



**ECT**

ENVIRONMENTAL CLEAN  
TECHNOLOGIES LIMITED

Annual General Meeting

**Vision 2023**

Bacchus Marsh Project

18 November 2022

# Disclaimer

Environmental Clean Technologies Limited ("ECT" or "the Company") has taken all reasonable care in compiling and producing the information contained in this presentation. The Company will not be responsible for any loss or damage arising from the use of the information contained in this presentation. The information provided should not be used as a substitute for seeking independent professional advice in making an investment decision involving Environmental Clean Technologies Limited. Environmental Clean Technologies Limited makes no representation or warranty, express or implied, as to the accuracy, reliability, or completeness of the information provided. Environmental Clean Technologies Limited and its respective directors, employees, agents and consultants shall have no liability (including liability to any person by reason of negligence or negligent misstatement) for any statements, opinions, information, or matters, express or implied arising out of, contained in or derived from, or any omissions from this presentation.

This presentation contains "forward looking statements" which involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of ECT, industry results or general economic conditions, to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. In particular, certain forward looking statements contained in this material reflect the current expectations of management of the Company regarding among other things: (i) our future growth, results of operations, performance and business prospects and opportunities; (ii) expectations regarding the size of the market and installed capacity of our project plants; (iii) expectations regarding market prices and costs; and (iv) expectations regarding market trends in relation to certain relevant commodities, including benchmark thermal coal and metallurgical coal prices and foreign currency exchange rates.

Forward looking statements are only predictions and are not guarantees of performance. Wherever possible, words such as "may," "would," "could," "will," "anticipate," "believe," "plan," "expect," "intend," "estimate," "aim," "endeavour" and similar expressions have been used to identify these forward looking statements. These statements reflect the Corporation's current expectations regarding future events and operating performance, and speak only as of the date of this material. Forward looking statements involve significant known and unknown risks, uncertainties, assumptions and other factors that could cause our actual results, performance or achievements to be materially different from any future trends, results, performance or achievements that may be expressed or implied by the forward looking statements, including, without limitation, changes in commodity prices and costs of materials, changes in interest and currency exchange rates, inaccurate geological and coal quality assumptions (including with respect to size, physical and chemical characteristics, and recoverability of reserves and resources), unanticipated operational difficulties (including failure of plant, equipment or processes to operate in accordance with specifications or expectations, cost escalation, unavailability of materials and equipment, delays in the receipt of government and other required approvals, and environmental matters), political risk and social unrest, and changes in general economic conditions or conditions in the financial markets or the world coal, iron and steel industries.

The materiality of these risks and uncertainties may increase correspondingly as a forward looking statement speaks to expectations further in time. Although the forward looking statements contained in this material are based upon what the Company believes to be reasonable assumptions, the Company cannot assure investors that actual results will be consistent with these forward looking statements. These forward looking statements are made as of the date of this material and are expressly qualified in their entirety by this cautionary statement. We do not intend, and do not assume any obligation, to update or revise these forward looking statements, unless otherwise required by law. Prospective purchasers are cautioned not to place undue reliance on forward looking statements. This presentation is for information purposes only and does not constitute an offer to sell or a solicitation to buy the securities referred to herein.

# COLDry – Focus on Commercial Demonstration



2023

**OPTIMAL**

**Panasonic**

  
**CALLEJA**  
GROUP

**GRAPHENEX**

**GDT**  
GREEN DISTILLATION TECHNOLOGIES CORPORATION LTD

 **Federation**  
University

**INVEST VICTORIA**

 **EnergyAustralia**

# COLDry – Focus on Commercial Demonstration

In 2022 ECT has been addressing many of the technical risks associated with COLDry, such as:

- An equipment scale increase of up to 10 times from the previous pilot plant
- Processing equipment integration
- Increased design efficiency of the conditioning system
- Meeting production pellet quality standards
- The site supporting new infrastructure

ECT is now focused on the commercial demonstration and integration of its highly efficient, patented drying technology.

Our aim in 2023 is to:

- Add downstream hydrogen and char production (Phase 2)
- Finalise and fix key inputs like electricity, waste heat and feedstock
- Add collaborative partnerships (like Optimal, Panasonic, GrapheneX, and GDT)
- Establish off-take partnerships





# Viridian Hydrogen

Better than blue.

