

## WORLD HYDROGEN CONFERENCE PRESENTATION

**PERTH, AUSTRALIA; 10 May 2023:** Hazer Group Ltd ("Hazer" or the "Company", ASX: HZR) advises of its participation at the World Hydrogen 2023 Summit and Exhibition Conference being held this week in Rotterdam, the Netherlands.

Hazer's Managing Director, Mr Glenn Corrie, is attending this week's World Hydrogen 2023 Summit and Exhibition Conference in Rotterdam to discuss and present the Company with the European investment community.

Attached is the presentation that Mr Corrie will be speaking to at the summit.

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.

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ASX:HZR

# Hazer Group Ltd

*Clean hydrogen technology  
to decarbonise the world*

World Hydrogen Summit, Rotterdam  
10 May 2023







# Disclaimer

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# Investment Highlights

Well positioned to play a leading role in global decarbonisation



**Rapidly Growing Hydrogen Demand** with forecast global market size US\$12 trillion by 2030



**Innovative, Proven and Proprietary** low emission H<sub>2</sub> technology with strong competitive advantage



**Commercial Demonstration Plant** de-risking scale-up with production online in 2023



**Commercial Scale-Up** on-track with Suncor/Fortis Burrard-Hazer Plant, Canada



**Unique Potential** to benefit from growing global decarbonisation initiatives in traditionally hard-to-abate sectors



**Established Global Partnerships** across strategic markets with tier-1 partners



**Clear Pathway to Deploy and License Technology** in multiple jurisdictions at commercial scale



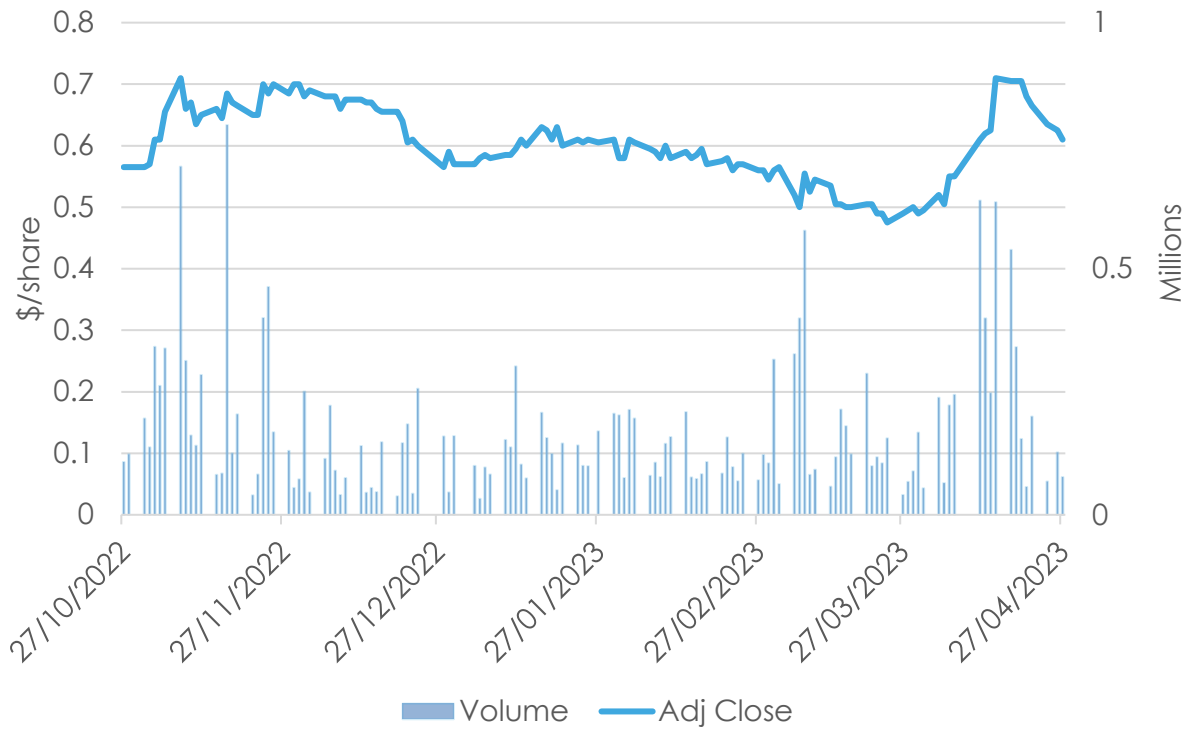
Experienced **Board and Management** team to execute on growth plan



