

HAZER STRATEGY UPDATE PRESENTATION

PERTH, AUSTRALIA; 15 June 2023: Hazer Group Ltd ("Hazer" or the "Company", ASX: HZR) will be hosting its Strategy Update webinar, including a Q&A session, today at 10.30am AEST/ 8.30am AWST.

Attached is the Strategy Update presentation that Hazer will be speaking to at today's webinar.

Register in advance for the webinar at:

https://us02web.zoom.us/webinar/register/WN_R6wZHplCQ-mANCp8rhX-XQ

Details about the webinar and how to submit questions for the live Q&A session will be sent following registration.

This announcement was authorised for release by the Board of the Company.

[ENDS]

ABOUT HAZER GROUP LTD

Hazer Group Limited ("Hazer" or "The Company") is an ASX-listed technology development company undertaking the commercialisation of the Hazer Process, a low-emission hydrogen and graphitic carbon production process. The Hazer Process enables the effective conversion of natural gas and similar methane feedstocks, into hydrogen and high-quality advanced carbon materials, using iron ore as a process catalyst.

Forward-looking Statements

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts but are based on the Company's current expectations about future events and results.

Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward-looking statements are subject to risks, uncertainties, assumptions, and other factors, which could cause actual results to differ materially to futures results expressed, projected, or implied by such forward looking statements.

The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statements" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under the applicable securities laws.

For further information or investor enquiries, please contact:

Email: contact@hazergroup.com.au

Phone: +61 8 9329 3358

For media enquiries, please contact:

WE Communications – Hannah Howlett

Email: HHowlett@we-worldwide.com

Phone: +61 4 5064 8064

Hazer Group Limited - Social Media Policy

Hazer Group Limited is committed to communicating with the investment community through all available channels. Whilst ASX remains the prime channel for market-sensitive news, investors and other interested parties are encouraged to follow Hazer on Twitter (@hazergroupltd), LinkedIn, Facebook, and YouTube.

Subscribe to HAZER NEWS ALERTS - visit our website at www.hazergroup.com.au and subscribe to receive HAZER NEWS ALERTS, our email alert service. HAZER NEWS ALERTS is the fastest way to receive breaking news about @hazergroupltd.



hazergroup.com.au
ASX:HZR

Hazer Group Ltd

Strategy Update
Thursday, 15 June 2023





Disclaimer

Important information This presentation has been prepared by Hazer Group Limited (“Hazer” or “the Company”)

Summary Information This document contains a summary of information about Hazer Group Limited and its activities that is current as at the date of this document unless otherwise stated. The information in this document is general in nature and does not contain all the information which a prospective investor may require in evaluating a possible investment in Hazer or that would be required in a prospectus or a product disclosure statement prepared in accordance with the Corporations Act 2001 or the securities laws of any other jurisdiction. The information in this document should be read in conjunction with the Company’s other periodic and continuous disclosure announcements lodged with the ASX.

No Liability The information contained in this document has been prepared in good faith by the Company however no guarantee, representation or warranty expressed or implied is or will be made by any person (including the Company and its affiliates and their directors, officers, employees, associates, advisers and agents) as to the accuracy, reliability, correctness, completeness or adequacy of any statements, estimates, options, conclusions or other information contained in this document. No person other than the Company is responsible for the preparation of this document. To the maximum extent permitted by law, the Company and its affiliates and their directors, officers, employees, associates, advisers and agents each expressly disclaims any and all liability, including, without limitation, any liability arising out of fault or negligence, for any loss arising from the use of or reliance on information contained in this document including representations or warranties or in relation to the accuracy or completeness of the information, statements, opinions, forecasts, reports or other matters, express or implied, contained in, arising out of or derived from, or for omissions from, this document including, without limitation, any financial information, any estimates, forecasts, or projections and any other financial information derived therefrom. Statements in this document are made only as of the date of this document unless otherwise stated and the information in this document remains subject to change without notice. No responsibility or liability is assumed by the Company or any of its affiliates (or their directors, officers, employees, associates, advisers and agents) for updating any information in this document or to inform any recipient of any new or more accurate information or any errors or mis descriptions of which the Company and any of its affiliates or advisers may become aware.

Financial data All amounts are in Australian Dollars (AUD) unless otherwise indicated. A number of figures, amounts, percentages, estimates, calculations of values and fractions in this presentation are subject to the effect of rounding. Accordingly, the actual calculation of these figures may differ from the figures set out in this presentation. Readers should be aware that a number of terms used in this presentation including ROI, NPV, net cash generation, operational cash expenditure, IRR and actual and budgeted commitments are categorised as non-IFRS information prepared in accordance with ASIC Regulatory Guidance 230 (Disclosing non-IFRS financial information), nor does it purport to be. This information has not been audited and is based on management estimates and not on financial statements prepared in accordance with applicable statutory requirements. Accordingly, readers should treat this information with appropriate caution. This information is for illustrative purposes only. This non-IFRS financial measures do not have a standardised meaning prescribed by Australian International Financial Reporting Standards (AIFRS) or the Australian Accounting Standards (AAS) and, therefore, may not be comparable to similarly titled measures presented by other companies, nor should they be construed as an alternative to other financial measures determined in accordance with AIFRS. Moreover, the disclosure of such non-IFRS financial measures in the manner included in this Presentation and the announcement to which it is attached may not be permissible in a registration statement under other securities acts. Although the Company believes that these non-IFRS / non-GAAP financial measures assist in providing additional meaningful information to readers in measuring the financial performance and condition of the Company’s business and underlying drivers, readers are cautioned not to place undue reliance on any non-IFRS / non-GAAP financial measures included in this Presentation and the announcement to which it is attached.

Forward Looking Statements Statements contained in this document or made during or in connection with this presentation, including but not limited to those regarding the possible or assumed future production, costs, projected timeframes, performance, dividends, returns, revenue, exchange rates, potential growth of Hazer, industry growth, commodity or price forecasts, or other projections and any estimated company earnings are or may contain or comprise forward looking statements. Forward looking statements can generally be identified by the use of words such as ‘project’, ‘foresee’, ‘plan’, ‘expect’, ‘aim’, ‘anticipate’, ‘believe’, ‘estimate’, ‘may’, ‘should’, or similar expressions. Forward looking statements including all statements in this presentation regarding the outcomes of preliminary and definitive feasibility studies, projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, these statements relate to future events and expectations and as such involve known and unknown risks and significant uncertainties, many of which are outside the control of the Company. Actual values, achievements, results, performance, actions and developments of the Company may differ materially from those projected, expressed or implied by the forward-looking statements in this document. Such forward looking statements speak only as of the date of this document. There can be no assurance that actual outcomes will not differ materially from these statements. To the maximum extent permitted by law, the Company and any of its affiliates and their directors, officers, employees, agents, associates and advisers disclaim any obligations or undertaking to release any updates or revisions to the information in this document to reflect any change in expectations or assumptions do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward looking statement or any event or results expressed or implied in any forward looking statement and disclaim all responsibility and liability for these forward looking statements (including without limitation, liability for negligence). Nothing in this document will under any circumstances create an implication that there has been no change in the affairs of the Company since the date of this document. Accordingly, you should not place undue reliance on any forward-looking statement.

Not Financial Product Advice This document does not constitute financial product advice or take into account your investment objectives, taxation situation, financial situation or needs. This document consists purely of factual information and does not involve or imply a recommendation of a statement of opinion in respect of whether to buy, sell or hold a financial product. An investment in the Company is considered to be speculative in nature and is subject to known and unknown risks, some of which are beyond the control of the Company. Before making any investment decision in connection with any acquisition of securities, investors should consult their own legal, tax and/or financial advisers in relation to the information in, and action taken on the basis of this document.

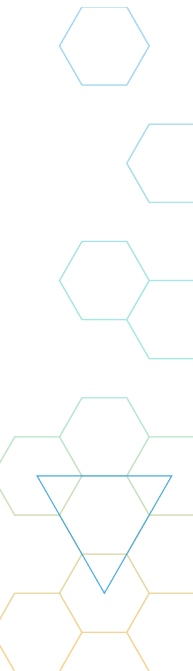
Acceptance By attending a presentation or briefing, or accepting, accessing or reviewing this document you acknowledge, accept and agree to the matters set out above.

Authorisation This document has been authorised for release by the Board of the Company.



Agenda

Topic	Presenter
Introductions & Corporate Overview	Glenn Corrie
Hazer Investment Highlights	Glenn Corrie
CDP Update	Mark Edwards
Project Pipeline	Luc Kox
Growth & Monetisation	Neil Brodie
Wrap-Up	Glenn Corrie
Q&A	All












