

4 April 2024

## INVESTOR PRESENTATION - RESOURCES RISING STARS GATHER ROUND INVESTOR CONFERENCE

Greenvale Energy Limited (ASX: GRV, “Greenvale” or “the Company”) is pleased to provide a presentation that will be delivered by its Executive Director and CEO, Mark Turner, at the Resources Rising Stars Gather Round Investor conference, to be held in Adelaide today.

Investors can register to watch a livestream of the conference at:

[Event Livestream](#)

[https://www.bigmarker.com/series/resources-rising-stars-gathe/series\\_summit](https://www.bigmarker.com/series/resources-rising-stars-gathe/series_summit)

### **Authorised for release:**

This announcement has been approved by the Board of Greenvale for release.

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**Greenvale**  
ENERGY LIMITED

ASX: **GRV**

# Driving the Future of Energy and Infrastructure

*High-value **bitumen** and **helium/hydrogen**  
assets with a rapid development pathway*

Resource Rising Stars Gather Round, April 04, 2024 | ADELAIDE | Mark Turner, CEO

# Important Information

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## FORWARD-LOOKING STATEMENTS

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expressions.

The forward-looking statements in this presentation are based on current expectations, estimates, forecasts and projections about Greenvale Energy and the industry in which they operate. However, please note, they do relate to future matters and thus are subject to various inherent risks and uncertainties. Actual events or results may differ materially from the events or results expressed or implied by any forward-looking statements.

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You are cautioned place no undue reliance on any forward-looking statement. The forward-looking statements in this presentation reflect views held only as at the date of this presentation.

## COMPETENT PERSON STATEMENT

The information in this presentation that relates to the Alpha Mineral Resource Estimate is based on information compiled by Mr. Carl D'Silva, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (Member number 333432). Mr. D'Silva is a full-time employee of SRK Consulting (Australasia) Pty Ltd, a group engaged by the Company in a consulting capacity.

Mr D'Silva has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr D'Silva consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Mineral Resource Estimate dated 9 March 2022 as announced to the ASX on that date and which is available at [www.greenvaleenergy.com.au](http://www.greenvaleenergy.com.au). The Company confirms that in relation to the Alpha Torbanite Project Mineral Resource Estimate, all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 9 March 2022.

The information in this presentation that relates to liquefaction testing is based on information compiled by David Cavanagh, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy AusIMM Member number 112318. David Cavanagh is a full-time employee of Core Resources.

David Cavanagh has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. David Cavanagh consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# GRV: Corporate Summary

## CAPITAL STRUCTURE

**440M**

Shares  
on issue

**38M**

Performance Rights  
on issue

**\$33.46M**

Market Capitalisation  
(26 Mar 2024)

**\$3.24M**

Cash at Bank  
(31 Dec 2023)

**\$0.076**

Share Price  
(26 Mar 2024)

**\$1.97M**

Liquid Investments  
(31 Dec 2023)<sup>1</sup>

**44%**

Top 20  
Shareholders

**16%**

Directors Shareholding

## BOARD & MANAGEMENT



**Neil Biddle**  
*Non-Executive Chairman*

Geologist with +35 years' experience in exploration and mining. Founding Director of Pilbara Minerals, where he oversaw the acquisition, exploration and development of the world-class Pilgangoora Lithium Project.



**Mark Turner**  
*Executive Director*

Engineer with +25 years' experience in the energy sector and a proven track record of major project delivery in oil & gas, water, power, renewables, and nuclear projects.



**Elias Khouri**  
*Non-Executive Director*

Extensive experience in equity markets, with expertise in corporate finance, advisory, capital raisings, joint venture and farm-in negotiations.



**Vince Fayad**  
*Co-Company Secretary*

+35 years' experience in corporate finance, international M&A, accounting and other advisory related services, with strong public company experience.



**Kurt Laney**  
*Chief Financial Officer & Co-Company Secretary*

Experienced Chartered Accountant specialising in the provision of accounting, taxation, and corporate secretarial services.

1. Liquid investments include GRV's shareholding in Astute Metals NL (ASX:ASE), with the following shares subject to escrow:

(a) 23.00 million shares which are to be released from escrow on 28 November 2024.

