

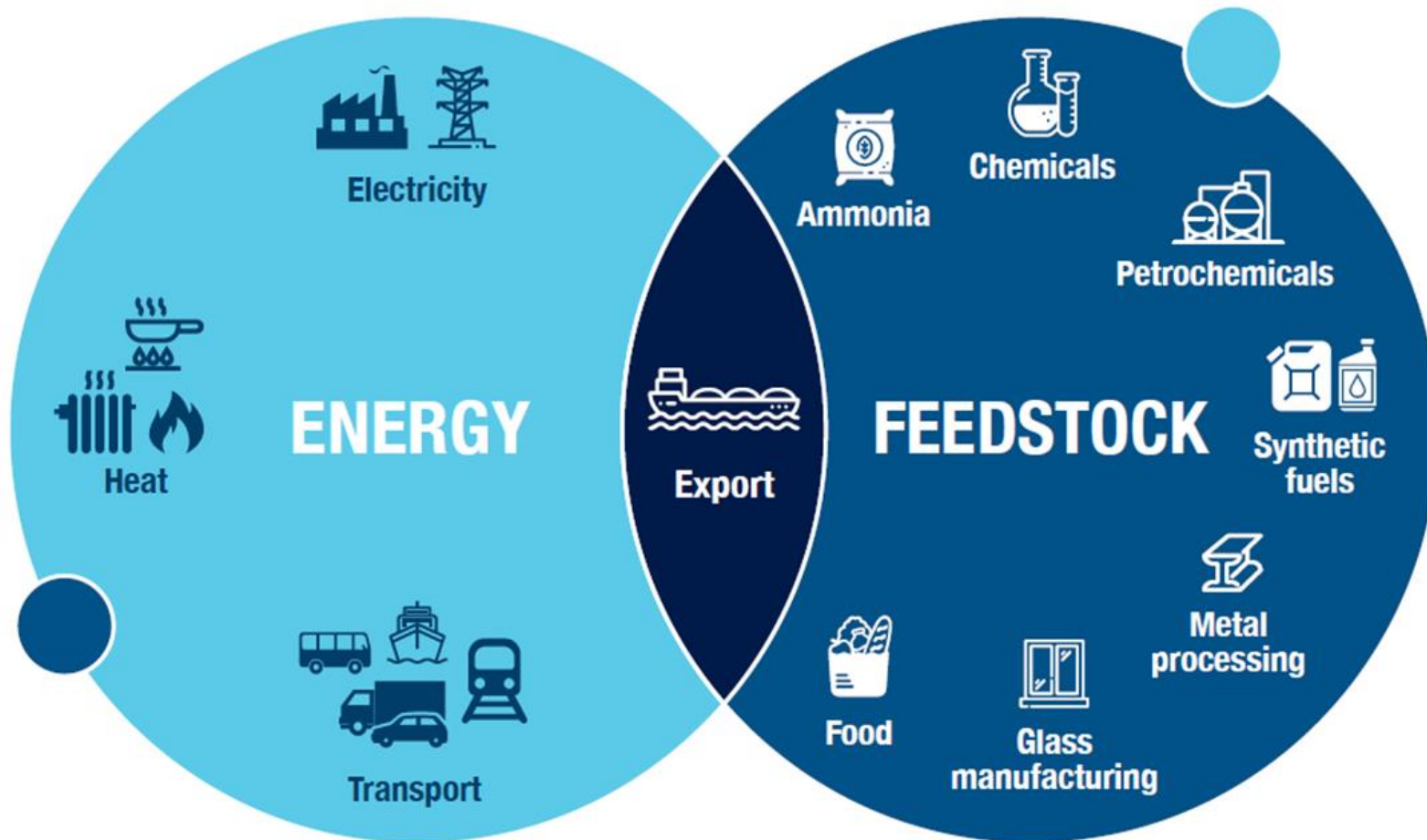


# International Hydrogen Day 2022

8 October 2022

Hon Alannah MacTiernan MLC, Minister for  
Regional Development; Agriculture and  
Food; Hydrogen Industry