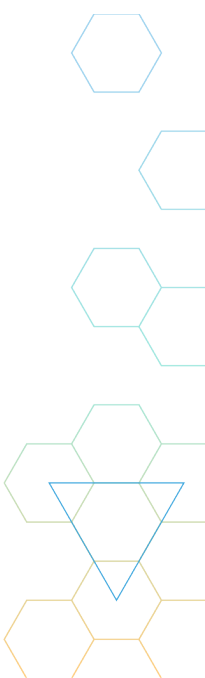
Corporate Overview





Experienced management team & board

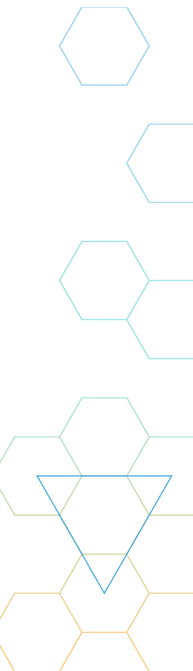
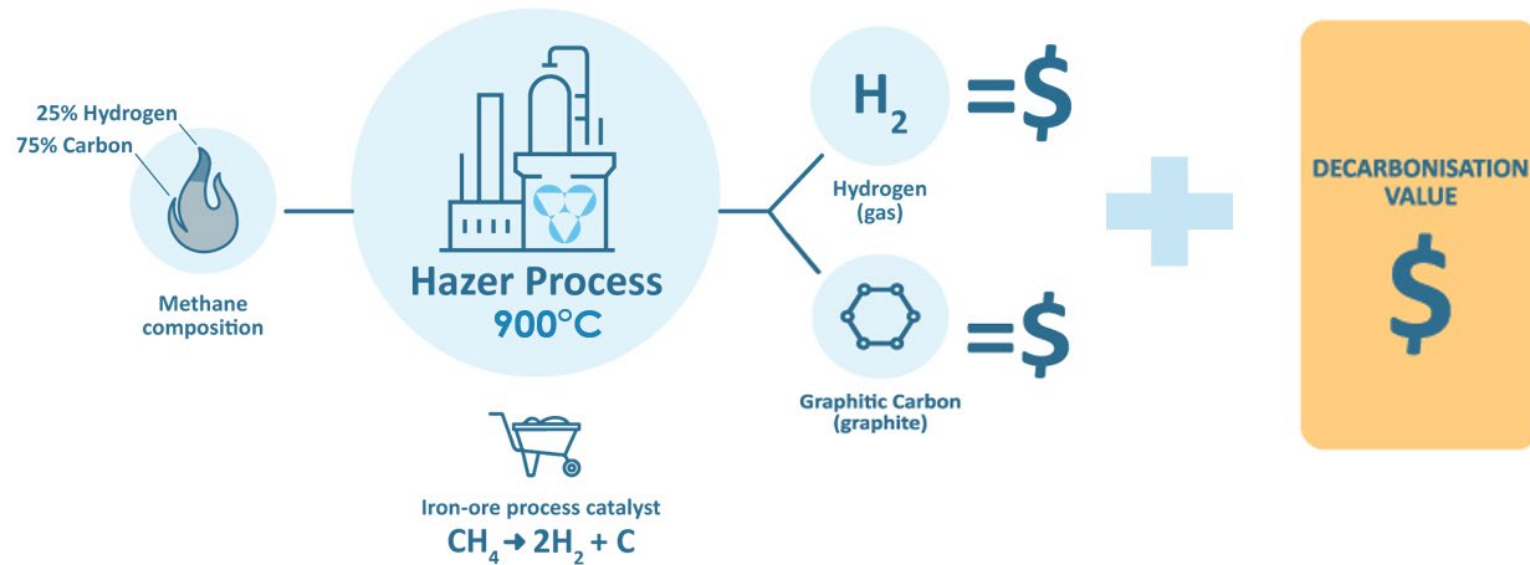
Management Team					Board			
								
Glenn Corrie	Neil Brodie	Mark Edwards	Luc Kox	Belinda Wilson	Tim Goldsmith	Danielle Lee	Dr Jack Hamilton	Andrew Hinkly
MD & CEO	Interim CFO	COO	CCO	CPO	Chairman	Non-Executive Director	Non-Executive Director	Non-Executive Director
25 years energy, PE and investment experience. Previously CEO of ASX listed Sino Gas & Energy and PE backed NEO Energy. Senior executive positions with Temasek, Ophir Energy and Shell.	Senior finance executive with over 25 years of financial, commercial and corporate governance expertise predominantly with Chevron & in energy transition/renewables.	Mechanical engineer with 30 years experience in industry. Former AUA regional director for light metals division at Hatch.	20 years experience in the water, oil & gas and renewable energy sectors.	25 years shared services experience in a various sectors, working with executives to develop business strategy and positive corporate culture.	Over 30 years corporate and commercial experience across international mining and industrial business operations. 20 years as partner with global professional services group PWC and 5 years as CEO Rincon Lithium.	Corporate lawyer with more than 25 years experience having worked in private law firms, in-house counsel and the ASX.	Career spanning over 30 years in the energy sector, holding senior positions with Shell and Woodside	Founding managing partner of AP Ventures. 25 years working in the automotive and mining industries



Hazer's competitive technology advantage

Innovative low emission, low-cost methane pyrolysis technology producing clean hydrogen and graphite

- Hazer Group Limited is a technology development company undertaking the commercialisation of the Hazer Process
- The Hazer Process enables low temperature conversion of natural gas and similar methane feedstocks, into hydrogen and high-quality graphite, using iron ore as a process catalyst



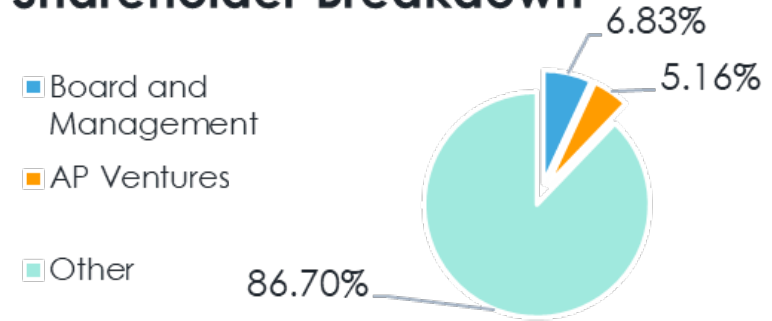


Corporate overview

HZR:ASX Share Price History



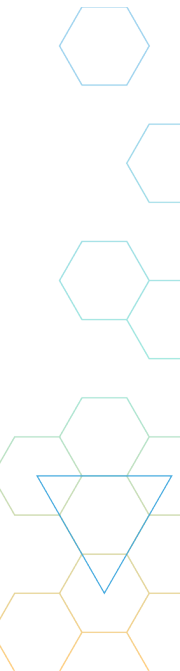
Shareholder Breakdown



Capital Structure as at 13 June 23

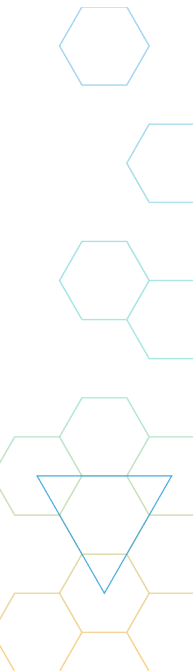
Share price	\$0.70
Market capitalisation (AUD)	\$119 million
Shares on issue	170,443,743
Cash as at 31 March 23 (adjusted)*	\$17.8 million
Debt as at 31 March 23	\$4.7 million
Enterprise value	~\$106 million
Capital /grant money invested to date	~\$70 million

*Adjusted for \$9.45 million FY22 R&D tax refund received on 13 April consistent with Appendix 4C advice provided.



The Hazer competitive advantage

Innovative low emission methane pyrolysis technology designed to produce clean hydrogen and graphitic carbon





Executing scale-up strategy in hard-to-abate sectors



HazerGroup™



Our Vision

Provide a unique climate technology to transform industry and contribute to a sustainable future for the next generation

* Refers to thousands ('000) of tonne per annum



Aligning with UN Sustainable Development Goals



Producing clean hydrogen from methane reducing emissions and accelerating the energy transition



Innovative climate technology decarbonising hard-to-abate sectors



Partnering with global corporations and governments in support of climate action





Key Activities

	CY2023		CY2024
	H1	H2	H1
Commercial Demonstration Plant (100 tpa)	Procurement, Fabrication, Engineering & Installation ● today		Ready for Start-up Targeted Production & Testing Program
Suncor & Fortis 2,500 tpa Burrard Plant	FEED Studies in Canada and Targeted FID		Detailed Engineering
New Potential Projects in Target Markets	 Japan France		Identify New Commercial Projects Japan & France Project Development Plans
Mitsui & Graphite Market Development	Developing Market for Hazer Graphite		Offtake Agreement
Corporate Updates	ARENA Grants	R&D Rebates	Corporate Access Events ARENA Grants




Hazer Investment Highlights





Investment highlights

Low cost, low emissions H₂ production technology company positioned to play a leading role in global decarbonisation

1 

Low-cost, Low-emissions, Proprietary Technology

2 

Compelling Economics & Returns

3 

Global Tier-1 Partnerships Across Strategic Markets

4 

Advanced Technology Readiness & Proven Scale-up

5 

Clear Commercial Pathway & Capex-lite

6 

Graphite Production Diversifies Earnings

7 

Rapidly Growing H₂ Demand

8 

Government & Policy Support





1 Low cost & low emissions hydrogen

Hazer well positioned as a low-cost, low-emissions hydrogen technology

Existing Technologies

Steam Methane Reforming (SMR)

Significant CO₂ emissions

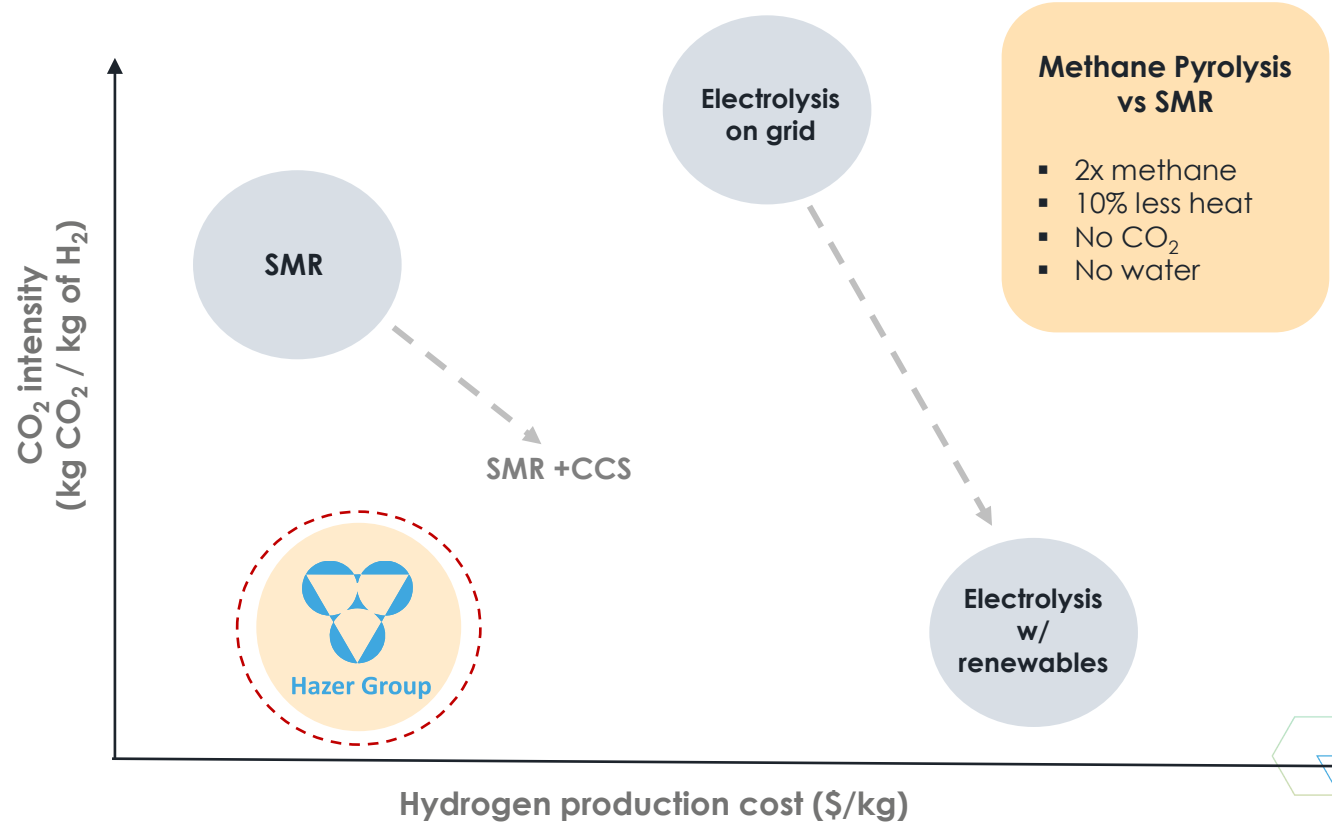
- Most widely used process for H₂ generation (~95%)
- High CO₂ emissions
- Requires CCS* to address emissions



