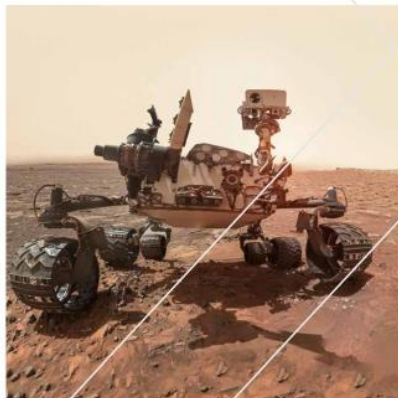


# Synthesising science and commerce to accelerate the development of tomorrow's clean energy

November 2023





# Introduction to entX

entX has assembled a world-class team of scientists specialising in tomorrow's clean energy technologies. By combining this exceptional skill base with leading-edge technology, intellectual property ownership, strong financial backing and highly experienced management, entX continues to identify, develop and commercialise clean energy solutions.

The Company's over-arching strategy is to utilise its exceptional intellectual and technical property to deliver clean energy which is more sustainable, efficient, effective and reliable than anything offered today.



**Using clever science and cutting-edge technology to  
create tomorrow's clean energy solutions**



# Executive Summary | entX



Green Hydrogen



Space and Defence



Medical Isotopes



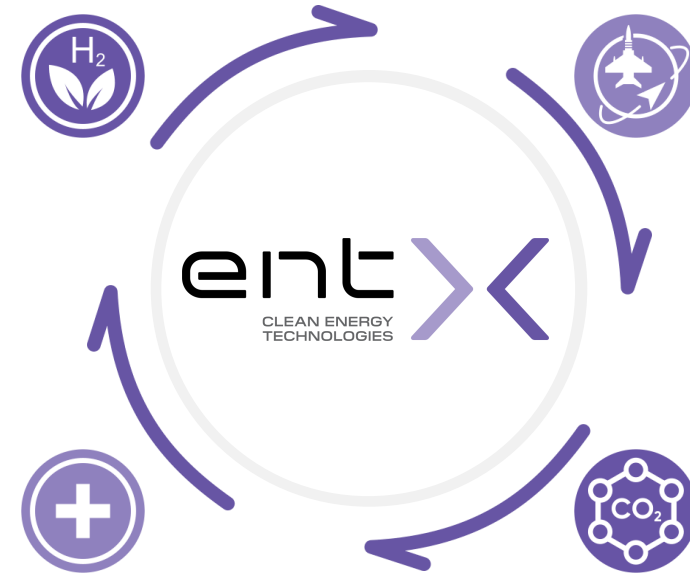
Carbon Transition Technologies



entX is relentlessly focused on the commercialisation of each technology in its portfolio, with value accretive actions the central tenet of all decision making

## entX's Competitive Advantage

- ✓ Aligned to critical industries central to the energy transition
- ✓ Diversification of technologies
- ✓ Experienced management team and board of directors
- ✓ Operating in sectors with high barriers to entry
- ✓ Well positioned to capitalise on government support and incentives
- ✓ Projects are being developed in desirable geographic locations
- ✓ Developing intellectual property as a key avenue to value creation



**Focus on  
Markets**



We analyse markets to spot future trends in Clean Energy Technology which will attract industry and government support for development

**Move Fast**



We turn decisions into action, develop collaborative incubator laboratories and seek progress over perfection

**Play to Win**



We aim high, measure our results through achievements and industry validation through commercial uptake

**Create value**



We continue to innovate and grow our technologies, through prudent investment in our people, processes and technologies to optimise our projects and maximise shareholder value



# Our people

## Management



**Bryn Jones**  
*Managing Director*



**Dr Julian Kelly**  
*Chief Technical Officer*



**Dr Massey de los Reyes**  
*Principle Scientist*



**Dr Scott Edwards**  
*General Manager – Generation Technologies*



**Damien Connor**  
*CFO & Company Secretary*



**Leigh Whicker**  
*Commercial Manager*



**Glenn Toogood**  
*General Manager Hydrogen & Clean Fuels*



Select Previous Experience



## Board of Directors



3.0%

**Tony Kiernan**  
*LLB  
Chairman*



3.3%

**Bryn Jones**  
*BAppSc, MMinEng, FAustMM  
Managing Director*



**Lucy Gauvin**  
*BCom (CorpFin), LLB  
Non-Exec Director*



12.8%

**Tim Goyder**  
*Non-Exec Director*



2.4%

**Tim Wise**  
*BSc  
Non-Exec Director*

% = Director's beneficial interest<sup>1</sup>

## 2. entX's Pillars



# Four Distinct Areas of Focus

## Green Hydrogen

- ▶ Developing growth opportunities across industrial decarbonisation (KCA Tissue Mill Project) and hydrogen salt storage (WEGH Project)
  - ▶ (Pages 10-12)

