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### Investment highlights

Low cost, low emissions H<sub>2</sub> production technology company positioned to play a leading role in global decarbonisation



Low-cost, Lowemissions, Proprietary Technology



Compelling Economics & Returns



Global Tier-1
Partnerships Across
Strategic Markets



Advanced Technology
Readiness & Proven

Scale-up



Clear Commercial Pathway & Capex-lite





Graphite Production Diversifies Earnings



Rapidly Growing H<sub>2</sub> Demand



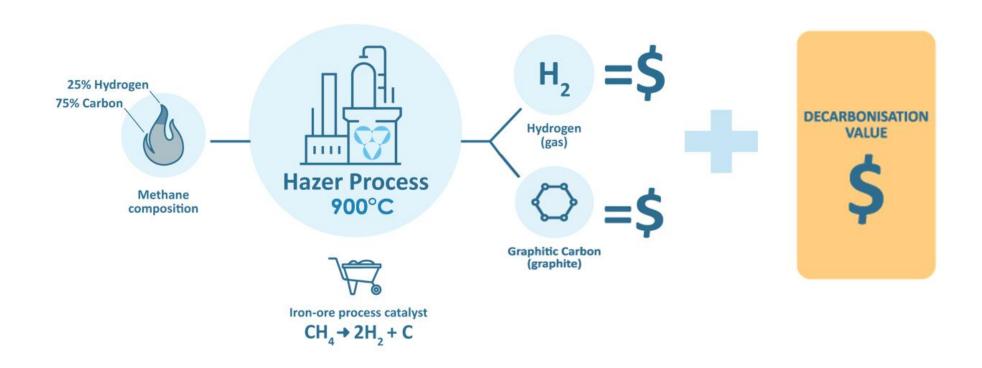


Government & Policy
Support

### 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 highquality graphitic carbon, using iron ore as a process catalyst.









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

### **Existing Technologies**

Steam Methane Reforming (SMR)

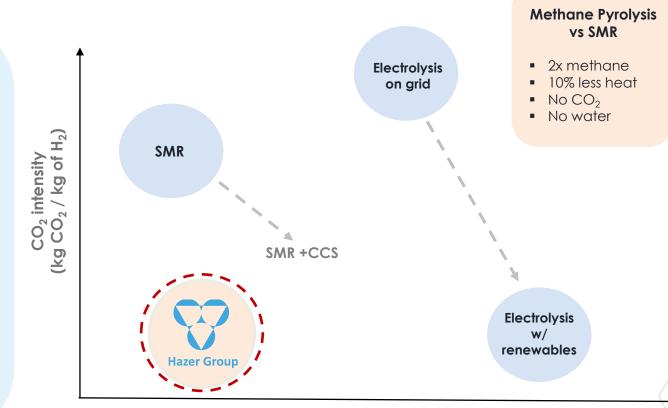
#### Significant CO<sub>2</sub> emissions

- Most widely used process for H<sub>2</sub> generation (~95%)
- High CO<sub>2</sub> 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







### "Plug-in" technology using existing infrastructure

End-use deployment and application of the Hazer Technology eliminates  $H_2$  transport risk and reduces cost



Conceptual design of Hazer facility co-located with 3<sup>rd</sup> 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





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





### 3 Overview of key scale-up development projects







Chubu, Japan



Montoir, France

Description	<ul> <li>Utilises existing fuel terminal site</li> <li>H<sub>2</sub> to be used in gas blending</li> </ul>	<ul> <li>Existing LNG import terminal or power station site</li> <li>H<sub>2</sub> as fuel for power generation, industry feedstock and mobility</li> </ul>	<ul> <li>Existing LNG import terminal site identified</li> <li>H<sub>2</sub> as fuel for power generation, industry feedstock and mobility</li> </ul>
Partners	FORTIS BC*	CHIYODA CORPORATION CHUBU Electric Power	<b>ENGIE</b>
Expected H <sub>2</sub> Production • Phase 1 • Phase 2	2,500 tpa 100,000+ tpa	2,500 - 10,000 tpa Up to 100,000 tpa	2,500+ tpa 50,000+ tpa
Hazer Operating Model	Project partner & licensing	Licensing	Licensing
Targeted Start-up (phase 1)	2025	2027-2028	2027-2028



# Advanced technology readiness

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

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











(~1Kg\* batch)



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





(<1g\* batch)

2016-present

(<100g\* batch)

2017

2017-2021

2022-2023

2007-2013

- University of Western Australia
- Concept evaluation

#### Scaled up bench test

- University of Sydney
- process research

#### Bench scale fluid bed

- University of Sydney
- Catalyst kinetics and
   Conceptual testina 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

