



Central Queensland Hydrogen Project

Gladstone Regional Council Deputation

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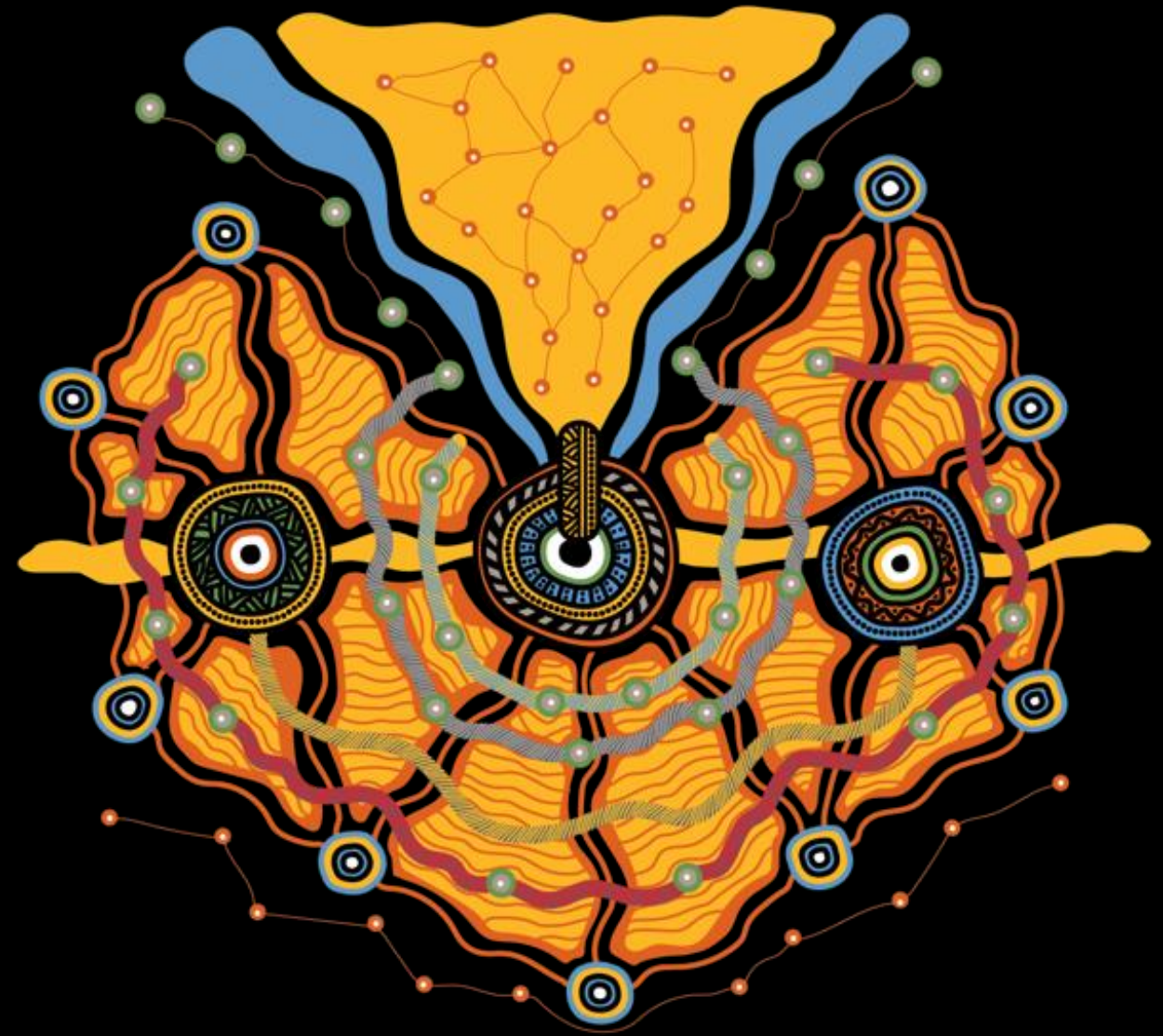
19 November 2024



Welcome

Stanwell and the CQ-H₂ Project acknowledge the Traditional Custodians of the land on which we live and work.

- We recognise and appreciate their deep connection to land, water, culture and community.
- We acknowledge the First Nations Bailai, the Gurang, the Gooreng Gooreng, and the Taribelang Bunda people as the Traditional Custodians of the land on which we are developing the CQ-H₂ Project.



