

Hexagon's WAH₂ Project

Low Emissions Ammonia

Investor Briefing

October 2024

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Forward looking statements can generally be identified by the use of forward-looking words such as, 'expect', 'anticipate', 'likely', 'intend', 'should', 'could', 'may', 'predict', 'plan', 'propose', 'will', 'believe', 'forecast', 'estimate', 'target', 'outlook', 'guidance', 'potential' and other similar expressions within the meaning of securities laws of applicable jurisdictions.

There are forward looking statements in this document relating to the outcomes of the Pre-Feasibility Studies and ongoing work on the WAH₂ Project. Actual results and developments of projects and the market development may differ materially from those expressed or implied by these forward-looking statements. These, and all other forward-looking statements contained in this document are subject to uncertainties, risks and contingencies and other factors, including risk factors associated with the hydrogen business. It is believed that the expectations represented in the forward looking statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.


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Gas Supply

Hexagon has not secured a long-term gas supply agreement. There is no guarantee that current discussions will convert into firm commitments to supply gas over the long term. It should be noted that the WAH₂ Project is contingent on securing long term gas supply in line with the assumed volumes, timing and price. If this cannot be achieved, there is a risk that the WAH₂ Project may be downgraded, deferred or may not go ahead.

Financing

Hexagon has not secured funding for the WAH₂ Project and accordingly to achieve the range of outcomes required for Phase 1, Hexagon will need to secure between A\$405M and A\$567M in funding for the project (assuming farmout of 65% - 75% project, leaving Hexagon with a 25% - 35% project share). There is no certainty Hexagon will be able farm out the WAH₂ Project or to raise the amount of funding when required. It should also be noted that any raise may only be available on terms that may be dilutive to shareholders or otherwise affect the value of Hexagon's shares. If the proposed farm-out or funding cannot be achieved, there is a risk that the WAH₂ Project may be downgraded, deferred or may not go ahead.



Hexagon Energy Materials Limited

ASX listed **project developer** (HXG)*

Competitive, **low-emissions ammonia** export project (WAH₂), annual net CF A\$244 million (100% project)¹

Targeting **substantial growth market** opportunity, ~US\$10 Bn pa market by 2035²

Leading clean ammonia project with ideal site secured, PFS completed, Pre-FEED nearing completion

Multiple near term rerating events – on track for FEED entry Q4 2024 with partner MOUs/Agreements

FID target end 2025

*HXG.ASX. Shares on issue 512,915,901. Market capitalisation \$11.8 million at 30 September 2024, \$1 million convertible note (ASX: 20 June 2024), cash of \$0.98 million at 30 June 2024.

¹WAH₂ Project Pre-Feasibility Study Updated Announcement (ASX: 2 August 2023); annual net CF estimate from 2028.

²Low-emissions ammonia market opportunity expected to reach 20 MTPA in Japan by 2035 based on 20% ammonia co-firing of coal-fired fleet.

Market opportunity – NH₃ the hydrocarbon substitute HEXAGON

Ammonia set to play a significant role in decarbonising power generation and shipping

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Clean ammonia will play an essential role in the energy transition.

Increasingly recognised as the pragmatic choice for decarbonisation.

And an opportunity to decarbonise Australia's energy exports.

Power Generation

- Currently 1/3 of Japan's electricity needs are met from coal-fired generation¹
- Japan has committed to reduce greenhouse gas emissions by 46% in 2030²
- Government and industry plan that by blending ammonia with coal, Japan can meet low-emissions targets with existing power plants

Marine Fuel

- Substituting ammonia for marine fuel oil and diesel
- IMO³ driving decarbonization, 30% emissions reduction by 2030, 80% by 2040⁴
- Australian iron ore exports a priority, highest tonnage trade route globally



Huge Demand Growth
Huge growth in market for low-emissions ammonia, expected to reach 20 MTPA⁵ with a value of US\$10 Bn/yr⁶ by 2035

Source: (1) JEPIC, Wood Mackenzie; (2) relative to 2013, METI strategic energy Plan; (3) International Maritime Organisation; (4) 2023 IMO Strategy on Reduction of GHG Emissions from Ships; (5) based on 20% ammonia co-firing of Japanese coal fleet; (6) indicative low-emissions ammonia price of US\$500 /T.

Increasing government support

Strategic investment and policy support for clean ammonia

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Strong market pull for clean ammonia is being driven by Government support in Japan and elsewhere.

While Australian Government support is encouraging supply development.