# Greenvale Energy – Our Value Proposition

HIGH-QUALITY ASSETS WITH A CLEAR DEVELOPMENT PATHWAY



**ALPHA  
TORBANITE  
PROJECT**

HIGH-GRADE  
BITUMINOUS  
PRODUCTS



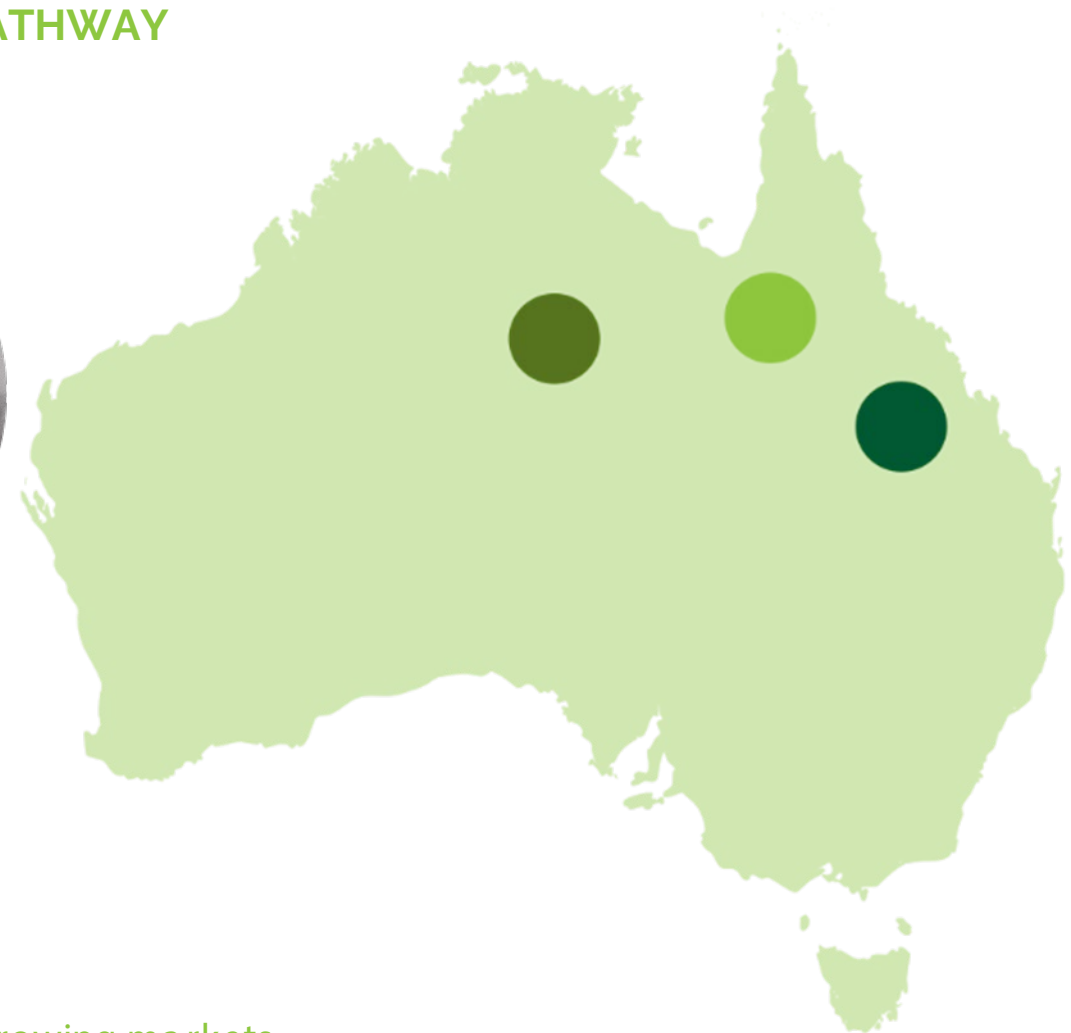
**HIGH-GRADE  
HELIUM &  
HYDROGEN  
PROJECT**

CRITICAL COMMODITIES  
& GOLD HYDROGEN



**QLD  
GEOTHERMAL  
PROJECT**

SUSTAINABLE  
24/7 ENERGY



Projects capable of delivering high-value products into strongly growing markets...

# Alpha Torbanite Project

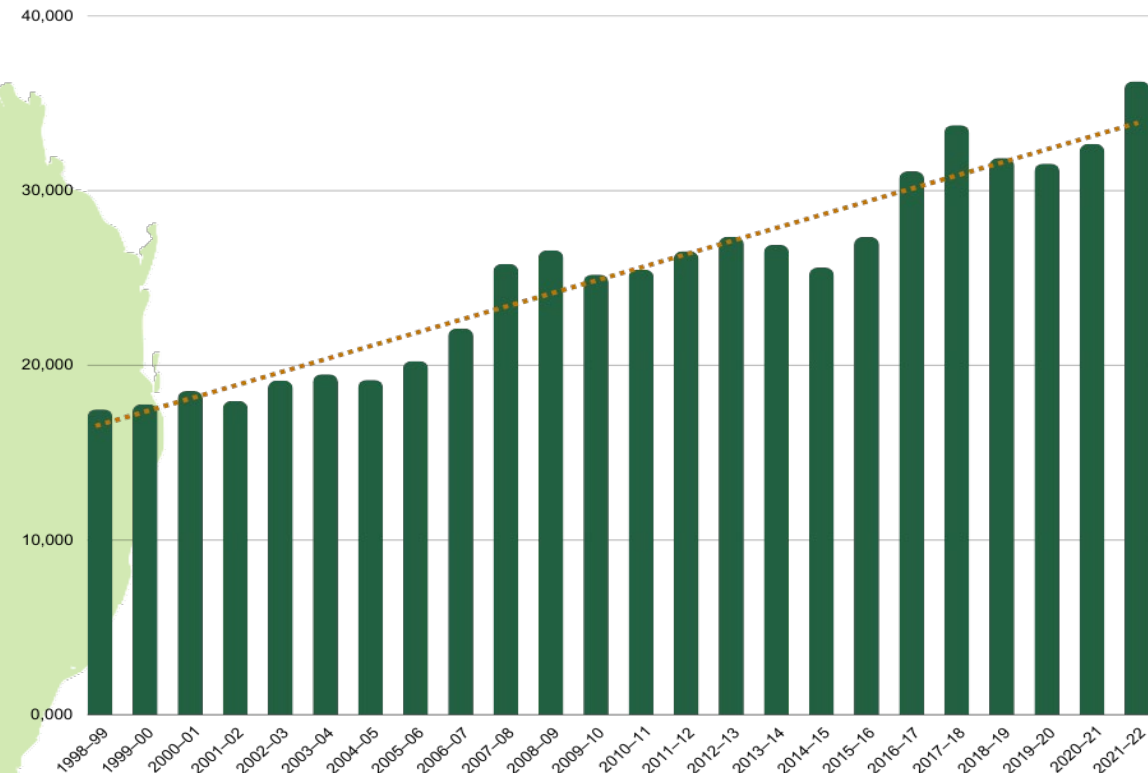
UNIQUE, HIGH-VALUE PROJECT GEARED TO AUSTRALIA'S BURGEONING INFRASTRUCTURE NEEDS

