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# Hazer Group

## Q3FY24 Investor Webinar

Wednesday, 24 April 2024

HazerGroup™

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# Agenda

| Item |
|---|
| Q3 Highlights |
| Commercial Demonstration Plant (CDP) Update |
| Corporate Update |
| 2024 Strategic Priorities |
| Q&A |

# Q3 highlights

**Pivotal quarter with Hazer's flagship demonstration facility commencing hot operation**

### 1 Flagship commercial demonstration facility online

First hydrogen and graphite production achieved at the CDP, a world-first commercial-level demonstration of the Hazer Process.

### 2 CDP performance testing on-track

The CDP has run continuously for 50+ hours in line with the performance test program to validate technology scalability.

### 3 Strong financial position

With the recent capital raise of ~$14M, Hazer is well-funded through the CDP test program and other significant milestones.

### 4 Hazer well-positioned in evolving market

Methane pyrolysis was the talk of CERAWeek confirming the value of hydrogen as a key element in the global energy transition.

# *Commercial Demonstration Plant*

*(CDP)*

# Commercial Demonstration Plant achieves first $H_2$

## Worlds first fully-integrated demonstration of Hazer's technology

CDP Site - Perth, Australia

1 Refer to ASX Announcement dated 31 January 2024 "*Hazer Achieves First Hydrogen and Graphite at Commercial Demonstration Plant*".

### Project Summary & Update

- 100 tpa $H_2$ and ~380 tpa Hazer graphite
- Carbon negative process with biogas feedstock
- First $H_2$ & graphite achieved in Jan 2024[1]
- Campaign based test program throughout 1H CY24 to validate commercial readiness.
  - Operate at test conditions
  - Gather process and performance data
  - Shutdown and inspect key equipment
  - Implement improvements for subsequent runs

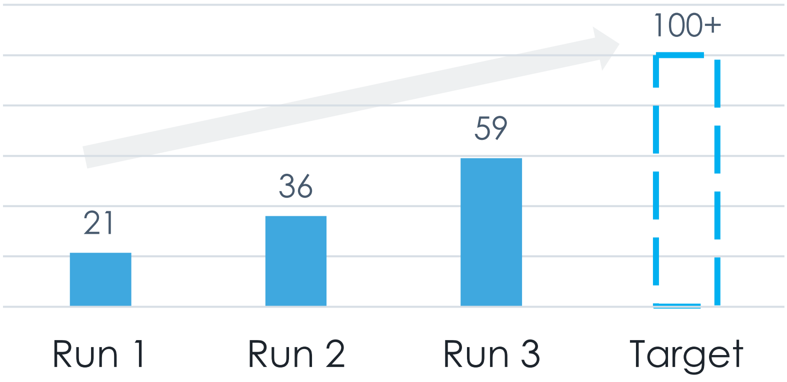
Australian Government
Australian Renewable Energy Agency
ARENA
WATER CORPORATION

# Ongoing results provide confidence in scalability

**First Hydrogen and Graphite production and over 50 hours of continuous hot operation achieved.**

- Initial $H_2$ and graphite production in line with expectations
- Progressive increase in operational run time with Run 3 achieving 59 hours hot biogas operation
- Improved reactor control and stability
- Further work completed after Run 3 on optimising auxiliary equipment including catalyst feed system

CDP Continuous Hot Biogas Operation (hrs)




**Hazer graphite collection sample from Run 1**

Preparation underway for extended duration runs in line with test program schedule

# CDP test program delivery on track

## Targeting commercial deployment readiness in 2024

**Commercial Demonstration Plant (CDP)**

CDP Site - Perth, Australia

### Hydrogen and Graphite Production
- ■ (Complete) Produce hydrogen and graphite
- ■ (On Track) High-volumes of graphite for product qualification

### Continuous Operation
- ■ (Complete) 24hr run completed (Run 3, 59 hours)
- ■ (On Track) 100+hrs extended operation run
- ■ (On Track) Solids handling demonstration

### Scale-up validation
- ■ (On Track) Validate reactor sizing / $H_2$ production
- ■ (On Track) Demonstrate graphite purity and catalyst consumption requirement

■ Complete ■ On Track

**Global Commercial Projects**

FORTIS BC

CHIYODA CORPORATION

CHUBU Electric Power

engie

# Corporate Update

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# Top 5 Takeaways from CERAWeek

## CERAWeek[1] - the "Super Bowl" of Energy

1. **"Energy is not the enemy – emissions are the enemy". Tackling climate change and decarbonisation is a long game;**
   - Narrative centred on the energy transition and consistently it's not an "or" but an "and" - molecule and electron solutions are required.
   - Demand for oil/gas and liquids is growing at pace. Today's energy mix is still 96% fossil fuels and 4% renewables.