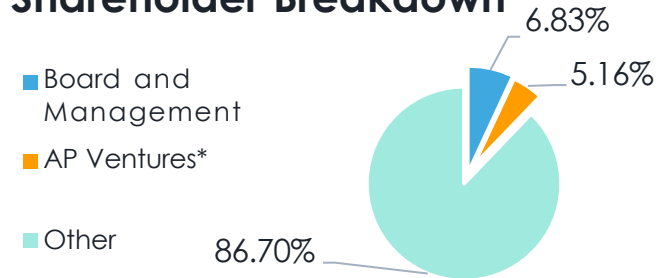


# Corporate Overview

## HZR:ASX Share Price History



## Shareholder Breakdown



\*AP Ventures largest shareholder

## Capital Structure as at 26 Apr 23

Share price	\$0.62
Market capitalisation (AUD)	\$106 million
Shares on issue	170,443,743
Debt as at 31 Mar 2023	\$4.7 million
Cash and cash equivalents*	~\$19 million
Enterprise value	~\$92 million
Capital /grant money invested to date	~\$70 million

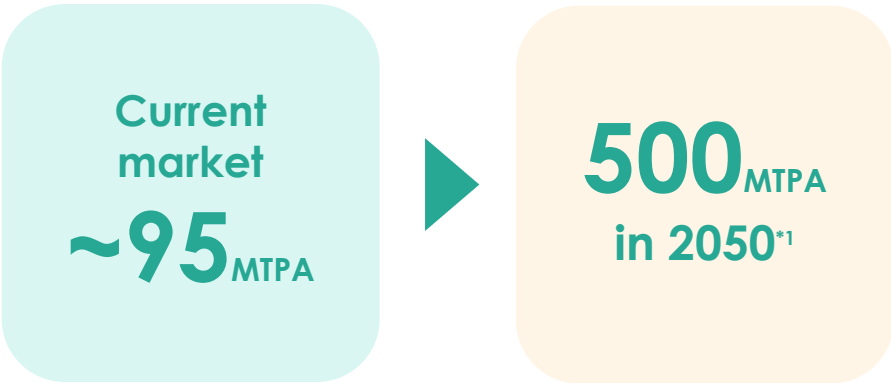
\*R&D claim of ~\$9.45mln received on the 5<sup>th</sup> April 2023



