



**ATCO**

# Green Hydrogen Developments – Australia

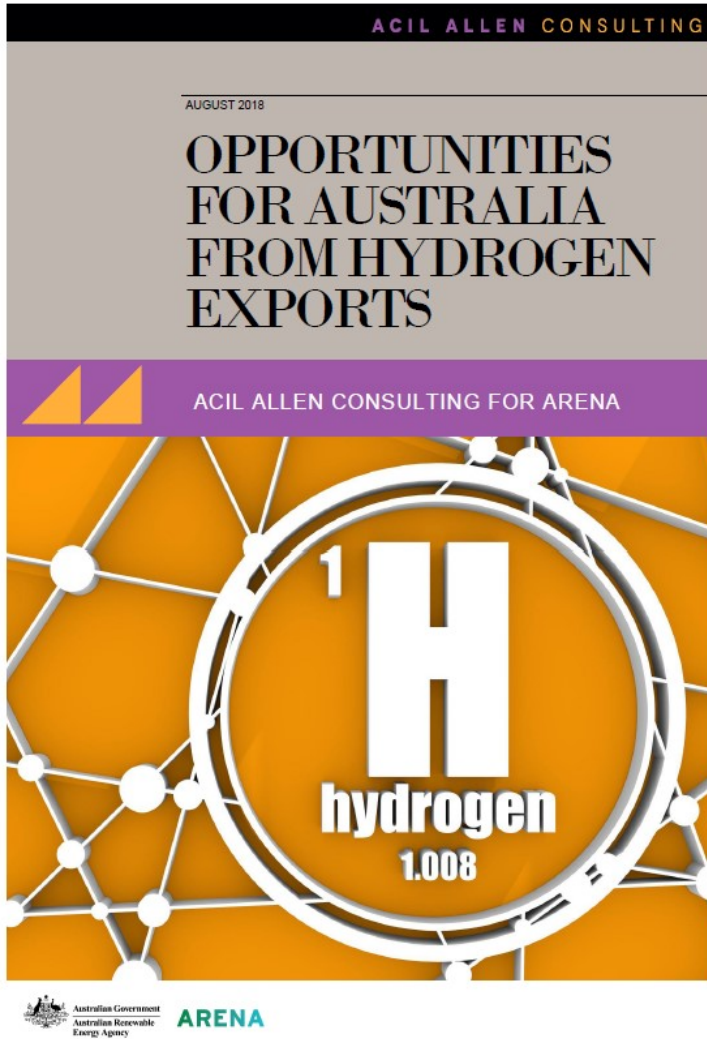
Amy Philbrook, PhD  
Future Fuels and Renewables  
ATCO Australia



# Hydrogen in Australia



# Hydrogen in Australia



## The Export Potential

- 2018 ACIL ALLEN
  - Could contribute \$1.7 billion per annum to the economy and provide 2,800 jobs by 2030
  - Australia is windy and sunny – and fairly empty

## Fossil Replacement

- In 2016, Australia was the biggest net exporter of coal, with 32% of global exports
- 82% of Australian gas production goes to exports
-