Rare, high-value torbanite deposit located in central Queensland, 500km west of Rockhampton



- One of only two known torbanite deposits in Australia
- Potential to become a key domestic source of bitumen (almost all of Australia's supply is imported)
- Development strategy based on the use of renewable power (geothermal) offset to deliver carbon neutral bitumen
- Opportunity to replace the current use of imported heavy crude oils in the Australian bitumen market

Road-related expenditure by all government  
(constant 2021–22 prices, adjusted by CPI)  
AU\$ million

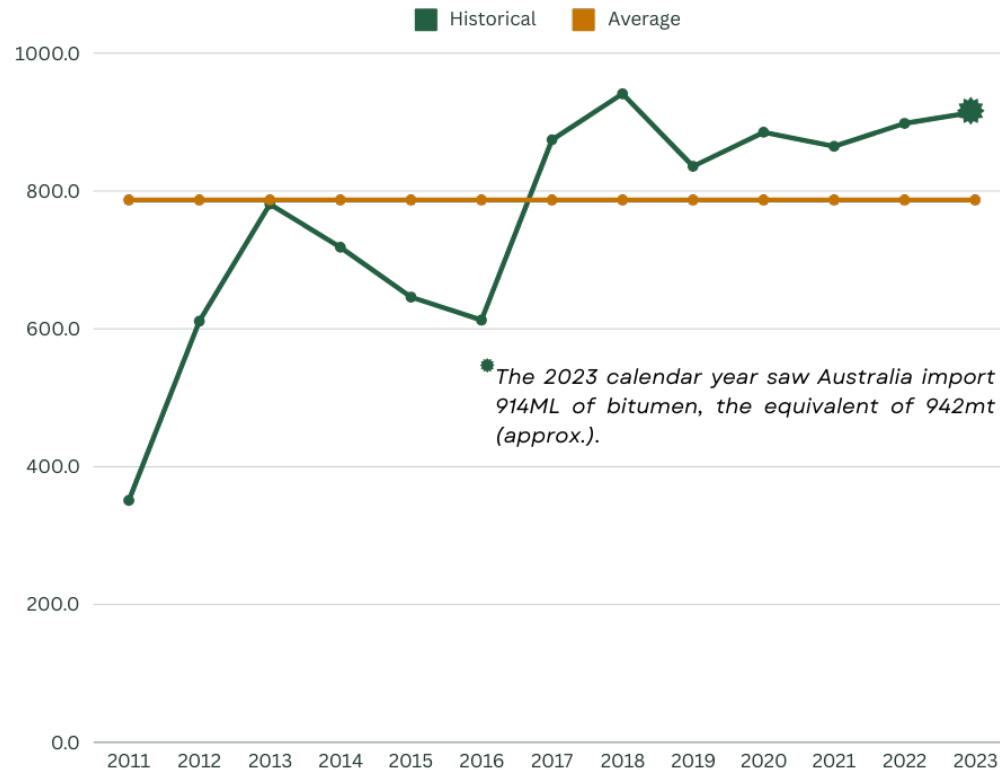


Source: Australian Infrastructure and Transport Statistics Yearbook 2023

# An Exciting, High-Value Growth Market

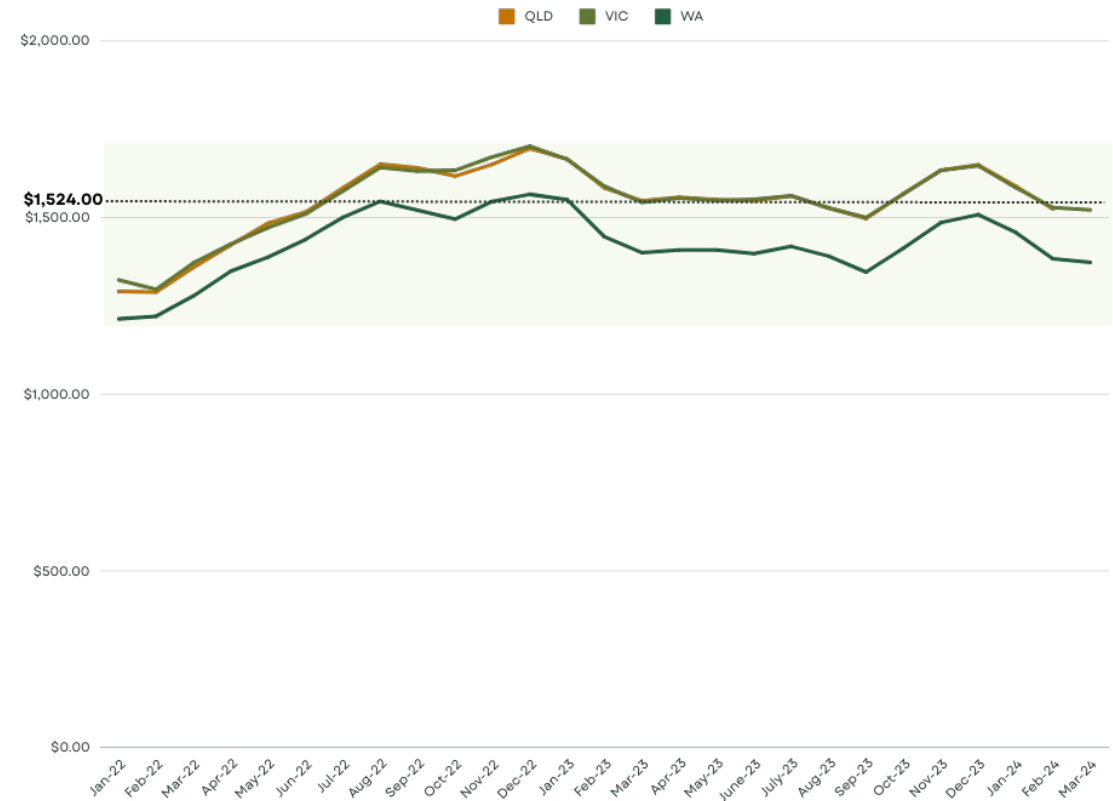
## BITUMEN IMPORTATION FEEDS CRITICAL INFRASTRUCTURE, WITH A HEAVY RELIANCE ON CHINA

Annual Australian Bitumen Imports by Volume (ML)  
as at December 2023



Source: Department of Climate Change, Energy, the Environment and Water, Australian Petroleum Statistics DEC 2023

C170 Bitumen Price Index (A\$/tn)