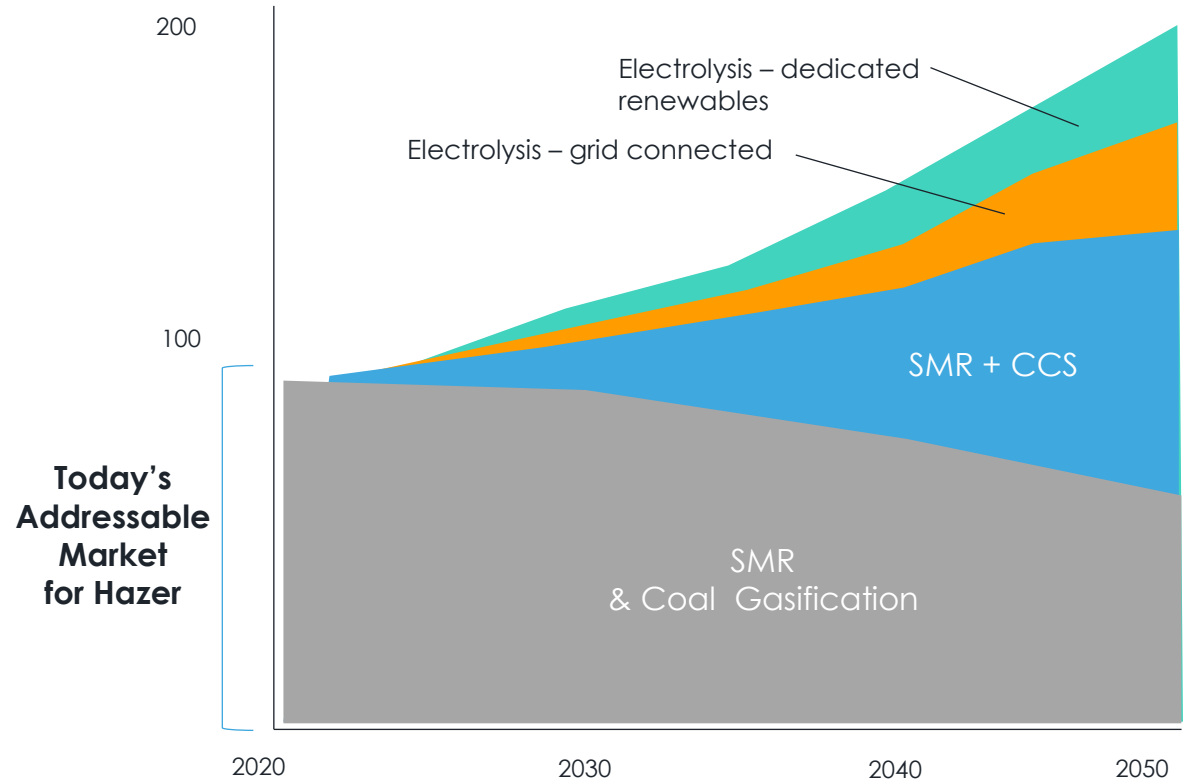


# Building a leading position in a rapidly growing market

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



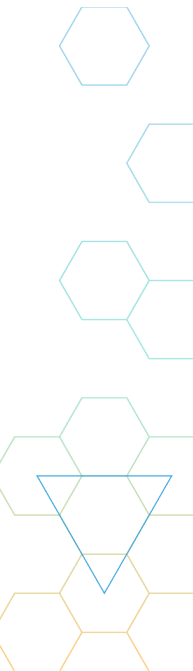
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Global production of hydrogen as feedstock – in million tonnes p.a.<sup>2</sup>

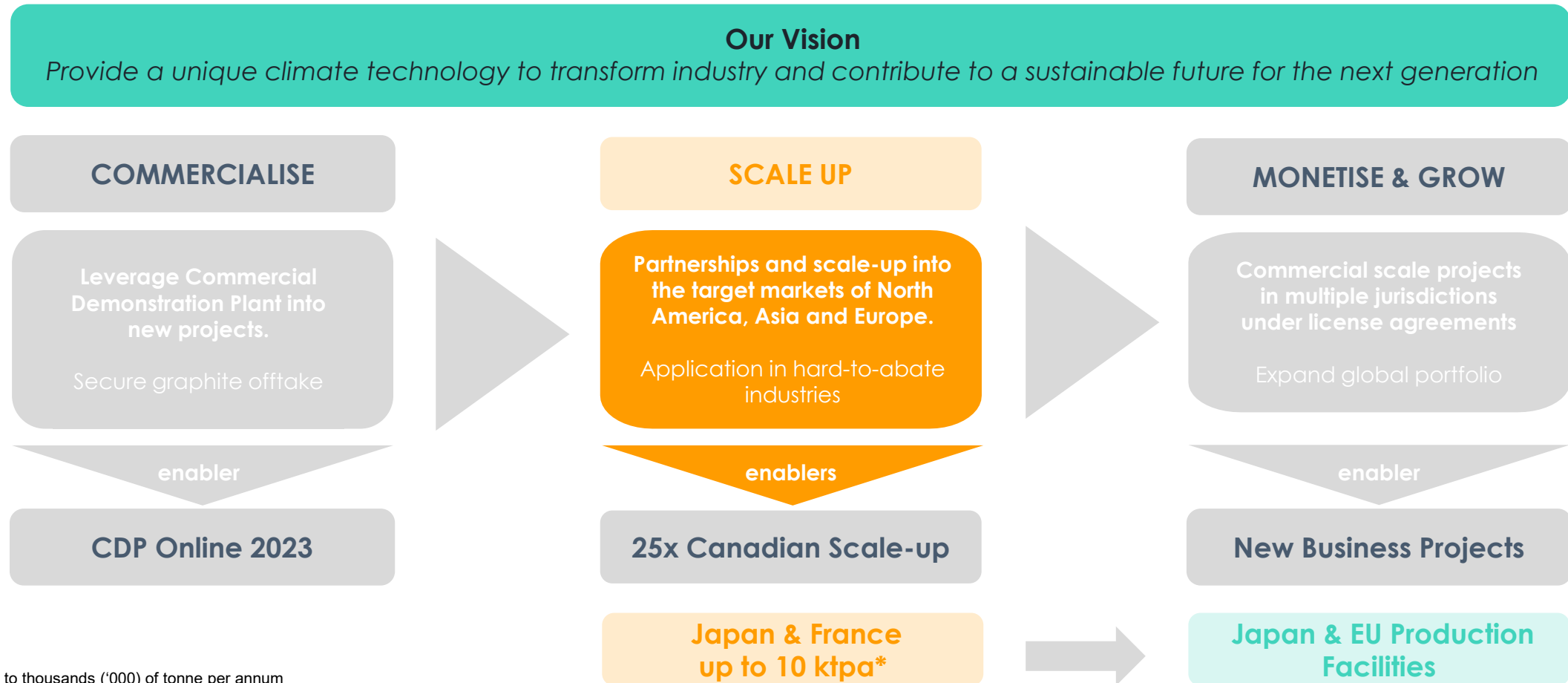
<sup>1</sup>International Energy Agency (IEA) - The Future of Hydrogen