# Hydrogen in Australia

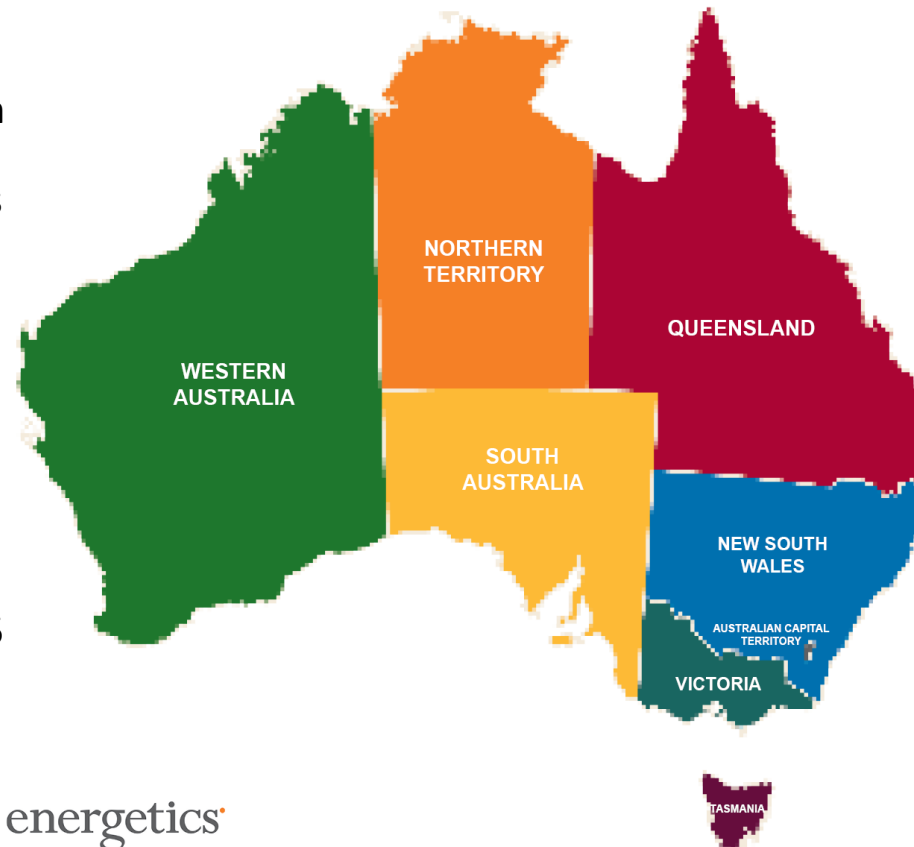
## Federal hydrogen strategy

- Target of under \$2/kg
  - Hydrogen Hub funding opportunities
  - ARENA and CEFC have prioritised hydrogen
- Targeting export market – estimated 7,600 jobs and \$11 billion in GDP in 2050

## WA Hydrogen Strategy

- The 2020 roadmap identified 26 initiatives
- Expressions of Interest (EOI) for its \$10 million Hydrogen Fuelled Transport Program
- Supporting Hydrogen Hub applications - \$117.5 million
  - Oakajee
  - Pilbara

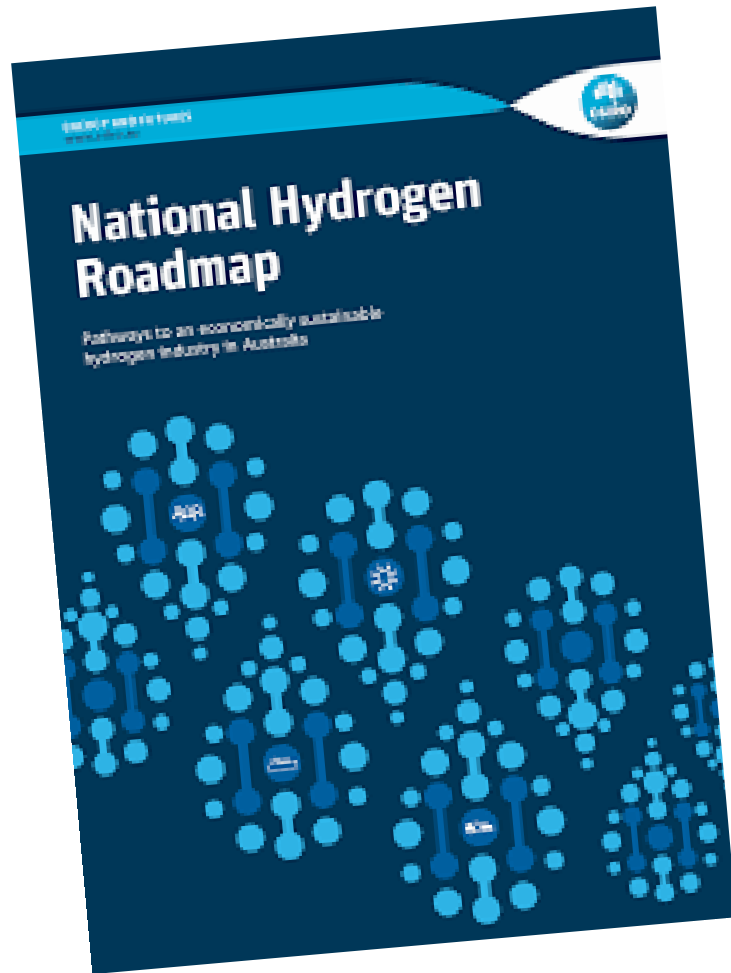
## Emissions reduction, renewable energy and hydrogen development goals by state



