



ASX Release 16 May 2024

Whitebark Energy instigates near term Hydrogen Commercialisation Pathway study

Highlights

- **Whitebark has commenced a Hydrogen Commercialisation Pathway study following a review of renewable energy development opportunities**
- **Near term focus on development and deployment of Hydrogen production facilities at the Company's 100% owned EPG2049**
- **Project development is in alignment with recently announced ~A\$6.7 Billion Federal Government Hydrogen production incentives**
- **EPG2049 Hydrogen production is targeting to serve nearby Hydrogen Highway infrastructure and associated offtakers**
- **Successful commissioning of EPG2049 will support assessment of additional hydrogen production at EPG2037, Warro and other Whitebark assets, as available**
- **The Company is committed to the ongoing evaluation of additional Natural Hydrogen asset opportunities with similar commercial characteristics**

Whitebark Energy Limited (ASX:WBE) ("Whitebark" or the "Company") has commenced targeted commercialisation studies for the Company's current portfolio in Australia. Hydrogen, produced through electrolysis powered by renewable sources, stands out as a versatile and sustainable fuel with the potential to revolutionise various sectors, including transportation, industry, and energy storage. Inland Australia, endowed with abundant geothermal energy resources and existing oil and gas wells which are end of commercial life, presents a unique opportunity to establish a hydrogen highway fuelled by hydrogen derived from geothermal power.

Whitebark's strategy for developing hydrogen from a geothermal energy source and supporting the 'Hydrogen Highway' through inland Australia is in line with recent Federal Government Budget announcements (including A\$6.7 Billion in Hydrogen Production incentives) promoting hydrogen production through extensive funding support. By leveraging Whitebark's existing assets with significant geothermal potential, Management firmly believes the Company is in a unique position to capitalise on growing market demand with a renewed focus on the development of hydrogen assets to commercialisation stage.

The Company is pleased to announce a Hydrogen Commercialisation Pathway study with an initial focus on developing Whitebark's 100% owned EPG2049 asset to production. Whitebark's commercialisation study and development pathway incorporates the following key components:

1. **EPG2049 Geothermal Resource Assessment and Development:**
 - Conduct further comprehensive geological surveys and exploration activities to verify EPG2049 geothermal potential;
 - Leverage EPG2049's existing production fields and well infrastructure and introduce technologies and reservoir characterization techniques to optimize resource development and maximize energy extraction;

- Collaborate with government agencies (incl. ARENA), research institutions, and industry partners to accelerate geothermal exploration and development efforts, and;
 - Target additional opportunities across inland Australian projects that support near term capital efficient geothermal deployment.
2. Prioritised Assessment of EPG2049's Hydrogen Production and Infrastructure Capability:
- Assess optimal Hydrogen facility deployment using identified key transportation routes and associated hydrogen refuelling stations along the proposed Hydrogen Highway;
 - Establish state-of-the-art electrolysis facilities powered by geothermal energy to produce hydrogen from waste production water;
 - Collaborate with government agencies, utilities, regulatory bodies and offtake counterparties (incl. vehicle manufacturers, fleet operators and logistic companies) to streamline production, and;
 - Develop a robust infrastructure network, including hydrogen production plants, storage facilities, and transportation corridors, to facilitate the distribution of hydrogen across inland Australia.
3. Continuous Assessment of Whitebark Portfolio potential for additional Hydrogen production:
- Ongoing monitoring and assessment of EPG2049's success to inform additional Hydrogen production capability at Whitebark's other assets;
 - Ongoing evaluation of additional acquisitions in alignment with asset selection principles, and;
 - Maintain commercial dialogue with partners and government entities for further joint venture and funding support opportunities.

Whitebark General Manager, Adam Stepanoff said: *"I am excited to announce a significant milestone in the Company's history, with commencement of a formal commercial assessment of Hydrogen deployment utilising the Company's uniquely positioned asset base. Hydrogen energy development in Australia represents a dynamic frontier in the nation's pursuit of sustainable energy solutions and Whitebark's EPG2049 asset location and production characteristics are perfectly placed to position Whitebark as a leader in Geothermal and Hydrogen production."*

As advancements in government support, technology and exploration continue to progress, Australia's Hydrogen landscape offers an attractive pathway to reducing emissions while diversify the energy mix, bolster energy security and deliver shareholder value."

Whitebark Energy's Hydrogen Project Focus

EPG2049 (Cooper Basin Geothermal & Hydrogen – Whitebark 100% WI)

Whitebark's immediate focus is to undertake a geothermal resource assessment of the EPG2049 area and complete a Basis of Design for feasibility to build and commission a scaleable, commercial hydrogen project. The area is ideally located to produce hydrogen for deployment along the Warrego highway from Roma to Mt Isa, with additional access to freight options for further markets.

EPG2049 consists of 1250 sub-blocks in South-West Queensland in the Cooper Basin approximately 360km South-West of Longreach covering an area of 3,875km². Australia's Great Artesian Basin previously housed modest geothermal plants (Murka and Birdsville) that operated in the 1980s and 90s. These assets demonstrate the feasibility of generating electricity from sedimentary heat and the associated potential for hydrogen production.

Geophysical studies undertaken by Whitebark in the EPG2049 holding indicate elevated geothermal gradients which have been further quantified by current operating oil and gas assets in the area. These temperatures support the production of electricity at shallow depths reducing the development risks involved with extracting the resource. Whitebark aims to assess the deployment of the technology in near-by project areas, with potential to scale the Inland project in due course.

EPG2037 (South-East Queensland Geothermal – Whitebark 100% WI)

Whitebark has recently secured additional application areas in South-East Queensland as Exploration Permit for Geothermal Energy 2037 ('EPG2037') consisting of 190 sub-blocks in the Greater Brisbane and Gold Coast Region, approximately 25 km from Brisbane in South East Queensland.

EPG2037 provides an additional Hydrogen development opportunity, with the Company currently evaluating it's commercial potential in alignment with the Company's revised Development Pathway. Geophysical interpretation has been undertaken and is positioned to develop a resource assessment of the area. Unlike EPG2049, EPG2037 does not have existing production wells and will be developed in sequence following successful project delivery of EPG2049.

Corporate

Additional asset acquisition continues to be guided by Whitebark's four key principles that support the sustainable deployment of Geothermal and Hydrogen production. These asset parameters include:

- Strategically located close to markets (i.e. Hydrogen Highway) or with a clear commercial outcome such as hydrogen production;
- Assets supporting smaller (sub 50MW) and more dynamic deployment that do not require significant capital expenditure and lengthy commercialisation processes;
- Assets which use preexisting oil and gas well bores for conversion into geothermal assets reducing the need for significant drilling costs, and;
- Assets which qualify for Whitebark's stringent geological requirements, in particular heat, permeability and adequate flow rates.

The Company is focused on its stated ambition of being the first commercial company in Australia to operate a commercial geothermal energy to hydrogen production project. The Company will continue to develop and grow the Company's Gas and Geothermal exploration assets and will continue to provide progress updates to shareholders as they occur.

This ASX announcement has been approved and authorised for release by the Board of Whitebark Energy Limited.

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About Whitebark Energy Limited

Whitebark Energy Limited is an ASX-listed exploration and production company featuring low-cost oil and gas production in Canada, a substantial contingent gas resource in Western Australia, and two EPG permit areas in Queensland. WBE has realigned its corporate strategy following a comprehensive management changeout and the landmark acquisition of a 100% interest in the Wizard Lake producing asset located in the prolific oil & gas province of Alberta, Canada.