<sup>2</sup>DNV (June 2022) – 'Hydrogen forecast to 2050'



# Executing scale-up strategy in hard to abate sectors

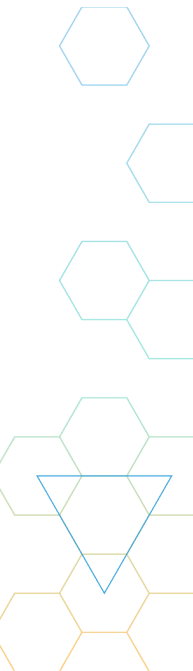
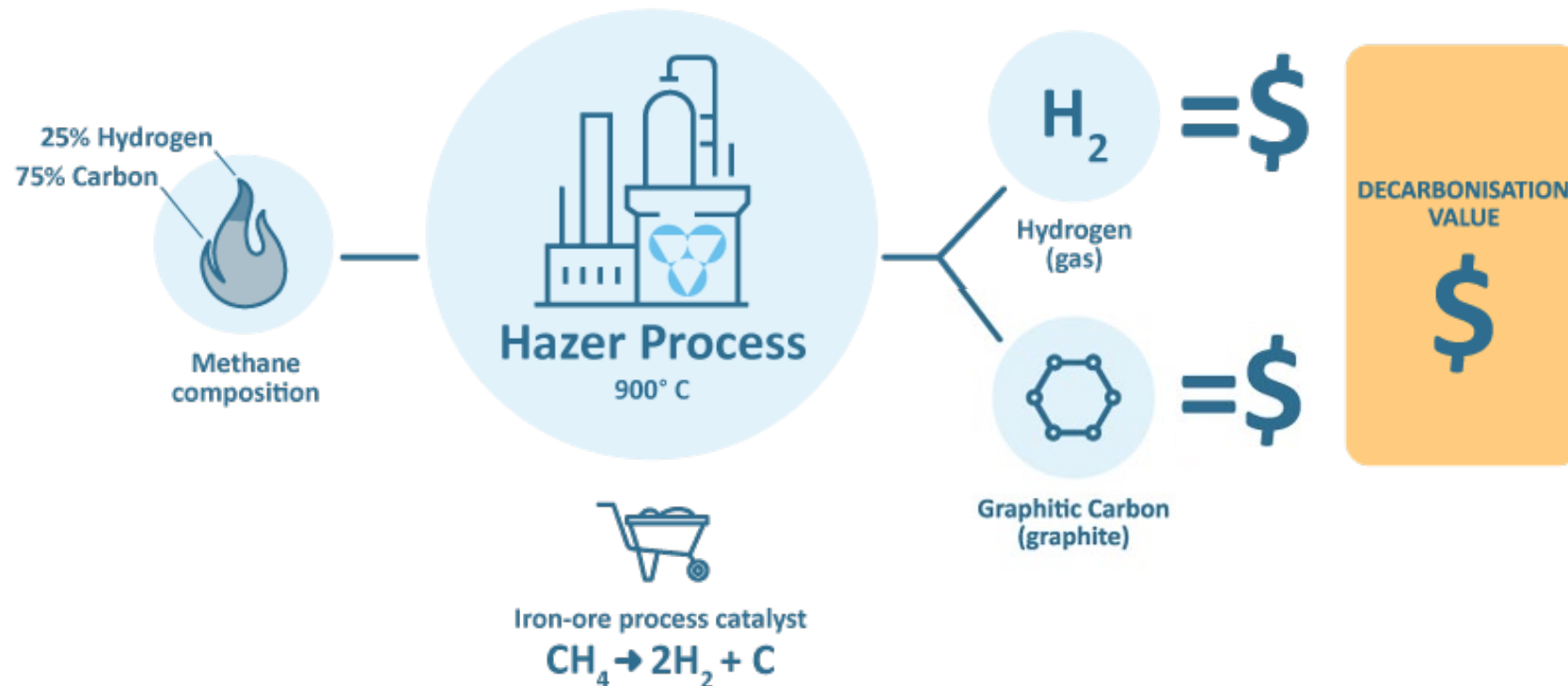
## Monetise market momentum and Hazer's unique technology