'Every connection we make delivers a brighter future'

artwork by David Williams of Gilimbaa.

About Stanwell

At Stanwell, we provide the spark for a bright future. That future starts now.

We are a major provider of electricity and energy solutions to Queensland, the National Electricity Market and large energy users throughout Australia.

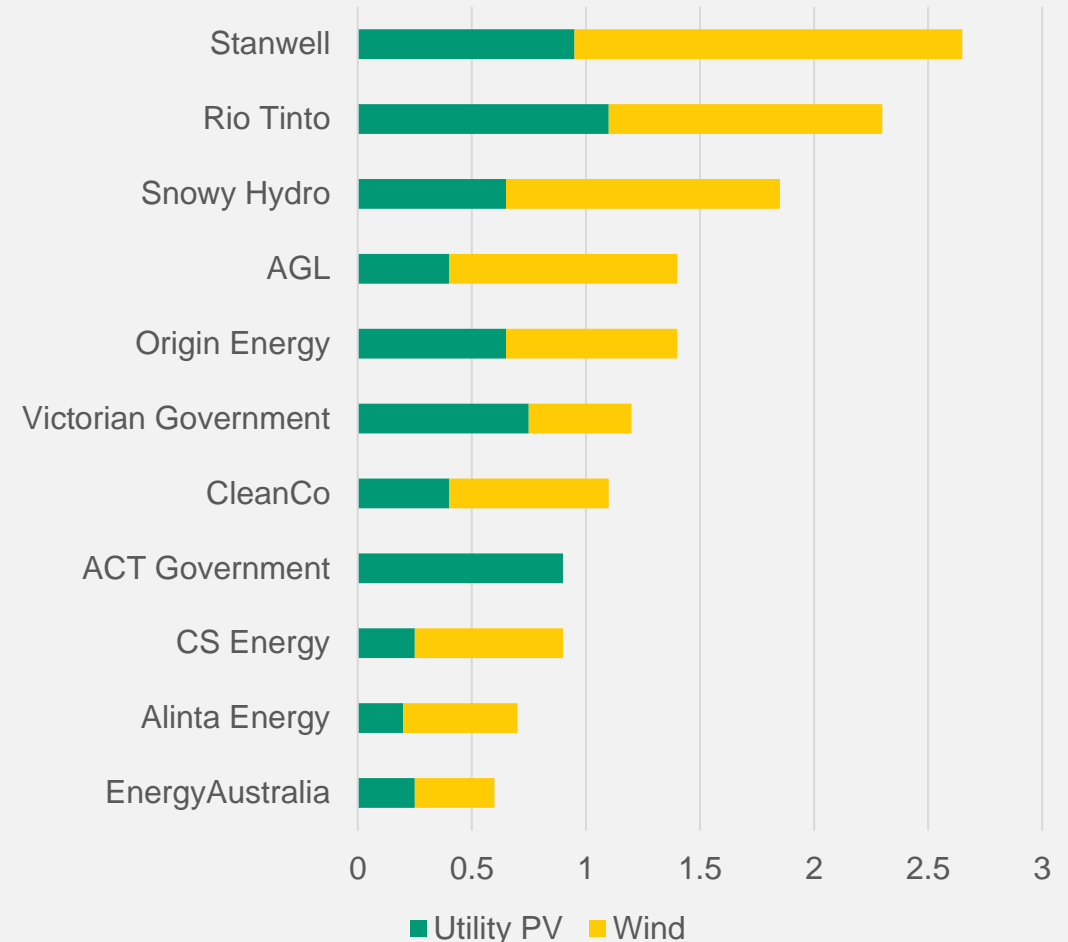
We're creating a new, lower carbon generation portfolio that's complemented by energy storage and we're driving the development of a renewable hydrogen industry in Central Queensland.

Stanwell has more than 4,000 MW of renewable energy and storage in our portfolio under contract, in development or under construction.

We're aiming to secure 10,000 MW of renewable energy and 5,000 MW of firming by 2035 to transition our existing portfolio.

Stanwell is Australia's largest offtaker of utility solar and wind generation.

