

# Hydrogen Refuelling Station (HRS)

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# Project overview

- Australia's first publicly available hydrogen refuelling station – launched 26 March 2021
- A partnership between ACT Government, Neoen, Hyundai and ActewAGL
- The station is not at commercial scale – between an R&D project and a 'outback' service station



Station entry

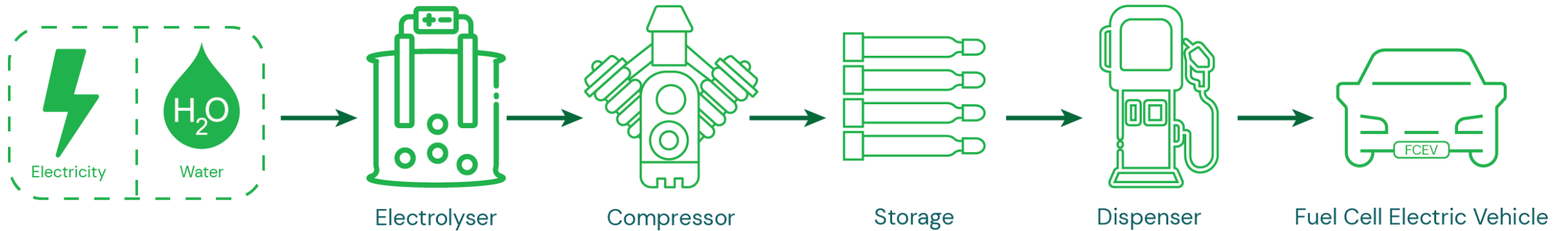


ACT Govt. vehicle



Station launch

# A hydrogen refuelling station



## The ActewAGL station

- operating 24x7 the station can produce more than 140kg each week
- the official range for the Nexo is 666km on 6.3kg of hydrogen
- assuming 20,000km p.a. the station can support over 40 Nexos
- designed for two back-to-back passenger vehicle refills
- refuelling time of 3-5 minutes