energetics

<b>Qld</b>	50% renewable energy by 2030 Net zero emissions by 2050 Hydrogen industry development fund (\$15m) to 2024
<b>NSW</b>	Net zero emissions by 2050 10% of gas from green hydrogen by 2030
<b>ACT</b>	100% renewable energy by 2020 Net zero emissions by 2050 Hydrogen mobility demonstration project
<b>Vic</b>	40% renewable energy by 2025 Net zero emissions by 2050 Victorian Hydrogen Investment Program (VHIP) Coal gasification to hydrogen pilot (Hydrogen Export Supply Chain)
<b>Tas</b>	100% renewable energy by 2020 Net zero emissions by 2050 Hydrogen Action Plan, vision to be 'significant' producer by 2030
<b>SA</b>	75% renewable energy by 2025 Net zero emissions by 2050 2017 Hydrogen Strategy: four key projects, including Australian Gas Networks' demonstration project
<b>WA</b>	Working to set target of net zero emissions by 2050 Renewable Hydrogen Strategy, for export and blending in gas networks and transport Renewable Hydrogen Fund (\$10m)
<b>NT</b>	50% renewable energy by 2030 Net zero emissions by 2050 Strong interest in renewable hydrogen opportunities

# Hydrogen Projects in Australia



## Projects

- Only a handful in operation (sub 2 MW)
- ARENA's 10 MW funding round
  - Three 10 MW projects supported
  - \$103 million of grant funding awarded
- Federal funding round Hydrogen Hubs
  - operation by 2025
  - \$464 million grant program