Australia's top utility PV and wind offtakers Gigawatts (GW)

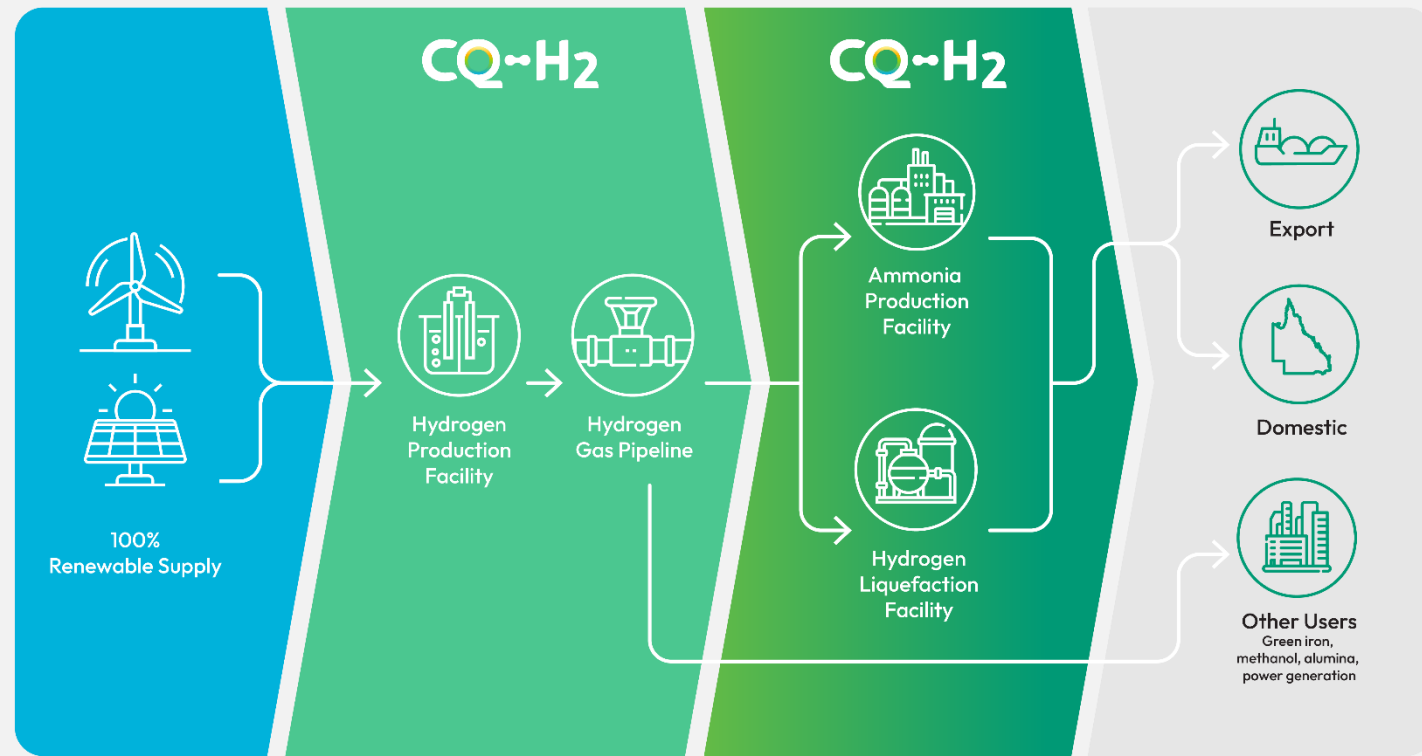


The CQ-H₂ Project

Stanwell is working with domestic and international partners across the hydrogen supply chain to develop CQ-H₂.

The CQ-H₂ Project involves:

- development of a Hydrogen Production Facility at Aldoga, near Gladstone
- development of a Hydrogen Gas Pipeline to transport Hydrogen to Gladstone Port
- development of a Hydrogen Liquefaction Facility
- development of an Ammonia Synthesis Plant (new to the Project)
- development of ship loading facilities at Gladstone Port to facilitate the export of liquid Hydrogen and Ammonia.