# Station equipment

**Dispenser**



**Heat exchanger**

**Chiller**

**Controls & demineraliser**

**Electrolyser**



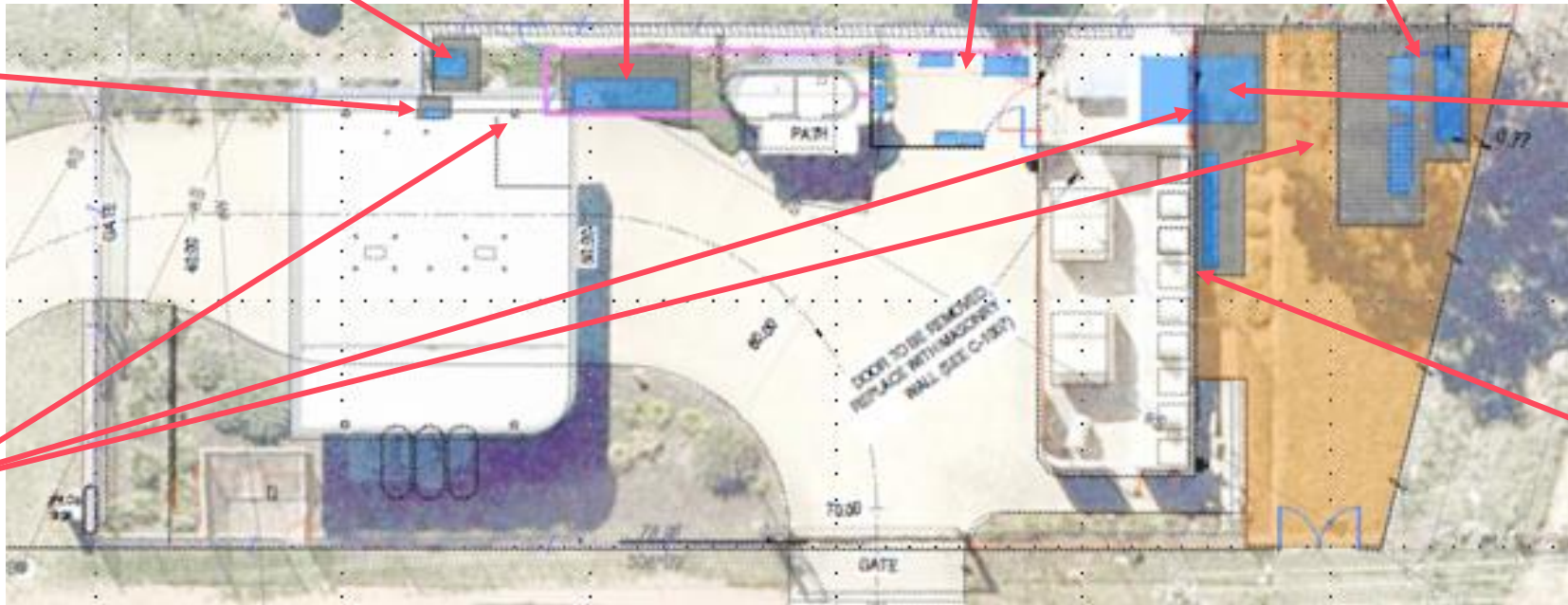
**Compressor**



**Storage**

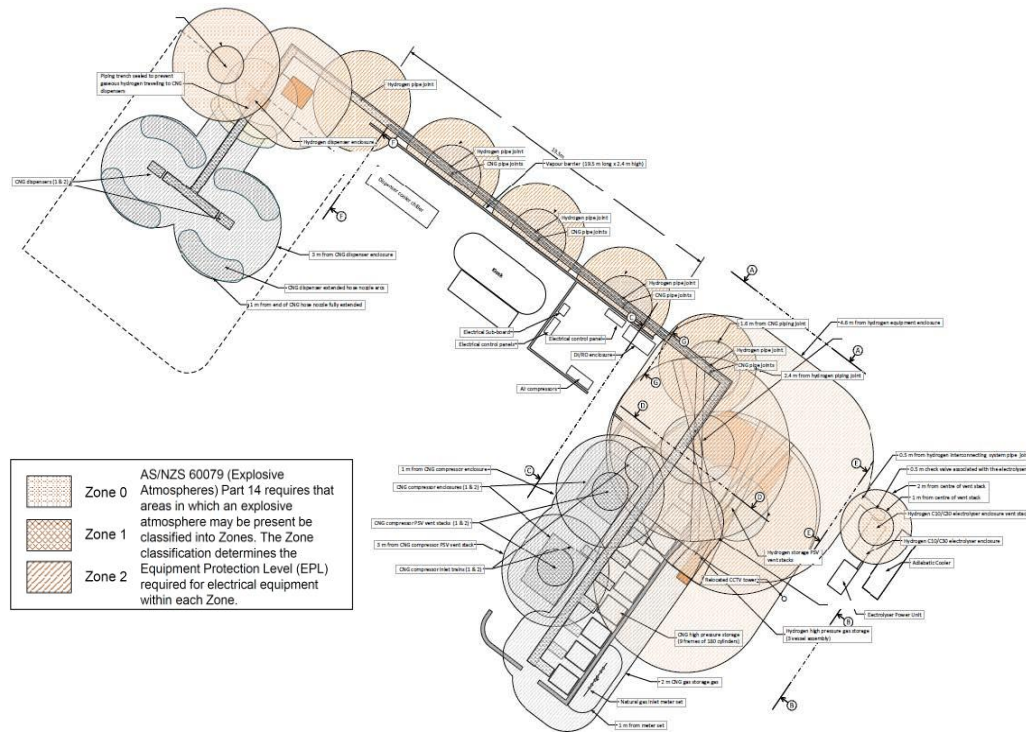


**Flame detectors**

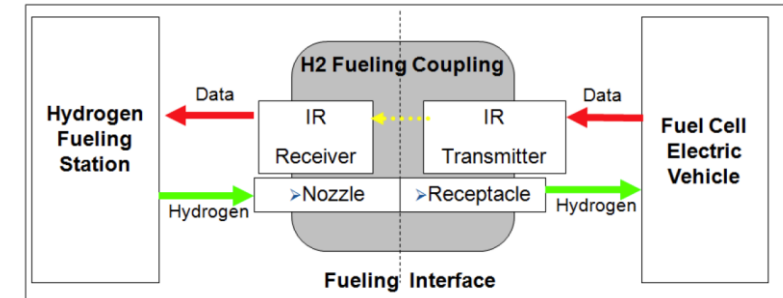


The station repurposed a Compressed Natural Gas (CNG) station, leveraging pre existing infrastructure

# Design and commissioning

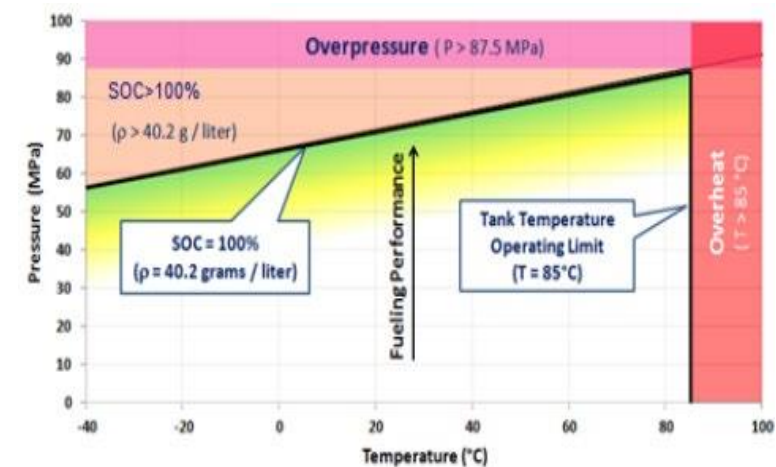


The HAZOP was a material part of the planning process, complicated by the CNG station