2025+

#### **Key Projects**

- Canada
- Chubu, Japan
- Montoir-de-Bretagne, France

Bench scale testing

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

### 4 Commercial Demonstration Plant (CDP) current status

#### Milestones to Ready for Start-up (RFSU)

- ☑ Phase 1 plant construction

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



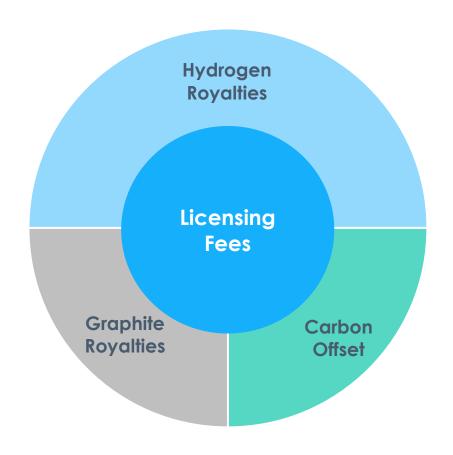
CDP model highlighting hot construction work-scope underway





## "Capex-lite" business model enables early free-cashflow

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



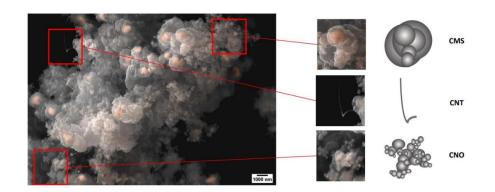
- One technology, two valuable markets
- Flexible combination of license fees and royalties
  - Fixed annual license fees commensurate with plant size
  - Royalties a percentage of H<sub>2</sub> and graphitic carbon revenues
- "Capex-lite" approach





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



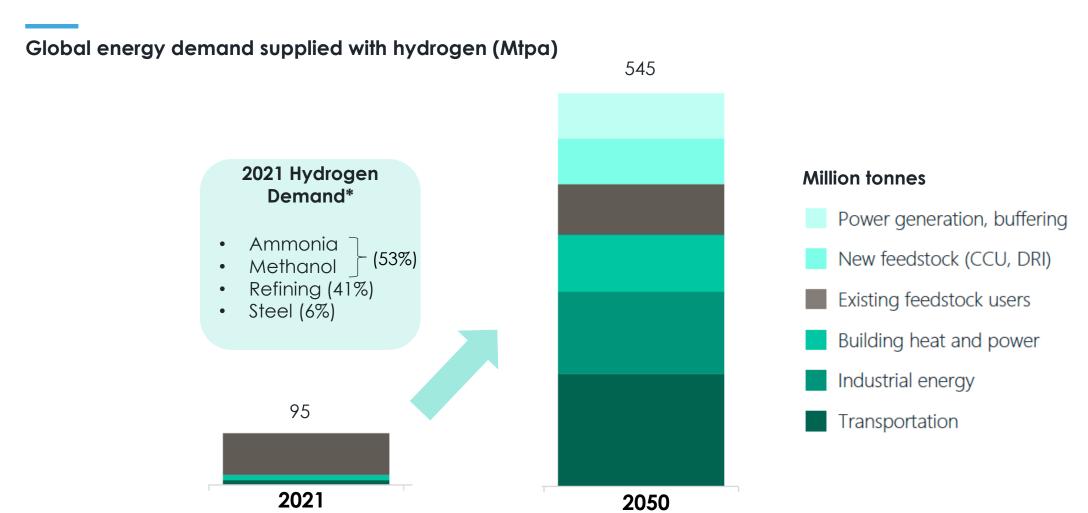
#### Mitsui MOU

- 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





# 7 Hydrogen market set to grow over 5x by 2050



Source: Hydrogen Council & EIA

<sup>\*</sup> Parenthesis represent share of 2021 global hydrogen demand (Goldman Sachs)