	Initial phase	Ultimate scale
Commercial operations date	2029	early 2030s
Hydrogen production facility average hydrogen production (tpd)	200	800
Hydrogen production facility installed electrolyser size (MW)	720	2,880



Hydrogen
Production
Facility



Aldoga
Solar
Farm



Hydrogen
Gas Pipeline



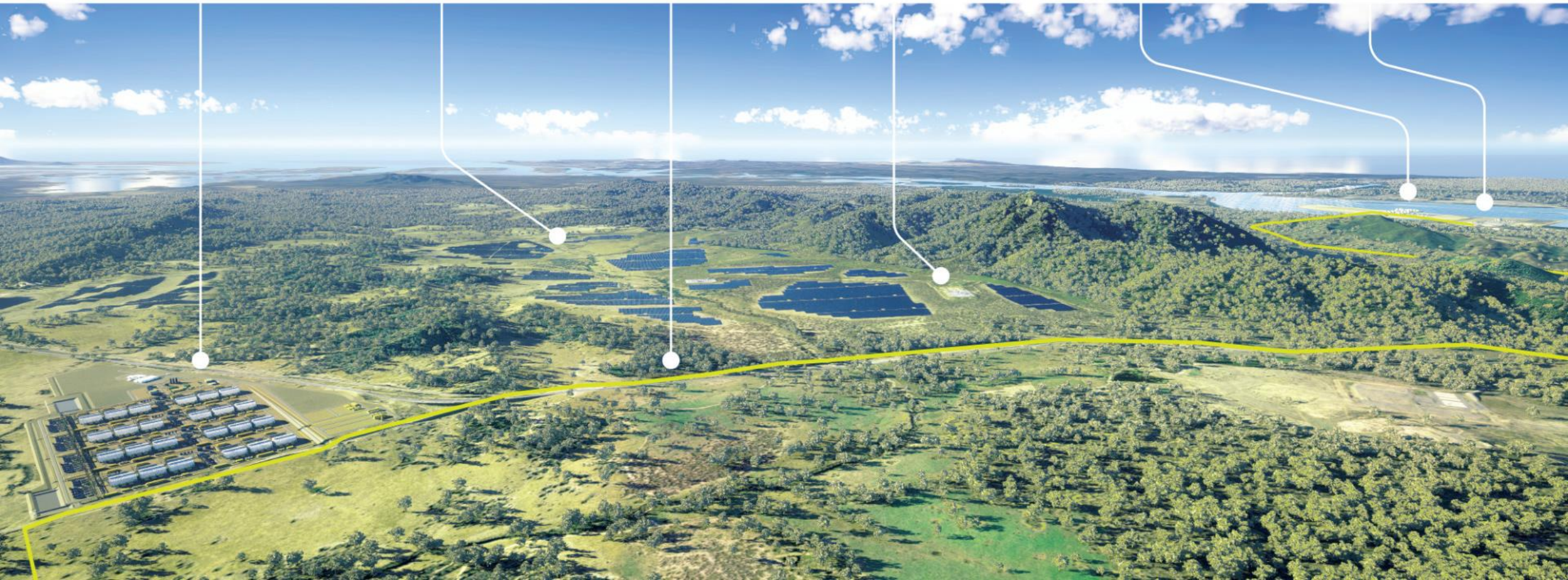
Larcom
Creek
Substation



Hydrogen
Liquefaction
Facility



Ammonia
Synthesis
Plant



Project objectives

CQ-H₂ is uniquely placed to achieve several objectives for Queensland, Australia and our key trading partners

Domestic decarbonisation of hard-to-abate, value-adding, trade-exposed industries

- Positioned to supply hydrogen for ammonia, green iron and methanol

Economic transition for Central Queensland

- Thousands of jobs during peak, supports 1,000 direct and indirect jobs during operation, \$8.9b added to Gross Regional Product

A new export industry for Australia

- CQ-H₂'s international consortium provides access to strategic Asian markets
- CQ-H₂ will attract around \$9b in Foreign Direct Investment.

Data source: Deloitte Access Economics



Capabilities across the supply chain

The CQ-H₂ consortium members have a unique mix of competitive advantages to harness the potential of the project

- Capability across the renewable hydrogen supply chain, including credible, diversified offtakers
- Initial MOU executed between the parties in September 2021
- Detailed Feasibility Study was completed in June 2022 and validated in January 2023
- FEED commenced in May 2023
 - Commitment of AU\$117 million
 - \$82m from consortium members
 - \$20m from Australian Renewable Energy Agency, and
 - \$15m from Queensland Government's Queensland Renewable Energy and Hydrogen Jobs Fund.



Australian Government
Australian Renewable Energy Agency

ARENA



Queensland Government



Iwatani

Marubeni



Capability	stanwell	Iwatani	Marubeni	Keppel
Renewable Energy	✓		✓	
H ₂ Production & Transport	✓	✓	✓	✓
Liquefaction		✓		
Ammonia Supply Chain			✓	✓
Utilisation		✓	✓	✓

Australian chemicals manufacturer Incitec Pivot Limited signed a Memorandum of Understanding in September 2024 with the intent to join the CQ-H₂ consortium in support of renewable ammonia development.

