



Central Queensland Hydrogen Project

Driving the development of Queensland's hydrogen industry and FEED study update

Stanwell Corporation

November, 2023



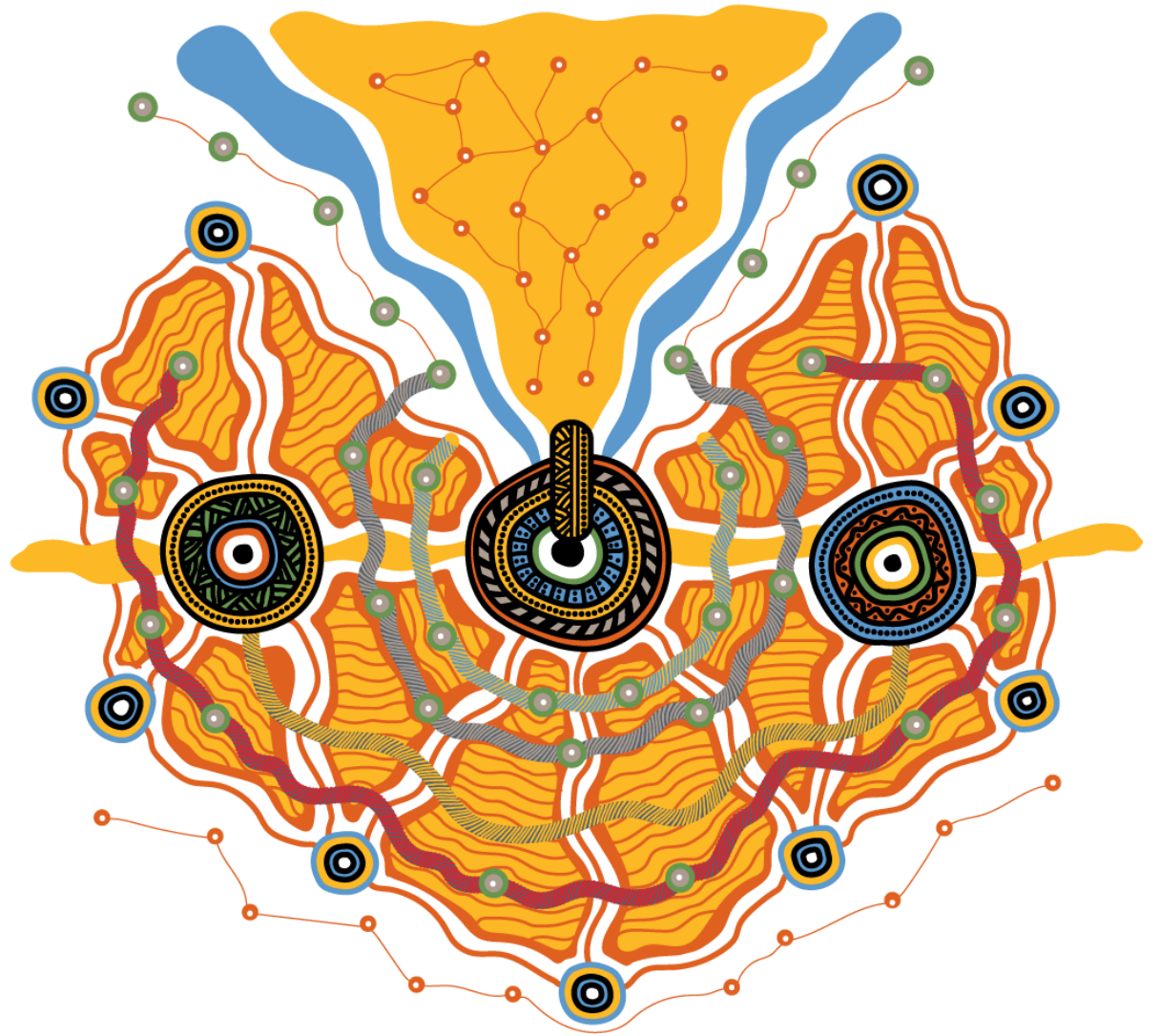
Welcome

We acknowledge the First Nations Bailai, Gurang, Gooreng Gooreng, and Taribelang Bunda people as 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 recognise Aboriginal and Torres Strait Islander people as Australia's first people and recognise the enduring and positive contribution their voices, traditions and histories make to our communities and our business.