The bitumen index is the straight average of the major bitumen suppliers' Monthly Gate List Prices (Published List Selling Price) for C170 grade bitumen. Source: vicroads.vic.gov.au; mainroads.wa.gov.au; tmr.qld.gov.au

# Alpha: High-Grade, High-Value

## ALPHA ROAD TO DEVELOPMENT

Analysis nearing completion for the maiden PFS. Current focus on mine planning, processing, and product marketing. Considerable advancements in initial process plant design based on results from liquefaction test programs 1-4.

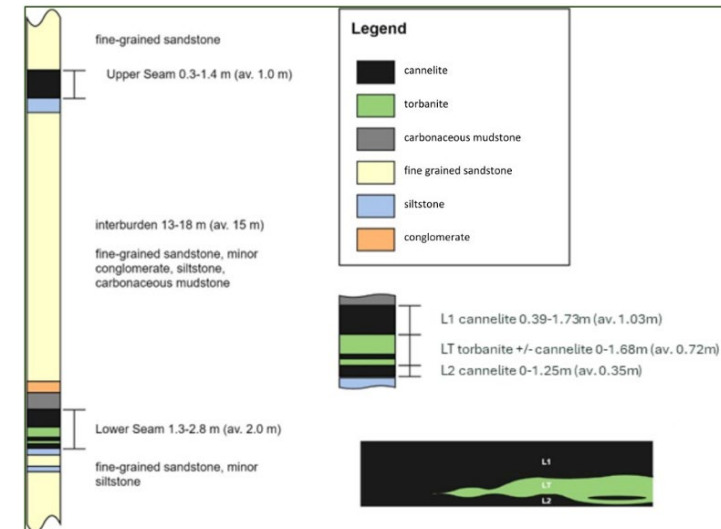
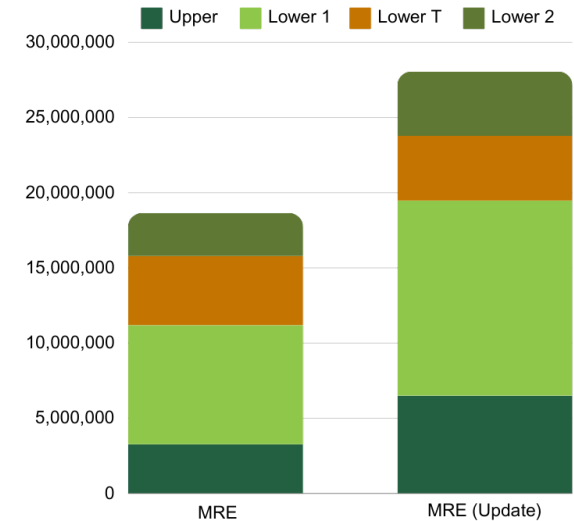
### Key Highlights

- 1. Stage 1 Production Target:** 100,000 tonnes of bitumen and blended products p.a. and stage 2 will double the production to 200,000 tonnes p.a.
- 2. Mine Life:** Estimated 20 years, based on preliminary assessments.
- 3. Operational Efficiencies:** Simplified ore extraction, ore blending capabilities, low moisture content requiring no additional drying, and cost-effective construction and operation.
- 4. Environmental Sustainability:** Early separation of asphaltenes, energy recovery, recycling of oils, and treatment processes to minimise environmental impact.