Supporting long-term benefits for Gladstone and Central Queensland

Community engagement

- Extensive engagement since Feasibility Study, continues through FEED
- 31 focus group sessions, 60 participants, 39 community organisations
- Community focus group sessions continue

Community engagement - outcomes

- Positive feedback on the new industry coming to Gladstone.
- Attract and retain families to the Gladstone area
- Key issues – affordable and adequate housing, childcare and schools so spouses can work and adequate access to healthcare

Traditional Owners and First Nations People

- Extensive engagement since 2022.
- MOU signed in April 2024 providing pathway to benefits sharing.
- Sponsor of Dorrie Day
- Cultural clearance surveys for the Geotechnical scope of the Project completed. Additional scopes will be provided prior to construction.

Sponsored events

- GEA Major Industry, Energy and Manufacturing Conference
- First Nations Chamber of Commerce and Industry Summit
- Gladstone's Mayor's Carols
- Gladstone Harbor Festival
- Hydrogen Grand Prix

Gladstone and Central Queensland suppliers

We are committed to working with Gladstone and Central Queensland suppliers to ensure that the project creates long-term benefits for Gladstone and the Central Queensland region.

- We are working with the Gladstone Engineering Alliance and other economic development organisations in Central Queensland:
 - To gain an understanding of the current supply chain and the capability and capacity of local business who have supporting existing major industry
 - To identify opportunities where we may be able to partner with local SMEs or encourage OEMs to upskill and enhance the local supply chains capabilities
 - To draw on the GEA memberships and knowledge for roadshows
- Gladstone Industry Leadership Group
 - Gain understanding of Gladstone major industry
- Early contractor engagements
- Training and apprenticeship providers
 - Understanding what pathways exist for local apprenticeships, what trainers and training facilities exist to support the Hydrogen Industry.



Workforce and associated infrastructure

Overview

- There will be a local workforce on the Project and opportunities for local businesses to be involved in the CQ-H2 Project. The Project is reviewing options to transport the local workers to the workfronts.
- For the ultimate capacity it is anticipated that a ~2,200 peak workforce is required for 6 months in mid 2028. There is a long duration for construction due to the sequencing of the Project. The Project will maintain an average workforce between 1000 - 1500 people. Construction will run from 2026 – 2030.
- CQ-H2 is working closely with Decmil owners of Homeground to accommodate the construction workforce. The current capacity along with the recently extended approval of the expansion will satisfy our workforce.
- During the Social Impact Assessment an accommodation study was undertaken to understand the number of rooms available in Gladstone. The study found that our accommodation strategy will not have a direct impact on the existing industry, businesses or community and the cumulative impacts are manageable.
- Homeground is perfectly positioned for our Project to house the workforce. It is ideally located between the airport and the work front for fly in fly out and drive in drive out workers.
- In addition, the use of existing infrastructure supports local businesses and reduces the footprint of the Project.



Environmental Approvals

Overview

CQ-H2 has reached significant approvals milestones:

- EPBC:
 - HPF 'controlled action' preliminary documentation
 - HTF 'controlled action' preliminary documentation
 - SIWP 'controlled action' preliminary documentation
 - HLF/ASP on hold due to Project changes
- Queensland State Approvals
 - HPF SDA submitted
 - HPF Environmental Authority submitted
 - HTF SDA to be submitted in late January
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 - SIWP SDA to be submitted in early February
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 - Development Approval for CQLA to be submitted in March.