Japanese Government
<p>US\$60 B allocated to support establishment of clean ammonia and hydrogen supply chains¹</p> <p>Includes supply Chain subsidies to incentivise producers</p> <ul style="list-style-type: none"> To bridge the gap between the ammonia price that producers and consumers require <p>Includes financial support for import infrastructure support</p> <ul style="list-style-type: none"> 8 locations to be selected <p>Revised JOGMEC Act² enables capital contributions and debt guarantees to clean ammonia production projects</p>

Australian Government
<p>Northern Australia Infrastructure Facility (A\$7 B)³</p> <ul style="list-style-type: none"> Potential concessional finance <p>A\$140 million State and Federal funding for the Pilbara Hydrogen Hub⁴</p> <ul style="list-style-type: none"> To position Pilbara as a global hub for ammonia/hydrogen production and export <p>Australian Federal Government’s proposed Hydrogen production Tax Incentive⁵</p> <ul style="list-style-type: none"> Applicable to ammonia produced for domestic use and export Applicable based on emissions intensity Applies to various production methods

Note (1) Allen & Overy, Japan unveils green subsidy programme, April 2023; (2) World Economic Forum ‘Enabling Measures Roadmap for Low-Emissions Hydrogen – Japan’, July 2023; (3) <https://www.naif.gov.au/our-investments/faqs/>; (4) <https://minister.dcceew.gov.au/bowen/media-releases/joint-media-release-pilbara-hydrogen-hub-boost-australias-hydrogen-industry/>; (5) Australian Government Treasury ‘Hydrogen Production Tax Incentive Consultation paper’, June 2024.

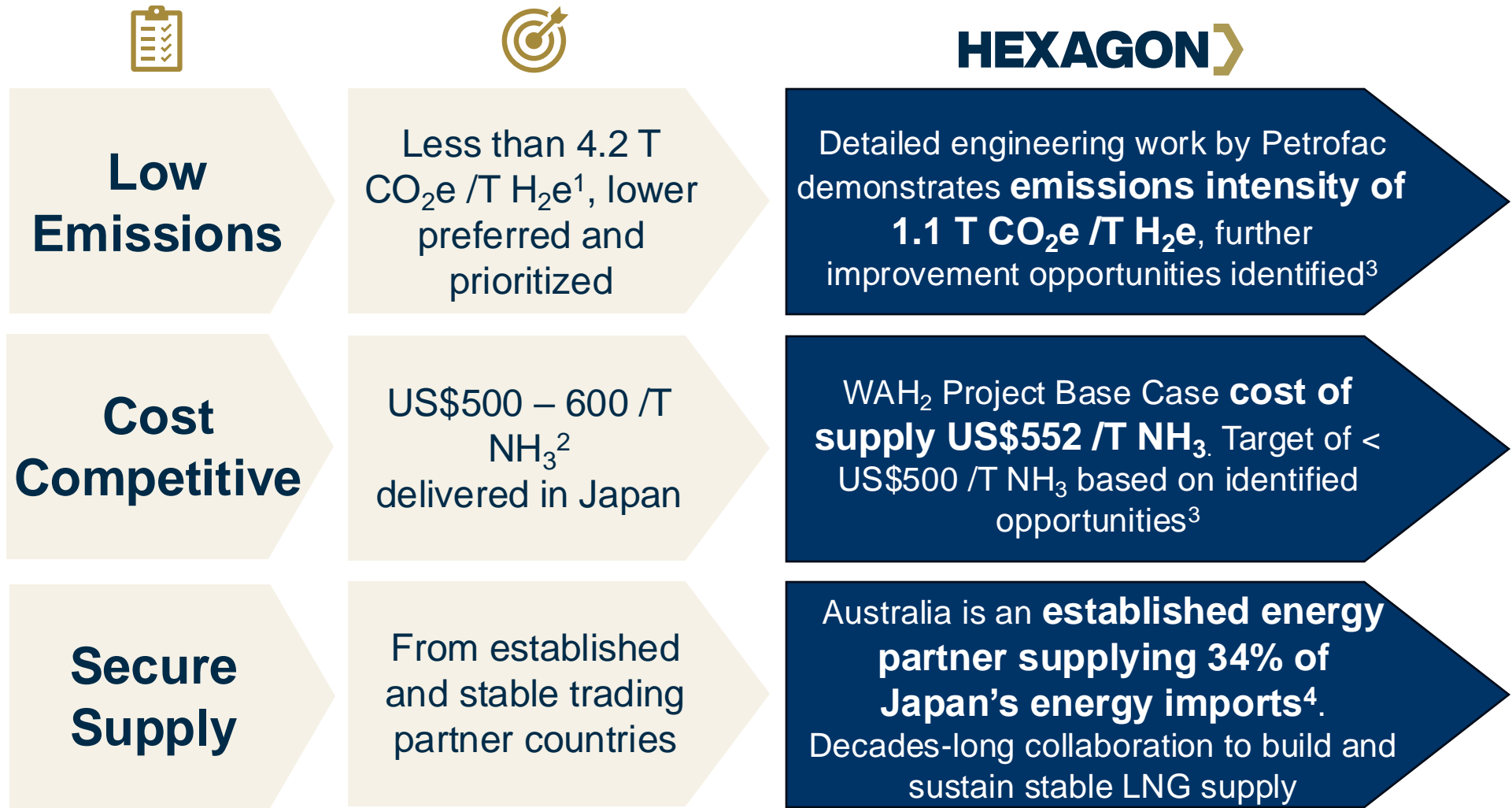
Japan's criteria for clean ammonia

Australia well-placed, Hexagon best-placed

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Japan has specified key criteria for potential suppliers to meet its future energy needs.