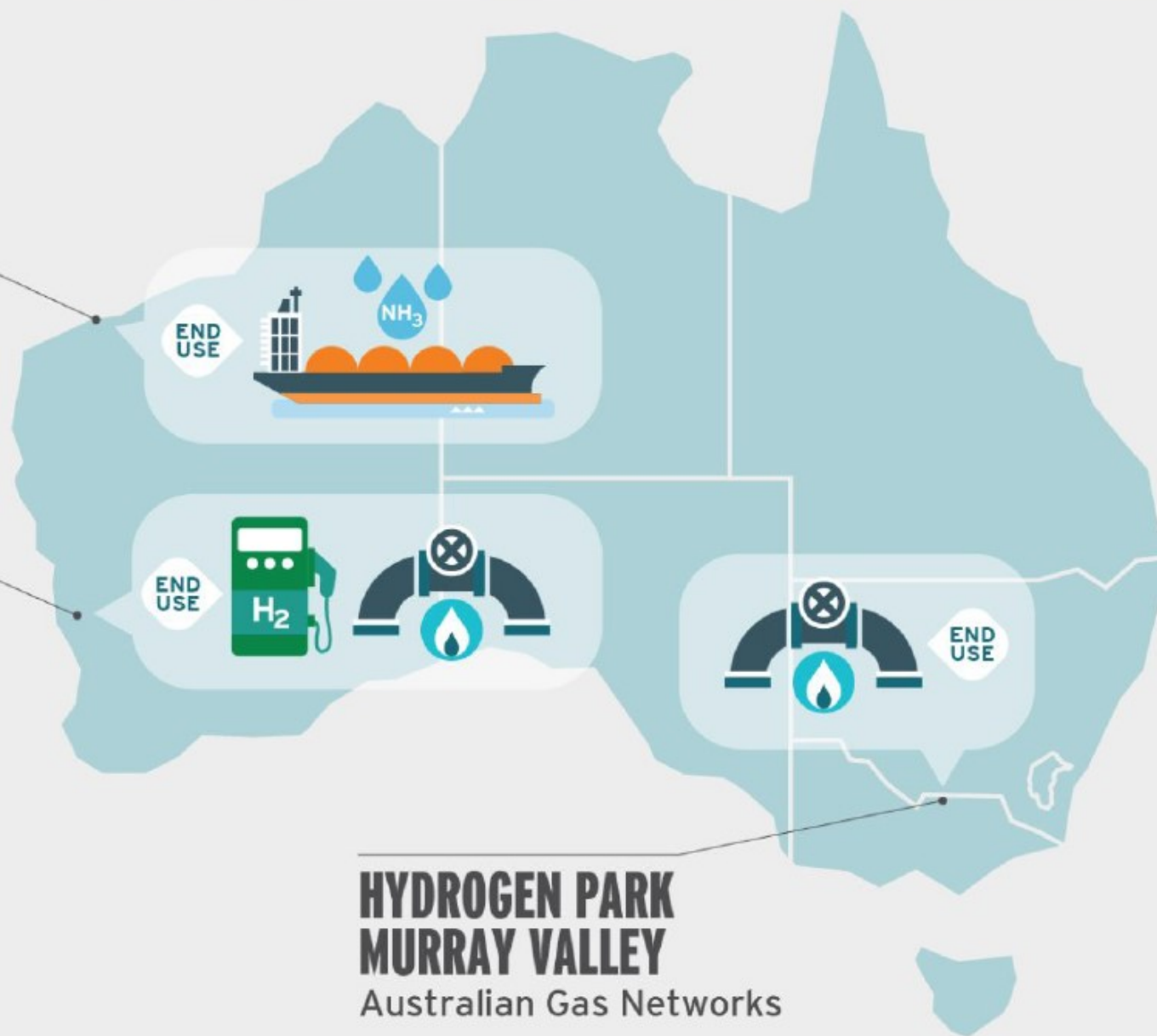


## YURI PROJECT IN THE PILBARA

Engie Renewables  
Australia

## CLEAN ENERGY INNOVATION PARK

ATCO Australia



## HYDROGEN PARK MURRAY VALLEY

Australian Gas Networks

Conditionally approved \$103.3 million in funding to 3 commercial-scale hydrogen projects.

At 10 MW, the electrolyzers in these hydrogen plants will be among the largest built in the world.