### Project Milestones

- 1. Substantial Resource Increase:** 51% increase to 28Mt of combined cannelite and torbanite.
- 2. Completion of Supercritical Water Testing:** valuable insights gained for Program 4
- 3. Test Program Expansion:** Supplementary sampling and testing based on additional HQ core holes drilled in October 2023.

MDL 330 Inferred Mineral Resource estimate by seam and ply unit (Air-Dried Tonnes)

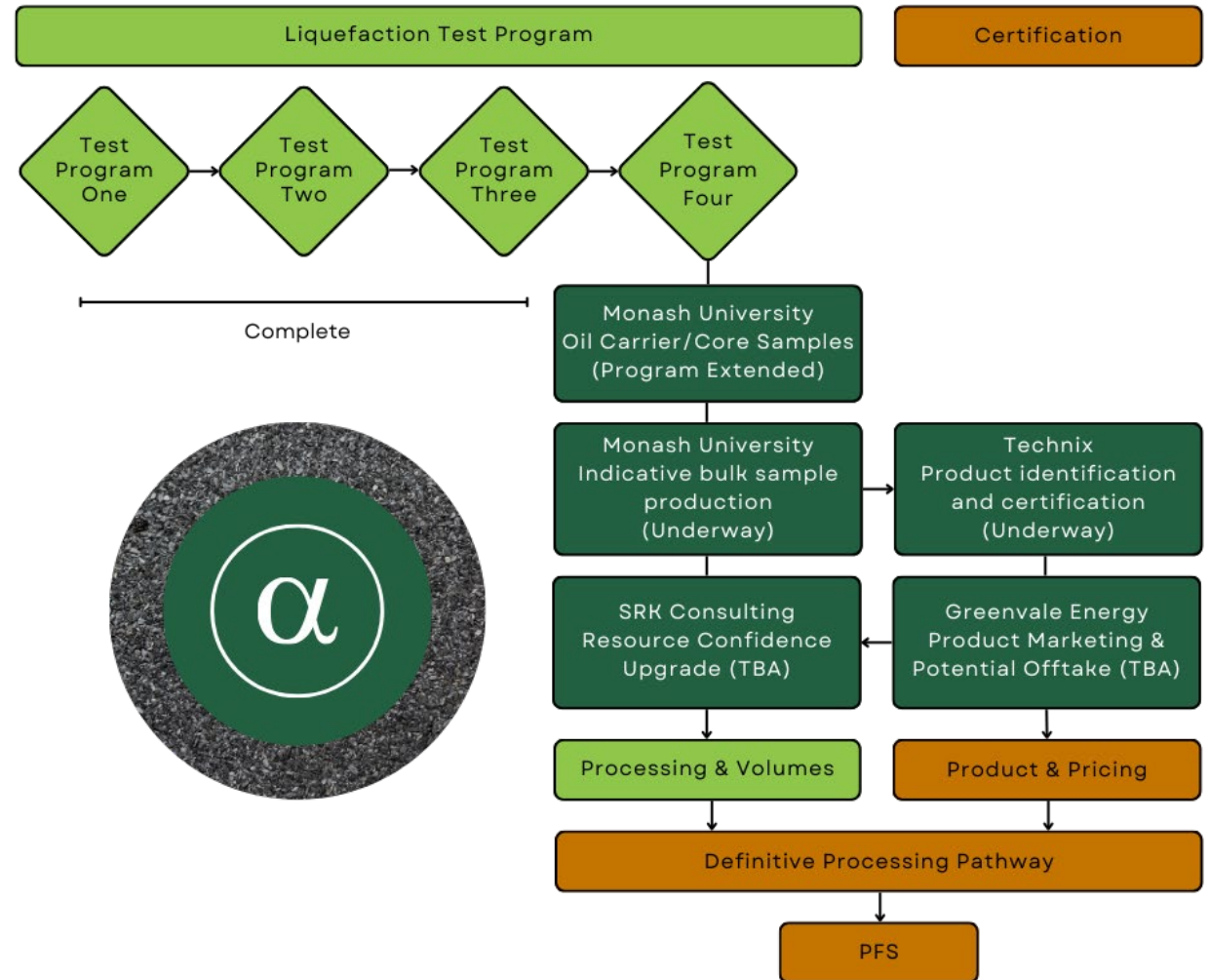




# Unlocking Alpha

## FINAL STEPS TOWARDS PFS DELIVERY

- Extended Liquefaction Test Program Four, Monash University completed
- Final production of indicative bulk sample by Monash University underway
- Product Identification and Certification by Technix
- Product marketing and offtake discussions to commence with Greenvale Energy and prospective end users
- Resource confidence upgrade to be completed by SRK Consulting on the back of final volumetrics and product certification
- Final delivery of preliminary feasibility study (PFS) slated for Q2 2024



