HEXAGON
Hexagon Energy Materials Ltd

FUTURE ENERGY AND ENERGY MATERIALS

FUTURE ENERGY

HEXAGON AND HYDROGEN – WAH_2

The global hydrogen export market is forecast to reach A$300 billion in sales by 2050. This is attracting significant attention. On a risk managed, shareholder value maximising basis, becoming a hydrogen market participant is core to Hexagon's strategy.

Methodology

Hexagon's focus is on large-scale blue Ammonia project development in North-Western Australia utilising:

- Proven technology to reform natural gas feedstock
- Carbon Capture and Storage (CCS) in depleted gas reservoirs to decarbonize ammonia
- North-Western Australia's renewable energy potential.

Project planning

The specialist Hexagon team is currently working to progress:

- A Preliminary Feasibility Study (PFS) which is anticipated to be completed in Q2 2023[1]
- Commercial discussions regarding gas supply, utilities, CO_2 sequestration and ammonia offtake
- An Option to Lease from the WA Government over the preferred project site.

Energy carrier

Hexagon produced hydrogen is proposed to be converted to low-carbon ammonia as the most appropriate carrier. This offers reduced processing and transportation costs and greater energy-efficiency than the alternatives of liquid hydrogen or liquid organic hydrogen carriers – and aligns with customers' need for ammonia. Stage 1 of Hexagon's WAH_2 Project will see 250,000 tpa of blue Ammonia produced from 2028, with Stage 2 expanding to 800,000 tpa.

Site location

Hexagon has applied to the WA Government for an Option to Lease over its preferred site in the Maitland Strategic Industrial Area (SIA). The SIA is proximal to services with established export routes and an existing infrastructure corridor. It is well placed for accessing key Asian markets such as Japan and South Korea and to provide domestic supply to Australia.

Gas supply

WAH_2's feed-gas requirement is small in the context of the WA gas market. Phase 1 of the project would consume only ~2% of Western Australia's forecast daily gas supply at the expected time of start-up (Base Case, WA GSOO 2022).

Long-term strategy

To the greatest extent possible, Hexagon plan to use renewable energy in hydrogen production and, over time, transition to green, liquid hydrogen production once key hydrogen materials handling technology breakthroughs are achieved and become commercial.
The Hexagon team's practical, delivery focused approach, Australian energy and industrial sector relationships and international end customer networks (focused on coal fired power station operators and shipping lines) underpin Hexagon's capacity to deliver for stakeholders in the emerging Hydrogen market.

FUTURE ENERGY MATERIALS

Hexagon also has a future energy materials asset base.

1. MCINTOSH PROJECT – Ni-Cu-PGE's

Hexagon's McIntosh Project comprises a highly Ni-Cu-PGE prospective 542km^2 ground holding (17 Exploration Tenements) in the Western Australia's Kimberley Region with Panoramic Ltd's Savannah Nickel Project and processing plant to the north, and Future Metals NL's Panton PGE project to the south.

Through a systematic geological program of work over the past two years several high priority targets were identified. These were drilled during the 2022 field season (Phase 1). Further EM downhole drills being undertaken in Q1 2023 will define potential progress to a Phase 2 drill program at the conclusion of the wet season Q1 2023.

2. MCINTOSH & CEYLON PROJECTS – Graphite

a. In February 2022 Hexagon signed an Earn-in deal over the Graphite Mineral rights at McIntosh with Green Critical Minerals Pty Ltd (GCM) to unlock value from past investments (McIntosh's Graphite assets are a combined total Graphite resource of 23.8 million tonnes, grading 4.5% TGC, with 81% indicated). To-date GCM have successfully funded to meet its spending commitments and the deal is progressing.

b. In the USA (Alabama) in December 2021 Hexagon completed a development deal (Binding Earn-in-Option) with Canadian Graphite project development company South Star Battery Materials Corporation (TSXV: STS) over the Ceylon Graphite deposit (ground holdings of 500 km^2) that Hexagon had secured and invested in assessing. The agreement provides for an 'on the ground' program (expenditure) taking place over the next three years by STS. It is expected that Q4 2023 will see completion by STS of the project Preliminary Economic Assessment.

3. HALLS CREEK PROJECT – Gold and Base Metals

Hexagon holds 430km^2 of highly prospective Au-Cu ground (13 Exploration Tenements) in the historic gold mining area of Halls Creek in WA, with multiple priority targets identified through geophysical work completed in 2021.

[1] WAH_2 is underpinned by the scope of work Hexagon completed for the Northern Territory (Pedirka) Blue Hydrogen Project PFS between April 2021 and February 2022.

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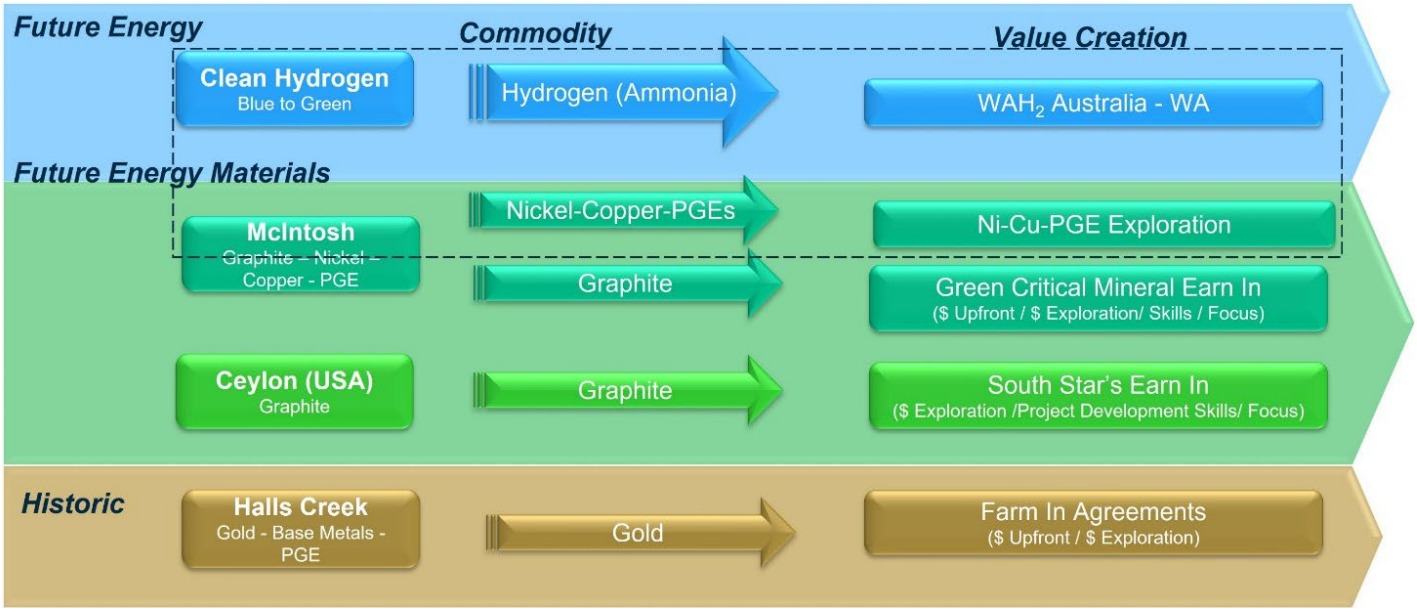

Figure 1 - Hexagon Strategy

(Source: Britannica, https://www.britannica.com/place/Alabama-state.)

Figure 2 - Hexagon Project Location Maps