

## > Hydrogen

*The 'hydrogen opportunity' is one that is gaining significant attention across the world as a means for accelerating the global transition to a low-emissions energy future – including in the Australian market, where the hydrogen industry is expected to contribute at least \$11 billion to the domestic economy and generate around 7,600 jobs by 2050.*

Traditionally used as an input in various industrial processes, 'clean hydrogen' (created using either renewable energy sources, or fossil fuels coupled with carbon capture storage technology) offers a low-emissions, storable energy solution for Australia's future domestic energy needs, with the potential for use in transportation, electricity generation, fuel, heat and industrial feedstocks. Australia has also been recognised as having the potential to become a major player in the hydrogen export market – given the country's abundance of natural resources, expertise in resource development, and proximity to countries like Japan, Korea and Singapore, which have each signalled their intention to rely on imported hydrogen to decarbonise their economies.

### Key issues

We expect that the development of a hydrogen project will follow a similar path to any other energy development project in Australia. However, in the early stages of a hydrogen project, particular attention should be given to the following matters:

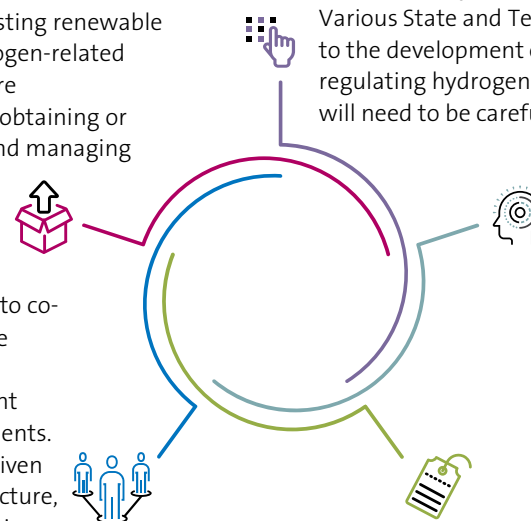
**Approvals and tenure:** Site selection will be key to ensuring the success of a hydrogen project. Depending on the project type, important considerations will include access to existing infrastructure, access to a reliable source of water, proximity to existing renewable energy facilities, managing hydrogen-related safety hazards, negotiating tenure arrangements with landholders, obtaining or amending planning approvals, and managing community stakeholders.

**Structuring:** With many opting to co-develop a hydrogen project, these projects may adopt a variety of bespoke structures, including joint venture or partnership arrangements. Proper consideration should be given to the pros and cons of each structure, including from a tax and accounting perspective.

**Regulatory hurdles:** The current energy regulatory framework will need to be adapted to properly respond to, and cater for, the creation of a hydrogen market in Australia. This includes the creation of a reliable guarantee of origin scheme (recognised both at a domestic and global level) to certify the method of production of hydrogen. Various State and Territory Governments have committed to the development of a nationally consistent approach to regulating hydrogen. This developing regulatory landscape will need to be carefully navigated.

**Intellectual property:** Robust intellectual property strategies and structuring will be critical to protect a project owner's interest in any new technologies developed as part of a hydrogen project – particularly where companies look to partner with others in the market to test the feasibility of, and co-develop, hydrogen projects in this emerging space.

**Project financing:** A funding strategy for a hydrogen product should consider the potential to tap into both public and private sector funding opportunities, given the number of funding initiatives that have been set up by ARENA, the CEFC and State and Territory Governments to fast-track the development of hydrogen projects.



## Policy and funding

Following the release of the National Hydrogen Strategy in 2019, the Federal Government has set an ambitious economic stretch goal of 'H2 under 2', to produce clean hydrogen at under \$2 per kilogram (which is the point at which hydrogen becomes competitive against alternative fuels in other industries).

To achieve this goal, key policy and funding initiatives have been put in place at both a federal and state level to support the development of hydrogen technologies and the establishment of 'hydrogen hubs' for the purposes of realising economies of scale in the hydrogen space. Examples of federal-level initiatives include ARENA's \$70 million Renewable Hydrogen Development Funding Round and the CEFC's \$300 million Advancing Hydrogen Fund. Examples of key state-level initiatives include Western Australia's \$15 million Renewable Hydrogen Fund, New South Wales' commitment to invest \$50 million in green hydrogen over the next 10 years, Queensland's \$25 million Hydrogen Industry Development Fund and Victoria's Renewable Hydrogen Industry Development Plan.

## Our experience

*The below demonstrates our early-stage hydrogen experience in Australia.*

- **Australian hydrogen participant** – in relation to potential collaboration agreements to team with other parties to develop and demonstrate hydrogen supply chain technology.
- **LAVO** – advised H2Store on the launch of hydrogen energy storage solutions provider LAVO, which has developed a world-first hydrogen energy storage system for everyday use.
- **State Government** – in relation to the sale of land sites to be used for hydrogen facility developments.
- **Renewable energy developer** – on a renewable project being developed in Tasmania that is looking to add a hydrogen facility on-site.
- **Energy company** – on environment, planning and land transactions in relation to the development of a hydrogen facility in Queensland.
- **H2Store Pty Ltd, Lavo Hydrogen Storage Technology Pty Ltd and Providence Investment Management** – on the development of, and investment in, new solid-state hydrogen storage technology. Our work includes: advising on the intellectual property ownership issues involved in R&D collaborations; drafting assignment and licensing arrangements; and acting on their negotiation of confidentiality agreements with the third parties involved in manufacturing and testing components of the new technology, which are based in several overseas jurisdictions.
- **Project finance – hydrogen** – advised start-ups in relation to electrolytic (solar and wind derived) hydrogen manufacturing and exporting. We have also advised bioenergy start-ups in relation to dimethyl ether and ammonia manufacturing and exporting.

## Who to contact



**Louis Chiam**  
Partner

T +61 3 9613 8867  
M +61 417 266 545  
Louis.Chiam@allens.com.au



**Jacqui Rowell**  
Partner

T +61 8 9488 3836  
M +61 405 606 670  
Jacqui.Rowell@allens.com.au



**Naomi Bergman**  
Partner

T +61 2 9230 5646  
M +61 423 263 421  
Naomi.Bergman@allens.com.au



**Kate Axup**  
Partner, Sector Leader – Energy

T +61 3 9613 8449  
M +61 420 647 104  
Kate.Axup@allens.com.au



**John Greig**  
Partner

T +61 7 3334 3358  
M +61 419 747 525  
John.Greig@allens.com.au



**Andrew Mansour**  
Partner

T +61 2 9230 4552  
M +61 410 402 646  
Andrew.Mansour@allens.com.au



**Luisa Colosimo**  
Senior Associate

T +61 3 9613 8277  
M +61 451 237 756  
Luisa.Colosimo@allens.com.au



**Robert Munro**  
Senior Associate

T +61 3 9613 8909  
M +61 401 472 141  
Robert.Munro@allens.com.au