Electrolysis

Energy intensive process

- 7x more energy intensive than SMR
- Only low emission if 100% renewable energy
- Requires significant water and renewable energy



*CCS = Carbon Capture & Storage. Requires geological formations for CO₂ sequestration

1

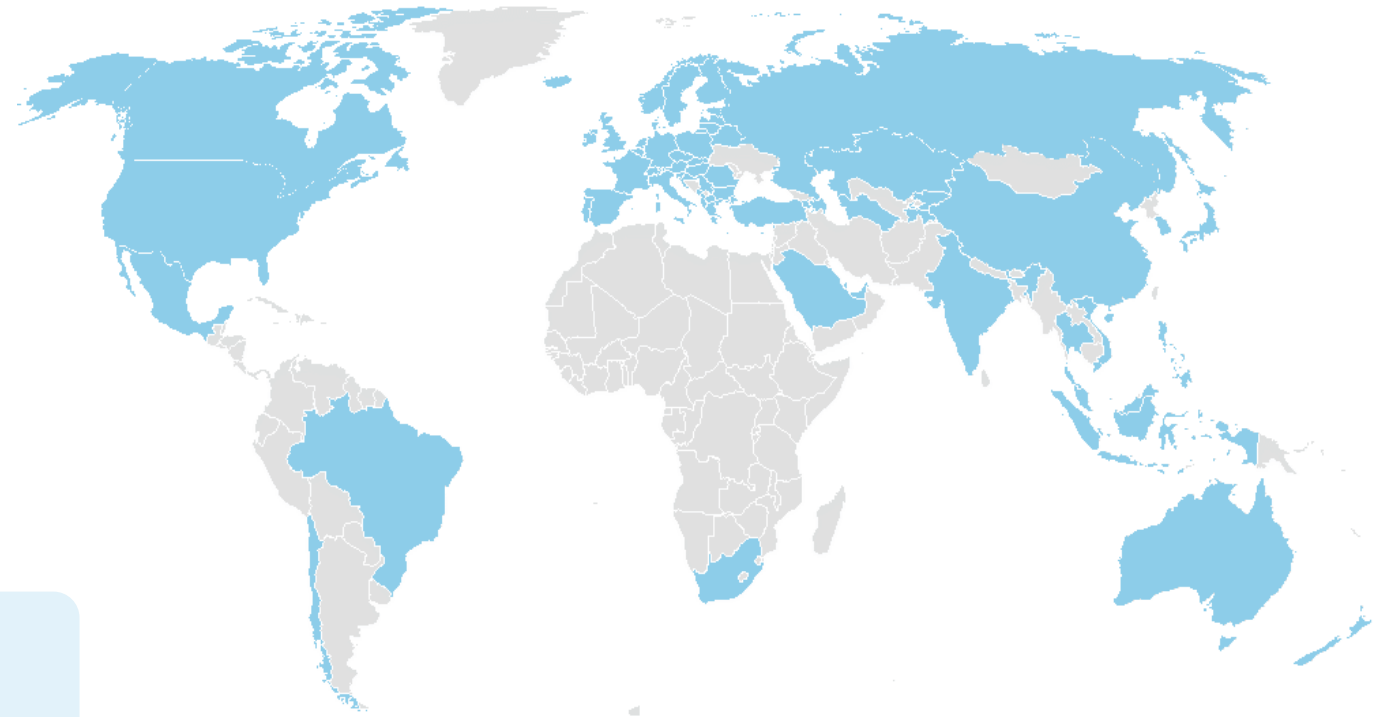
Strong IP protection & strategy

71% of the Hazer IP portfolio is now accepted or granted in line with expectations

Four IP families across 30 jurisdictions:

1. Hydrogen production using iron-ore catalyst
2. Hazer graphite morphology and purification
3. Methane pyrolysis process improvements
4. Trademarks

Recent patent allowed in the US for controlling graphite morphology



*Key Jurisdictions: Australia, USA, Europe, Canada, China, Japan and Korea



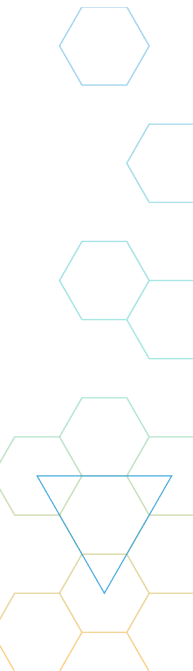
1 “Plug-in” technology using existing infrastructure

End-use deployment and application of the Hazer Technology eliminates H₂ transport risk and reduces cost



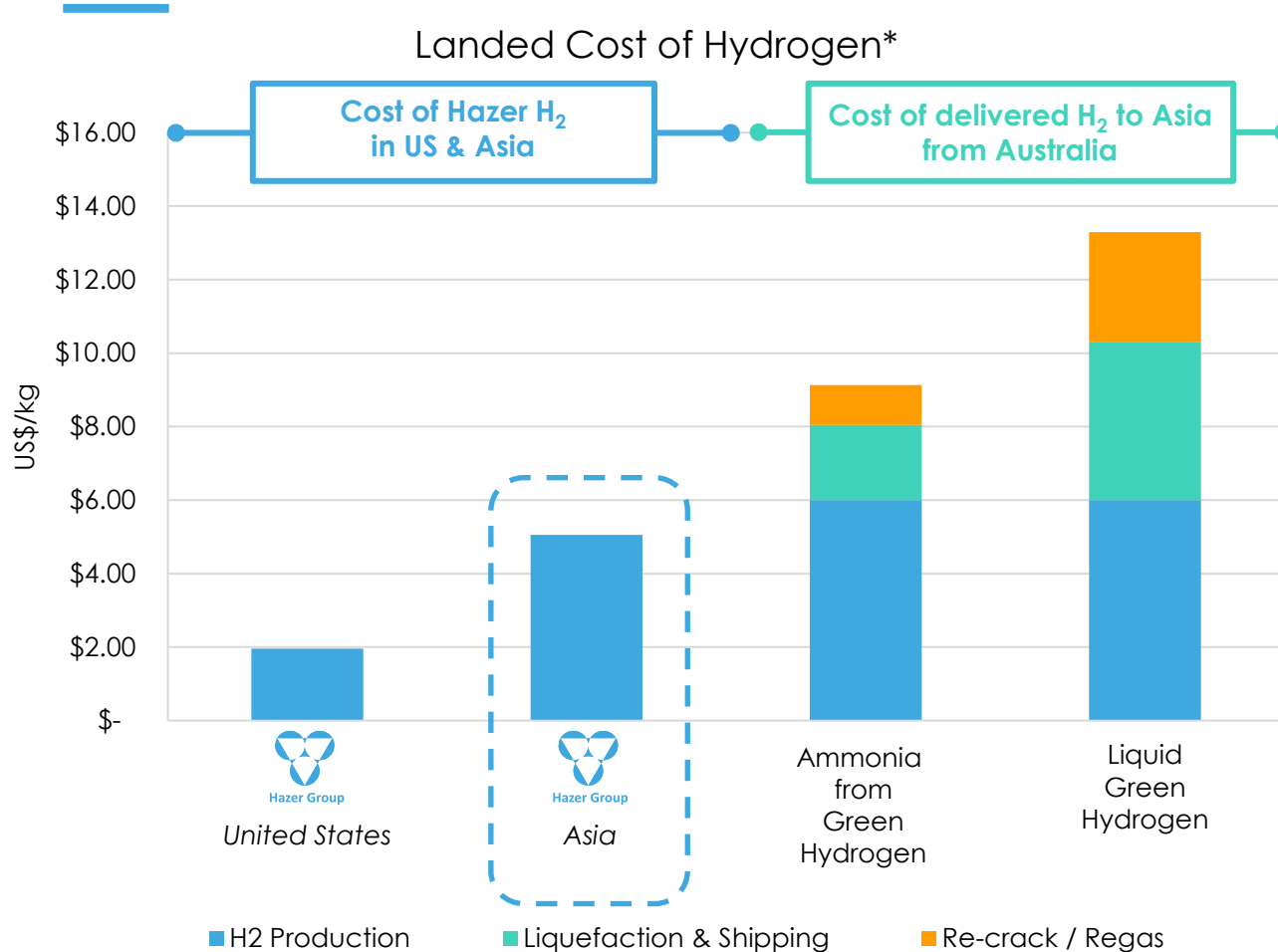
Conceptual design of Hazer facility co-located with 3rd party refinery
(Source: stock image not Hazer infrastructure)

- Eliminates requirement for hydrogen transportation cost and risk
- Co-located with end-user infrastructure – such as LNG facilities, refineries etc.
- Ability for shared services and lower operating cost model



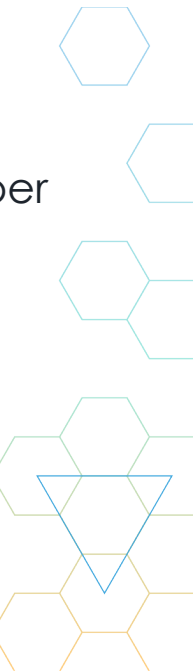


2 Delivered Cost of H₂ – Hazer Competitive Advantage



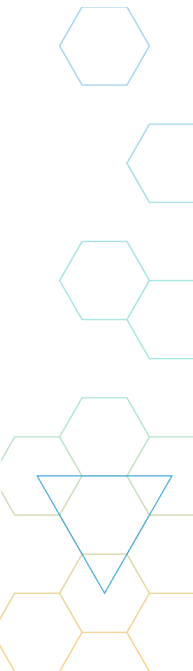
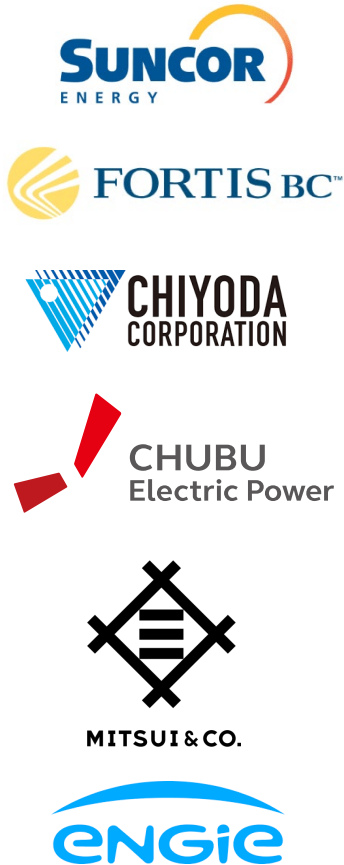
- Hazer co-located at existing infrastructure eliminating requirement for shipping
- Liquefied H₂ technology (-253 °C) not available today and economic viability challenged
- Ammonia is transportable however reconversion technology immature and potentially expensive
- Hazer in North America significantly cheaper with low-cost gas and power

* Company aspirations should not be read as forward-looking statements. Hazer does not yet have reasonable grounds to believe the aspirational portfolio will be achieved. See disclaimer - slide 2 and assumptions & notes – slide 43.



