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ASX Announcement - 23 March 2023

Investor Update presentation and townhall on WAH_2 Project today at 11:00 AM AWST / 2:00 PM AEST

WAH_2 Project Review

Further to its announcement on 15 March 2023, Hexagon Energy Materials Ltd is pleased to provide a copy of the Investor Update presentation to be given today at 11 am Perth time and 2 pm AEST.

To register for the call, please email anas@hxgenergymaterials.com.au and you will be sent the link to join. Please feel free to include any questions on the project that you would like the team to address in the Q&A session at the end of the presentation.

The WAH_2 Project is Hexagon's flagship project to supply low-emissions ammonia to Asia Pacific markets as they decarbonise their energy sectors.

The WAH_2 Project is well-placed as the energy transition drives an increasing demand for low-emissions energy.

The project aims to:

- Use proven technology to reform feed-gas from WA gas fields to produce hydrogen which is then converted to ammonia (as the most cost-effective and energy-efficient means of transport to market).
- Capture and permanently store by-product CO_2 in sequestration projects that are being developed in the area.
- Use renewable energy as far as practicable as a source of power for the project.

The call will include:

- Perspective on the evolving Asia Pacific ammonia market and customer base.
- Update on WAH_2 Project progress.
- Next steps in terms of project progression and potential strategic partnerships.
- Q&A.

Ends

About Hexagon Energy Materials Limited

Hexagon Energy Materials Limited (ASX: HXG) is an Australian company focused on future energy project development and energy materials exploration and project development.

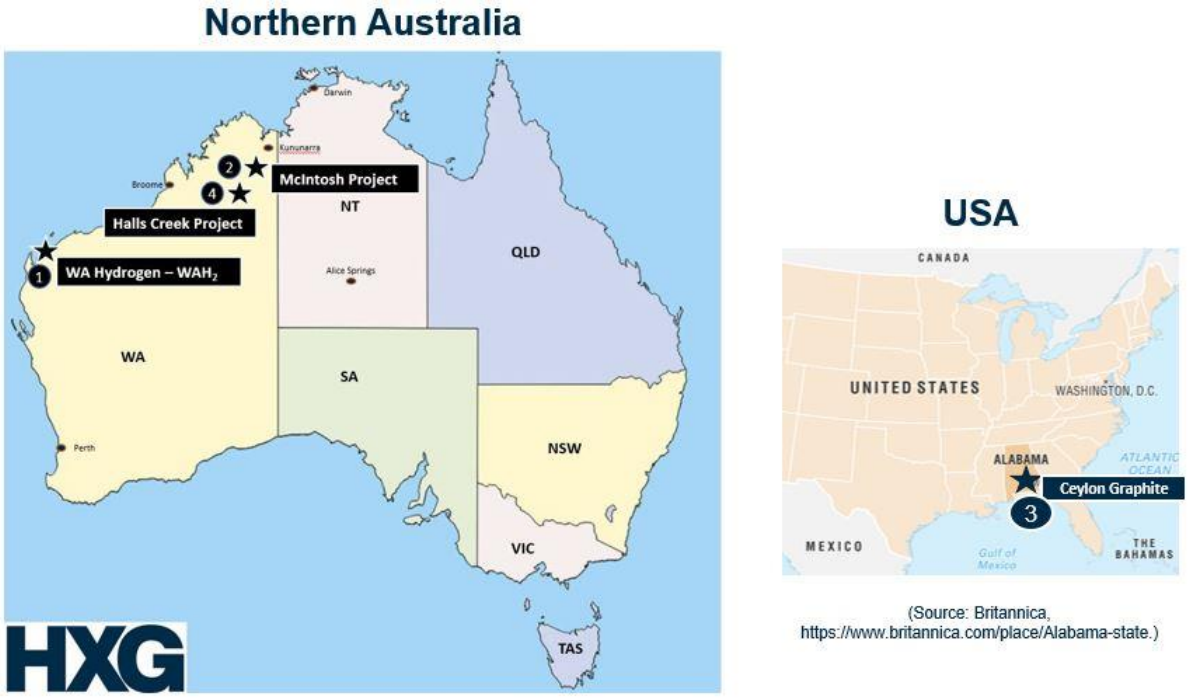
Hexagon 100% owns the McIntosh Nickel-Copper-PGE and Graphite project in Western Australia and the Halls Creek Gold and Base metals project in WA. On 14 February 2022 Hexagon announced a binding Graphite Mineral Rights Earn-in agreement (up to 80%) had been entered into with Critical Green Minerals Pty Ltd, with McIntosh Graphite expected to

