

# HYDROGEN BLENDING FACT SHEET



## Community Blending Project

### Hydrogen

Hydrogen can be produced by electrolysis, where an electrical current is used to split water (H<sub>2</sub>O) into its basic elements – hydrogen (H<sub>2</sub>) and oxygen (O<sub>2</sub>). When renewable energy is used for this process, renewable hydrogen is produced which does not generate carbon emissions when then utilised as an energy source.

Once produced, hydrogen can be stored within a tank or pipeline for use in a fuel cell to generate electricity, or combusted directly to produce energy and water vapour. The hydrogen can also be blended directly with natural gas for use within existing gas networks.

Renewable hydrogen presents an opportunity for ATCO and Australia to contribute to energy sustainability goals within the energy distribution industry. The use of renewable hydrogen within the existing ATCO network can deliver emissions reductions now and into the future.

### Is Hydrogen Safe?

Yes! As with natural gas, hydrogen can be produced, transported, stored and used safely. Just like natural gas, it must be treated with respect, proper care and handling.

- Hydrogen is a colourless, odourless, tasteless, non-toxic and non-poisonous gas.
- When burned, it produces only heat and water vapour with no carbon emissions.

### ATCO Hydrogen Blending Project

ATCO's Clean Energy Innovation Hub (CEIH) located at our Jandakot Operations Centre has been producing renewable hydrogen since 2019 using solar energy. When necessary, ATCO supplements the solar energy by purchasing electricity, backed by the surrender of Large-scale Generation Certificates (LGCs) to ensure the electricity used to produce our onsite hydrogen is recognised as renewable.

- In December 2022, ATCO began to inject renewable hydrogen (2%) into a portion of the distribution network around Calleya Estate, Treeby Estate and Glen Iris within the City of Cockburn as part of the Hydrogen Blending Project.
- At commissioning the project was one of the largest of its kind in Australia, at around 2,700 customers.
- The blending of renewable hydrogen into the natural gas network has helped achieve the WA Government's goal of distributing hydrogen in the WA gas network by 2022.
- Renewable hydrogen will be blended into the existing distribution network when sufficient gas energy demand is needed by the project area residents.
- Supported by the Western Australian (WA) Government, this project received funding from the Renewable Hydrogen Fund as part of the Western Australian Government's Renewable Hydrogen Strategy.

### Blended Gas Areas

Calleya Estate, Treeby Estate and Glen Iris within the City of Cockburn



**H<sub>2</sub> Possibilities** Hydrogen has the potential to play an important role in a clean energy future.



Blending into the  
Natural Gas network



Industrial



Export



Power Generation



Heavy Transport



Storage

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## Community Blending Project

### How will this impact my Home or Business?

- Extensive testing has found that hydrogen blended into natural gas systems at ratios up to 10% does not impact modern appliances in Australia. ATCO is confident there will be no impact to appliances due to the small amount of hydrogen that the project will blend into the network.
- There will be no interruption to your gas supply as a result of the hydrogen blending project.
- Residents will not notice any change in your gas supply at up to 10% blended gas. The look, sound and smell of the gas will remain consistent.
- There will be a minor increase in the volume of gas needed throughout the network in order to provide the same amount of heat to homes and businesses. However, because customers pay for energy consumed, not volume, there will be no change to your monthly bills during the project.