3 Global partners & projects

Tier-1 partners developing commercial projects in North America, Europe and Asia-Pacific





4 Advanced technology readiness

Rapid development since company founding and advancing Tech Readiness Level (TRL)

(< 60kg/hr* continuous**)

(~<2 kg/hr* semi-continuous)

(~1Kg* batch)

(<100g* batch)

(<1g* batch)



2007–2013

2016–present

2017

2017–2021

2022-2023

2025+

- Bench scale testing**
- University of Western Australia
 - Concept evaluation

- Scaled up bench test**
- University of Sydney
 - Catalyst kinetics and process research

- Bench scale fluid bed**
- University of Sydney
 - Conceptual testing of fluidised bed concept

- Pilot Plant**
- Sydney and Perth
 - Fluidised bed with optimized conditions and catalyst injection

- Commercial Demonstration Plant (CDP)**
- Perth, Australia
 - End-to-end continuous plant with biogas feed
 - Start up planned 2023

- Key Projects**
- Burrard, Canada
 - Chubu, Japan
 - Montoir-de-Bretagne, France

Strategic Focus

*Combined product scale **CDP planned start up 2023



4 Targeted R&D program to accelerate commercialisation

Strengthening IP and expediting technology development

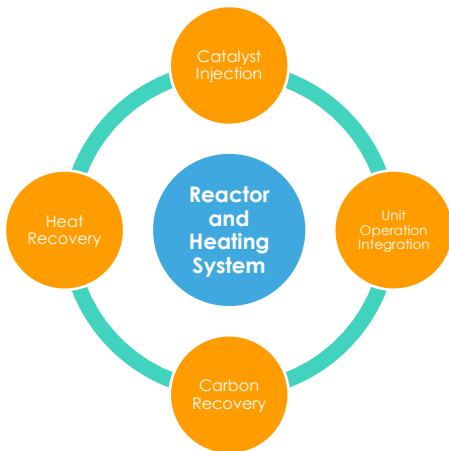
Process Development

Objective:

Validate commercial performance & progress reactor scale-up

Focus Areas:

- Commercial Demonstration
- Burrard 2,500 tpa
- Next generation reactor design



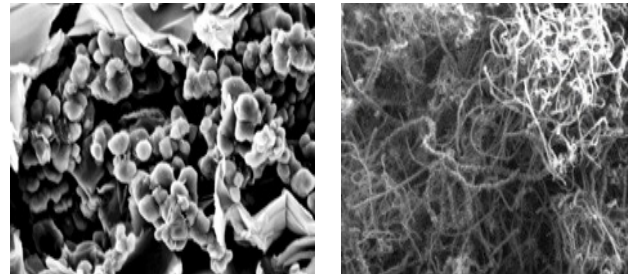
Graphite Product Development

Objective:

Identify suitable markets and qualify Hazer Graphite for commercial offtake

Focus Areas:

- External testing with third parties
- Market development collaboration



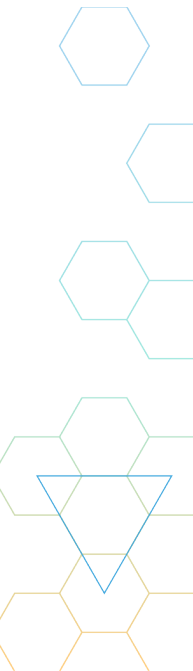
Catalyst Development

Objective:

Extend catalyst fundamental knowledge and identify commercial supply

Focus Areas:

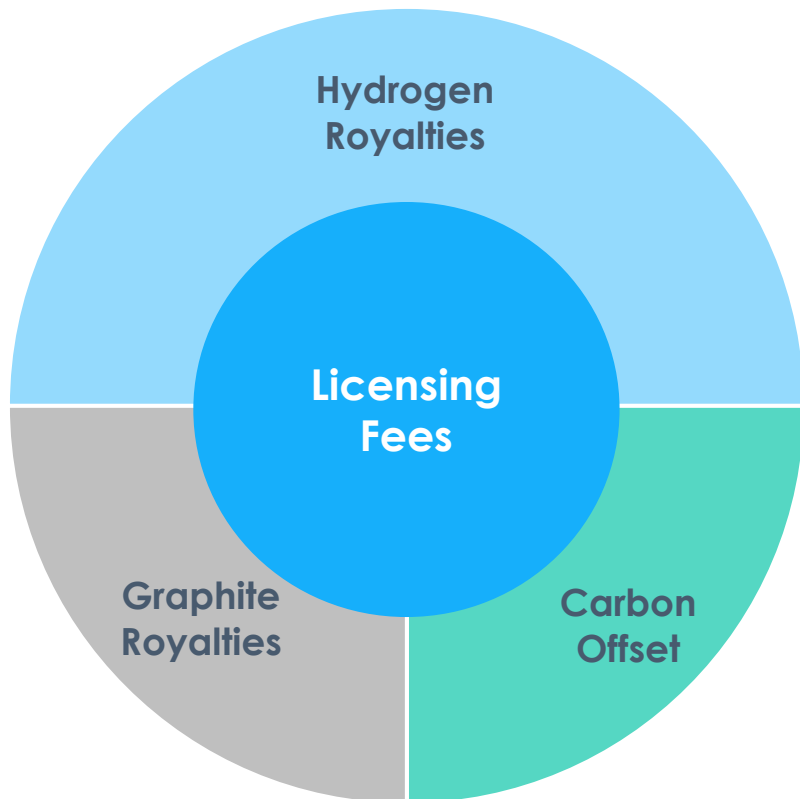
- Catalyst supply cost study
- Catalyst development via ARC grant at USyd laboratory



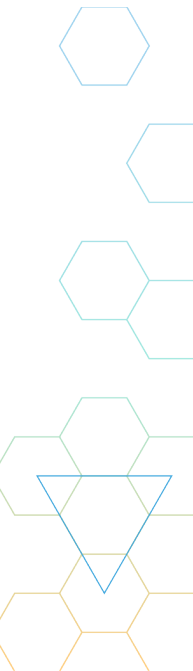
5

“Capex-lite” business model enables early free-cashflow

Hazer business plan premised on licensing and royalty revenues avoiding large-scale capex exposure



- One technology, two valuable markets
- Flexible combination of license fees and royalties
 - Fixed annual license fees commensurate with plant size
 - Royalties a percentage of H₂ and graphitic carbon revenues
- “Capex-lite” approach

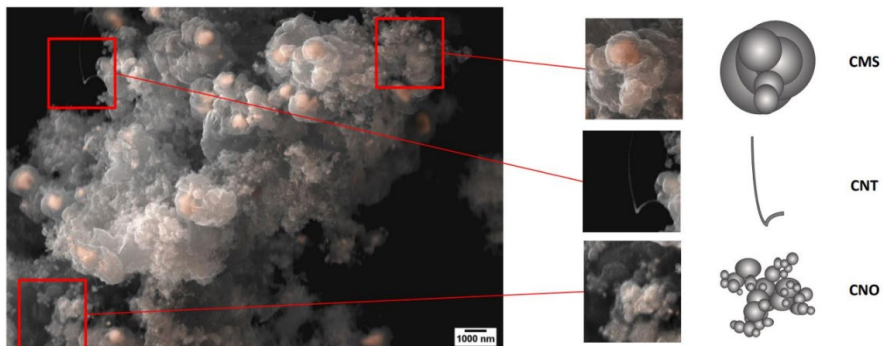


6

Graphite production diversifies earnings

A synthetic, low emissions product with differentiated morphology and properties

- Highly structured vs amorphous carbon black
- Iron inclusions produce magnetic graphite
- Low production emissions
- Up to 95% graphite purity
- High thermal & electrical conductivity
- Low sulphur & low ash content



Mitsui MOU

- A leading international trading and investment group based in Japan
- MOU signed to jointly investigate the market for Hazer graphite
- Exploring possible customers & applications in Asia-Pac, Northern America, Europe and Middle East

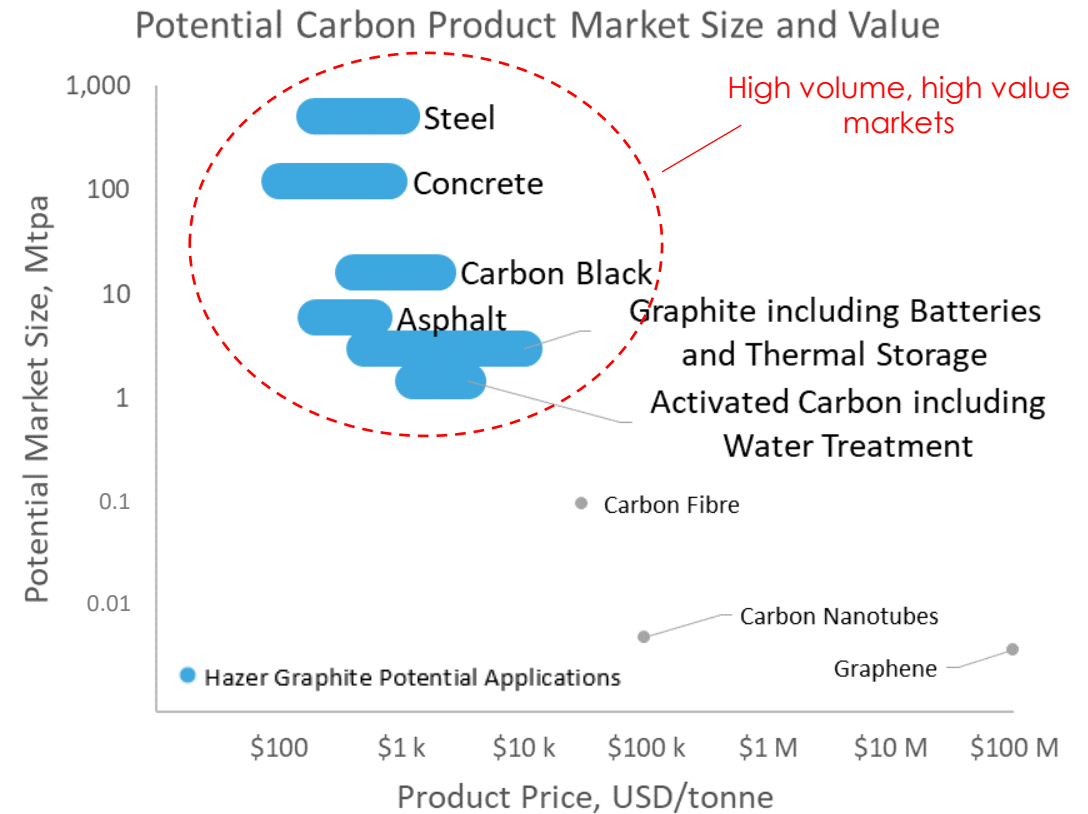


6

Unlocking the value of Hazer graphite

Differentiated properties for large & diverse applications

- **Steel / Iron** - low emissions steel applications across a broad range of production processes
- **Water Purification** - PFAS removal
- **Battery Applications** - promising results in anode and conductive additive applications
- **Thermal Energy Storage** - early promising results with strong commercial interest
- **Asphalt / Concrete** - High volume, low emissions application potential