become part of an ASX Initial Public Offering during 2023. In the USA, Hexagon has an 80 per cent controlling interest of the Ceylon Graphite project located in Alabama, over which South Star Battery Materials Corp (TSXV: STS) on 7 December 2021 signed an Option to develop and Earn-In up to 75% interest.

Hexagon is developing a business to deliver low-emissions hydrogen/ammonia into export and domestic markets at scale, via Hexagon's WAH_2 Project.

Hexagon plans to use renewable energy in its low-emissions hydrogen production as far as practicable.

Hexagon's overarching goal for 2023 is to secure and leverage technical and commercial alliances by commodity across its project portfolio whilst maintaining a core focus on Northern Australian Future Energy and Future Energy Materials project development.



Locations of Hexagon's projects

To learn more please visit: www.hxgenergymaterials.com.au.

Authorisation

This announcement has been authorised by the Board of Directors.

FOR FURTHER INFORMATION, please contact:

Hexagon Energy Materials Ltd
info@hxgenergymaterials.com
+61 8 6244 0349

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Investor townhall on Hexagon's WAH_2 Project

March 2023

Overview

1. The Opportunity
2. WAH_2 Project Update
3. Timeline and Milestones
4. Questions & Answers

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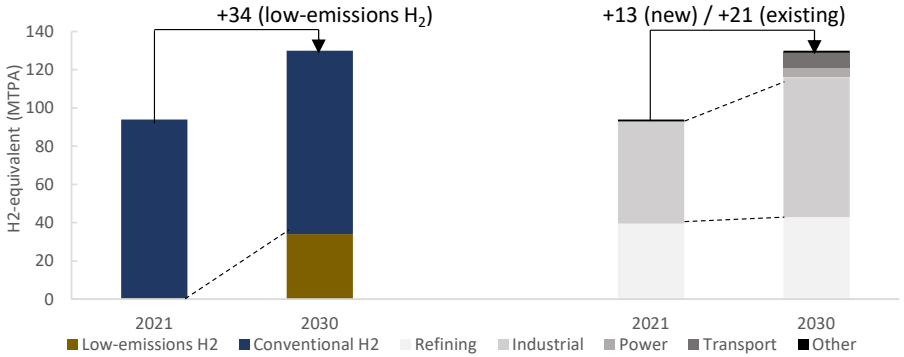
1. The Opportunity

Market Context

The energy transition is happening; driving a growing, unsatisfied global appetite for low-emissions energy

Demand

Global Hydrogen Demand[1]
(in 2021 and in Announced Pledges Scenario in 2030)



Hydrogen (H_2) and Ammonia (NH_3) each have a major part to play

- Global H_2 demand forecast[1] to increase by up to 36 MTPA; 38% from 2021 to 2030
- NH_3 made up ~35% of the global H_2 market in 2021 (34 MTPA H_2e equating to 190 MTPA NH_3)