Hydrogen Production Facility site at Aldoga



CQ-H₂ is on track to reach FID for Phase 1 in 2025

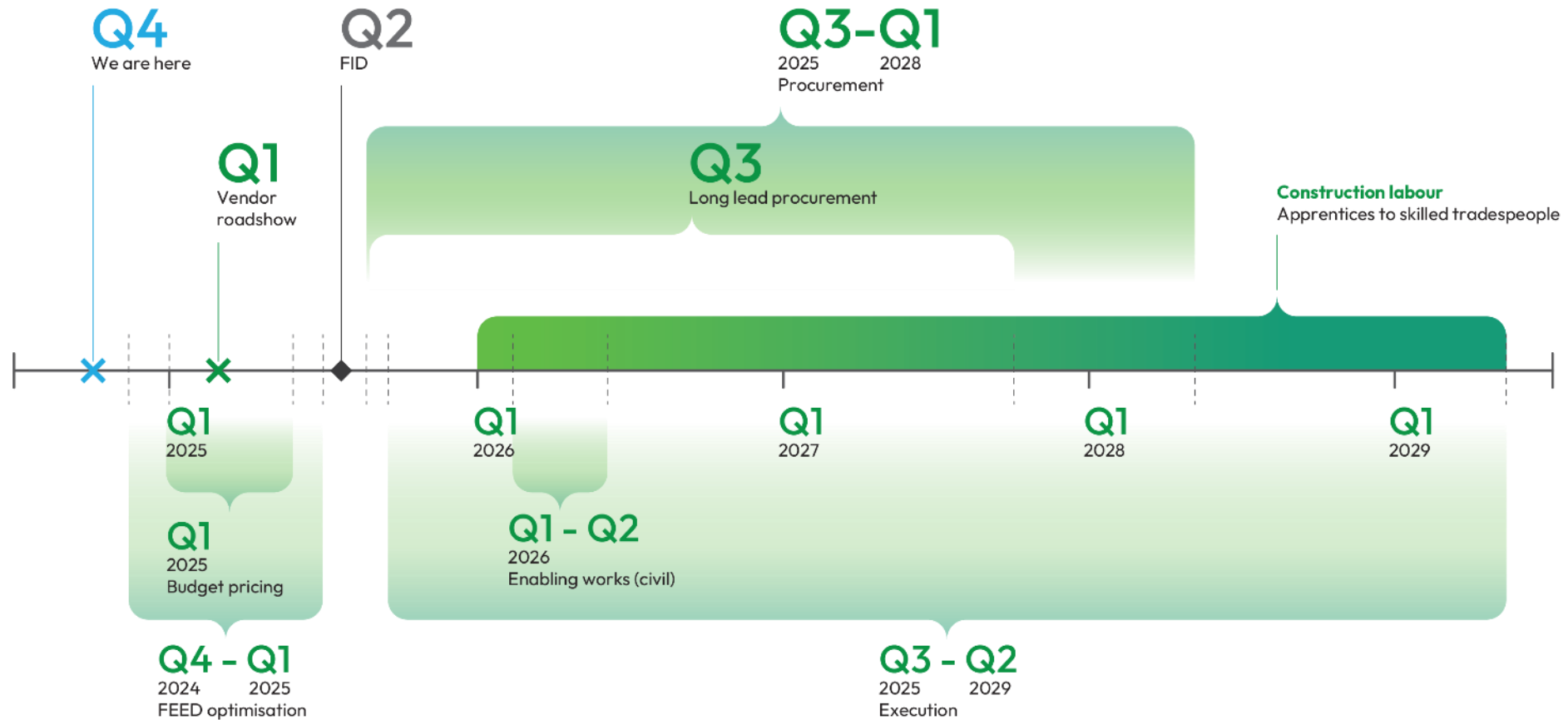
Key updates

- **Engineering design** – Initial engineering FEED on hydrogen production facility has been completed, ongoing optimisation activities underway, preparation for FEED on downstream facilities.
- **ARENA Hydrogen Headstart** – CQ-H₂ is 1 of 6 projects currently being considered by ARENA for funding from the Headstart Program. A decision is due in the coming months.
- **Energy** – Stanwell to provide 100% renewable energy supply. 380 MW Aldoga Solar Farm started construction in April 2024
- **Hydrogen offtake** – offtake pathways established for initial and future phases, including domestic and export components. Gladstone Green Iron Project announced in May 2024
- **Primary approvals** – EPBC referrals have been submitted. Primary approvals on track to be obtained by FID.
- **First Nations** – extensive engagement since 2022. MOU signed in April 2024 providing pathway to benefits sharing.
- **Third party infrastructure and land** – water, transmission and port access secured or on track to be secured by FID
- **Queensland Government support** – dedicated Joint Project Management Office established with 10+ agencies and government owned entities to facilitate the project.



Project roadmap

We are committed to working with Gladstone and Central Queensland suppliers to ensure that the project creates long-term benefits for Gladstone and the Central Queensland region.



Thank you

For more information, please visit the CQ-H2
website: [Central Queensland Hydrogen Project
\(CQ-H2\) | Home Page \(cqh2.energy\)](https://cqh2.energy)