Hexagon meets or exceeds all the criteria and is regarded by many potential customers as the best-placed Australian project.

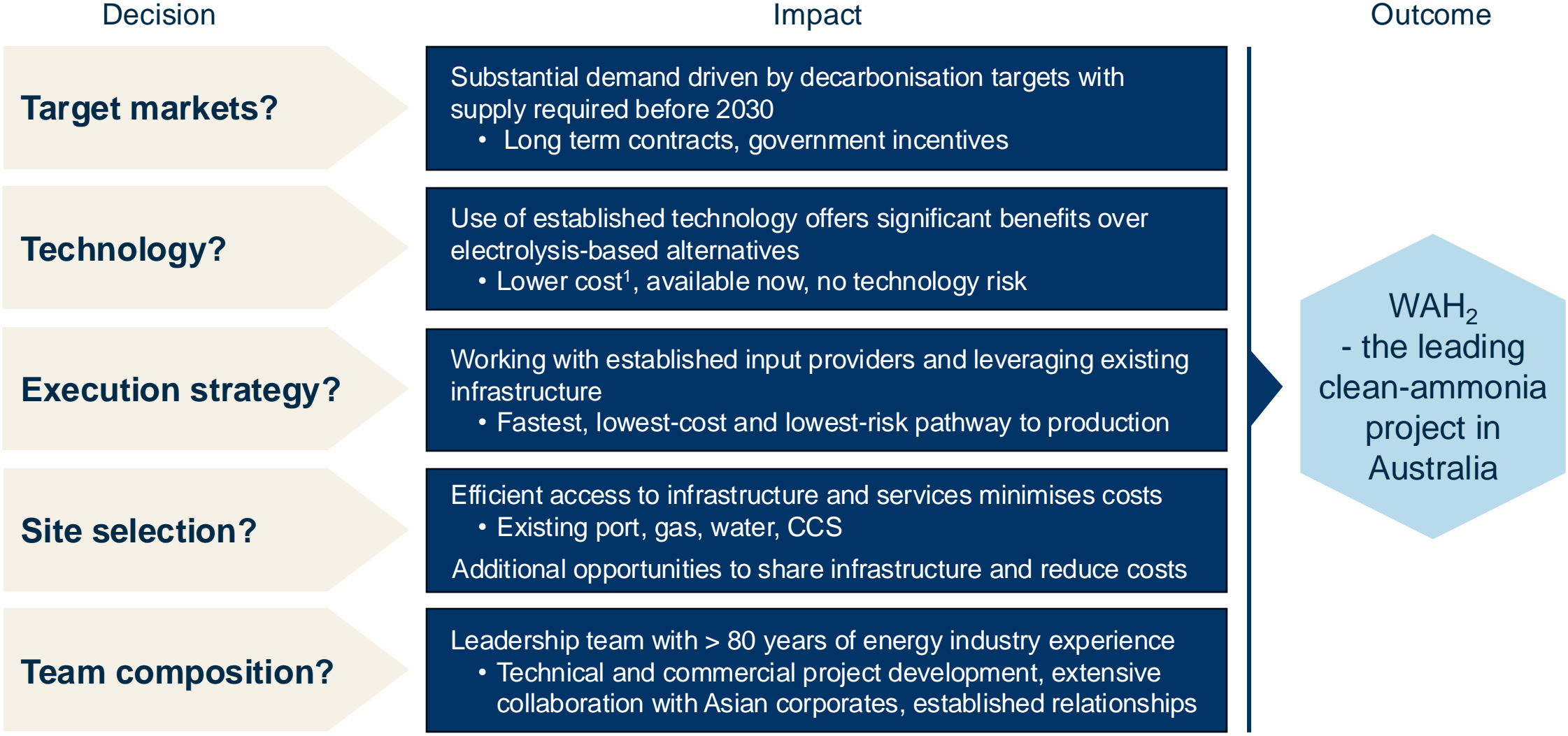


Source: (1) Clean Fuels Ammonia Association recommendation to METI; (2) HXG assessment, (3) WAH2 Project Pre-Feasibility Study Updated Announcement (ASX: 2 August 2023); (4) Research Institute of Economy, Trade and Industry 'The New Australia-Japan Energy Relationship'.

Project design drives competitive advantage

Hexagon’s decisions have positioned WAH₂ as Australia’s leading clean-ammonia project

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Note (1) Hydrogen Insights December 2023, Hydrogen Council and McKinsey & Company.

Positive macro-environment, evolving as expected

Planets align for WAH₂, with an increasing desire for credible supply of clean energy

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There is an increasing need for clean energy as 2030 approaches.

Federal, State and Overseas governments' objectives support development.

While increasing costs of competing technologies favour WAH₂ as an early mover.