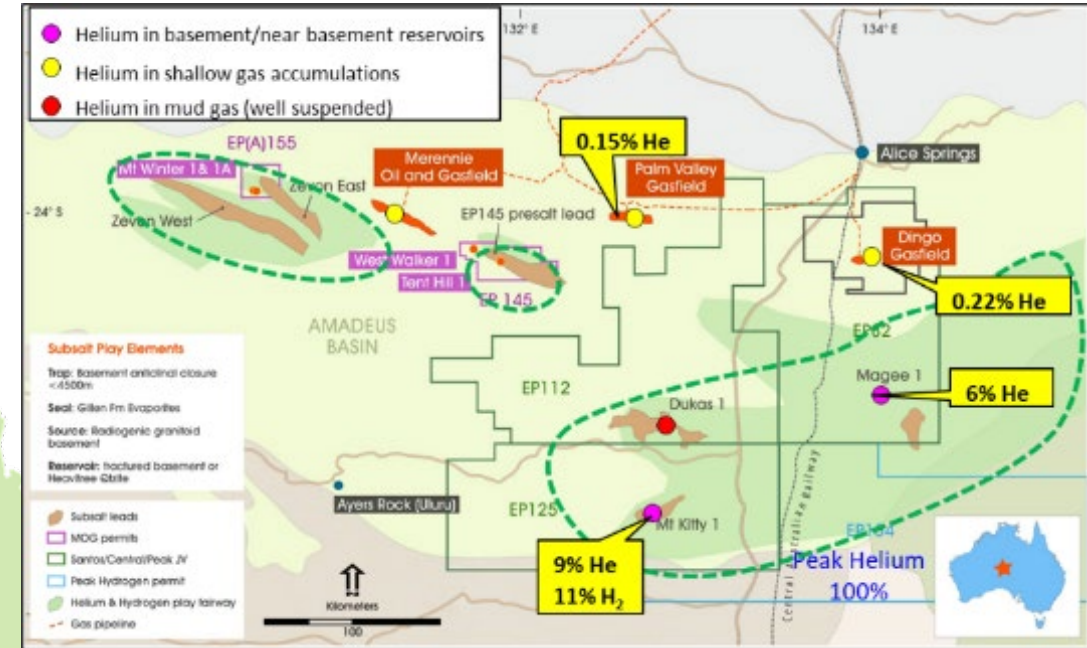
# West Walker Project

## HIGH-GRADE HELIUM AND HYDROGEN OPPORTUNITY



Farm-in agreement with Mosman Oil & Gas to acquire a 75% interest in EP145 in the Amadeus Basin

- Amadeus Basin has some of the highest concentrations of helium globally, as well as confirmed hydrogen accumulations
- EP145 sits within recognised play fairways for helium and hydrogen and contains proven hydrocarbon discoveries
- Lies on-trend with the producing Merenie Oil & Gas Field
- Successful helium wells located along the margins of the Amadeus Basin at Mt Kitty-1 and Magee-1
- Existing pipeline infrastructure to Australian East Coast provides opportunity for early commercialisation



### Prospective Resource “Best Estimate” <sup>1</sup>

**440**

billion cubic feet of total gas

**26.4**

billion cubic feet of helium

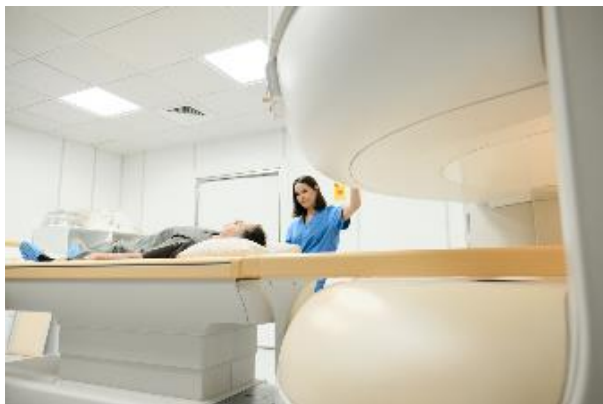
**26.4**

billion cubic feet of hydrogen

1. Applying the SPE PRMS standard

# Helium, Hydrogen, Natural Gas

## HIGH-VALUE COMMODITIES WITH OUTSTANDING MARKET FUNDAMENTALS



### Helium

- Lowest cooling temperature of any element – invaluable for medical, manufacturing and scientific applications
- Annual demand expected to rise from 6.0Bcf to 8.5 -10 Bcf by 2030, fueled by rising demand in cryogenics and welding applications
- Periods of severe supply shortages since 2006, including rationing by suppliers
- Price for large quantities at the source increased by 11% p.a. from 2006-2022 to ~US\$450/mcf in late 2022<sup>1</sup>

<sup>1</sup> Kornbluth, 2023 <sup>2</sup> AER



### Natural Hydrogen (Gold Hydrogen)

- Alternative, clean, carbon-free fuel
- Requires no additional energy input from either fossil fuels or renewables
- Natural Hydrogen is continuously created, constantly replenished
- GRV will be ideally positioned to take advantage of future hydrogen markets at its West Walker Project