## Medical Isotopes

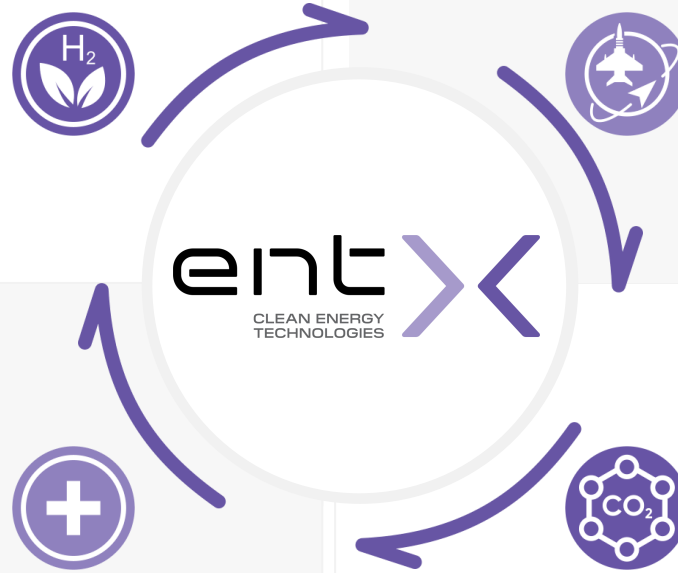
- ▶ Developing secure Australian supply chains for vital and emerging medical isotopes used in the diagnosis and treatment of diseases in the fields of cardiology, neurology and oncology
  - ▶ (Pages 16-17)

## Space and Defence

- ▶ Specific technologies focused on improved long term energy supply for space missions. Current technologies are GenX (fuel free power generation) and RHU (provision of survival heat)
  - ▶ (Pages 13-15)

## Carbon Transition Technologies

- ▶ A clean energy incubator focused on developing and conceptualising new technology opportunities for rapid testing and evaluation. Current technologies include CarbonX (CO<sub>2</sub> utilisation), the *PhosEnergy Process* and GenT (conversion of waste heat into energy).
  - ▶ See (Pages 18-19)



Each pillar operates independently from one another, with separate teams, funding models and resources allocated to each pillar



entX's operating structure has been created with a view of maximising flexibility, in which individual pillars can be spun-out, sold down, accelerated or de-prioritised, based on optimising commercial outcomes, and thus shareholder value, without impacting the operations of the remaining pillars



# Green Hydrogen Strategy

The entX Green Hydrogen pillar is built on two key projects:

- 1 **Industrial Decarbonisation** – Kimberly-Clark Australia Tissue Mill
- 2 **Industrial Scale Hydrogen Storage** – WEGH Project





# Industrial Decarbonisation – KCA Tissue Mill

The KCA Project focuses on developing industrial hydrogen decarbonisation capability to off takers. This process provides entX a wealth of opportunities to apply our intellectual property in a commercial setting and deploy this capability across other industrial manufacturing scenarios.