Low-emissions H_2 and NH_3 forecast[1] to have ~25% market share by 2030

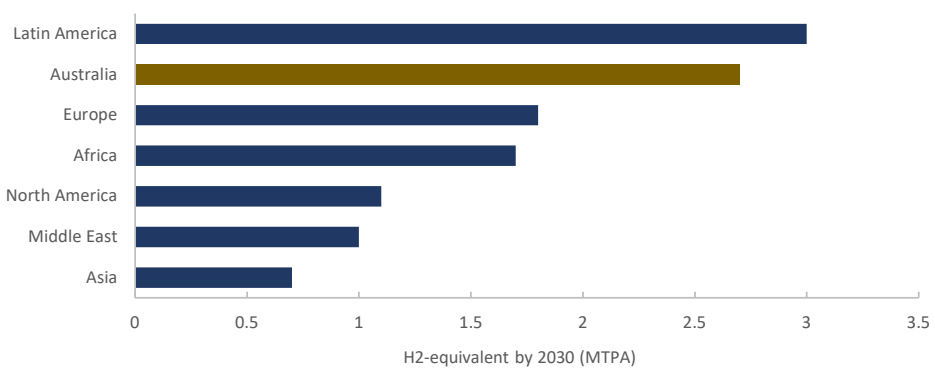
- New applications such as power generation and transport, plus displacement of high-emissions alternatives in refining and industrial processes

Strong demand forecast in APAC, with Japan and Korea playing key roles

- Japan[2] targeting imports of 3 MTPA low-emissions NH_3 by 2030, 30 MTPA by 2050
- Korea[3] targeting 3.6% of power generation from NH_3 in 2030, increasing thereafter

Supply

Planned Hydrogen Exports by Region[1]



Australia is well-positioned to become a globally significant exporter

- Plentiful natural resources, high renewable energy potential, CO_2 sequestration sites, supportive Government

Global exports of low-emission H_2 and NH_3 are estimated to increase to 12 MTPA H_2 equivalent by 2030, from essentially zero today[1]

- Most export projects focusing on NH_3 as chosen carrier, reflecting challenges of long-distance H_2 transport
- Australia's share over 20% at 2.7 MTPA H_2 equivalent, equating to ~15 MTPA NH_3 if NH_3 was the chosen carrier

The US Inflation Reduction Act (August 2022) will impact the planned supply forecast shown above

Source: (1) IEA Global Hydrogen Review 2022, 'Announced Pledges' Scenario; (2) METI Ammonia Strategy and Policy in Japan; (3) S&P Platts 'South Korea to commercialize ammonia-fuelled power generation by 2030'

The case for blue hydrogen in the energy transition

Low-emissions hydrocarbon-based hydrogen/ammonia will form the transitional source

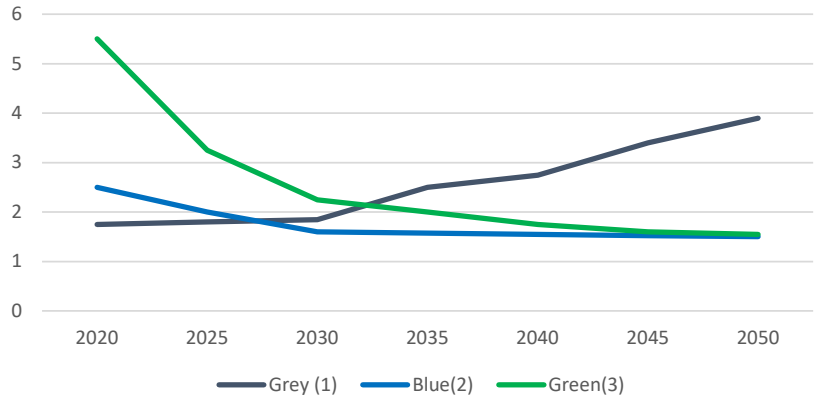
International research and policy documents focus on the need for "blue" hydrogen and ammonia

- Blue hydrogen is currently less that half the cost of production of "Green" hydrogen
- By the late 2020's blue hydrogen will be cheaper than grey hydrogen
- Green hydrogen is not expected to compete with the cost of blue hydrogen until the late 2040s