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

# The Hazer competitive advantage

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





# Current technologies face multiple challenges

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

## Existing Technologies

### Steam Methane Reforming (SMR)

#### Significant CO<sub>2</sub> emissions

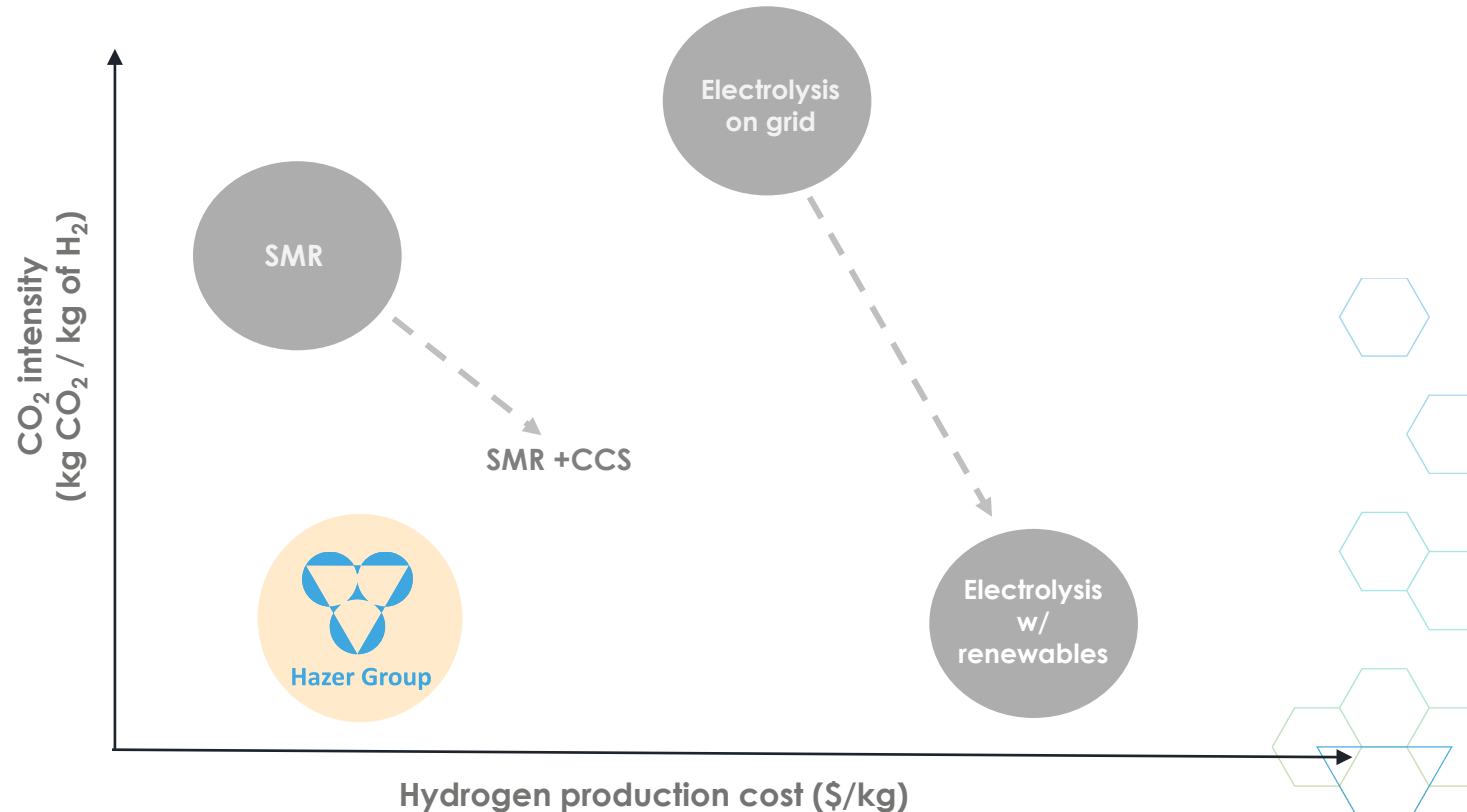
- Most widely used process for the generation of hydrogen (~95%)
- High CO<sub>2</sub> emissions
- Requires CCS\* to address emissions; expensive and difficult