Increasing cost of competing, electrolysis-based, technologies¹



Increasingly technology-agnostic approach of customers and regulators, with focus on emissions intensity²



Gas reforming with CCS increasingly seen as the most credible clean-ammonia solution available at scale before 2030³



Alignment with Government objectives

Australia

- Leading clean energy exporter
- Decarbonising iron ore exports

WA

- Establishing the Pilbara Hydrogen Hub
- New industry, new jobs
- Domestic gas use

Japan

- COP Decarbonisation commitments
- Clean ammonia import and co-firing targets

Note (1) Hydrogen Insights December 2023, Hydrogen Council and McKinsey & Company; (2) S&P Global, 'Cracking the Code: Unlocking Japan, Korea and Australia's Hydrogen ecosystem' April 2024, HXG discussions; (3) Ammonia Supply Outlook 2024: A Clean Takeover, BNEF August 2024.

Project overview - Hexagon's WAH₂ export plant

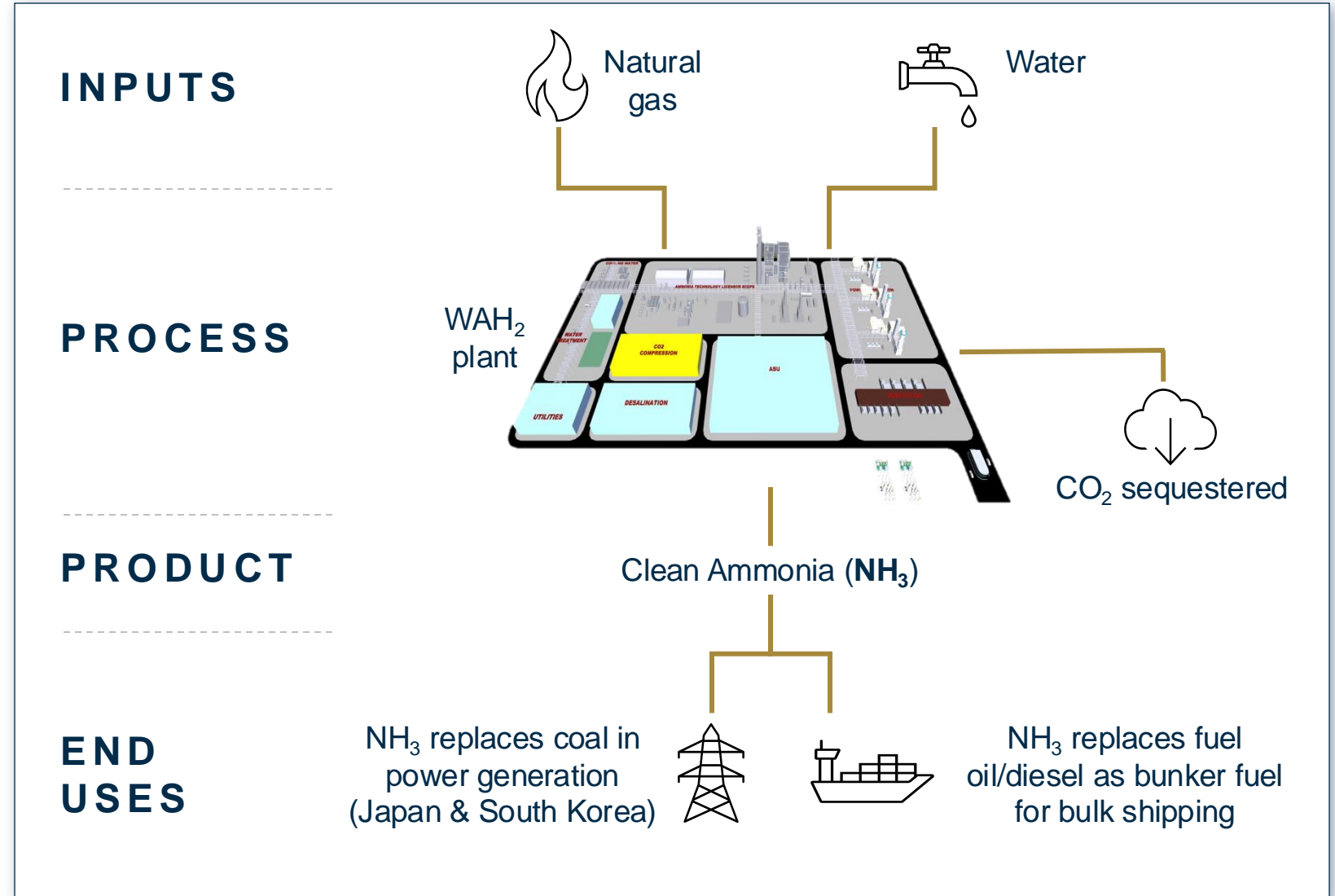
Low-emissions, cost competitive ammonia

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The WAH₂ Project uses established technology to decarbonise gas and produce clean ammonia which can be used in existing infrastructure to replace coal for power generation, and to replace hydrocarbon marine fuels.

Effectively decarbonising Australian gas to help the energy transition.

Material volumes (600 kTPA) targeted to be online before 2030.



Partnering with experienced industry players

Hexagon is seeking the fastest, lowest-cost, lowest-risk pathway to production

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Before initiating WAH₂, Hexagon identified how to deliver the lowest-cost, lowest-risk and fastest path to market:

1. Securing a site in the Maitland Strategic Industrial Area;
2. Working with established input providers; and
3. Leveraging existing infrastructure wherever possible.