## Triggers for valuation step change



1

Feasibility study completion

2

Sign binding offtake agreement with KCA

3

Commence hydrogen production



# Large Scale Green Hydrogen Storage WEGH Project



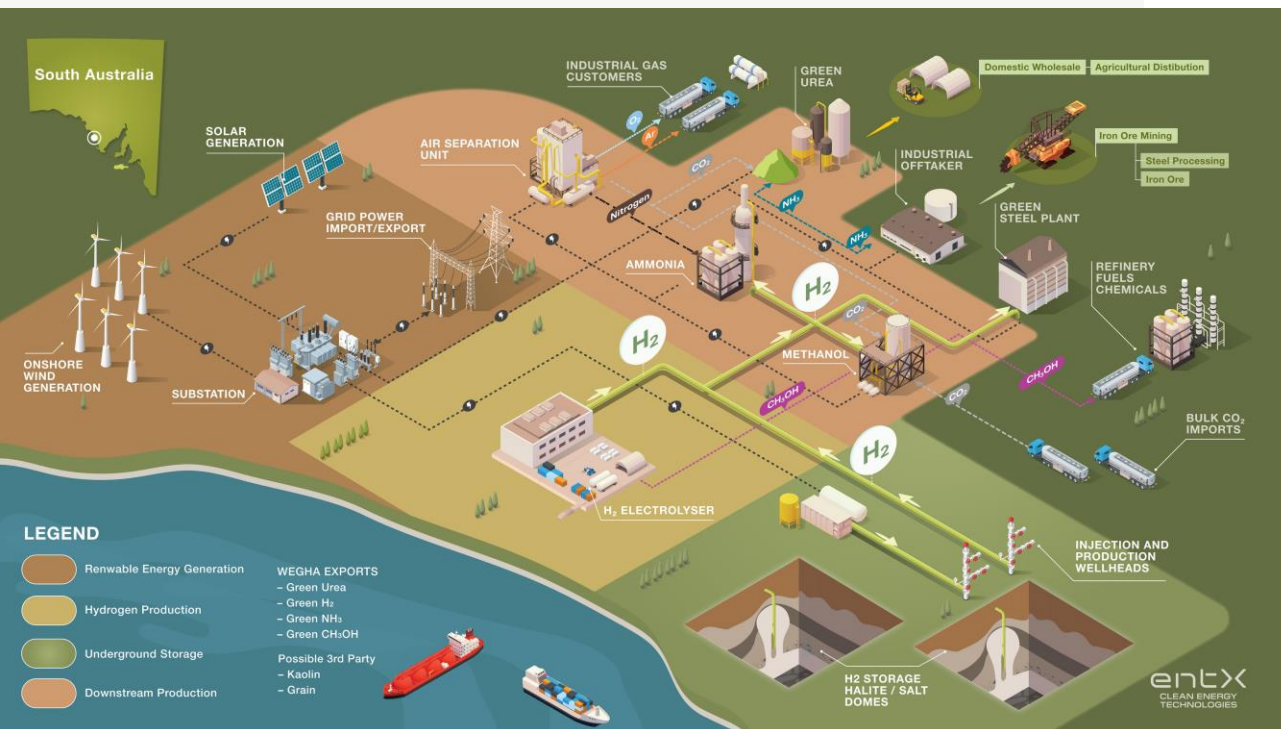
The Company has identified and secured a rare opportunity in the development of a potential giga-scale hydrogen project<sup>1</sup> – with the potential for large-scale underground hydrogen storage in salt caverns. entX is uniquely positioned to provide energy to downstream partner facilities, driving future revenue streams.

Renewable energy potential for the region

**40GW**

entX's forecast market share of hydrogen storage in the region

**90%+**



## Triggers for valuation step change

1

Confirmation of onshore salt deposits

2

Complete WEGH project feasibility

3

Confirmation of salt storage resource volume

4

Engage preferred development partner

Note: This graphic is for illustrative purposes only.