We pay respect to Elders past and present and extend our acknowledgement and respect to all Aboriginal and Torres Strait Islander people.



'Every connection we make delivers a brighter future'

artwork by David Williams of Gilimbaa.

Central Queensland Hydrogen Project

A large-scale renewable hydrogen project located near Gladstone, in Central Queensland, Australia.

We are working with domestic and international partners from across the hydrogen supply chain to develop Queensland's largest renewable hydrogen project, with the view to exporting renewable hydrogen via its different carriers to Japan and Singapore, as well as supplying large industrial customers in Central Queensland.

The Central Queensland Hydrogen (CQ-H₂) Project involves:

- the development of a Hydrogen Production Facility at Aldoga, near Gladstone
- the development of a Hydrogen Transfer Facility (pipeline)
- supply of hydrogen to an ammonia production facility
- the development of a Hydrogen Liquefaction Facility and ship loading facilities at Gladstone Port.



Hydrogen Production Facility

Aldoga Solar Farm

275 kV transmission line

Larcom Creek substation

Hydrogen gas and water pipeline (proposed)

Hydrogen Liquefaction Facility

Northern Trade Precinct - Port of Gladstone

275 kV transmission line

Surplus Industrial Water pipeline

Calliope River substation

TO GLADSTONE

Aldoga Lot - QLD Govt owned and zoned for heavy development



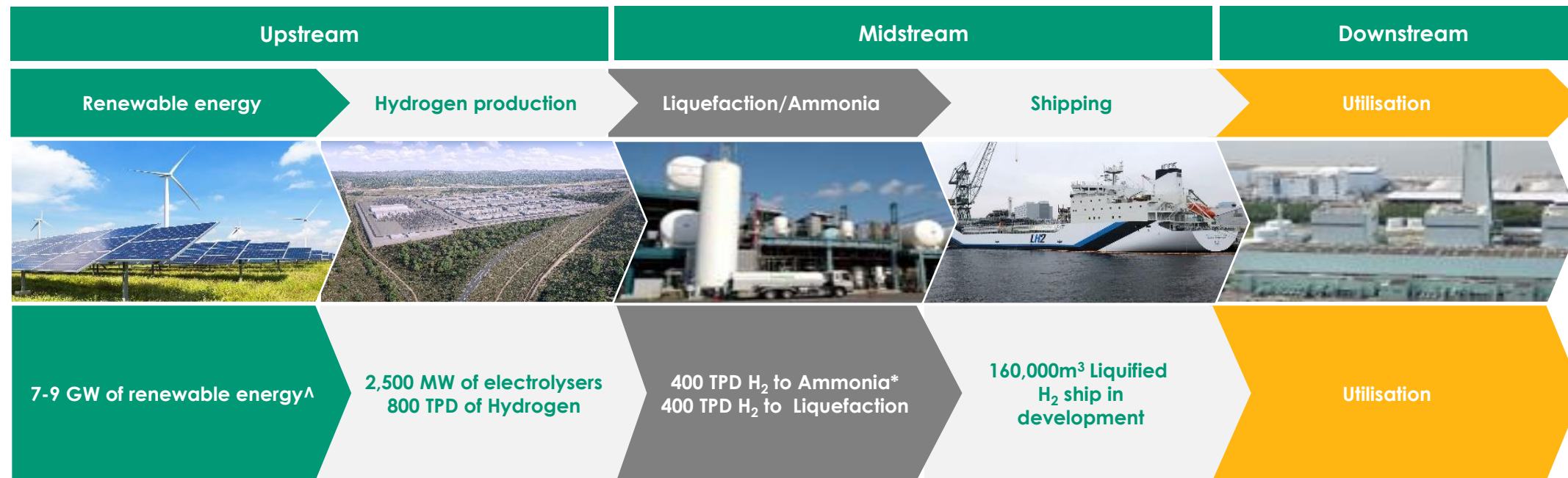
0 km 1 2 3 4 5 km



South Passage Island

CURTIS IS

About the CQ-H₂ Project



Consortium:



Government Support:



[^] Renewable energy projects will be developed separately to CQ-H₂

* Ammonia production facility is being developed by Keppel and Incitec Pivot separately to the CQ-H₂ Project

Front End Engineering Design (FEED) Study

The FEED study represents the largest investment in an Australian renewable hydrogen project of its kind to date

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.

