

STARTING A CENTRAL QUEENSLAND HYDROGEN INDUSTRY

Steve Quilter

EGM Energy Trading and Commercial Strategy

27 February 2020



Stanwell Hydrogen Project



Creating a Central Queensland
hydrogen industry

Four ingredients for early-stage hydrogen projects



Competitive capital and input costs



Domestic off-take



Funding from ARENA and other investors



Government policy, funding support to fill the gap



Offtake opportunities

Market engagement process

1. Long-list / early leads

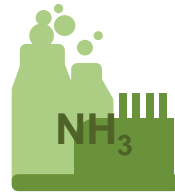


2. Short-listing



3. MOU/Non-binding agreements

4. Executed agreements



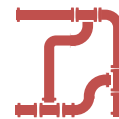
Power to Ammonia

Domestic – regional ammonia demand per year to displace some imported ammonia:

- 50,000 tonnes ammonia, or
- 7,700 tonnes hydrogen.

International – Stanwell is working with a potential partner on an international green ammonia supply chain demonstration.

Power to Gas



Injection of hydrogen into gas distribution networks, and synthetic / renewable methane have also been considered, but appear less viable.

Green ammonia and co-combustion

Market drivers



Energy sector decarbonisation targets in Japan



Ability to use existing transport infrastructure



Limited biomass supply



Technology for co-combusting NH₃ in coal-fired plant

Characteristics

- **Timing:** 2030
- **Demand:** approximately 600,000 tonnes per annum
- **Pricing:** shadow price imported biomass

Other opportunities

- Supply chain partners
- Portfolio of products/end uses

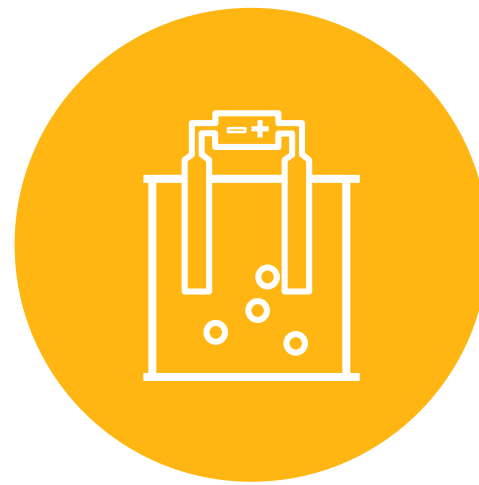
Opportunities for commercial partnerships



Investment partners



Off-takers



Original equipment manufacturers



Government funding bodies

For more information
visit stanwell.com or
email hydrogen@stanwell.com





Together we create energy solutions