Source: DOE Webinar - Introduction to SAE H2 Fuelling Standardization

Refuelling verification required specialist equipment

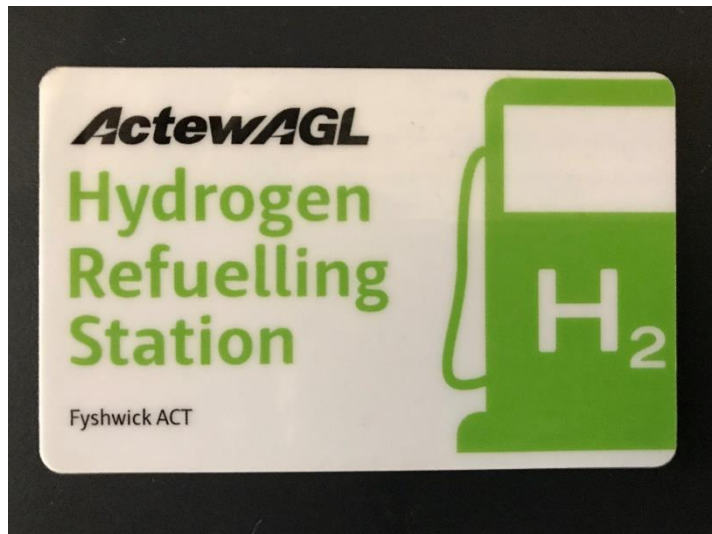


Source: SAE J2601 Fuelling Protocols for Light Duty Gaseous Hydrogen Surface Vehicles

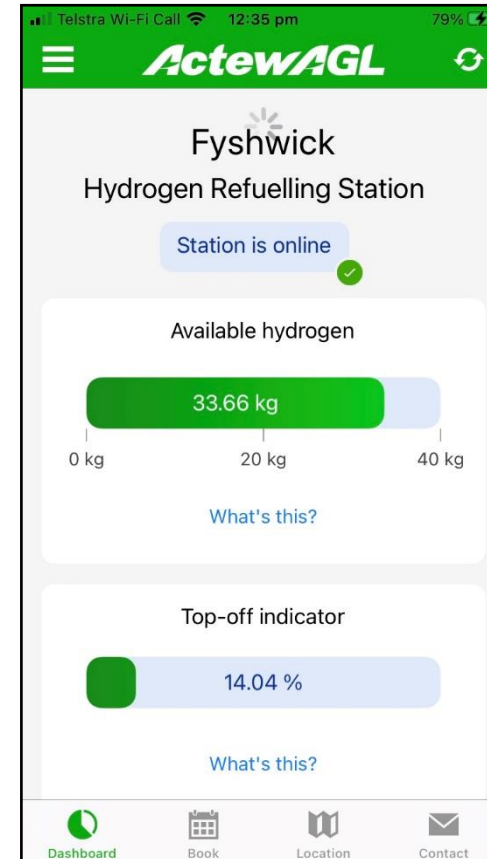
# Operations

Current customers:

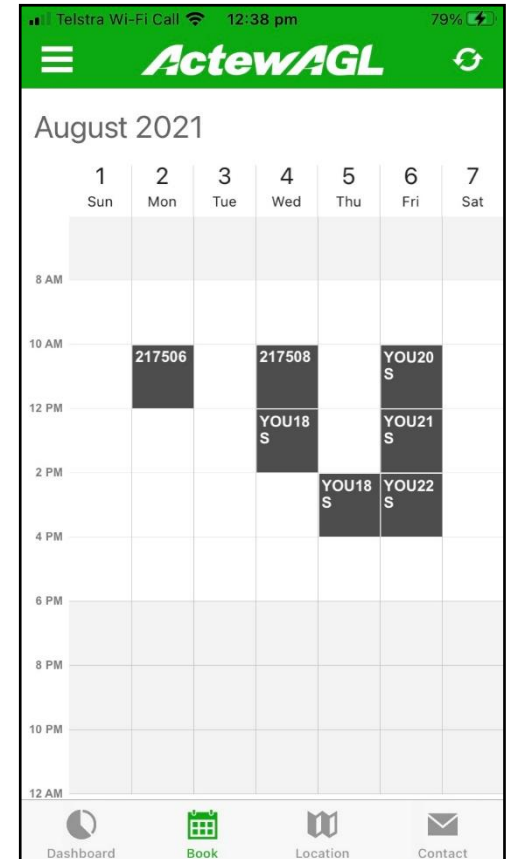
- 20 vehicles for ACT Government
- 1 vehicle for Woodside



An RFID card unlocks the dispenser



An app was created to manage availability





# The Future

- Zero Carbon Certification Scheme
- Target diesel vehicles
- Collaboration key to viable stations
- Station networks (redundancy)
- The need to move quickly
- Scale, scale, scale



***ActewAGL***

**Thank you**