Participation Agreement signed on 26 May 2023.

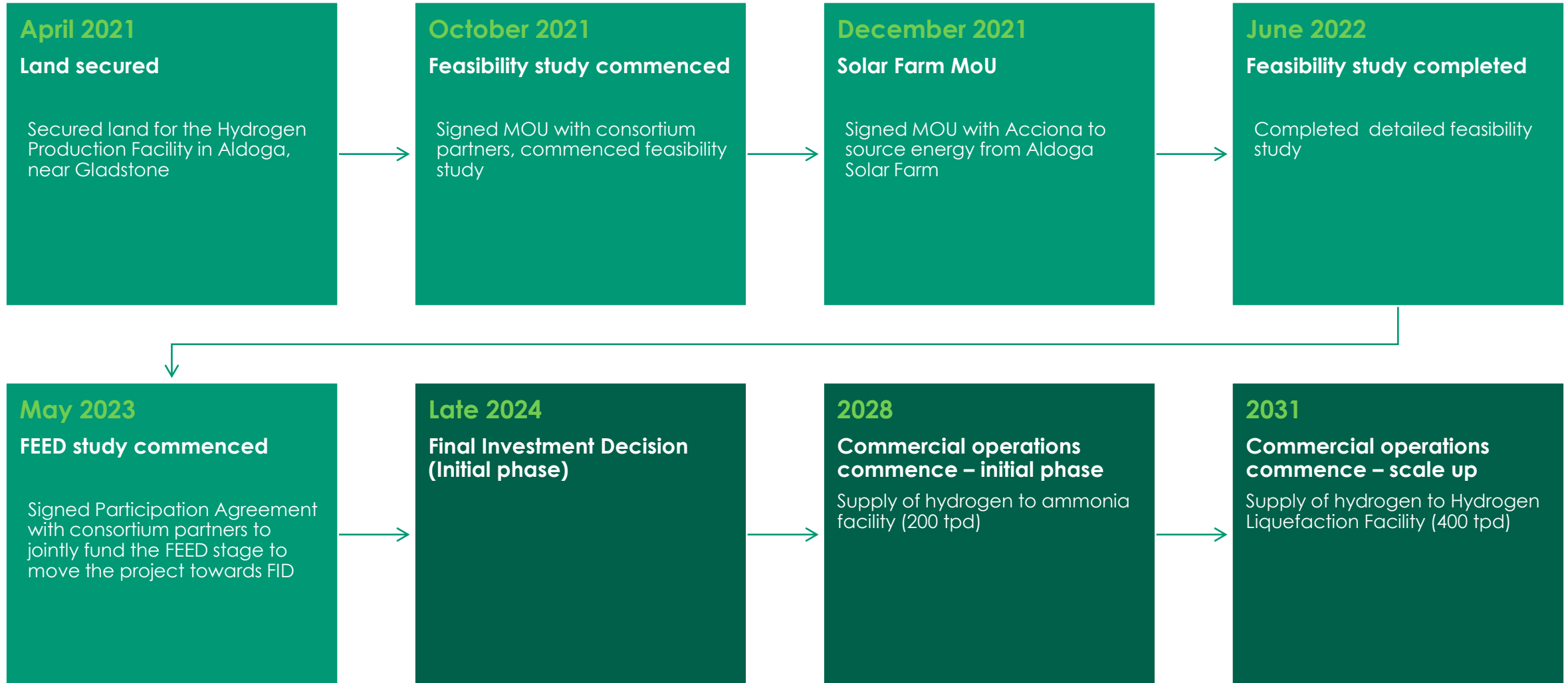
FEED commenced Monday 29 May 2023.

Successful completion of FEED will bring project closer to a Final Investment Decision, planned for late 2024.

Commercial operations planned to commence from 2028.