### Electrolysis

#### Energy intensive process

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

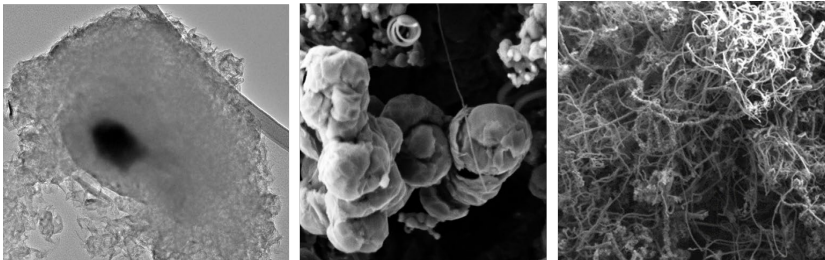


\*CCS = Carbon Capture & Storage. Requires geological formations for CO<sub>2</sub> sequestration

# Unlocking the value of Hazer graphitic carbon

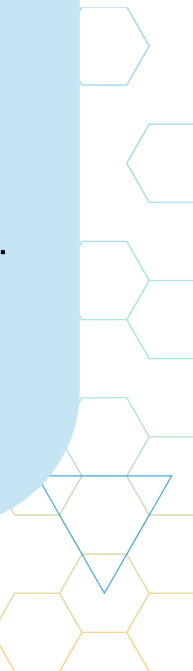
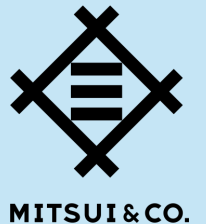
## Unique graphitic material tailorable to different markets

- Current focus is on high volume hard to abate sectors for early offtake – such as steel industry
- Graphite purity ex-reactor 80 - 95% (wt) - can be increased to >99+% using various purification techniques
- Longer maturity prospects in high value markets in development such as energy storage



## Mitsui MOU Hydrogen & Decarbonisation Strategy

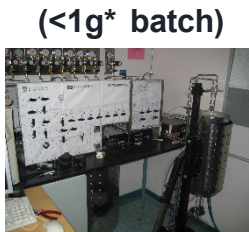
- Mitsui & Co is a leading international trading and investment group based in Japan.
- MOU signed with Mitsui to jointly investigate the market for Hazer graphite.
- Explore possible customers, applications and partners in Asia, Oceania, Northern America, Europe and the Middle East.
- Focus on hard to abate sectors such as steel making and chemical industries.





# Successful technology development & up-scaling

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



(<1g\* batch)



(<100g\* batch)



(~1Kg\* batch)



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



(< 60kg/hr\* continuous\*\*)

hazergroup.com.au

**25x Scale-up Plant**

2007–2013

2016–present

2017

2017–2021

2022-2023

2025

- Bench scale testing**
- University of Western Australia
  - PhD (Dr. A. Cornejo)
  - Concept evaluation

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

- Bench scale fluidised 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

- Burrard-Hazer Hydrogen Project**
- BC, Canada
  - 2,500tpa
  - Targeted RFSU 2025

\*Combined product scale \*\*CDP planned start up 2023



# Established presence in target markets

## NORTH AMERICA

- MOU with Suncor and FortisBC to develop 2,500 tpa Hazer facility in Canada



## EUROPE

- MOU with ENGIE to develop hydrogen production facility in EU



## ASIA

- Mitsui MOU to investigate market for Hazer graphite
- PDP with Chubu & Chiyoda for Hazer facility in Japan\*