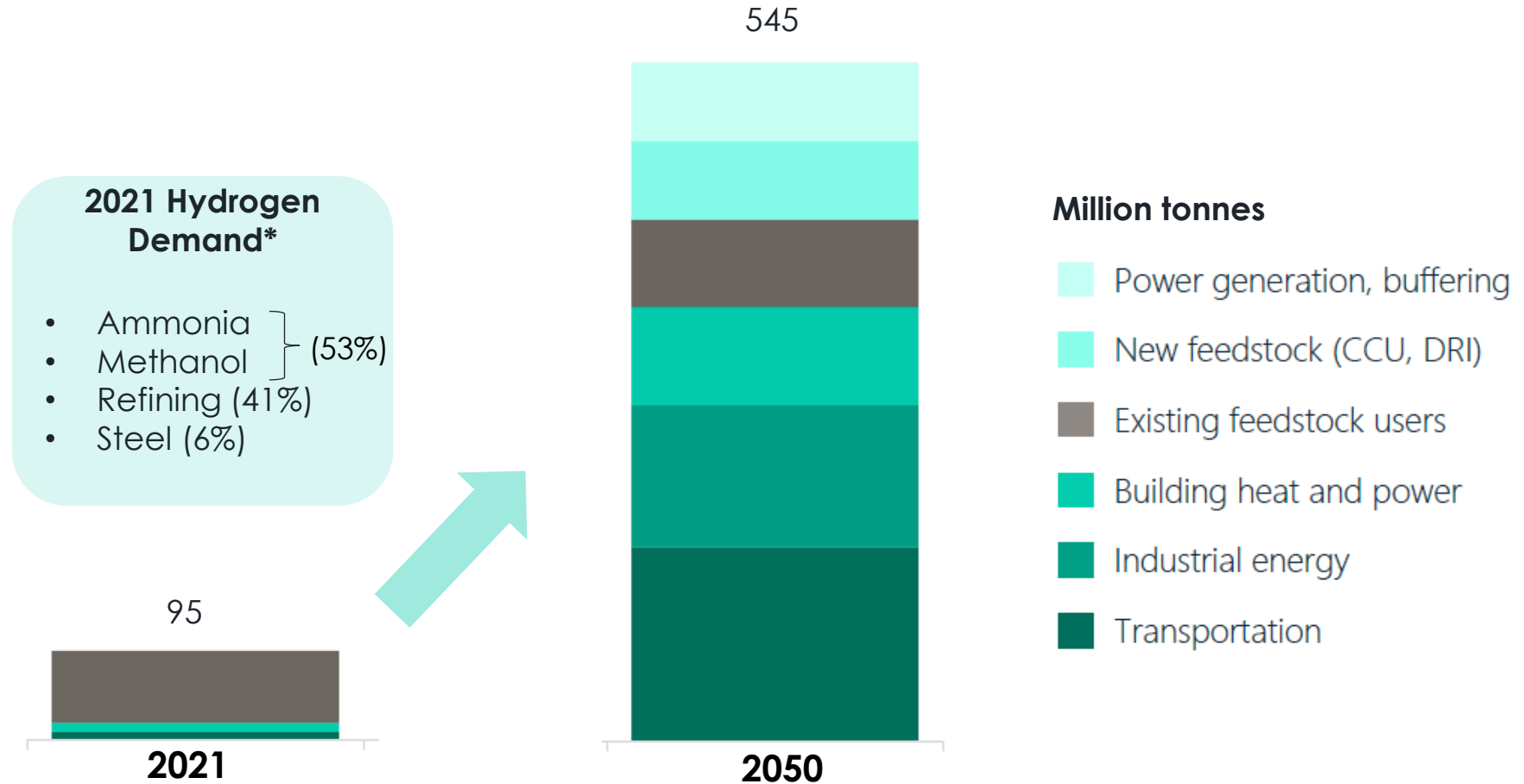


* Company aspirations should not be read as forward-looking statements. Hazer does not yet have reasonable grounds to believe the aspirational portfolio will be achieved. See disclaimer - slide 2 and assumptions & notes – slide 43.



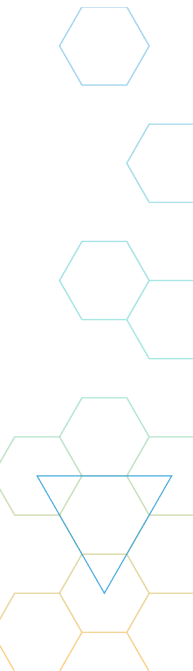
7 Hydrogen market set to grow over 5x by 2050

Global energy demand supplied with hydrogen (Mtpa)



Source: Hydrogen Council & EIA

* Parenthesis represent share of 2021 global hydrogen demand (Goldman Sachs)





8

Significant fiscal policy support across key markets

Government funding & incentives support Hazer technology commercialisation

POLICY SUPPORT

HAZER ELIGIBILITY



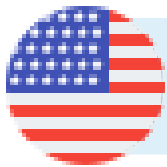
Hydrogen Headstart Program

- ✓ Australia ARENA (\$9mIn) & R&D tax support
- ✓ Hydrogen Headstart program commits \$2bln to industry



**Canadian Net-Zero Emissions
Accountability Act**

- ✓ \$8mIn CleanBC provincial government grant secured
- ✓ Further provincial and federal level funding available



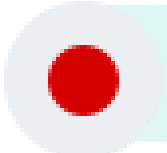
**Inflation Reduction Act (IRA)
National Hydrogen Strategy**

- ✓ Up to \$3/kg H₂ production tax credit
- ✓ Australia-US Climate Compact facilitates access



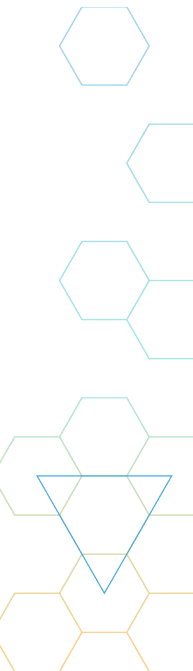
Green Deal & GDIP

- ✓ ENGIE PFS confirms Hazer meet EU thresholds for low emissions hydrogen
- ✓ Funding options being explored by partnership



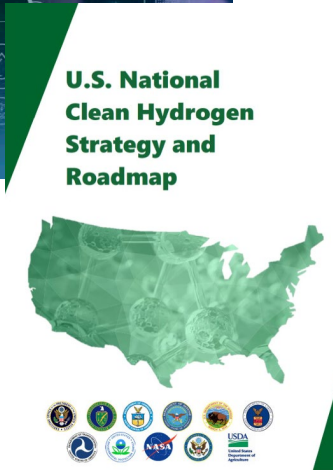
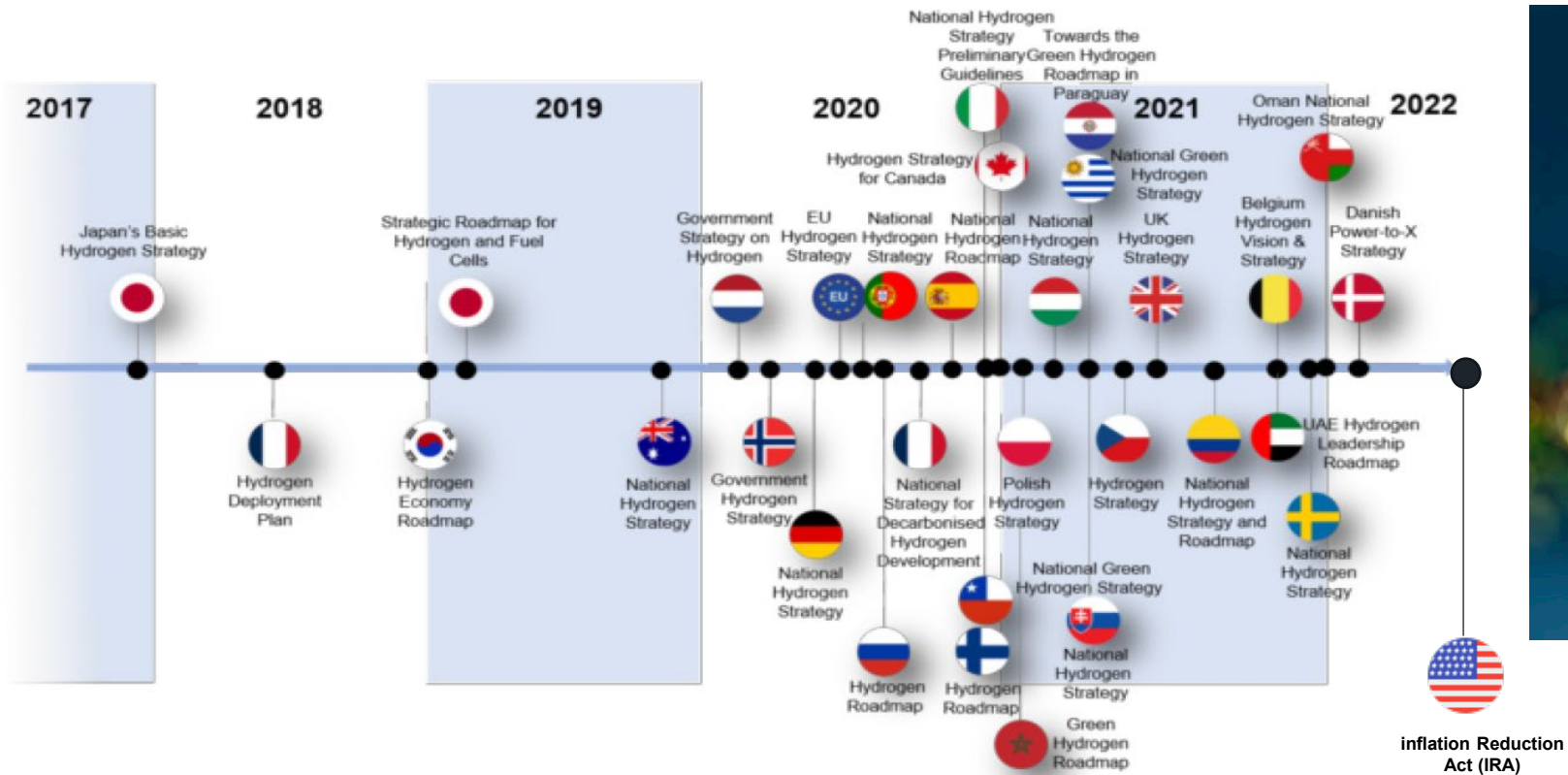
METI Green Innovation Fund (\$16bln)