Project schedule

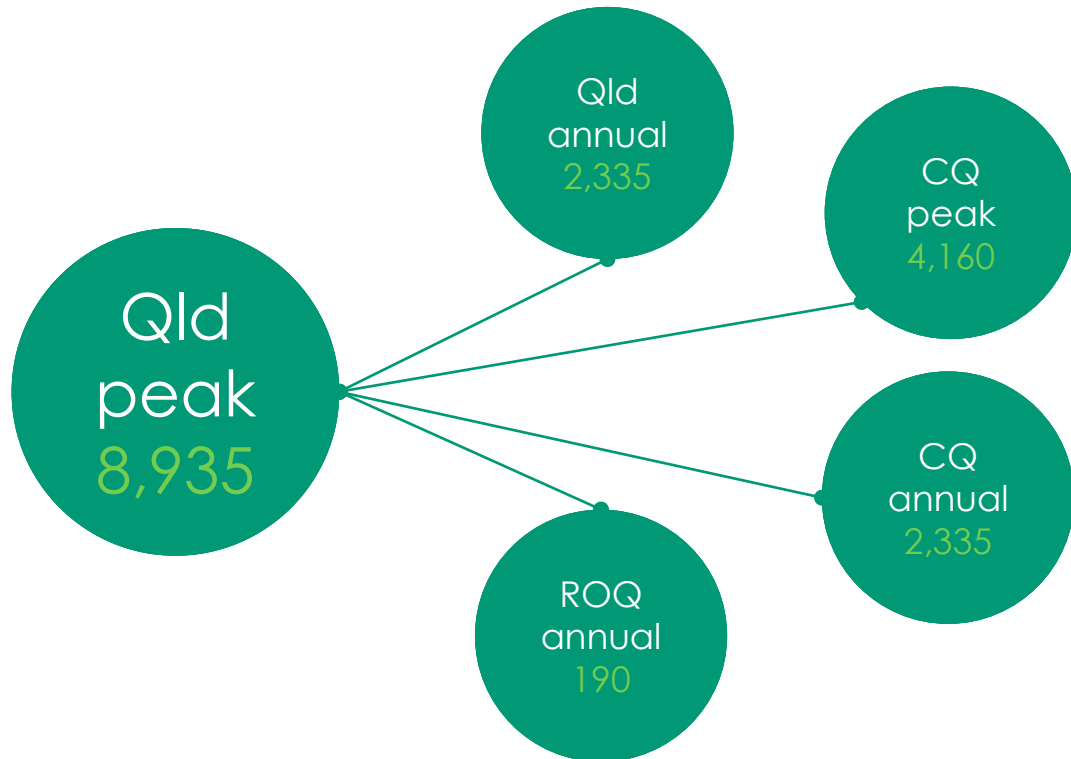


Community



Direct and indirect economic benefits

Direct and indirect employment impacts (FTE's)



Source: Modelling by Deloitte. The economy-wide modelling technique used, estimates the net impacts from an economic growth perspective including jobs created as a result of the project. This means that the 8,936 jobs are new jobs that are estimated to be created compared to a 'business as usual' forecast for the Queensland economy that excludes the project from occurring. CQ refers to 'Central Queensland' and RoQ refers to 'Rest of Queensland' which together sum to Queensland.