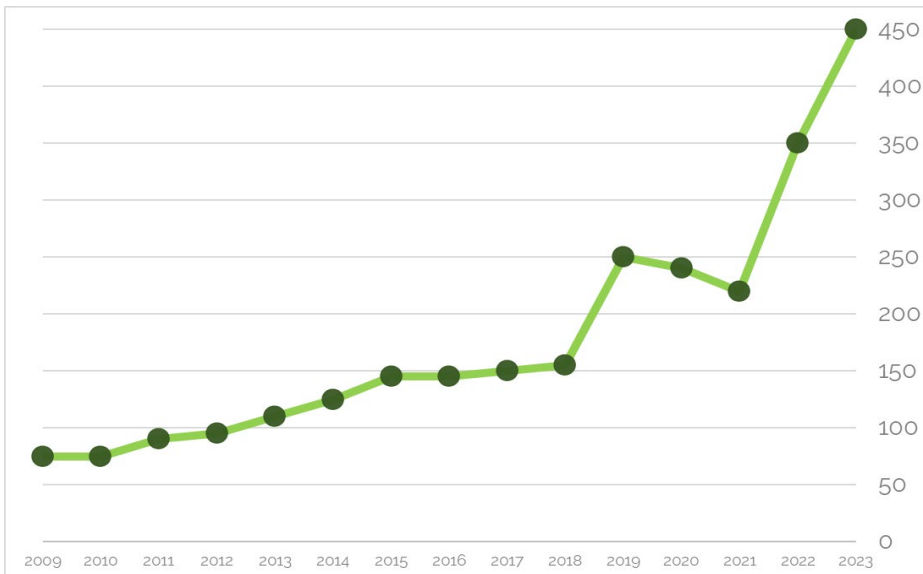
### Natural Gas

- As Australia transforms to meet Net Zero emissions, gas will continue to complement renewable energy to provide reliable and dispatchable electricity
- Australian gas prices in downstream markets averaged around \$14.50/GJ for Q2 2023<sup>2</sup>

# Helium: Surging Price and Fast-Growing Market

A HIGH-VALUE COMMODITY WHICH IS EXPERIENCING EXPONENTIAL PRICE GROWTH

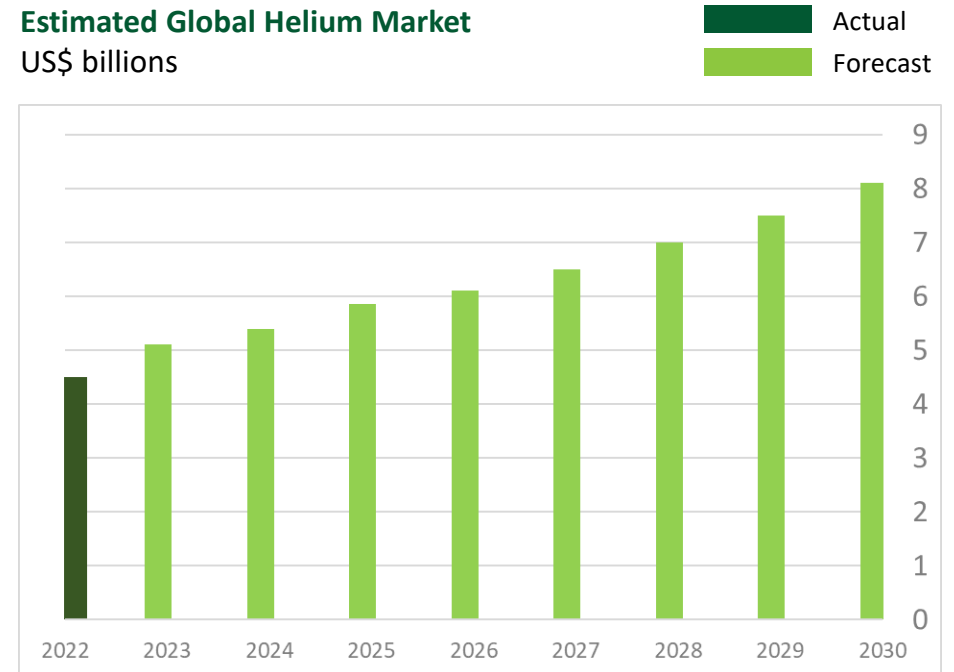
**Historical price of bulk liquid helium**  
US\$/thousand standard cubic feet (Mscf)



Source: Kornbluth Consulting LLC

Fragile supply and surging demand is driving significant upward momentum in the helium price.