## POLICY SUPPORT

### North America

**Inflation Reduction Act** allocates \$369bn to climate stepping up commitment to develop hydrogen technologies

### Europe

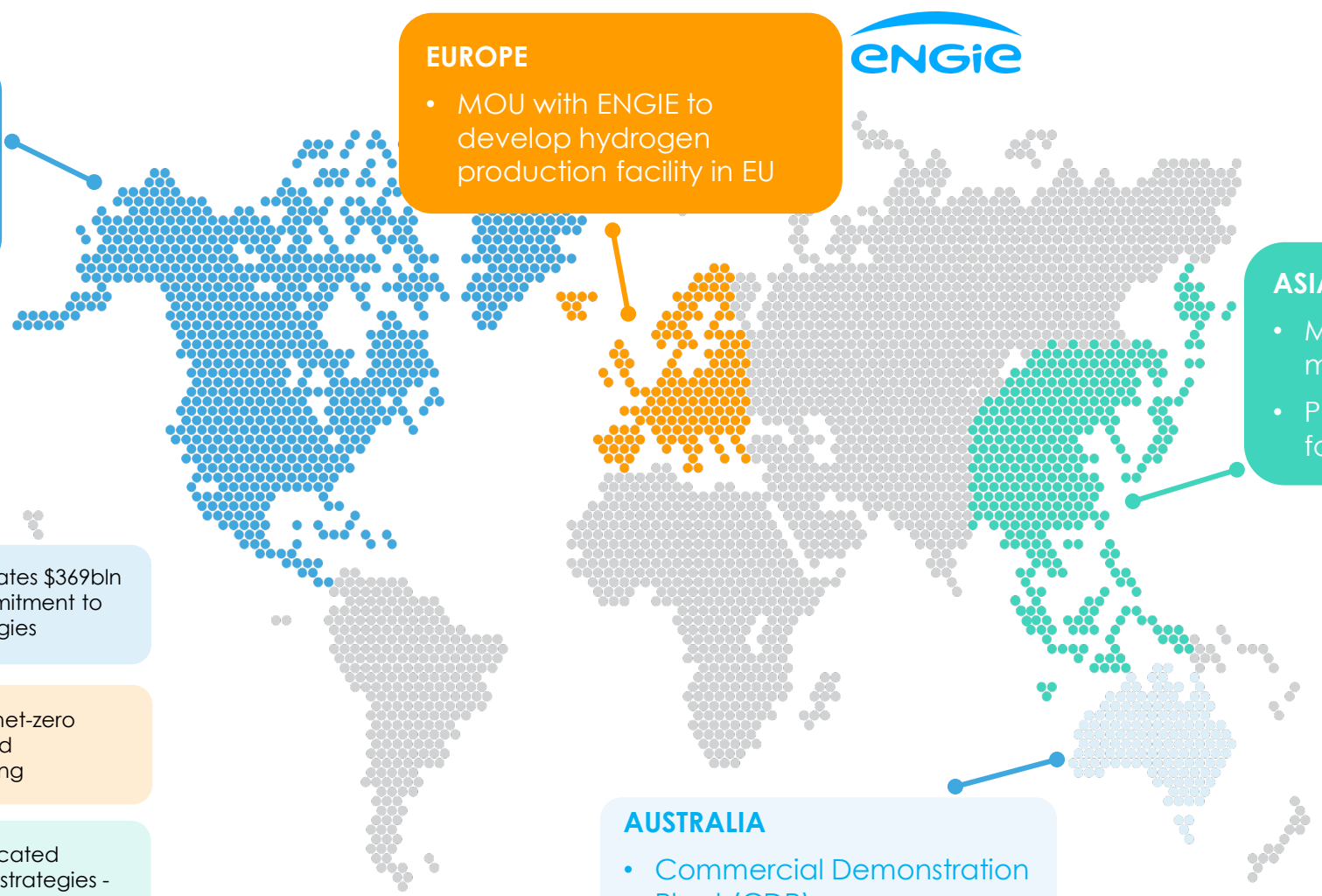
**Green Deal & GDIP** supports net-zero technology development and accelerating access to funding

### Asia-Pacific

Selected countries with dedicated decarbonisation / hydrogen strategies - Japan, Korea, Singapore & Australia

## AUSTRALIA

- Commercial Demonstration Plant (CDP)



\* PDP refers to Project Development Plan



# 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 H<sub>2</sub> production capacity up to 100,000 tpa, with an initial capacity between 2,500-10,000 tpa

Chubu Electric to utilise H<sub>2</sub> as a fuel for power generation and for industrial applications

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

# Advancing collaboration for first project in EU

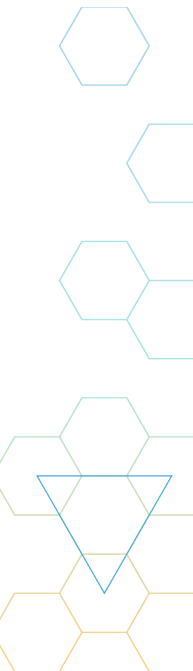
Facility to be located at the existing LNG import terminal in Montoir-de-Bretagne, France