These projects will help progress Australia's pathway to achieving the Australian Government's goal of 'H<sub>2</sub> under \$2'.

# Hydrogen at ATCO

**ATCO**



# A GLOBAL COMPANY

Throughout ATCO's  
**70 YEAR+ HISTORY**

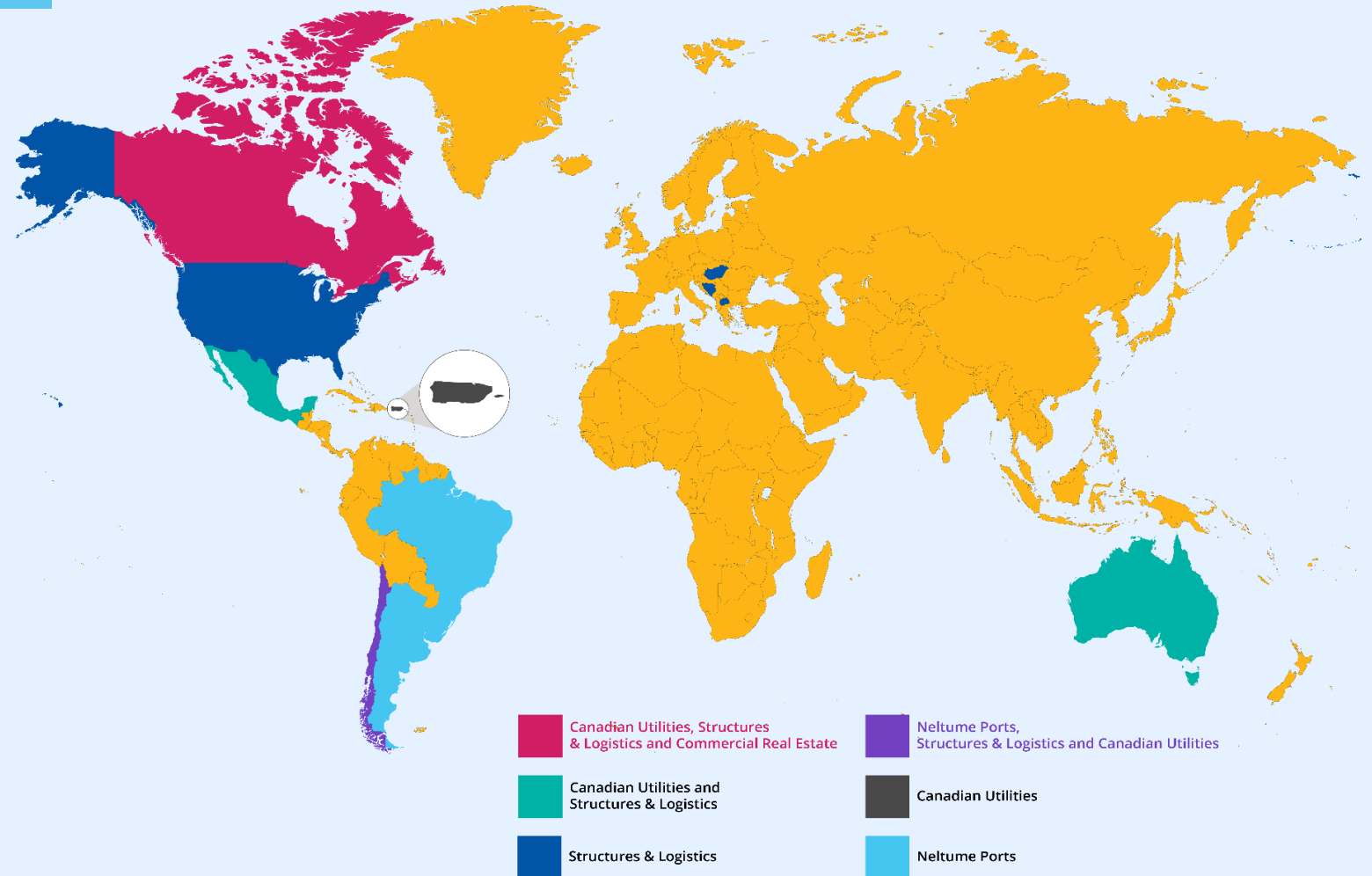
Part of the Australian community for  
**60 YEARS**