This strategy is proving successful.

In this way a small company can build out a large project



Project site – in optimal location of Maitland SIA¹

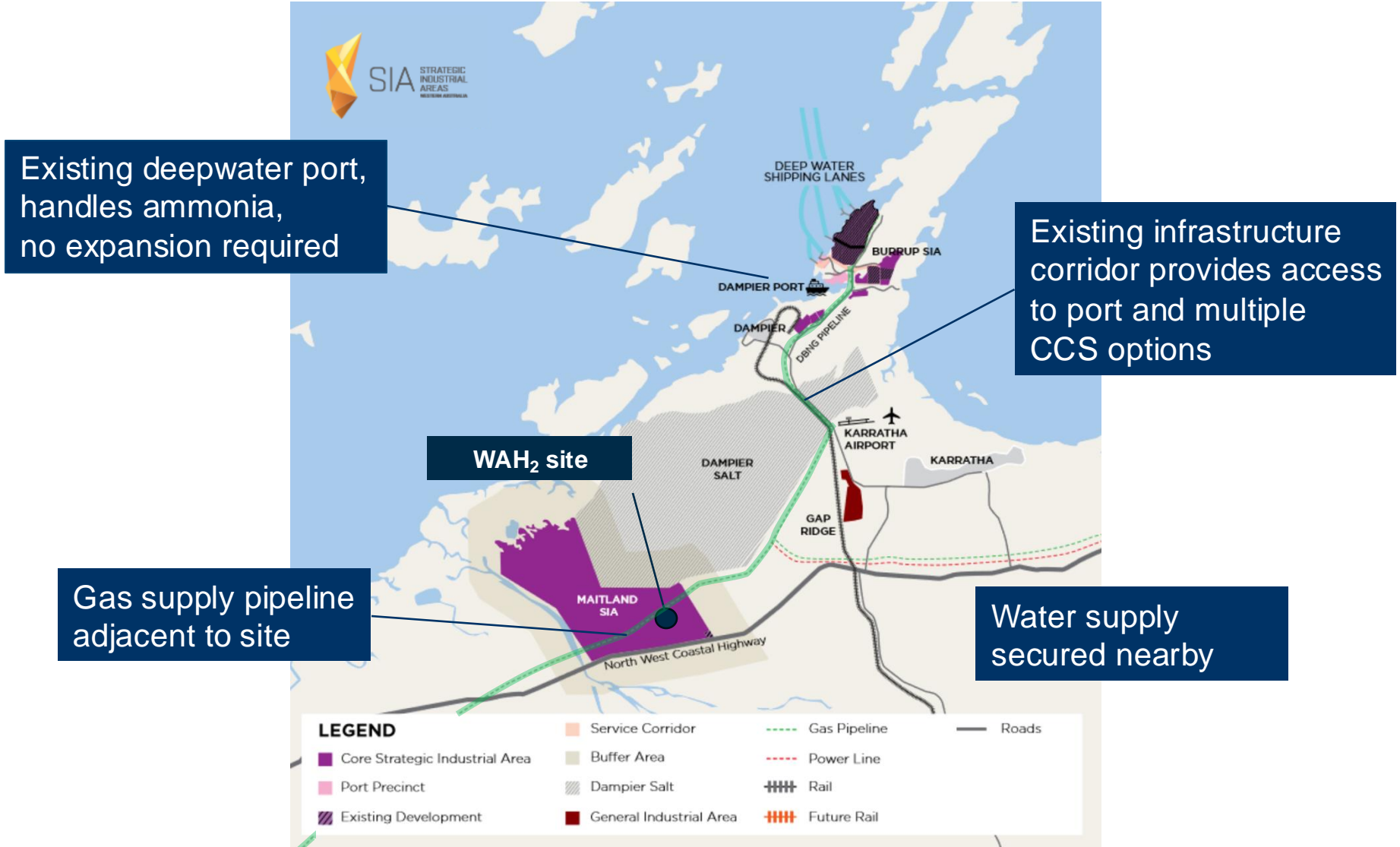
Proximity enables lower cost access to required services and infrastructure

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Hexagon's site is a key asset, providing access to existing infrastructure that is located nearby.

With significant additional opportunities to share infrastructure with the proponents of other projects.

Together, underpinning the competitiveness of the WAH₂ Project.