1. CSIRO: Australian salt basins – Options for underground hydrogen storage



# Space and Defence

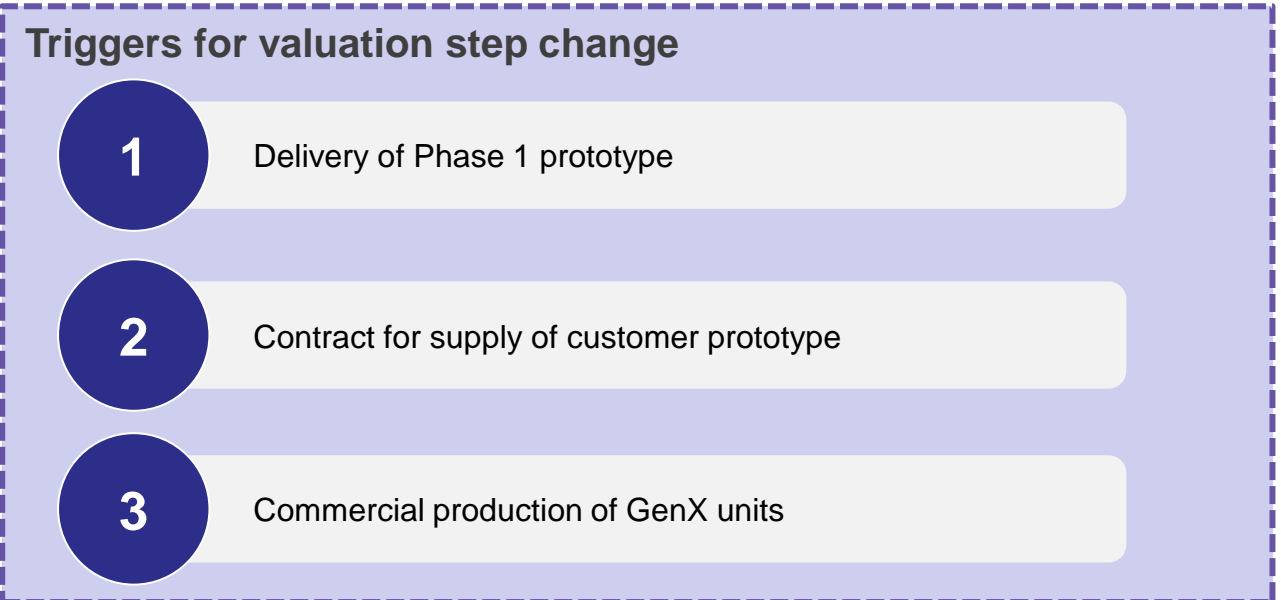
Improving the length and duration of space missions via two specific projects:

- 1 **GenX** – Enabling platform that unlocks and enables new paradigms in long term secure power supplies for the space and defence sector
- 2 **Radioisotope Heater Units (RHU)** – Providing vital survival heat to lunar and space missions





GenX addresses the need for reliable, long-lasting power solutions for complex space missions and remote terrestrial applications, offering a betavoltaic technology<sup>1</sup> that is a maintenance-free, fuel-free power system, revolutionising power management for space, defence and remote sensing.



#### Notes

1. A type of nuclear battery which generates electric current from beta particles (electrons) emitted from a radioactive source, using semiconductor junctions.

2. Haver Analytics - Morgan Stanley Research





# Radioisotope Heat Units (RHUs)



**RHUs have been used in the global space industry for many years to provide internal heat to keep electronics warm in extreme environments such as lunar night and deep space.**

## Triggers for valuation step change



1

Successful completion of prototype development

2

Successful completion of commercial production feasibility

3

Signing of commercial contract to develop lunar project



# Medical Isotopes

Developing secure Australian supply chains for vital and emerging medical isotopes via two specific projects:

- 1  **$^{177}\text{Lu}$** : Radioisotope for the treatment of neuroendocrine tumours and prostate cancer
- 2  **$^{212}\text{Pb}$** : Targeted Alpha Therapy isotope, projected for rapid uptake in the nuclear medicine sector





entX is developing processes and technologies to feed the exponential growth of the Theragnostic and Targeted Alpha Therapy cancer treatment markets.

## Key Developments



- **Lutitium-177 ( $^{177}\text{Lu}$ )** is currently the most used radiometal for targeted radionuclide therapy due to its commercial availability and the clinical success of a  $^{177}\text{Lu}$ -based peptide for the treatment of neuroendocrine tumors and prostate cancer
- **Lead-212 ( $^{212}\text{Pb}$ )** is an emerging Targeted Alpha Therapy isotope which is projected for rapid uptake in the nuclear medicine sector due to its favourable in-body chemistry

## Triggers for valuation step change

- 1 The conclusion of the demonstrator design
- 2 Signing of supply agreements with customers

## Triggers for valuation step change

- 1 Product validation
- 2 Production of commercial demonstrator quantities
- 3 Signing of supply agreements



# Carbon Transition Technologies





# Carbon Transition Technologies



The Carbon Transition Technologies (CTT) pillar is where the entX team monitors and analyses trends in sector and technology development and conceptualises or acquires new technology opportunities for rapid testing and evaluation.

## The PhosEnergy Process

The Company's foundation technology is the PhosEnergy Process (the "Process"), a patented technology development to recover uranium from phosphate fertiliser production

## CarbonX Process

A ground-breaking, patented technology, which has the potential to profitably convert CO<sub>2</sub> to methanol and other commercial products

## GenT Energy

A thermovoltaic (TV) technology which utilises the GenX electrode system in combination with selected semiconductors – converting infrared radiation (waste heat) into electrical energy