Providing products & services in  
**100+ COUNTRIES**

With over  
**6,500 EMPLOYEES**

Assets of  
**\$22 BILLION**

Market cap of  
**\$4 BILLION**





# AUSTRALIA – GAS DISTRIBUTION

ATCO OWN AND MAINTAIN

## WA'S LARGEST GAS NETWORK



MORE THAN

**14,500KMS**

OF PIPELINES



MORE THAN

**780,000**

CONNECTION POINTS

**REGULATED  
& UNREGULATED**  
NETWORKS

MORE THAN



**450**

EMPLOYEES



DISTRIBUTION MAP



- ATCO GAS DIVISION DEPOT
- ATCO GAS DIVISION SERVICE AREA

# ATCO'S CLEAN ENERGY INNOVATION HUB

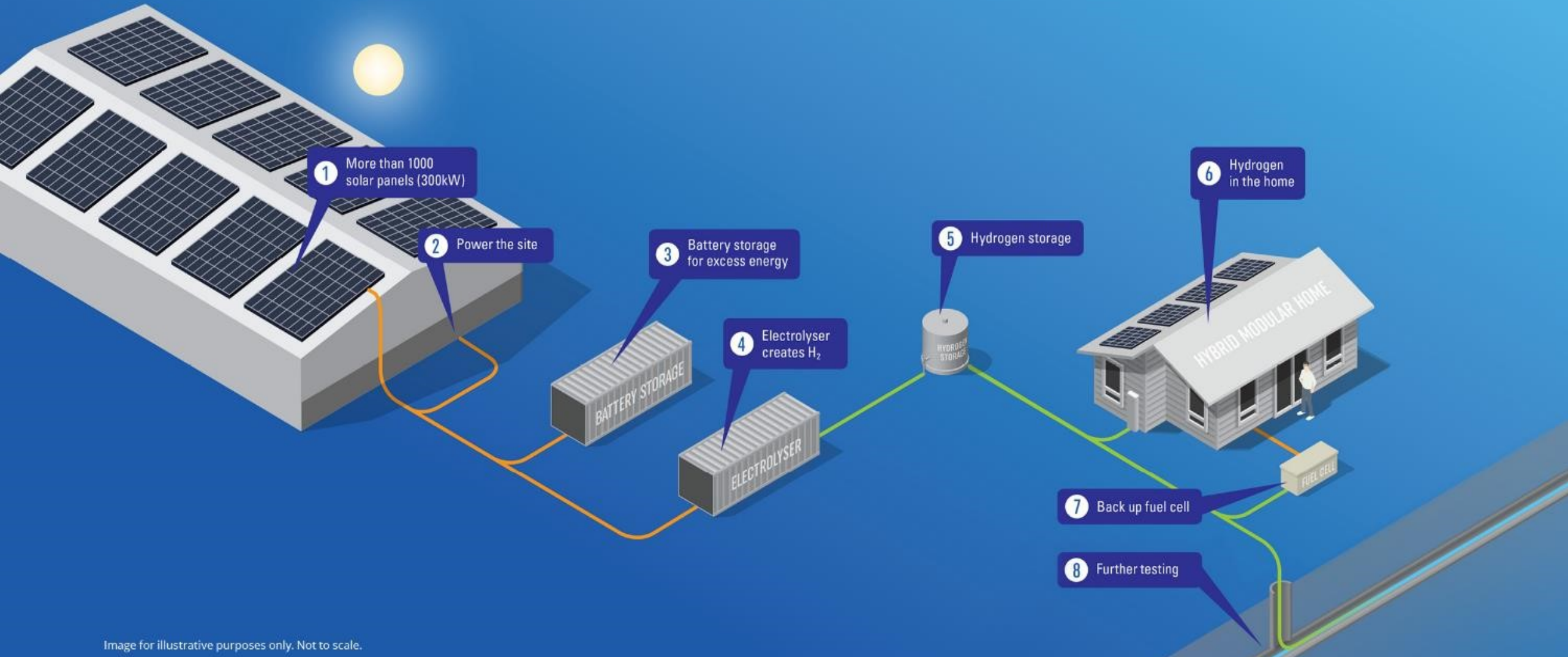


Image for illustrative purposes only. Not to scale.



# CLEAN ENERGY INNOVATION PARK

ATCO in partnership with AGIG construct and operate a 10 MW commercial scale green hydrogen production plant producing **4.0 tonnes of hydrogen per day** in Western Australia. The hydrogen produced will be trucked on a daily basis to the injection / customer transfer points.



## To date:

### Secured \$375K grant from WA Government

- Feasibility Study for CEIP – 10 MW Electrolyser.
- Approximately 4 tons of green hydrogen per day.
- Builds on ATCO's CEIH experience.
- Modular design for expansion and replication.