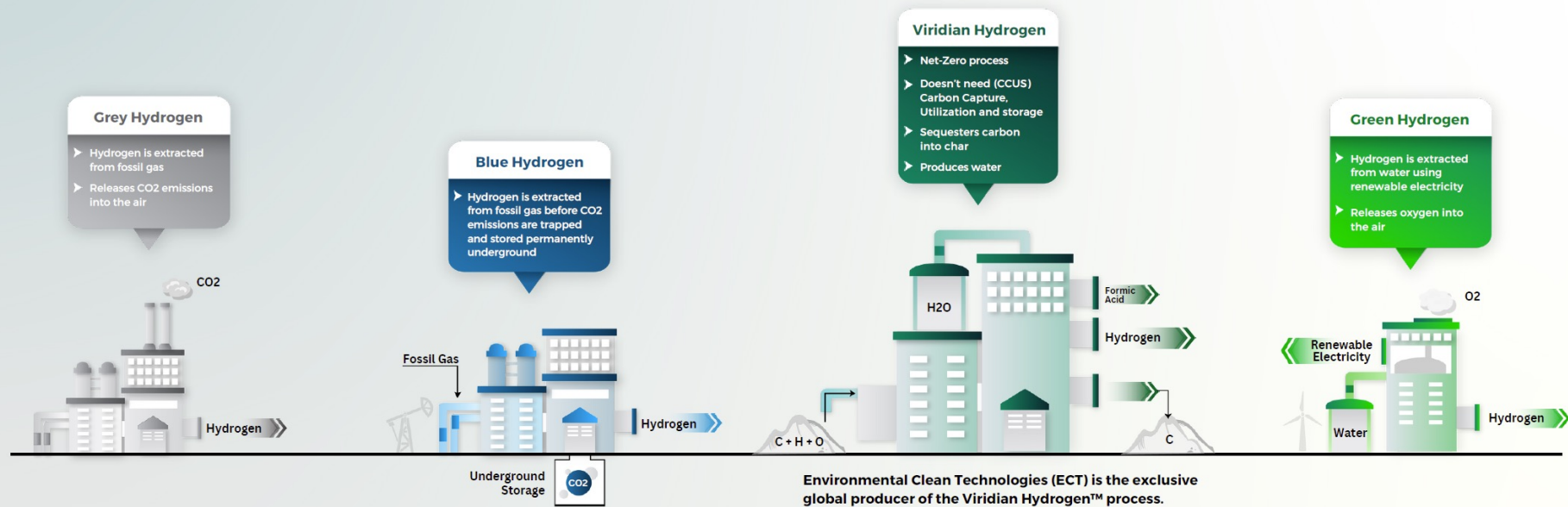
Cheaper than green.

Transition to zero that's reliable and clean.



# Better than blue. Cheaper than green.

## How Hydrogen is Produced - The Differences





# Introducing our first **Viridian Hydrogen** project at Bacchus Marsh

1. COLDry zero-emission drying
2. Pyrolysis kiln
3. Syngas processing
4. H<sub>2</sub> storage
5. Char silo
6. COLDry silo
7. Lignite bunker
8. Biomass bunker
9. 10MW Multifeed turbine
10. ECT workshop
11. GrapheneX R&D centre
12. H<sub>2</sub> & EV charging station
13. 3MW Solar system
14. Data centre (basement) - waste heat
15. Panasonic Fuel Cells
16. Water Capture
17. Electrolyser

Artists' impression of the completed project at Bacchus Marsh, see end note for further details





# Viridian Hydrogen: Environmental Credentials

- Lower CO<sub>2</sub> emissions than "blue", "turquoise", and "grey" hydrogen
- Carbon is sequestered into char which is then used to improve soil health
- Water captured from COLDry process
- Net zero hydrogen
- Further environmental enhancements via:
  - Solar PV array to generate renewable electricity
  - Electrolyser to consume renewable power and water from COLDry to produce green hydrogen

Our Viridian Hydrogen process allows for cost-effective integration with renewables to deliver the best of both worlds – cost-effectiveness and net zero emissions



