

# **Clean Energy Innovation Hub**

Stevan Green President, ATCO Gas Division

## Who is ATCO | ATCO Global

### Approx. 7,000 employees and assets of \$23 billion



- ELECTRICITY, PIPELINES & LIQUIDS, INVESTMENTS AND STRUCTURES & LOGISTICS
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- NELTUME PORTS AND STRUCTURES & LOGISTICS
- NELTUME PORTS
- STRUCTURES & LOGISTICS



## Who is ATCO | ATCO Australia

ATCO HAS BEEN IN AUSTRALIA FOR MORE THAN 55 YEARS





## Who is ATCO | Gas Division

- Own, operate and maintain WA's largest gas network
- More than 14,000km of pipelines
- 760,000 connection points
- Regulated and unregulated networks
- More than 300 employees







## Gas supply chain





## **Customer Expectations**



- A cleaner energy future is important to them
- They expect ATCO to help make a cleaner energy future a reality







## ATCO's pathway to a cleaner energy future





## **ATCO'S CLEAN ENERGY INNOVATION HUB**









## Hydrogen Development Activity in Australia

#### Over \$200M of investment announced in the past 12 months.

### Some examples (not an exhaustive list)

Business	Project	Location
АТСО	Clean Energy Innovation Hub	WA
AGIG & Siemens	Hydrogen Park SA (HyP SA)	SA
Jemena	Project H2Go	NSW
Kawasaki Heavy Industries (KHI) J- Power, Iwatani Corporation, Marubeni Corporation, Shell & AGL	Hydrogen Energy Supply Chain (HESC)	VIC
Yara & ENGIE	Renewable Hydrogen / Ammonia	WA
CSIRO	Hydrogen Energy Systems Future Science Platform	National
FFCRC	Pre-competitive Cooperative Research	National





EU, Japan and Korea each promoting readiness the hydrogen economy beginning from 2030.

- European Union Energie Park in Mainz Hydrogen energy storage at grid scale. 200 tpa (cf 4 tpa CEIH). ~\$A25M
- Japan are using next year's Tokyo Olympics to showcase zero emission hydrogen technology.
- Korea are planning development of hydrogen infrastructure progressively from 2022-2030.
  - HyNet Project announced to develop 100 hydrogen refueling stations in Korea by 2022 at a cost of A\$168M.
  - Plan to begin importing hydrogen in 2030

Rock fact: The cost of solar power is 55% lower in Australia than in Japan



## **Cost of Production**

In the 1850's Aluminium was more expensive than gold. 100 years later the cost of Aluminium was reduced by 1000 times.

In the 1970's solar panels were 1000 times more expensive than they are today less than half a century later.

How quickly and how far will the cost of hydrogen come down?









## **ATCO's Clean Energy Innovation Hub**

The CEIH project has been made possible with the support of the Australian Renewable Energy Agency and has two components:

1. Research facility to investigate the potential role of hydrogen in the future energy mix.

2. Test bed for micro grids enabled by gas technology, integrating with solar and batteries.





## What we hope to learn

- The impact of hydrogen on our distribution network assets, downstream appliances and safety standards.
- The potential role of hydrogen to complement intermittent renewable energy (wind and solar).
- The economies of scale & opportunities for remote application.
- How to optimise the investment in existing infrastructure in preparation for carbon constrained future.
- Meeting customer needs for low emission fuels and maintaining affordability.



## **ATCO's commitment**