Total economic impacts



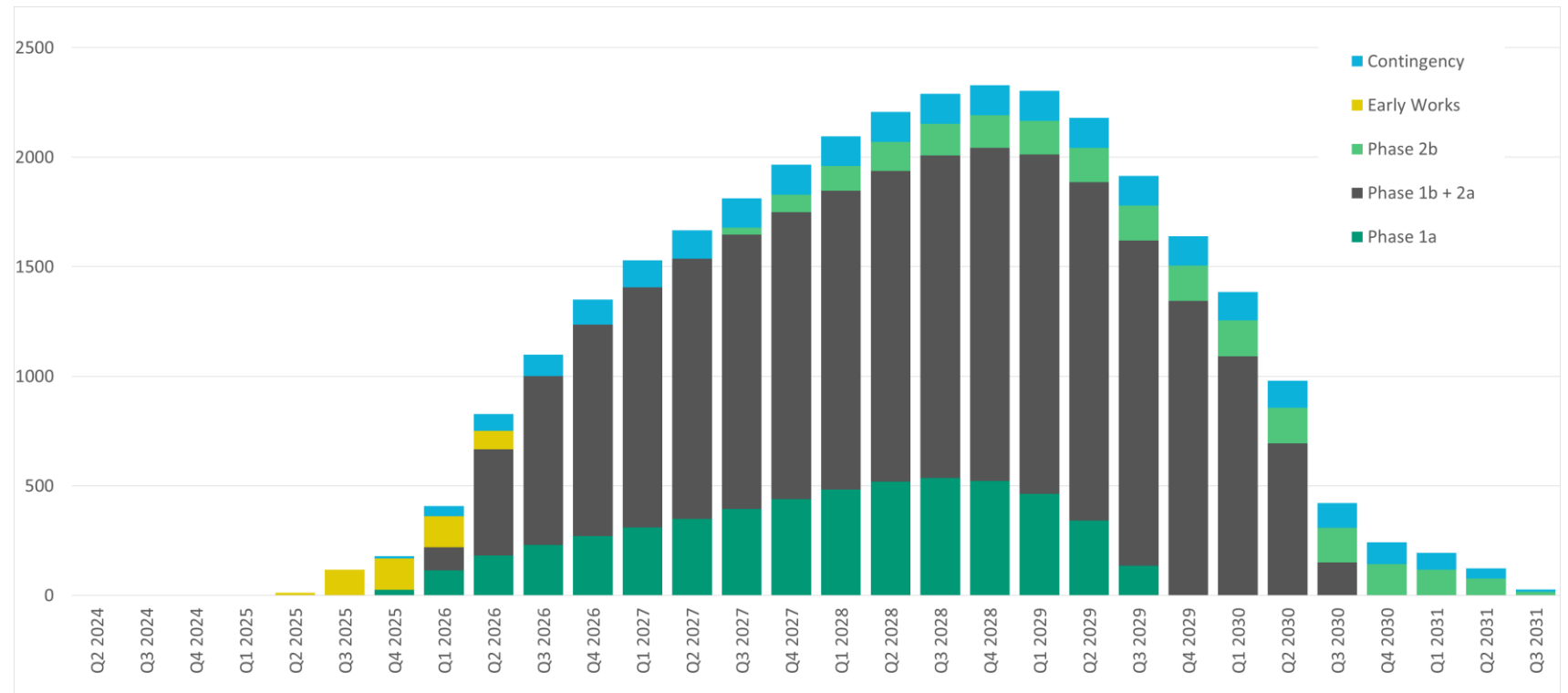
Workforce estimate and associated infrastructure

Overview

- ~2,200 peak workforce with a long duration of construction due to the staging of the Project
- Early works duration allows for time to prepare for the workforce
- CQ-H2 is investigating Village location to house the FI-FO and DI-DO workers

Challenges

- Village location needs to be minimum 30 min from Airport and 30 min from site.
 - Potential impacts:
 - Local services
 - Housing
 - Local workforce shortages



Community Acceptance

Essential for establishing a H₂ industry

Top community concerns relating to the hydrogen industry



Housing

How to avoid 'boom and bust' cycle?



Safety

For workers and the community



Water

Where does it come from?



Environmental Impacts

On local flora, fauna and marine environment

What the surrounding community wants

- Meaningful social investment that meets community needs, with sustained long-term benefits
- Consideration of cumulative impacts of multiple projects
- To understand the employment and supply opportunities early so that people can get job ready
- First Nations partnerships and opportunities
- Management of housing impacts, with a plan post construction
- Improved healthcare, childcare and education and training
- More people to live and work in Gladstone

Supporting long-term benefits for the Central Queensland region

We are committed to working with the Gladstone community to ensure the project creates long-term benefits for the region, and will continue stakeholder and community engagement activities in Gladstone during the FEED stage.

As part of our community participation activities, we support and participate in engagements. Events include:

- H2 Grand Prix (Event Sponsor & Sponsor of 2 Gladstone State School teams)
- Gladstone Show
- First Nations Chamber of Commerce and Industry Summit & Chamber of Commerce and Industry
- GEA Events (Supply Chain Expo, International Women's Day and Major Industry and Energy Conference)
- Dorrie Day (Sponsor)



Training, Innovation and Partnerships





FUELLING A HYDROGEN FUTURE: STEM SKILLS FOR SECONDARY LEARNING

OVERVIEW

Hydrogen focused online learning micro-credentials – FREE for all Education Queensland Secondary Students from 15th May 2023.

The hydrogen industry is set to be a promising option for storing energy from renewables, advancing the decarbonisation of regional and global economies and positioning Queensland as a sustainable energy powerhouse nationally and internationally.

The QCAA/ACARA curriculum aligned online learning resources are available for students in Years 7-10 and Years 11-12. These non-creditable micro-credentials are awarded a **digital badge** and a Certificate of Completion.