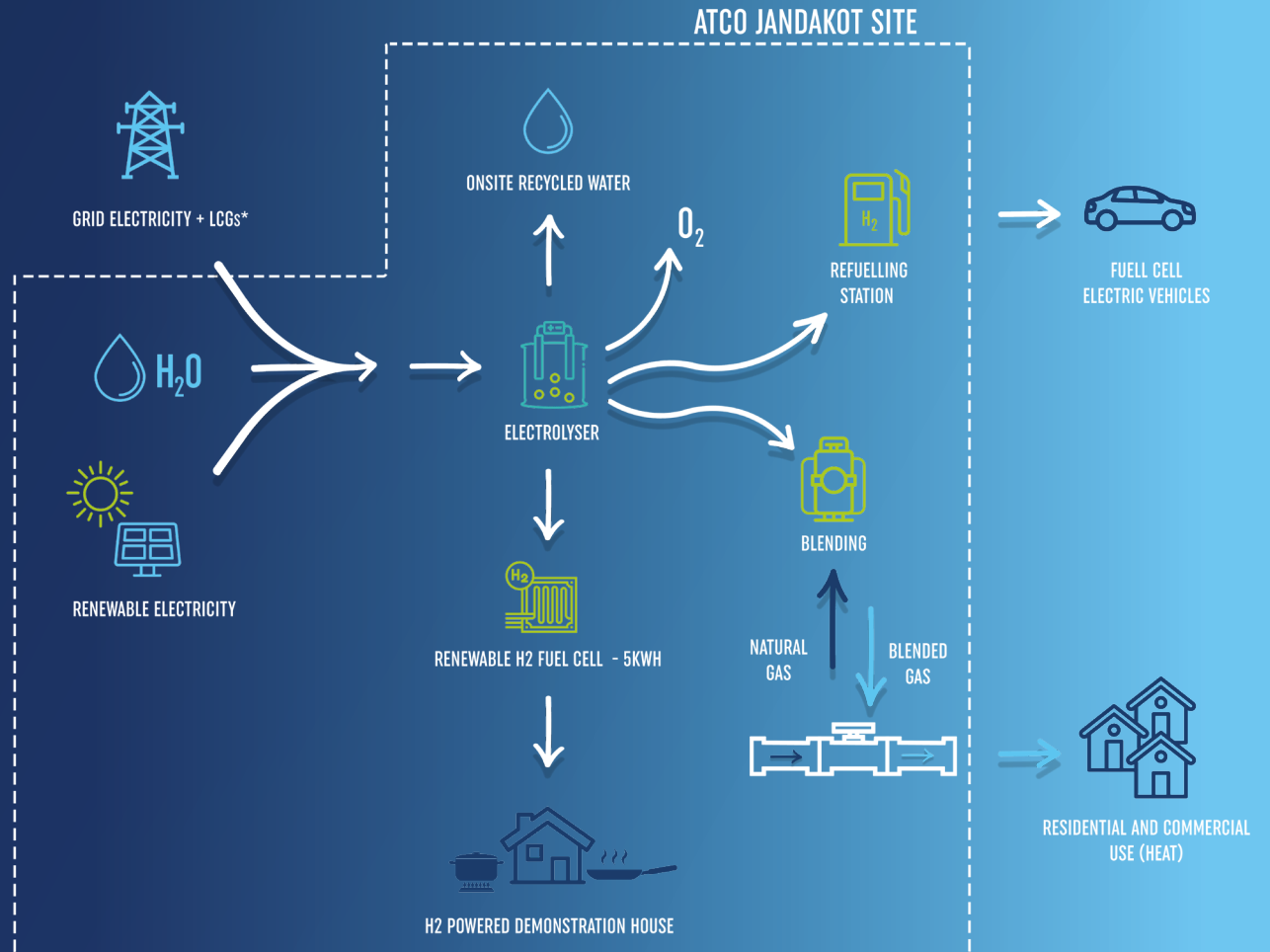
### For More Information

- If you would like to speak to our friendly team please phone **13 13 56** and select option 1 for Hydrogen
- Email your questions to [h2australia@atco.com](mailto:h2australia@atco.com)

#### ATCO, Gas Division

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# CLEAN ENERGY INNOVATION HUB



\* To produce sufficient hydrogen for the Project, ATCO will supplement the solar energy by purchasing electricity, backed by the surrender of Large-scale Generation Certificates (LGCs) to ensure the electricity used to produce hydrogen is recognised as renewable.

<sup>1</sup>Data sourced from various studies and [www.energynetworks.com.au/news/energy-insider/2022-energy-insider/hydrogen-in-the-home-gas-networks-is-closer-than-you-think/](http://www.energynetworks.com.au/news/energy-insider/2022-energy-insider/hydrogen-in-the-home-gas-networks-is-closer-than-you-think/)