Note: (1) Strategic Industrial Area; (2) Damper to Bunbury Natural Gas Pipeline
Source: Image - DevelopmentWA

World class execution team

Team with track record and experience of building and leading major energy businesses

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Wealth of experience in **developing projects and businesses** from inception to multi-billion-dollar enterprises

Board of Directors



Charles Whitfield
Chairman

CIO of Drumrock Capital
Turnaround and growth company specialist Ex **Citibank** MD & **Deutsche Bank**



Andrew Kirk
Commercial Director

Head of LNG for Power Co., Bangkok. Ex-17 years **Woodside** LNG Strategy Co-founder Green Hydrogen Asia



Garry Plowright
Non-Exec Director

Land Access and Approvals Manager at **Pilbara Minerals** History in Mining law, regulatory process and mine development



Philipp Kin
Non-Exec Director

investment banking (M&A, DCM and ECM) and energy research roles including Lead WA LNG Asset Economist at **Shell**

Project Team



Stephen Hall
CEO/ Project Leader

30 years-experience energy sector Ex-**Woodside Energy** VP Strategy, Power & New Markets Ex-VP North-West Shelf Development



Reinhardt Matisons
Business Development

35 years commercial experience Energy sector. Ex-EVP Marketing, Trading & Shipping at **Woodside Energy** Ltd. Ex-Senior Consultant Poten & Partners



Neil Theobald
Business Development

Snr Adviser Asia Natural Gas & Energy Asscn - Senior Advisor to **McKinsey & Co.** -Ex-**Chevron** VP Global LNG, Gas & Trading Ex-Non-Exec Chair North-West Shelf Gas



Liz Sully
Regulatory Approvals

25 years regulatory approvals experience in energy sector Ex-**Santos & Woodside** Regulatory Approvals Specialist

World class technical advisors to provide **detailed technical and costing analysis**

Industry partners



Leading energy services company with expertise in engineering consultancy to design, build, and operate world-class low emissions energy facilities.



Industry leader with SynCOR Ammonia™ utilizes stand-alone autothermal reforming for the production of syngas instead of conventional tubular reforming.

WAH₂ Project is best-placed

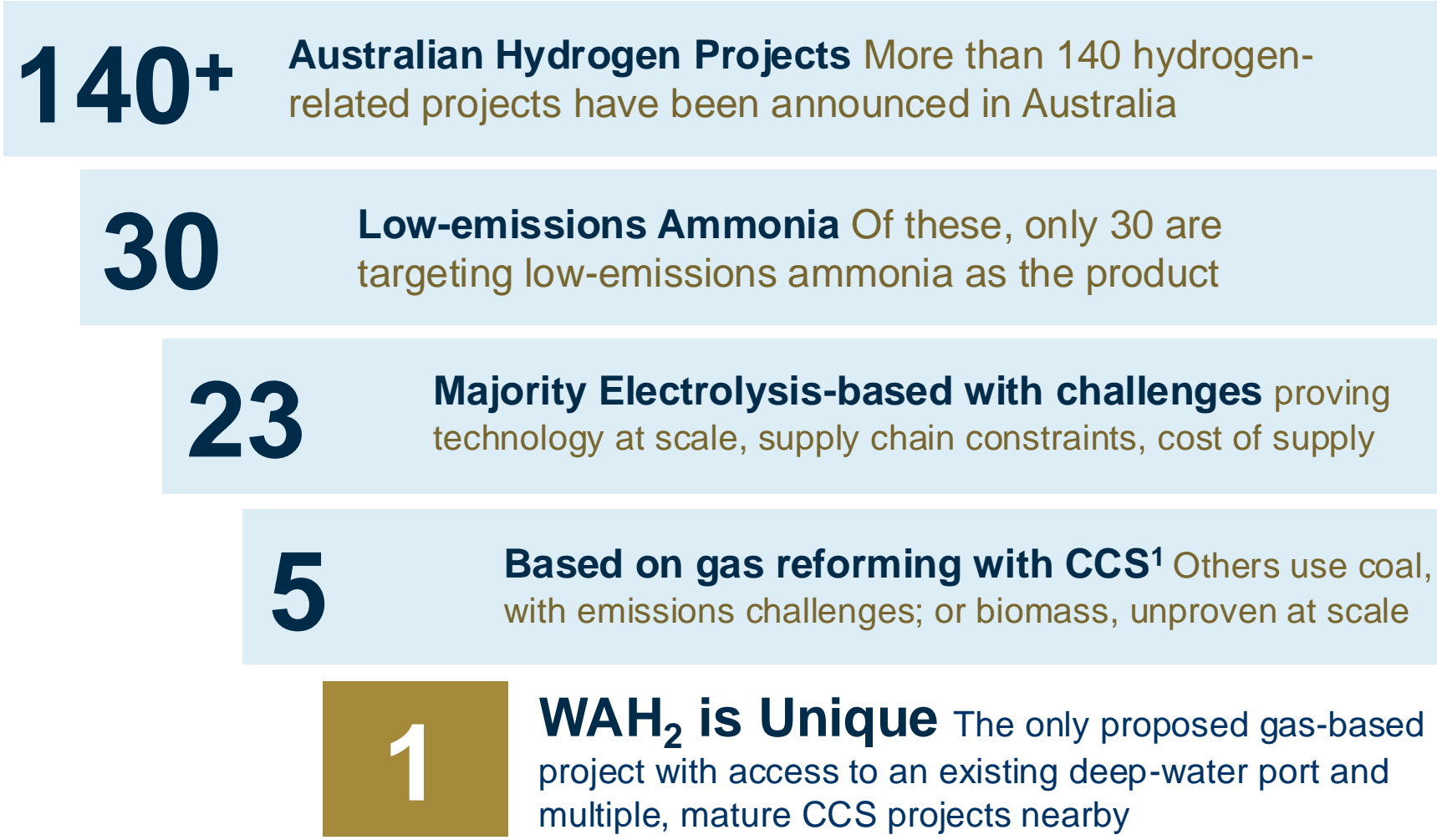
Early mover project with competitive advantages related to tech. choice and secured site

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Hexagon’s WAH₂ Project is considered the most advanced clean ammonia export project in Australia.