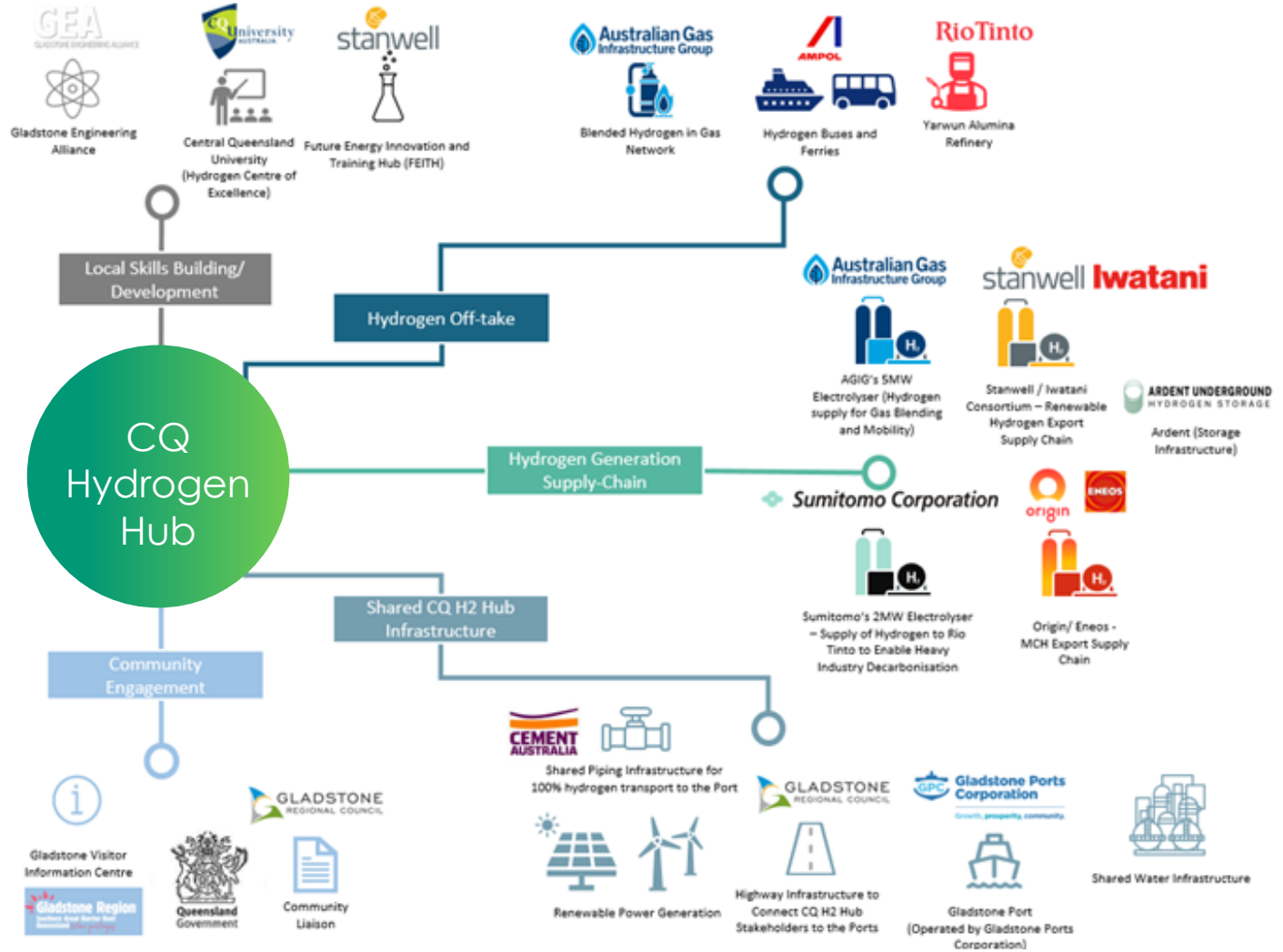
The micro-credentials are aligned to the United Nations Sustainable Development Goal (SDG) 7 – Affordable and Clean Energy and include Queensland-based STEM industry professional profiles.

Micro-credential Topics

- Chemical and physical properties of hydrogen
- History of hydrogen fuel
- Hydrogen applications
- Hydrogen storage and transport
- Hydrogen safety
- Future of the hydrogen industry



Future Energy and innovation Training Hub



\$69.2 million in Australian Government grant funding has been secured for the CQ Hydrogen Hub