- ✓ Japanese Government support likely for Chubu/Chiyoda Project
- ✓ Funding options being explored by partnership



8 Global policy action gaining momentum

Hydrogen strategies expected in countries representing over 80% of global GDP by 2025



Source: Various sources; data compiled by Goldman Sachs Global Investment Research
 Source: Goldman Sachs, Carbonmics: the Clean Hydrogen Revolution, February 2022, p.15

Commercial Demonstration Plant (CDP)



Commercial demonstration plant confirming scalability

The first fully-integrated demonstration plant of the Hazer Process



CDP Site, Perth, Australia

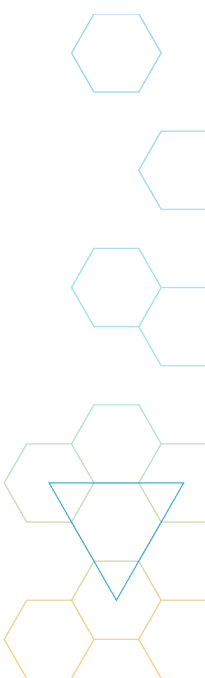
Project Summary

- 100 tpa H₂ and ~380 tpa graphitic carbon
- Carbon negative process with biogas feedstock
- Construction & Phase 1 commissioning completed June 2022
- Ready for startup on-track for 2023.
- Fully funded with ~\$9.4 million grant funding awarded by Australian Renewable Energy Agency (ARENA)



Australian Government
Australian Renewable
Energy Agency

ARENA



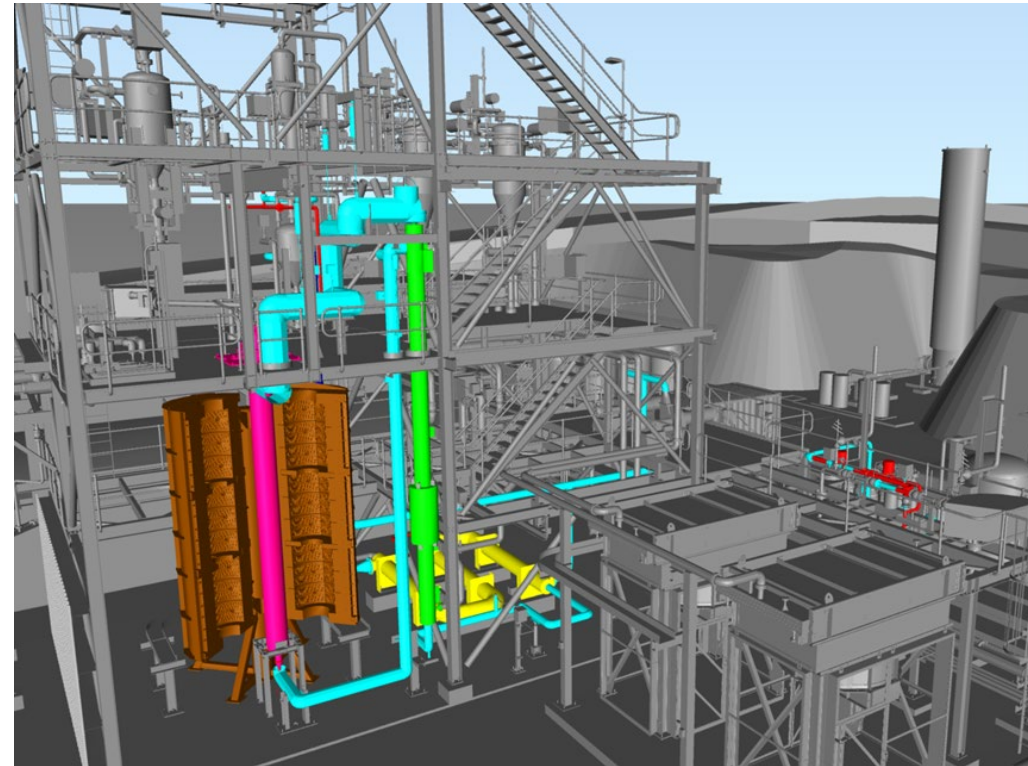
Commercial demonstration plant current status

Milestones to Ready for Start-up (RFSU)

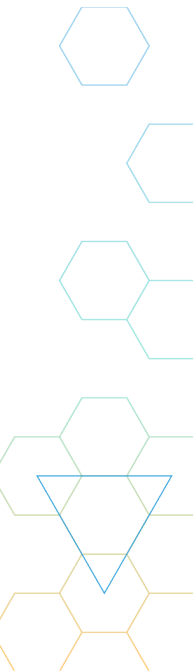
- ✓ Phase 1 plant construction
- ✓ Phase 1 commissioning, testing & debugging
- ✓ Heat exchanger materials delivery
- ✓ Mark-1 reactor forging & heat treatment
- ✓ Hot construction planning and contracts
- ✓ Start-up approvals and permits

On-track

- ❑ Hot equipment fabrication & installation
- ❑ Commissioning, RFSU and production



CDP model highlighting hot construction work-scope underway



Project Pipeline

Partnerships and scale-up into target markets



Overview of key development projects






Burrard, Canada



Chubu, Japan



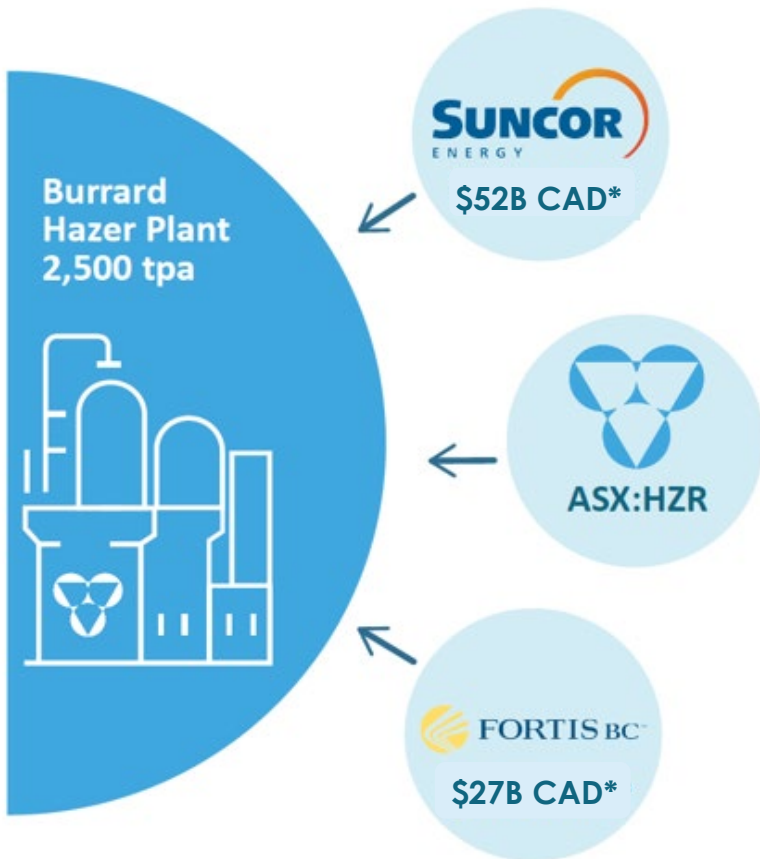
Montoir, France

Description	<ul style="list-style-type: none"> Utilises existing fuel terminal site H₂ to be used in gas blending 	<ul style="list-style-type: none"> Existing LNG import terminal or power station site H₂ as fuel for power generation, industry feedstock and mobility 	<ul style="list-style-type: none"> Existing LNG import terminal site identified H₂ as fuel for power generation, industry feedstock and mobility
Partners			
Expected H₂ Production <ul style="list-style-type: none"> Phase 1 Phase 2 	<p>2,500 tpa 100,000+ tpa</p>	<p>2,500 - 10,000 tpa Up to 100,000 tpa</p>	<p>2,500+ tpa 50,000+ tpa</p>
Hazer Operating Model	<p>Project partner & licensing</p>	<p>Licensing</p>	<p>Licensing</p>
Targeted Start-up (phase 1)	<p>2025</p>	<p>2027-2028</p>	<p>2027-2028</p>



1 Collaborating with major energy companies in Canada

Partnership with Suncor and Fortis to develop a 2,500tpa hydrogen facility in Burrard, Canada



- Concurrently scaling up technology 25x from CDP
- MOU signed in Feb 2022 with Suncor and FortisBC
 - 2,500tpa near-commercial scale plant
 - Decarbonising pipeline network by blending with natural gas
- Target FID 2023
 - With first hydrogen expected 2025
- Secured C\$8m in grant funding from the province of British Columbia. Meets funding requirements to FID

On 4th Nov 2022, the Canadian Government announced federal tax credits for clean technology & low-emitting hydrogen projects

* Market capitalisation is approximate as of 13 June 2023

2 Transformational project in Japan market

Hazer successfully expands its relationship with existing partner Chiyoda to jointly prepare a development plan with Chubu Electric for a Hazer facility in Chubu, Japan



Preparation of a Project Development Plan (“PDP”) for a commercial scale facility

Target H₂ production capacity up to 100,000 tpa. Initial capacity 2,500 -10,000 tpa

H₂ to be used as a fuel for power generation and for industrial applications

Plan to be completed during 1H 2024. Targeted initial start-up late 2020's



3

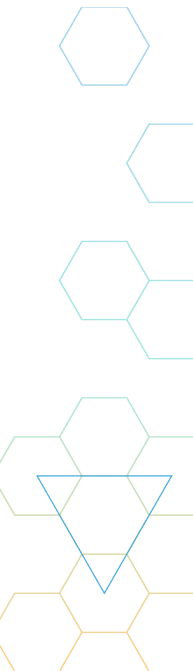
Advancing collaboration for first project in EU