This is due to its competitive cost of production and ability to supply before 2030.

Each reflect Hexagon’s choice of technology and location.



Source: Hexagon analysis of publicly available information; Note (1) carbon capture and storage

Timeline

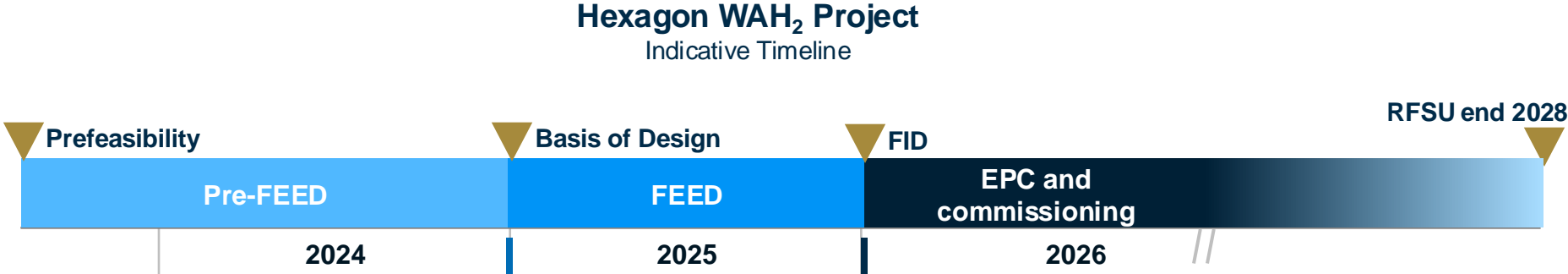
Multiple near-term revaluation events as project advances

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Hexagon has already achieved major milestones to establish the project.

Active negotiations are progressing on the next stages of key inputs and partnerships.

As results become announcable a flow of agreements is expected which will de-risk WAH₂ economics and, in turn, re-rate Hexagon's valuation.



Achieved already:

- Land – allocated, terms agreed
- Plant – technology selected, core design set
- Water – Key Terms Agreement
- Port – access confirmed
- Offtake – bunkering MOU

In progress

- Completion of Pre-FEED technical and approvals scope
- Progression of agreements on gas supply, CCS, CO₂ transport, shared infrastructure, offtake

Upcoming

- Completion of FEED technical scope
- Site lease and land use agreement
- Primary regulatory approvals (environment, heritage)
- Final commercial agreements as appropriate
 - Gas supply, water supply, CCS, CO₂ transport, infrastructure access, offtake
- Project Financing

Substantial progress since Pre-feasibility

Reducing uncertainty and suggesting improved economics relative to PFS Base Case¹

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Opportunities captured to simplify scope, reduce capital and share infrastructure.

Assumptions replaced by third-party prices.

Flexibility preserved to optimise emissions intensity to meet customer needs and/or subsidy requirements.

Site	<ul style="list-style-type: none"> Option to Lease agreed in-principle with DevelopmentWA Baseline surveys suggest no significant issues²
Plant	<ul style="list-style-type: none"> Design basis set for core process, ongoing emissions optimisation
Gas supply	<ul style="list-style-type: none"> Confidential discussions with several potential gas suppliers, potential equity participation
Water supply	<ul style="list-style-type: none"> Key Terms Agreement³ executed with Water Corp. Desalination plant, seawater supply and brine return pipelines deleted from base case
Infrastructure corridor	<ul style="list-style-type: none"> Govt Plan⁴ accommodates future NH₃ and CO₂ pipelines Govt Hydrogen Hub funding allocated to multi-user NH₃/H₂ pipeline
CO₂ transport	<ul style="list-style-type: none"> Confidential discussions with 3rd party pipeline provider, indicative pricing provided
CCS	<ul style="list-style-type: none"> Confidential discussions with nearby sequestration projects, indicative pricing provided
Port	<ul style="list-style-type: none"> Availability of existing bulk liquids loading berth confirmed, no expansion required for WAH₂ Phase 1
Offtake	<ul style="list-style-type: none"> Confidential discussions with multiple parties, several considering equity participation in project as well as offtake MOU executed with Oceania⁵ to provide ammonia bunkering for bulk carriers

Note (1) HXG ASX updated announcement 2nd August 2023; (2) Maitland SIA baseline studies provided by DevelopmentWA; (3) WAH2 Project – Water Supply Key Terms Agreement Announcement (ASX: 11 March 2024); (4) Maitland to Burrup Corridor Development Plan, as provided by JTSI; (5) WAH2 Project Ammonia Bunkering Memorandum of Understanding (ASX 13 May 2024)