Blue hydrogen and ammonia plants are not all equal

- Access to competitively priced feed gas and proximity to CO_2 sequestration sites are an advantageous

Production cost of hydrogen[1]
($/kg)



1 Steam methane reforming without carbon capture. Gas price of flat $2.6-6.8/Mmbtu; based on $30/t CO_2 (2020), $50/t CO_2 (2030), $150/t CO_2 (2040) and $300/t CO_2 (2050),

2 Gas price of flat $2.6-6.8/million British Thermal Units (MMBtu);based on $30/ton CO_2 (2020), $50/ton CO_2 (2030), $150/ton CO_2 (2040), and $300/ton CO_2 (2050). Assumes autothermal reforming with carbon capture and storage 98% CO2 capture rate

3 Based on alkaline with size classes of 2 megawatts (MW) (2020), 20 MW (20205) and 80 MW from 2030); based on levelized cost of energy of $25-73/mega-watt-hour (MWh) 2020, $13-37/mega-watt-hour (MWh) 2030, $7-25/mega-watt-hour (MWh) 2050

Source: (1) McKinsey "Five charts on hydrogen's role in a net-zero future" October 25, 2022

Japan

Japan is at the forefront of demand for low-emissions Hydrogen and ammonia demand in Asia Pacific

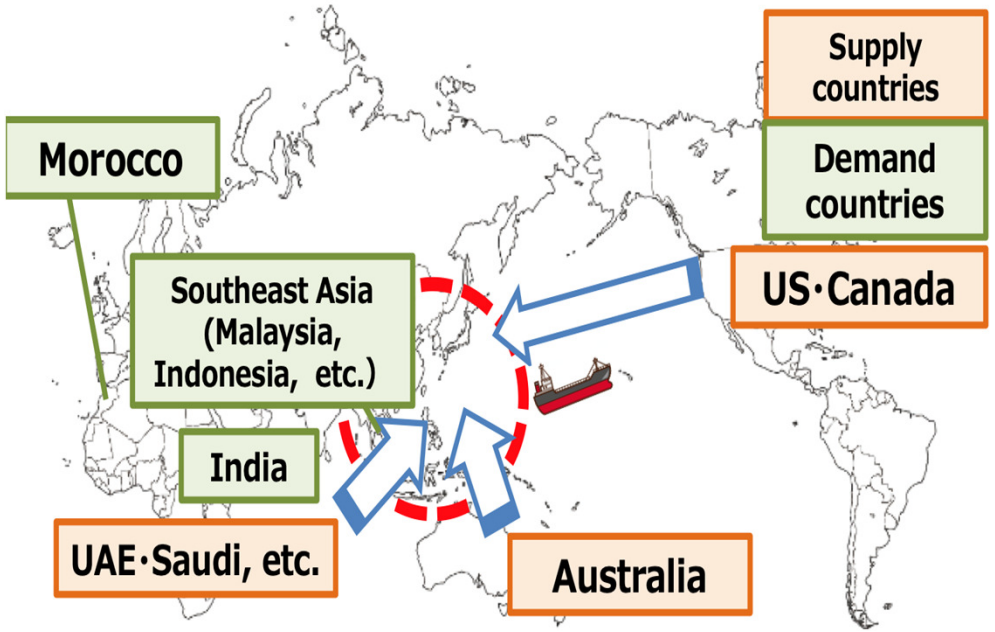
Japan's energy strategy has well developed policy and targets for using hydrogen and ammonia as part of Japan's decarbonisation

One of the largest initiatives uses hydrogen and ammonia to decarbonise thermal power generation:

- 20% ammonia co-firing in coal power plants by 2030
- 30% hydrogen co-firing in gas power plants by 2030
- Hydrogen/ammonia to comprise 1% of Japan's overall power mix by 2030

Japan plan expects to invest JPY300bn (A$3.4bn) per year into establishing low-emissions hydrogen and ammonia supply chains

Japanese companies are actively seeking low-emissions investment opportunities in Australia