2. **Gas (LNG, natural gas) is a transition fuel and a long-term fuel**
   - Many proof points – LNG demand growth, US considering lifting their LNG export moratorium.
   - Focus needs to be on reducing emissions rather than replacing hydrocarbons - "abandoning the fantasy of phasing out oil/gas".

3. **Breakthrough technologies, like the Hazer Process, are key enablers for the energy transition**
   - Technology plays a critical role in tackling climate change and enabling an (affordable) transition.
   - Hard truths on CCUS and renewables

4. **Methane Pyrolysis is on the map! Hydrogen is crucial for industry (over mobility) with cost an important consideration.**
   - Broad consensus that the cost of $H_2$ production and willingness to pay for a "green/clean" premium are important considerations.
   - Industry and decarbonising hard-to-abate sectors should be the focus rather than mobility.

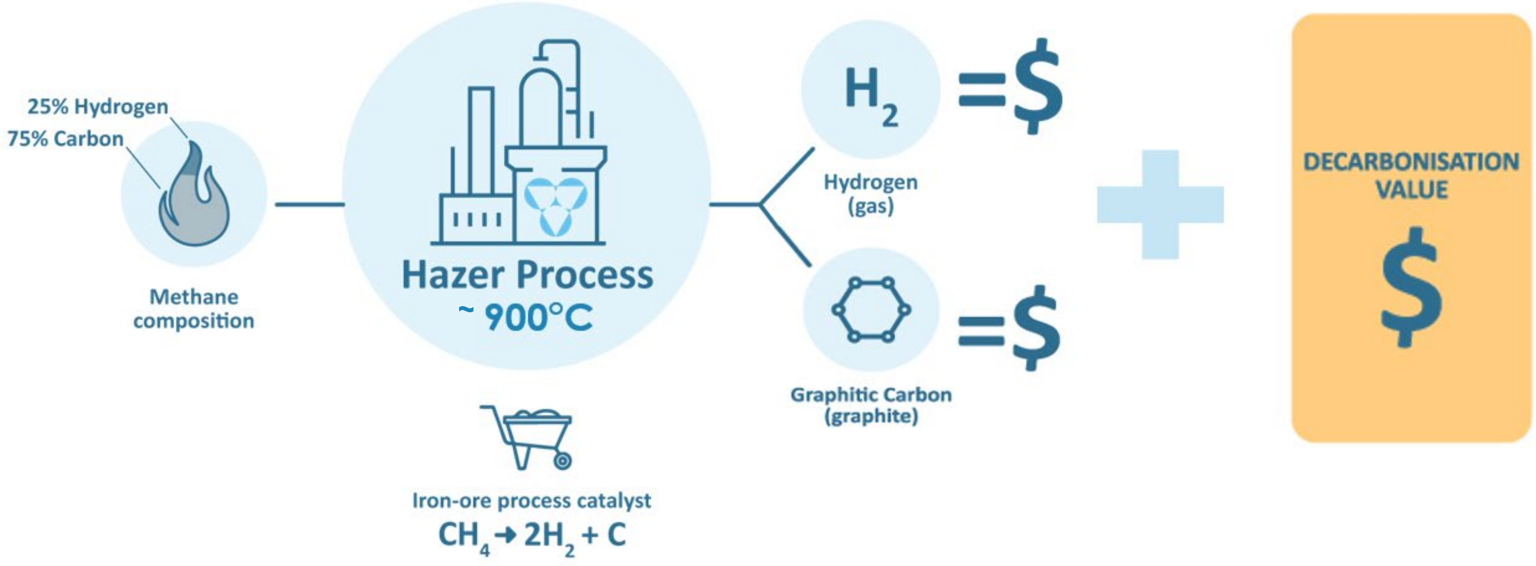
5. **The energy transition is not free, it requires abundant funding from industry and governments;**
   - Crucial role for the existing industries to support the funding of the energy transition coupled with the capital markets and competitive financing.

[1]Cambridge Energy Research Associates (CERA) Week is the company's annual conference held in Houston, Texas and attended by CEO's and Ministers from global energy and utilities, as well as automotive, manufacturing, policy and financial communities, along with a growing presence of technology providers.