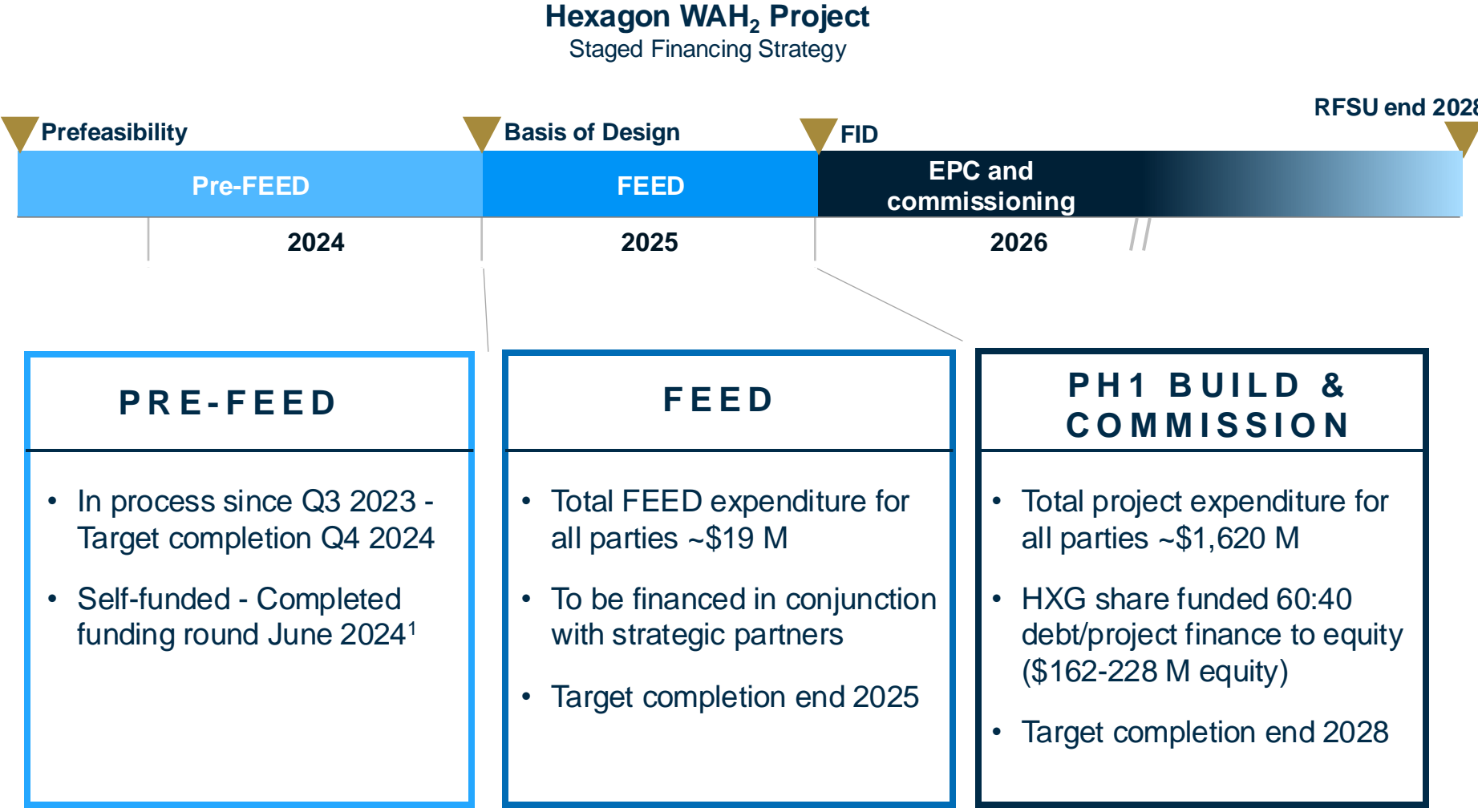
Funding path to production

Preserving shareholder value by staged approach

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WAH₂ will be progressed in combination with equity partners who will represent ~2/3 of project equity from FID forwards.

Management is focused on progressing with minimum dilution of existing shareholders.



Note: All currency in AUD; (1) Completion of Financing Round to Fund WAH2 Project Pre-FEED (ASX 20 June 2024)

Compelling proposition

FEED on WAH₂ the next key milestone, pathway to Project partnerships

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Early mover, large market

Hexagon is a front runner in accessing a high growth, government backed market

Advantaged project

Secured project site with access to key existing infrastructure and inputs

Near-term catalysts

Multiple near-term milestones (FEED, partners) expected to be catalysts for revaluation

Attractive returns

Accessing government and subsidized funding would leverage shareholder payoffs

Growth upside

WAH₂ Phase 2 (double production) and additional project cost saving opportunities¹

HEXAGON

Fuelling the Future

Low Emissions Ammonia
From Australia to APAC

This announcement has been authorised for release to the ASX
by the Board of Hexagon Energy Materials Ltd.

FOR FURTHER INFORMATION, please contact:

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