Commercial facility to be located at the existing LNG import terminal in Montoir-de-Bretagne, France

- Partnering with ENGIE, a French multinational utility
- 2022 PFS confirms Hazer can meet EU frameworks for low-emissions hydrogen
- PDP with production capacity of at least 2,500 tpa
- Site identified at Montoir-de-Bretagne LNG import terminal
- Hydrogen to be used for industrial application and mobility



LNG tankers at the Montoir-de-Bretagne LNG terminal, France
Image rights: © ELENGY 2022



Growth & Monetisation

Commercial scale projects, global portfolio





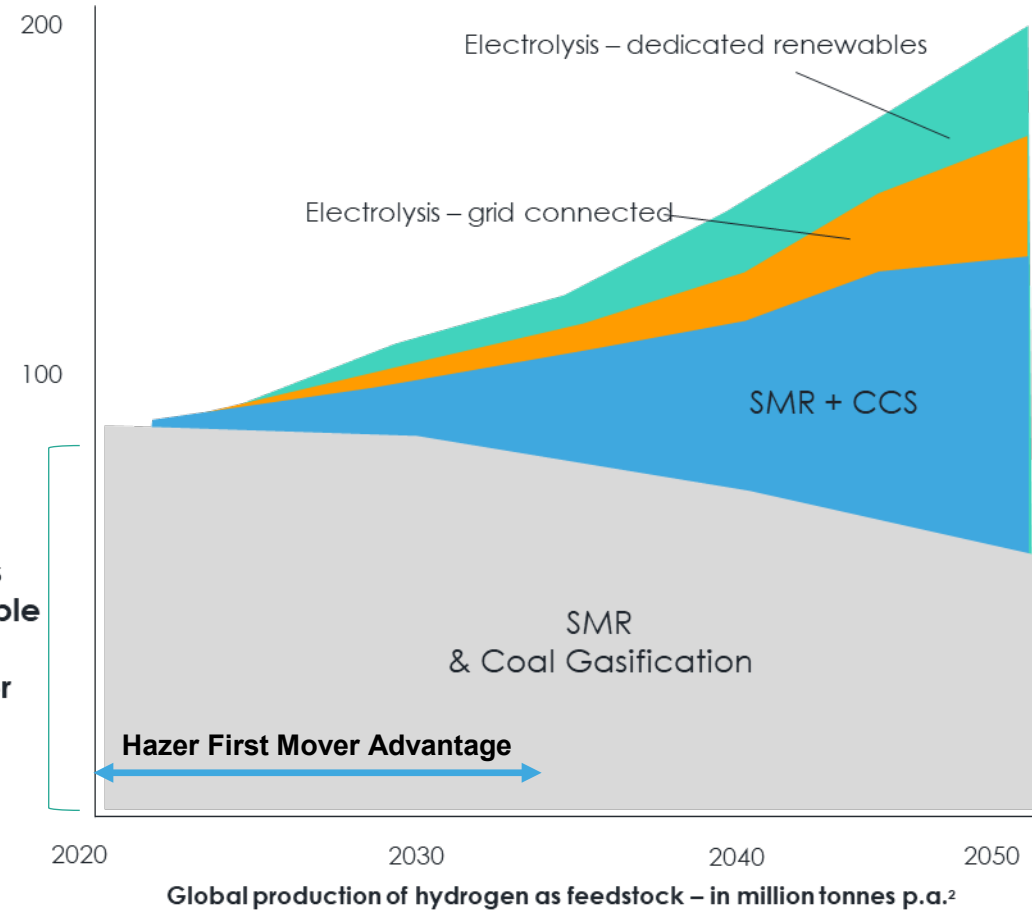
Building leading position in a rapidly growing market

Hydrogen will play a key role in the decarbonisation of hard-to-abate sectors



© Getty Images

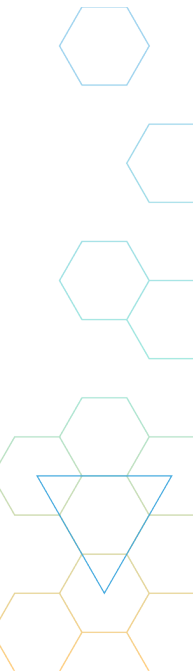
Today's Addressable Market for Hazer



¹International Energy Agency (IEA) - The Future of Hydrogen, June 2019: <https://www.iea.org/reports/the-future-of-hydrogen>

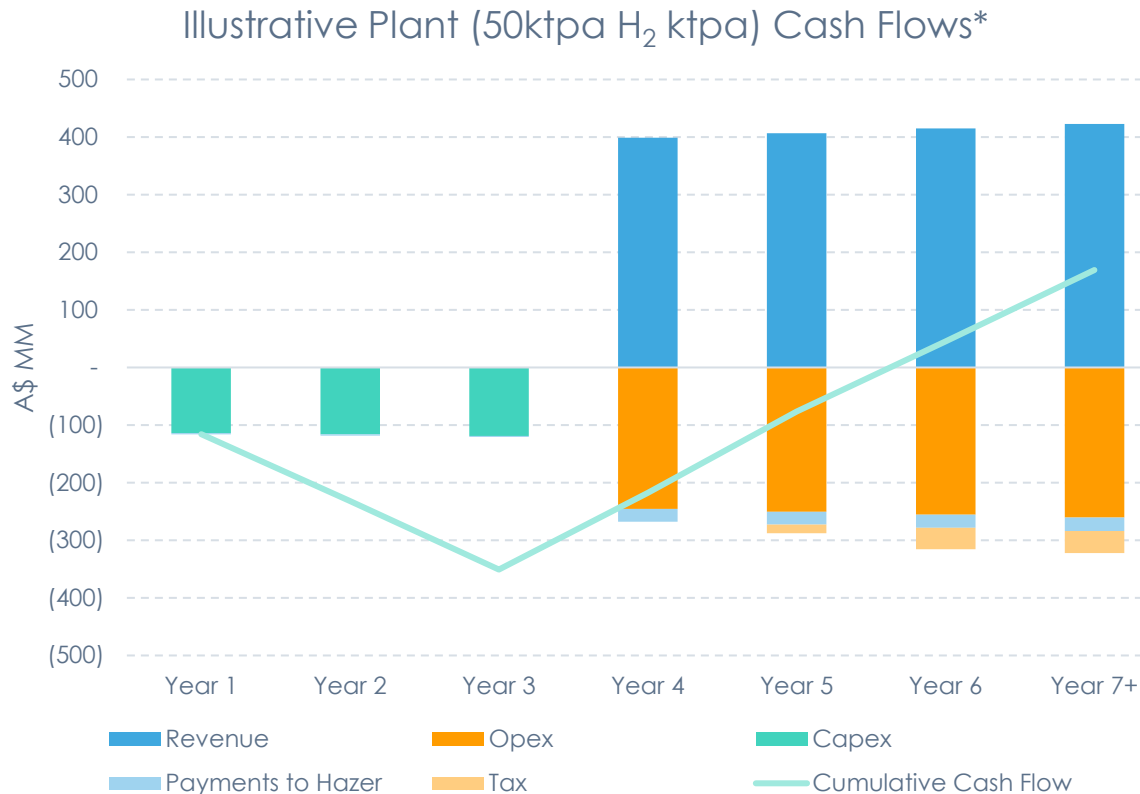
²DNV (June 2022) – 'Hydrogen forecast to 2050':

<https://www.dnv.com/news/hydrogen-at-risk-of-being-the-great-missed-opportunity-of-the-energy-transition-226628>





Illustrative plant economic indicators



Illustrative Plant Owner Returns:

- 50 ktpa of H₂ production, 195 ktpa of graphite
- NPV8 at FID (20 years) ~A\$390mIn (~US\$270mIn)
- Project IRR ~24% (ungeared)
- ROI ~4.0x

Illustrative Hazer Returns:

- “Capex-lite” - No capital contributions / outlay
- NPV8 (20 years) from license fee & royalties ~A\$97mIn (~US\$67mIn)

* Company aspirations should not be read as forward-looking statements. Hazer does not yet have reasonable grounds to believe the aspirational portfolio will be achieved. See disclaimer - slide 2 and assumptions & notes – slide 43.





Growth ambition – 10 plants in 10 years

Potential for over 500 KTPA of Hazer installed H₂ capacity across target markets by 2035

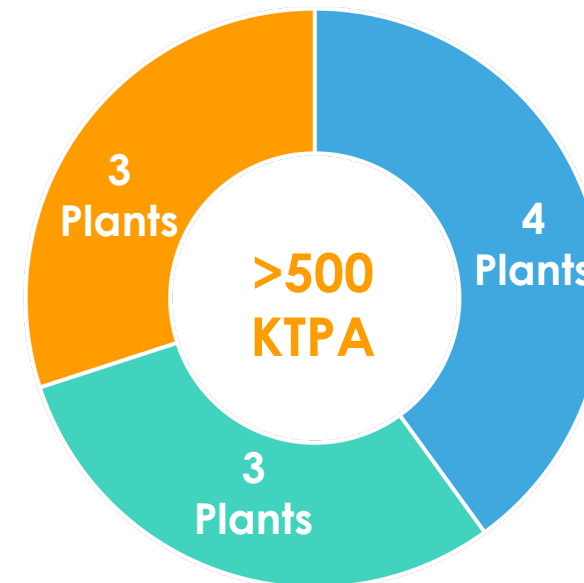
2023 Current Portfolio

Current Plant Pipeline:

1. North America – Burrard and other US
2. Asia-Pacific – Japan Chubu / Chiyoda project
3. Europe – Engie project
4. Ongoing discussions across all target markets

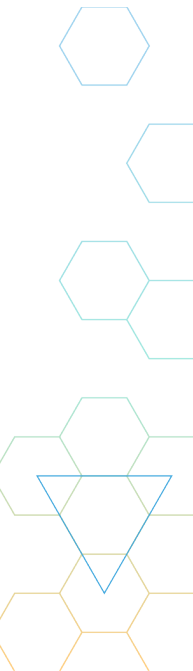


2035 Aspired Portfolio



■ Asia-Pacific ■ North America ■ Europe

* Company aspirations should not be read as forward-looking statements. Hazer does not yet have reasonable grounds to believe the aspirational portfolio will be achieved. See disclaimer - slide 2 and assumptions & notes – slide 43.