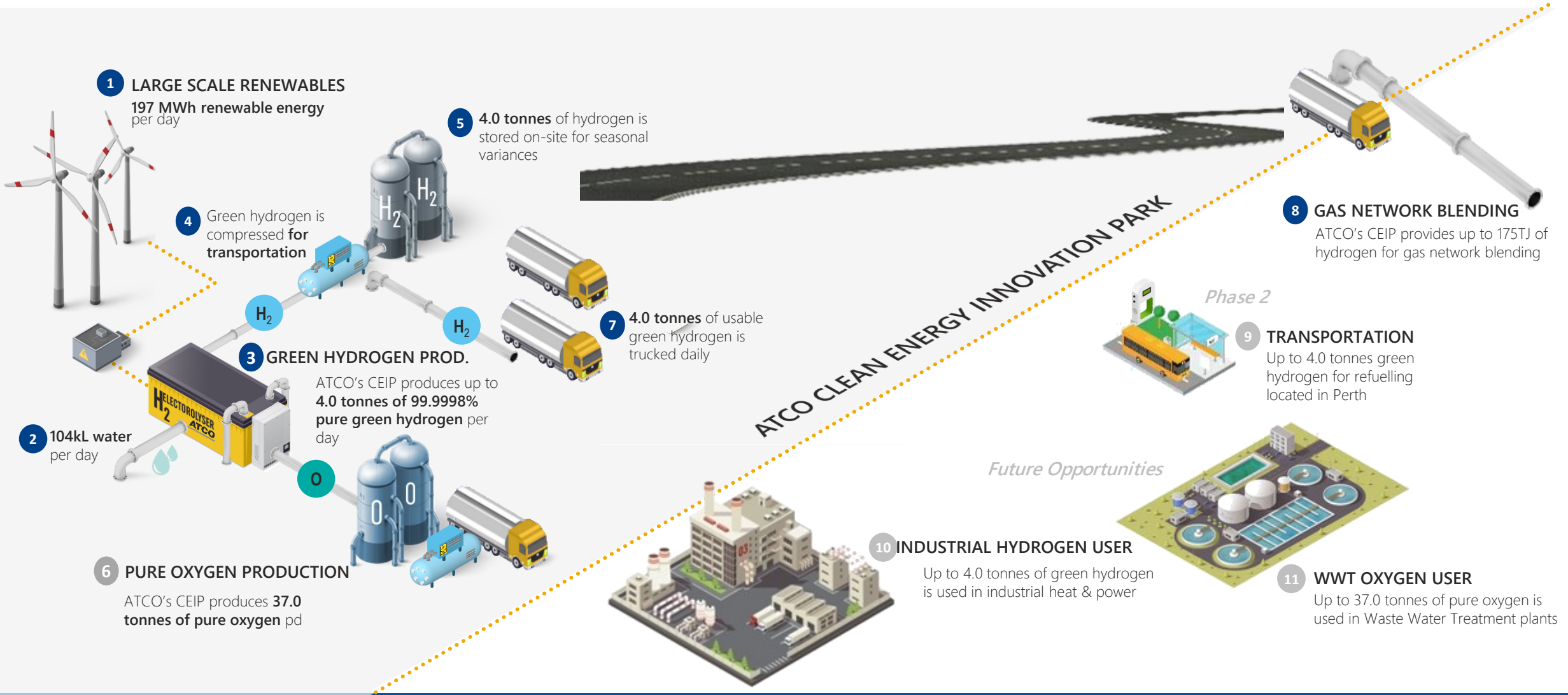
### Secured \$28.7M from Australian Renewable Energy Agency

- Production aimed for Q1 2023.
- Offtake opportunities in industrial use, transport and gas network blending.



**ARENA**

# CLEAN ENERGY INNOVATION PARK





## ATCO Australia

Level 12, 2 Mill Street,  
Perth, WA 6000 Australia

Postal Address:  
PO Box 7182  
Cloisters Square  
WA 6850

**P:** +61 8 6163 5400

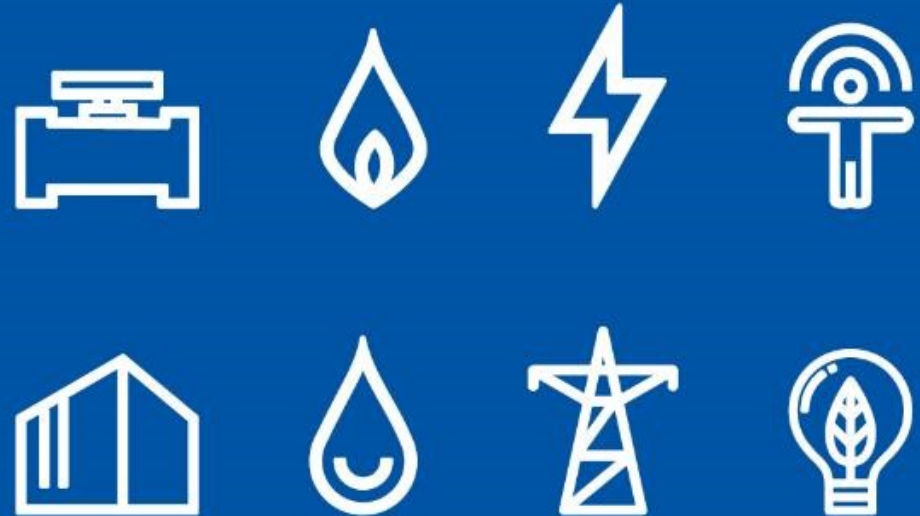
**E:** [enquiries@atco.com.au](mailto:enquiries@atco.com.au)

**W:** [www.atco.com.au](http://www.atco.com.au)

 [@atcogasaustralia](https://www.facebook.com/atcogasaustralia)

 [@atcoaustralia](https://twitter.com/atcoaustralia)

 [search companies: atco-australia](https://www.linkedin.com/company/atco-australia)



**ATCO**