# Hazer's competitive technology advantage

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

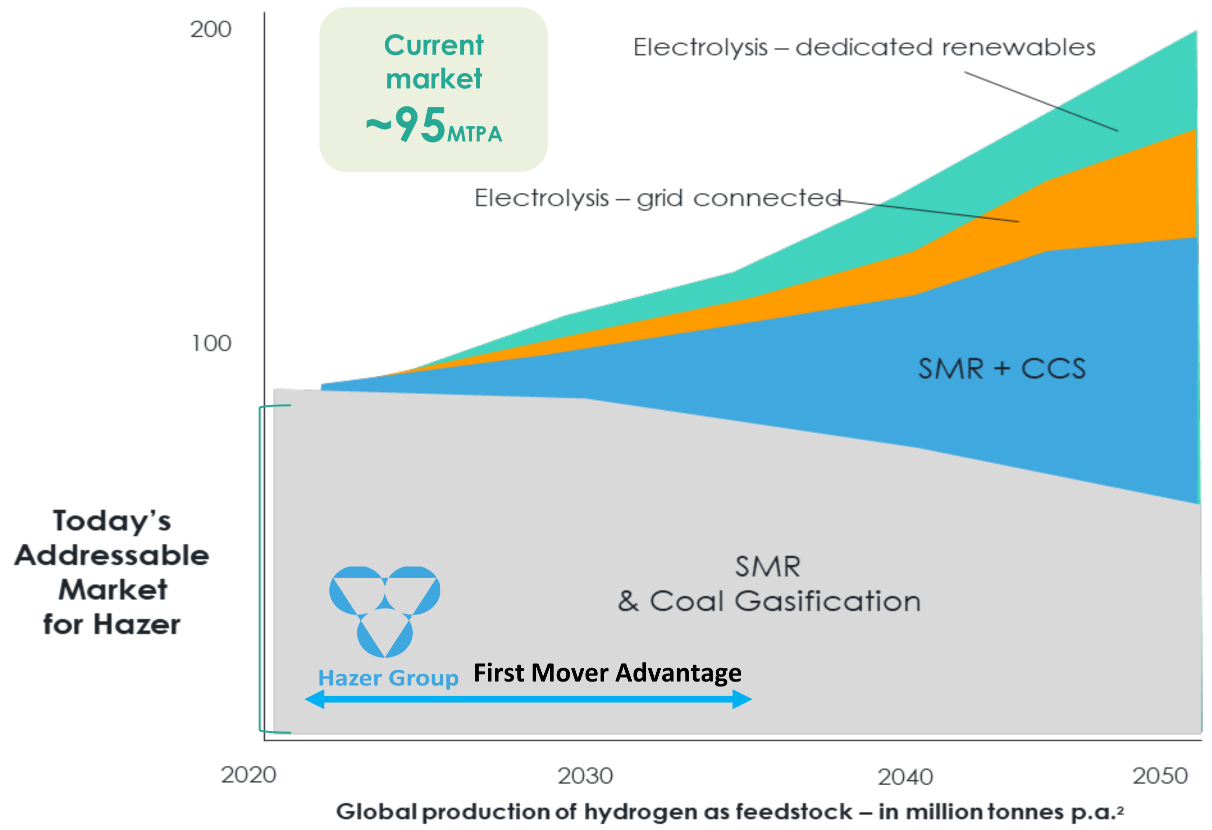
- Hazer Group Limited is a technology development company undertaking the commercialisation of the Hazer Process
- The Hazer Process enables low temperature conversion of natural gas and similar methane feedstocks, into hydrogen and high-quality graphite, using iron ore as a process catalyst




**Fluidised bed reactor is proven technology re-purposed from refining and metallurgical industries, enabling scalability**

# Hydrogen production technology comparison

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




### Existing Technologies

**Steam Methane Reforming (SMR)**

**Significant $CO_2$ emissions**

- Most widely used process for $H_2$ generation (~95%)
- High $CO_2$ 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 $CO_2$ sequestration

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

[2]DNV (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

# 2024 Strategic Priorities

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# 2024 strategic priorities

## Multiple near-term catalysts to unlock value in our technology

**Commercialising Technology**

1. CDP online and complete test program to validate commercial readiness
2. Advance Hazer Graphite offtake opportunities

**Accelerate Scale-up**

3. Deliver Canada commercial arrangements & project development decision
4. Progress France & Japan commercial projects

**Growth & Monetisation**

5. Advance strategic partnerships in hard-to-abate sectors incl. green steel
6. Continue to assess licensing deals and other strategic opportunities

# Compelling investment case

- Advanced, disruptive clean hydrogen technology with strong competitive advantage
- Co-located with end-user infrastructure enabling shorter pathway to $CO_2$ reductions for hard-to-abate sectors
- "Capex-lite" license model unlocks early cash-flow and attractive returns
- Tier-1, global partnerships across strategic markets
- 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)

# Q&A


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