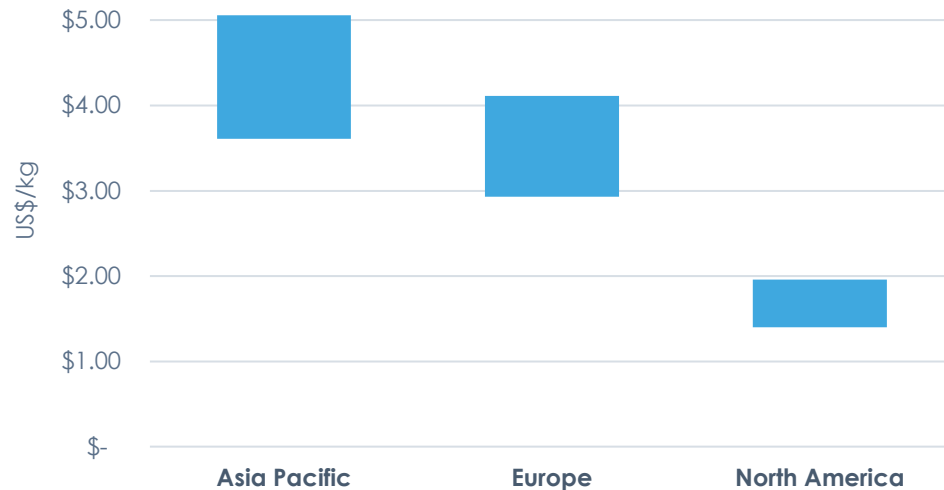


Cost ambition

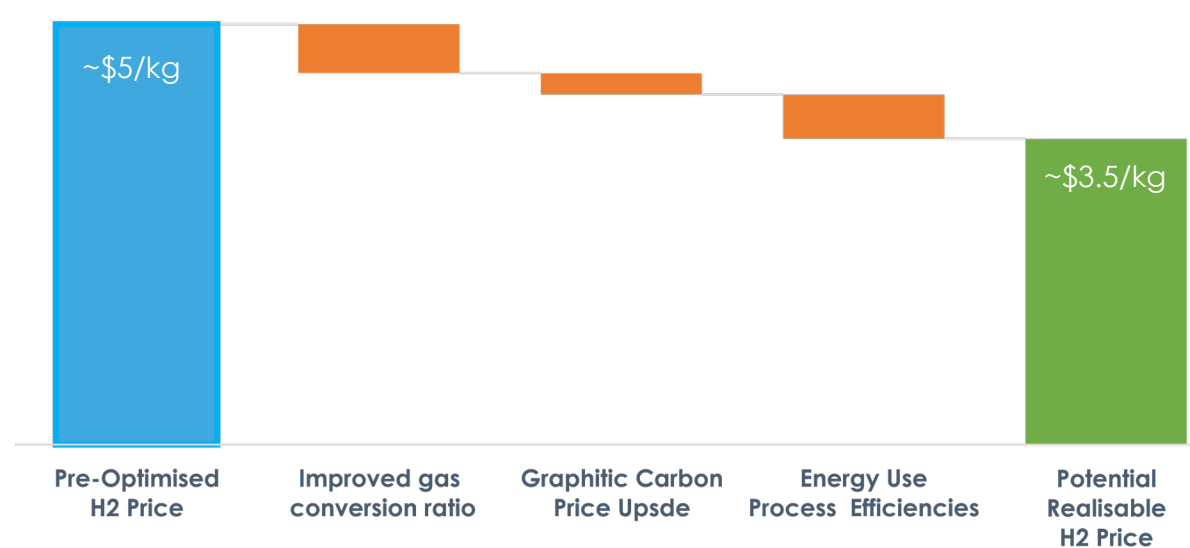
Competitive Hydrogen Cost in Target Markets:

- Cost of Production correlates strongly with feedstock gas and power prices
- Targeted H₂ cost per kg therefore varies across target markets
- Cost-competitive with clear pathway to optimize further through learning curve and other operating efficiencies

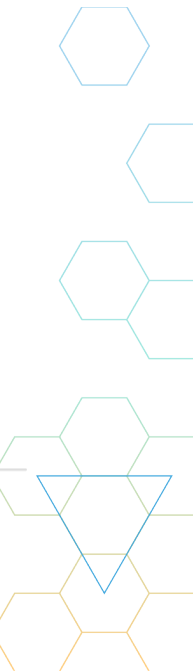
H2 per kg Target Cost Range by Market*



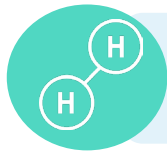
Asia-Pacific Potential Cost Optimisation Example



* Company aspirations should not be read as forward-looking statements. Hazer does not yet have reasonable grounds to believe the aspirational portfolio will be achieved. See disclaimer - slide 2 and assumptions & notes – slide 43.



Compelling investment case



Advanced, disruptive technology with strong competitive advantage. 1 technology serving 3 markets



Co-located with end-user infrastructure enabling shorter pathway to CO2 reductions for hard-to-abate sectors



Clear commercial pathway, capex-lite model unlocks early cash-flow and attractive returns



Global partnerships across strategic markets with Tier-1 partners



In the sweet spot of the energy transition and rapidly growing hydrogen market



Artist impression of Hazer facility co-located with 3rd party refinery (source: stock image not Hazer infrastructure)





HazerGroup™

▼
Hazer Group Ltd

ASX:HZR

Investor Relations Enquiries:

contact@hazergroup.com.au

Media Enquiries:

hhowlett@we-worldwide.com



hazergroup.com.au



Abbreviations and units used

ARENA Australian Renewable Energy Agency

CCS Carbon Capture & Storage

CDP Commercial Demonstration Plan

FID Final Investment Decision

IRR Internal Rate of Return

KTPA thousands of tonne per annum

LNG Liquefied Natural Gas

MOU Memorandum of Understanding

MMBTU Million British Thermal Units (A thermal unit of measurement for Natural Gas)

MTPA millions on tonne per annum

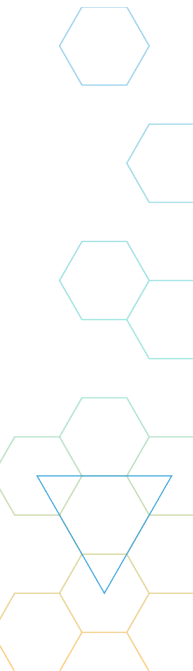
PDP Project Development Plan

PFS Pre-Feasibility Study

ROI Return on investment

SMR Steam Methane Reforming

TPA tonne per annum





Assumptions and notes

Technology/Project Risk

Slides 35-40 assumes that the Commercial Demonstration Plant demonstrates that the Hazer process technology is effective at producing graphitic carbon and high purity hydrogen consistently and reliably as has occurred in prior smaller size pilot projects.

Slide 17 – Delivered Cost of H2 – Hazer Competitive Advantage

1. Hazer US and Asia Pacific costs of H2 - Company analysis and projections, modelling a notional plant outcome at an average feedstock gas price of US\$2.20/MMBTU, ~US\$400/tonne graphitic carbon revenue [offset against operating expense]. Learning curve of 30% (see slide 39 references and sources).
2. Green ammonia cost - Source IRENA, 2020 NH3 costs of US\$720-\$1,400/tonne, mid-point being \$1,060/tonne. H2 equivalent is US\$6.00/kg:
<https://www.futurebridge.com/industry/perspectives-energy/green-ammonia-an-alternative-fuel/#:~:text=Cost%20of%20green%20ammonia&text=The%20current%20Price%20of%20green,%2C%20to%20%24%20310%20per%20tonne.>
3. Green hydrogen production cost - Source: IEA Global Hydrogen Review 2022, p.92. 2021 Wind Onshore and Solar PV average price of US\$6/kg.
4. Shipping of ammonia and liquid hydrogen – Source: IEA Global Hydrogen Review 2022 & Energy Technology Perspectives 2023. Costs of shipping ammonia expected at \$1.9-2.2/kgH2 (average \$2.05/kg), LH2 \$2.0-3.7/kgH2 (average \$2.85/kg): <https://www.hydrogeninsight.com/innovation/iea-ammonia-and-lohc-will-be-cheaper-options-for-shipping-hydrogen-than-liquefied-h2-even-with-reconversion-costs/2-1-1387346>
5. Ammonia re-crack to H2 - The cost of re-cracking ammonia to hydrogen is estimated to be € 1/kg / US\$1.08/kg: <https://pubs.rsc.org/en/content/articlehtml/2021/se/d1se00345c>
6. Green hydrogen production cost - Source: IEA Global Hydrogen Review 2022, p.92. 2021 Wind Onshore and Solar PV average price of US\$6/kg.
7. Green Hydrogen liquefaction - Unit costs of liquefaction system for hydrogen 1.44 \$/kg LH2: <https://www.sciencedirect.com/science/article/abs/pii/S0360319919311127>
8. Green Hydrogen Load-out & Receiving Facilities - ~US\$3/kg. Australian Hydrogen Market Study Sector Analysis Summary, May 2021. CEFC, p.84.

Slide 23 – Unlocking the value of Hazer Graphite

Adapted from various data sources including:

1. "Methane Pyrolysis for Hydrogen - Opportunities and Challenges," by Marc von Keitz, 2021, ARPA-E Available: <https://www.energy.gov/sites/default/files/2021-09/h2-shot-summit-panel2-methane-pyrolysis.pdf>
2. "R&D Opportunities for Development of Natural Gas Conversion Technologies for Co-Production of Hydrogen and Value-Added Solid Carbon Products" Argonne and Pacific Northwest National Laboratories, Nov 2017 Available: <https://www.osti.gov/servlets/purl/1411934>
3. "Natural & Synthetic Graphite: Outlook to 2030," Roskill, Oct 2020

Slide 37 – Illustrative Plant Economic Indicators

Sources: Company analysis and projections, modelling a notional plant outcome at an average feedstock gas price of US\$2.20/MMBTU, ~US\$400/tonne graphitic carbon revenue, H2 revenue of ~US\$3/kg. No Government funding or tax incentives, or debt funding benefit, or learning curve to optimise plant outcomes included. NPV8 is after-tax and assumes a notional 3-year construction timeframe. US dollars to Australian dollar of 1.45. License fees and royalty rates are notional as no license agreements transacted to date. Not adjusted to reflect any jurisdiction-specific operating conditions, economics and impact.

Slide 39 – Cost Ambition

Sources: Company analysis and projections, modelling a range of notional outcomes:

1. Feedstock gas - Asia Pacific US\$10/mmbtu, Europe ~US\$8/mmbtu, North America ~US\$2/mmbtu
2. ~US\$400/tonne graphitic carbon revenue, offset against operating expenses.
3. No Government funding, tax incentives or debt funding upside benefit included.
4. Learning curve of 30% is applied to the low-end cost estimate to reflect process engineering, operating, maintenance, logistics and other expected efficiencies.
Rationale for inclusion: <https://hbr.org/1964/01/profit-from-the-learning-curve>
Learning curve applicable to construction projects(closest analogue). Supports ranges of 60-95% (inverse being 5-40%):
<https://www.fgould.com/americas/articles/applying-learning-curve-theory-construction-cost/>