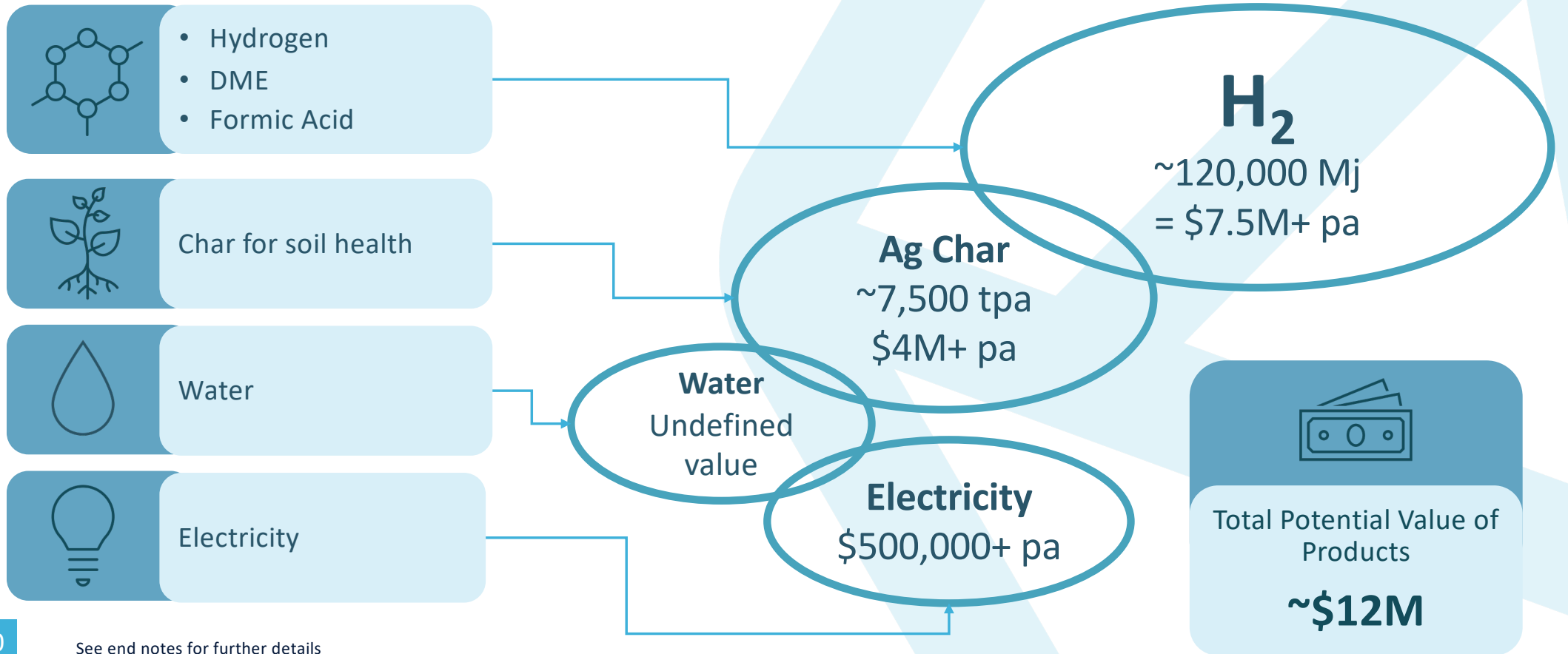
# Viridian Hydrogen project

## Commercial Inputs

- Cost-effective electricity with co-generation
- Multiple generation sources allow for flexible despatch and load management inside an on-site microgrid.
- Waste heat – partnering with industries of the future (like data centres) to deliver zero-cost waste heat
- Lignite - acting as a reliable and stable chemical baseload to ensure efficient, steady-state operation.
- Biomass - targeting biomass waste that pays a disposal fee.

# Viridian Hydrogen

## Bacchus Marsh project Commercial Outputs and Values





# ECT

ENVIRONMENTAL CLEAN  
TECHNOLOGIES LIMITED



*“ECT is only as strong as its people. Our people are our staff, our shareholders, our customers and our partners. These are our stakeholders. We hope that with strong cultural leadership backed by openness and transparency we build a stakeholder network of trust, commitment and courage. ECT aims to embody this in our ESG principles.”*

Glenn Fozard  
Managing Director

**ECT bridges the gap between today's high emissions use of resources and tomorrow's net zero emissions world.**

[ectltd.com.au](http://ectltd.com.au)



# End Notes

- Slide 7 Artists' impression provides a vision for the Bacchus Marsh site:
  - 1: COLDry demonstration plant is installed as part of Phase 1 and currently proceeding through wet commissioning
  - 2-5: components of Phase 2, in the design and procurement phase but yet to be installed
  - 6: COLDry storage silo is installed and functional
  - 7 & 10: Lignite storage bunker and plant workshop, installed
  - 14: Waste heat – currently being demonstrated at small scale
  - 8, 9 & 11-13, 15-17: components of Phase 2, yet to be installed
- Slide 8 Commercial Outputs and Values – Assumptions:
  - COLDry plant output capacity of 25,000-30,000 tonnes per annum
  - Hydrogen: 1000 tonnes at a market value of ~AU\$7.5 per kg  
<https://www.pv-magazine-australia.com/2022/06/01/green-hydrogen-price-may-drop-to-7-5-kg-by-2025/>
  - Ag Char: ~7,500 tonnes at an estimated market value of \$530 per tonne  
Based on internal estimates drawn from similar product specifications in the market e.g. [www.farmchar.com.au](http://www.farmchar.com.au).
  - Electricity: Estimated savings and grid sales based on an average rate of \$0.15c per kWh