Sources: Ministry of Economy, Trade and Industry of Japan (METI) "Basic Hydrogen Strategy" Dec 2019, METI "Strategic Roadmap for Hydrogen and Fuel Cell" March 2019, "Ammonia Strategy and Policy in Japan" METI 2022

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2. WAH_2 Project Update

WAH_2 Project Summary

Potential first mover, producing and exporting low-emissions ammonia to APAC markets planned pre-2030

Preparatory studies completed in Q4 2022 have confirmed the project concept

- Growing APAC demand for clean energy with Northern Western Australia well placed to supply
- Cost and schedule advantages over electrolysis-based alternatives
- Availability of required inputs – natural gas, power and water
- Capacity and readiness of CO_2 sequestration services aligned with WAH_2 project timeline

Current prefeasibility work is focusing on identified key levers to drive maximum value

- Consideration for differing H_2 production technologies and assessment of tangible differences in cost, utility requirements and CO_2 emissions
- Assessment of economies of scale to appropriately balance production capacity and cost
- Engaging with Government and industry on potential multi-user infrastructure to further drive down unit costs
- Defining an appropriate path to net zero before 2050

The WAH_2 Project is on track to enter 'Select' phase by mid 2023[1]

- Completion of WAH_2 Project Pre-feasibility Report in Q2 2023
- Targeting award of 'Option to Lease' over preferred Maitland Strategic Industrial Area site in Q2 2023
- Progression of commercial discussions regarding gas supply, utilities supply, CO_2 sequestration and ammonia offtake

Note: (1) subject to PFS result

WAH_2 Project Outline – PFS focus

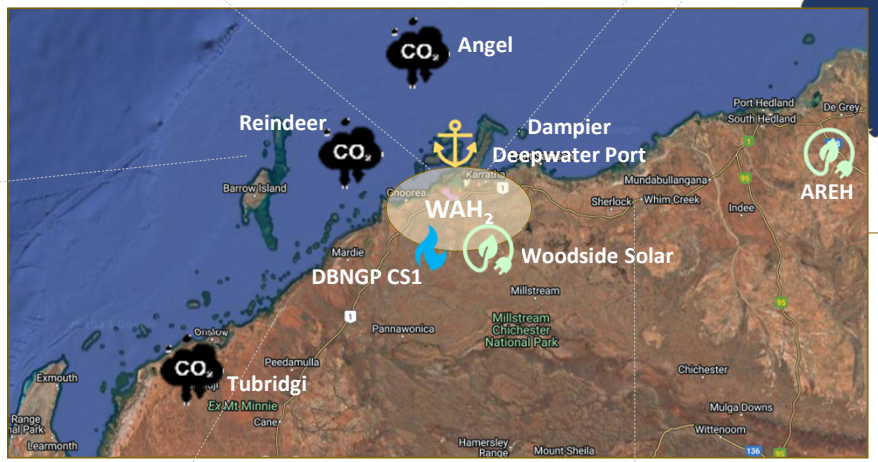
Leverage proven technology and established energy infrastructure to reduce project costs and execution risk

Competitive, low-emissions, low-risk H_2 production
- Using proven methane reforming technology

Converted to low-carbon NH_3 as the most appropriate energy carrier
- Reduced cost, more energy-efficient
- Aligns with target customers' need for NH_3

Access to existing deepwater port
- Existing NH_3 export operations

Carbon capture and storage (CCS) in depleted gas reservoirs



Proximal to Japan and South Korea markets

Established Shipping Routes

Phased development to manage risks and align with market development

Harnessing northern Western Australia's renewable energy potential

WAH_2 Technical Overview

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Preparatory studies confirmed concept, PFS[1] to focus on identified levers to drive maximum value