- Partnering with ENGIE, a French multinational utility company
- 2022 Pre-Feasibility Study confirms Hazer can meet EU frameworks for low-emissions hydrogen production
- Preparation of Project Development Plan for commercial-scale facility with production capacity of at least 2,500 tonne per annum
- Project site identified as existing LNG import terminal at Montoir-de-Bretagne, operated by ENGIE's affiliate company ELENGY
- H2 to be used in a variety of application including industry and mobility



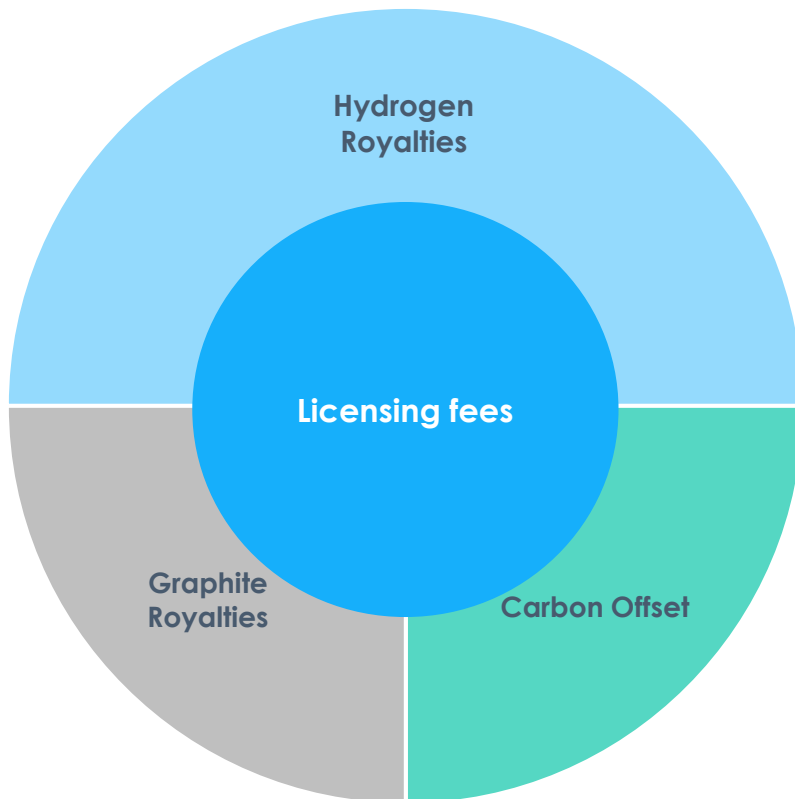
LNG tankers at the Montoir-de-Bretagne LNG terminal, France

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# “Capex-lite” business model to enable early free-cashflow

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



## One technology, two markets

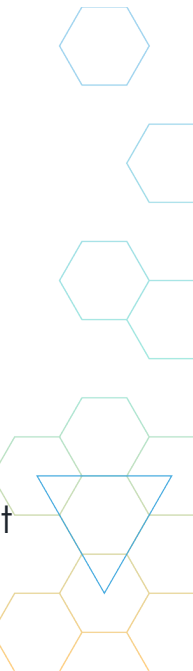
- OPEX shared by two product streams (H<sub>2</sub> & graphitic carbon)
- Competitive differentiator is its ability to serve supply & demand side

## Revenue model to include a combination of license fees and royalties

- Fixed annual license fees commensurate with plant size
- Royalties a percentage of H<sub>2</sub> and graphitic carbon revenues





## “Capex-lite” approach focuses Hazer’s strength as technology provider and licensor:

- Partnership model targets tier-1 project proponents, e.g. Suncor, with expertise in project management & EPC
- Any capex exposure risk-assessed on strategic & commercial merit





# Key Activities

	CY2023		CY2024	
	H1	H2	Q1	
Commercial Demonstration Plant (100 tpa)	Procurement and fabrication, Engineering & Installation			
		Ready for Start-up		
			Final Commissioning	
Suncor & Fortis 2,500 tpa Burrard Plant	FEED Studies in Canada and targeted FID			
Mitsui MOU	Developing market for Hazer Graphite			
NEW Potential Projects	 Negotiate Commercial Agreements			
Corporate Updates	 ARENA Grants	 R&D Rebates	Site Visit	 ARENA Grants







# HazerGroup™

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ASX:HZR

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