrogen projects will require support from water supply infrastructure. The existing regulatory framework for water is well placed to manage water requirements for hydrogen projects but Government support will likely be required, by way of planning water supply infrastructure projects (such as the work currently being undertaken by the Gladstone Area Water Board), so that additional water sources can be accessed if necessary.

A clear understanding of existing large water allocations that are held by entities involved in the energy transition (such as thermal power stations) and understanding their intentions to release or trade those entitlements as thermal generation power stations retire would support a holistic approach to water planning for industrial use.

Safety

The industry recognises that a successful hydrogen industry will require effective safety management systems that are able to evolve to accommodate projects of varying types and scale. Fortunately, there is existing safety legislation that will require proponents to implement appropriate safety management systems and practices. This is attributable in part to the existing safety regulation around major hazard facilities.

To ensure that this safety regulation remains fit for purpose, it will be important for there to be ongoing dialogue between Government and

relevant stakeholders so that any emerging safety risks or hazards can be dealt with through industry specific standards.

It is generally expected though that such standards can be developed and implemented via the existing legislative framework and a standalone act will not be required. This is particularly so where hydrogen specific safety amendments have already been incorporated in petroleum legislation.

Community Impacts and Benefit

The industry is supportive of community impact and benefits for hydrogen projects being factored into the pooled benefits scheme currently proposed for renewable energy projects generally. This would also further support regulatory consistency between hydrogen projects and other renewable energy projects.

Hydrogen Storage

The ability to store hydrogen underground will be key to ensuring that the hydrogen industry is both sustainable and commercial. The industry proposes that the Government consider the appropriate legislative pathway to facilitate the underground storage of hydrogen.

There may be some challenges associated with extending either of the *Mineral Resources Act 1989* or the *Petroleum and Gas (Production and Safety) Act 2004* to deal with underground hydrogen storage, including competing interests with resources proponents as well as native title implications. Government should review whether hydrogen storage could be dealt with under the *Greenhouse Gas Storage Act 2009*, which could potentially leverage the existing regulatory work that has been done around the land access, environmental, and other relevant impacts of underground storage.

In addition establishing a pathway for salt caverns, or other options to be developed and repurposed for hydrogen storage is supported.

Other

As a general comment, a key theme of the Consultation Paper is that many existing legislative frameworks can accommodate hydrogen development (subject to a few exceptions such as underground storage of hydrogen). This provides a compelling case that significant legislative reform is not required and nor is standalone legislation (that would take considerable time to develop, likely resulting in adverse outcomes for investors and the development of the hydrogen industry). Instead, it is believed that reform should be focused on any clearly identifiable deficiencies or gaps in the existing framework and avoid introducing additional approval or licensing processes where possible. However, this should not preclude the government from considering flexible use of its current legislation, perhaps considering variations upon industry application to do so, especially where it is considered appropriate for the state to be the decision maker.

The focus of the Consultation Paper is limited to regulatory reform of green hydrogen. Restricting regulatory reform to renewable hydrogen may result in legislative inconsistencies moving forward if other types of hydrogen (such

as naturally occurring hydrogen) are commercially developed in Queensland. Development of naturally occurring hydrogen, and other non-renewable hydrogen, should be contemplated when considering the extent of legislative changes required to facilitate renewable hydrogen. If new licenses or other approval pathways are developed specifically for renewable hydrogen, without taking into account the potentially differing requirements of other types of hydrogen, such licenses or approvals may end up not fit for purpose and have to be the subject of further revisions to account for industry development. For example, the development of blue and brown hydrogen may be managed under planning legislation whereas naturally occurring hydrogen may need to be managed under resources legislation,

Next Steps

QREC and Hydrogen Queensland are eager to support the Government in its review of hydrogen regulation and look forward to continuing to work with the Government to facilitate development of the green hydrogen industry in Queensland.

As well as a revised Queensland Hydrogen Strategy, QREC and Hydrogen Queensland seek to provide the Queensland Government with a proactive industry policy agenda in the coming months. We look forward to engaging with you on a range of industry proposed initiatives to assist in the development of this important industry.

The Industry voice of our Hydrogen Future.

H2Q is an membership based not-for-profit that provides a collaborative and safe environment to share ideas and grow industry participants capacity to solve emerging industry issues

Our mission, is to champion the acceleration of hydrogen adoption and the development of clean energy solutions to deliver new jobs, regional prosperity and decarbonization. We provide our members with opportunities to promote their CAPABILITY, connect with a view to COLLABORATE, and ADVOCATE on behalf of a developing industry.

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QREC works with industry, communities and all levels of government to deliver a thriving new energy sector for Queensland.

We are a not-for-profit industry body that represents solar, wind, pumped hydro, electricity transmission, battery storage and hydrogen proponents, operators and their suppliers.

Our role is to be a leader in policy development and ensure best practices and successful coexistence with communities. With this focus, our exciting new industry will support the regions and Queensland's economic development while ensuring we all have access to clean and secure energy.

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