		Preparatory studies	PFS focus
Inputs	Gas supply	• **Requirements small in the context of the WA gas market** • Phase 1 requirement 23 TJ/d (~2% of forecast WA supply at start-up), increasing to 74 TJ/d for Phase 2	• **Access to DBNGP** (CS1 spur adjacent to Maitland SIA) • Contracting approach and indicative gas price
	Power supply	• Reliable supply of 8 MW for Phase 1, increasing to 25MW for Phase 2 • Third-party provider may be able to **access greater economies of scale** and **renewable penetration**	• **Investigate 3rd party suppliers** (lower unit cost) • Optimise renewables penetration • Potential access to **multi-user infrastructure**
	Water supply	• Access to groundwater not realistic • **Desalination plant required** to convert seawater to freshwater for process cooling, steam production, etc.	• Explore opportunity to **share water infrastructure** with other SIA proponents to access economies of scale • Potential for access to **multi-user infrastructure**
Process	H_2 / NH_3 production	• Methane reforming **technology field proven and widely used** • Choice of specific H_2 production technology drives tangible differences in costs, power requirements and CO_2 emissions • **Economies of scale** can be significant	• Appropriate **choice of H_2 production technology** • Appropriate production capacity for Phase 1 • Incremental scope of Phase 2 • **Class 4 capital and operating cost estimates**
Outputs	Ammonia export	• NH_3 export via isotank for Phase 1, unless multi-user infrastructure available • Phase 2 predominantly via pipeline and bulk carrier	• Explore **optimal plant capacity of Phase 1** considering export bottlenecks • Explore customer **logistics constraints and drivers** • Potential access to **multi-user NH_3 export infrastructure**
	Greenhouse gas emissions	• Plant to **capture >90% of direct CO_2 emissions** to meet low-emissions benchmarks • Phase 1 to sequester up to 0.5 MTPA CO_2, Phase 2 up to 1.5 MTPA CO_2	• Confirm **direct and lifecycle emissions** • Define path to net zero • Confirm CO_2 sequestration requirements • Potential for access to **multi-user CO_2 transmission infrastructure**

Note: (1) Preliminary Feasibility Study

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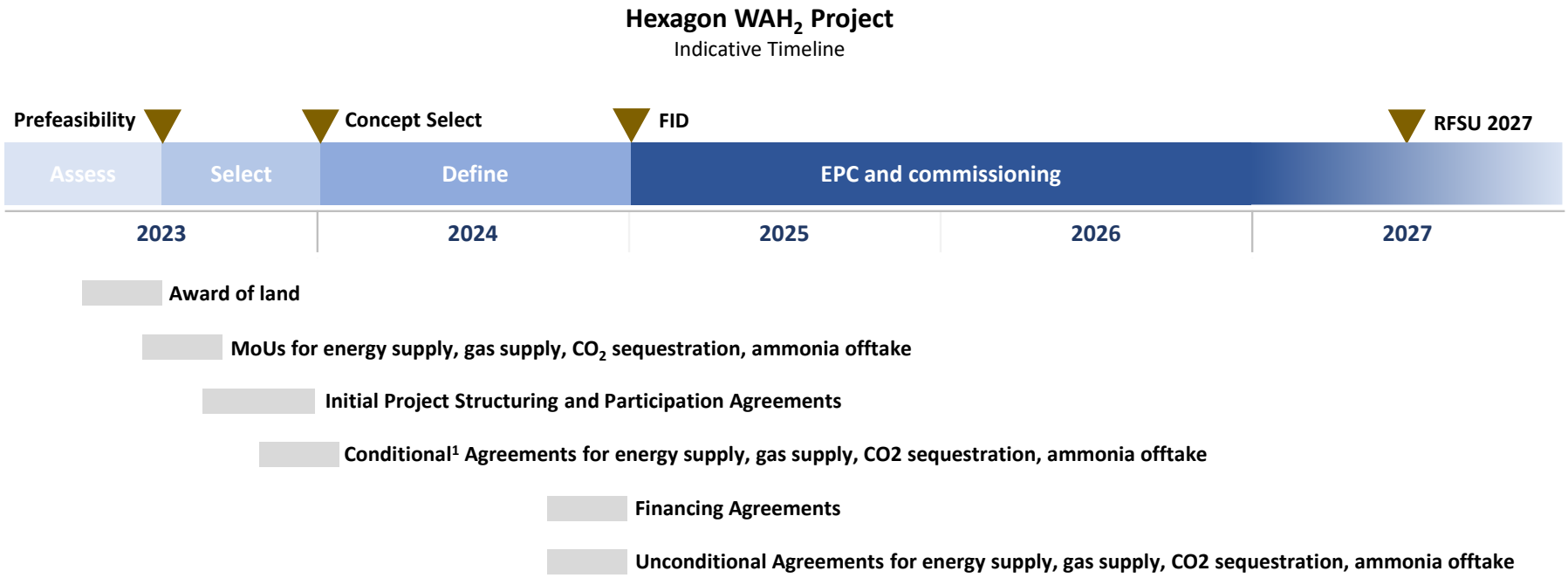
3. Timeline and milestones