**Estimated Global Helium Market**  
US\$ billions



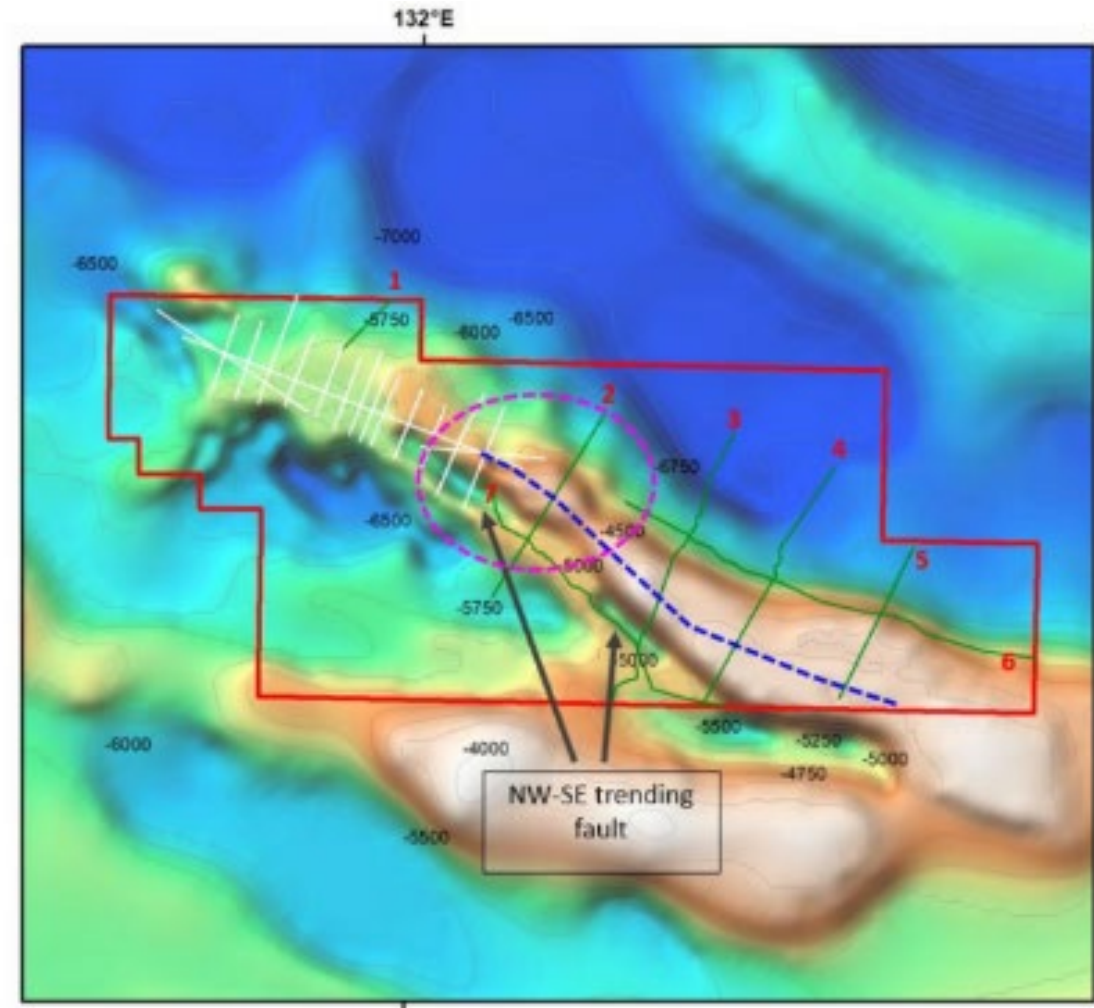
Source: The Business Research Company, Helium Global Market Report 2023. Published January 2023

The global helium market is forecast to grow from US\$5 billion in 2023 to over US\$8 billion by 2030.

# West Walker Project

## NEXT STEPS – RAPID PATHWAY TO UNLOCK VALUE

- Acquisition of 2D seismic data
- Interpretation of seismic results to support planning for an initial drilling program
- Drilling “sweet-spot” identified in EP145 which could test all targets – helium, hydrogen and natural gas



# Geothermal Opportunity

## UNTAPPED RENEWABLE ENERGY OPPORTUNITY

120km east of Mount Isa within the North-West Minerals Province



- One of the most prospective areas for geothermal energy in Queensland, if not Australia.
- Millungera Basin total identified stored thermal energy potential likely to exceed 611,000 petajoules (@ 90% probability)
- Millungera Basin exceeds maximum heat flow averages through all established geothermal fields determined in Australia to date.
- Queensland's North-West Mineral Province presents significant opportunities to provide wholesale power to major new resource projects.
- 2023-24 State Budget committed \$19B over four years to deliver more renewable energy to the Queensland SuperGrid



**IMAGE:** Simplified map of northwest Queensland showing the interpreted subsurface distribution of the Millungera Basin. Also shown are Geoscience Australia and industry seismic lines, as well as key historic drillholes

# Key Investment Takeaways

## MULTIPLE VALUE-CREATION PATHWAYS

- ✓ A unique growth opportunity in **rare, critical, high-value** commodities
- ✓ Alpha Torbanite Project advancing towards **commercialisation**
- ✓ Ideally positioned to become Australia's only end-to-end **domestic source of bitumen** for burgeoning infrastructure demand
- ✓ Exciting new **high-grade helium, natural gas and hydrogen** growth opportunity secured in the Amadeus Basin, close to existing gas infrastructure
- ✓ Demand for helium increasing with supply decreasing – **price expected to continue rising** and will do for the foreseeable future
- ✓ Poised to capitalize on **future hydrogen market opportunities** as Queensland aims to be a hydrogen hub
- ✓ **Geothermal strategy** advancing in Queensland
- ✓ **Experienced team** with exceptional track record of value-creation for shareholders



Projects capable of delivering **high-value products** into **strongly growing markets...**