### Significant fiscal policy support across key markets

#### Government funding & incentives support Hazer technology commercialisation

#### **POLICY SUPPORT**

### Hydrogen Headstart Program









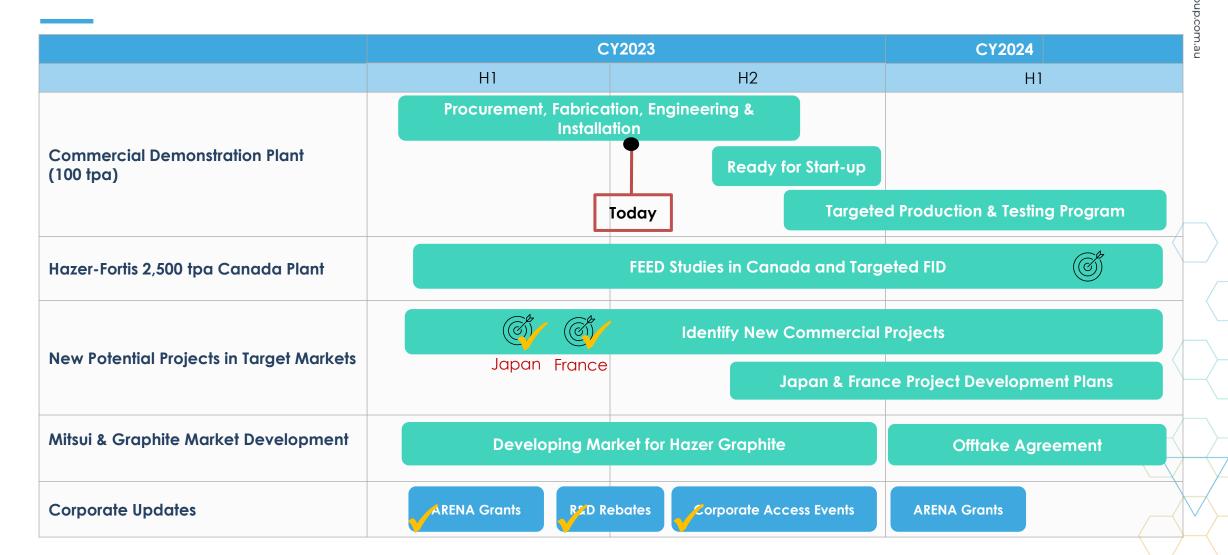
#### HAZER ELIGIBILITY

- ✓ Australia ARENA (\$9mln) & R&D tax support
- ✓ Hydrogen Headstart program commits \$2bln to industry
- √ \$8mIn CleanBC provincial government grant secured
- ✓ Further provincial and federal level funding available
- ✓ Up to \$3/kg H₂ production tax credit
- ✓ Australia-US Climate Compact facilitates access
- ✓ ENGIE PFS confirms Hazer meet EU thresholds for low emissions hydrogen
- ✓ Funding options being explored by partnership
- ✓ Japanese Government support likely for Chubu/Chiyoda Project
- ✓ Funding options being explored by partnership





### **Key Activities**





### 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 CO<sub>2</sub> reductions for hard-to-abate sectors



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



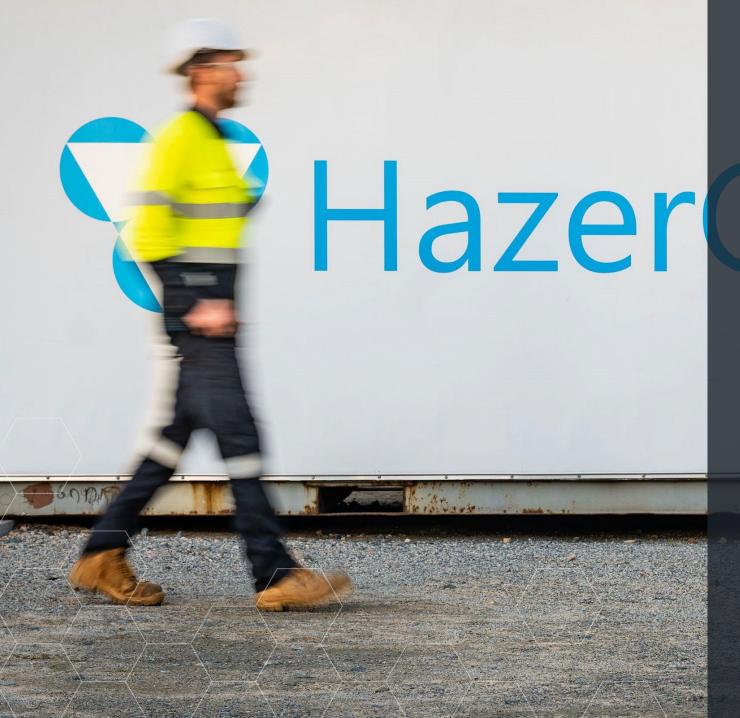
Global partnerships across strategic markets with Tier-1 partners



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



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



Hazer Group Ltd ASX:HZR

> **Investor Relations Enquiries:** contact@hazergroup.com.au

> Media Enquiries: hhowlett@we-worldwide.com













hazergroup.com.au