Timeline of major milestones

The coming months will contain a series of important outcomes

As the project progresses, relationships with key partners will be developed and appropriate commercial agreements negotiated. These will become more defined in-step with the technical definition of the project.



Note: (1) Conditions precedent include WAH_2 Project FID

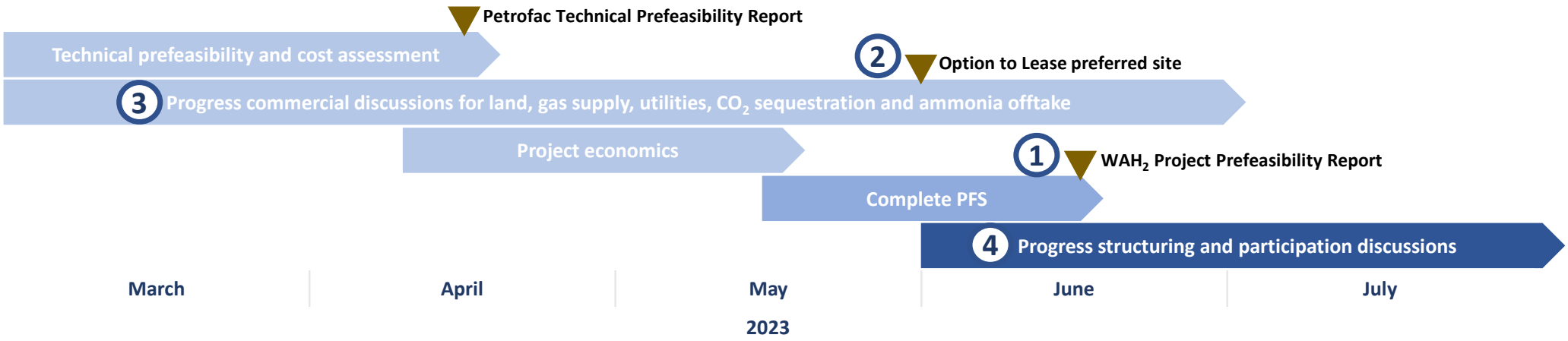
Next Steps

Four key milestones targeted for completion by Q2 2023

1. **Complete WAH_2 Project Prefeasibility Report**
2. **Secure Option to Lease from the WA Government over Hexagon's preferred project site**
3. **Progress commercial discussions**
   - Gas supply – volume, availability, price, emissions profile
   - Power supply – availability, price, renewables penetration
   - CO_2 sequestration – capacity, readiness, price, access point
   - Ammonia offtake – volumes, logistics, price, emissions profile

And, subject to PFS results:

4. **Progress project structuring and participation discussions with strategic partners**



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5. Q&A

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FOR FURTHER INFORMATION, please contact:

Stephen Hall
stephenh@hxgenergymaterials.com.au

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