# The uses of renewable hydrogen



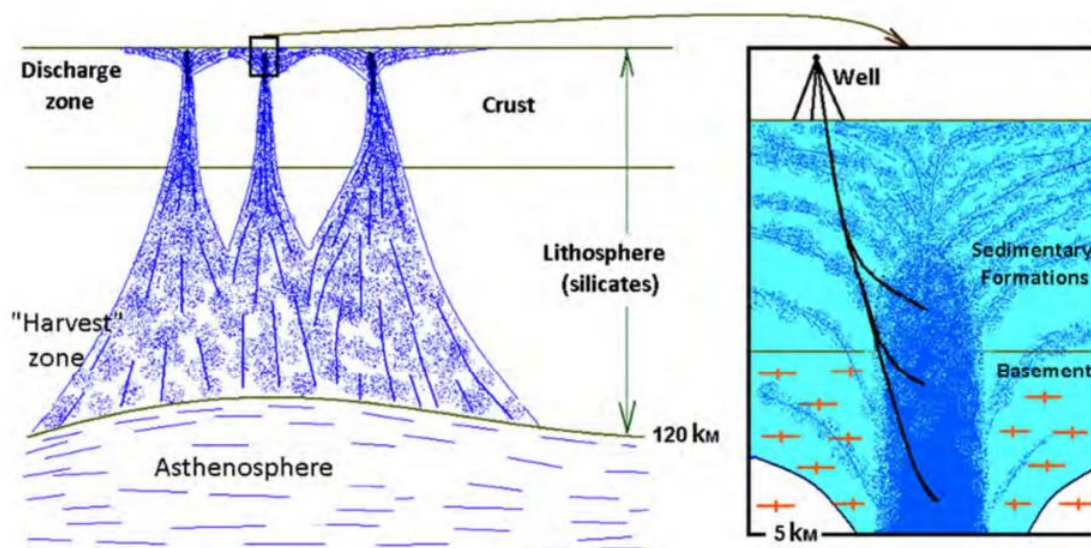
# Decarbomisation Opportunities



1.2 MTPA of ammonia in the mining sector

# Naturally Occurring (White) Hydrogen

- New and evolving sector
- Potential for very low production costs
- Lower-polluting compared to industrial hydrogen



Hydrogen degassing in the lithosphere - Schematics



Hydrogen in Australian natural gas: occurrences, sources and resources. C. Boreham et al., 2021

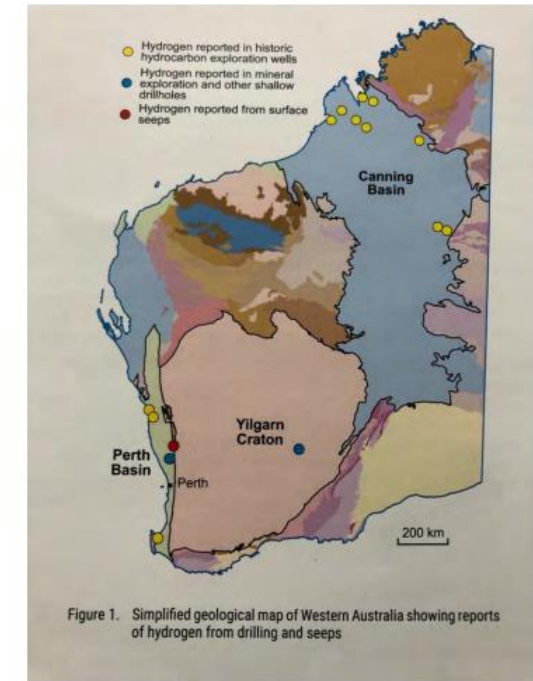
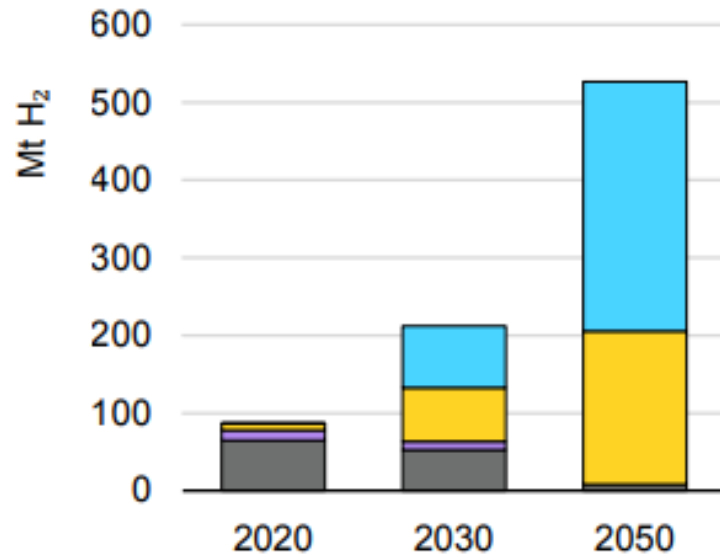


Figure 1. Simplified geological map of Western Australia showing reports of hydrogen from drilling and seeps

GSWA 2021: Advancing the Prospectivity of Western Australia. Dr. P. Haines Presentation

# Global Hydrogen Demand

IEA Net Zero Emissions Scenario, 2020-2050  
Global Hydrogen Demand



## Sources of Hydrogen Production

- Fossil
- Fossil with CCUS
- By-product
- Electrolysis

To achieve global net zero emissions scenarios by 2050

IEA forecasts that hydrogen production will need to increase to:

- 212 Mtpa by 2030
  - 530 Mtpa by 2050
- 250% increase**

Renewable hydrogen from electrolysis-based production is forecast to achieve a 60% share by 2050

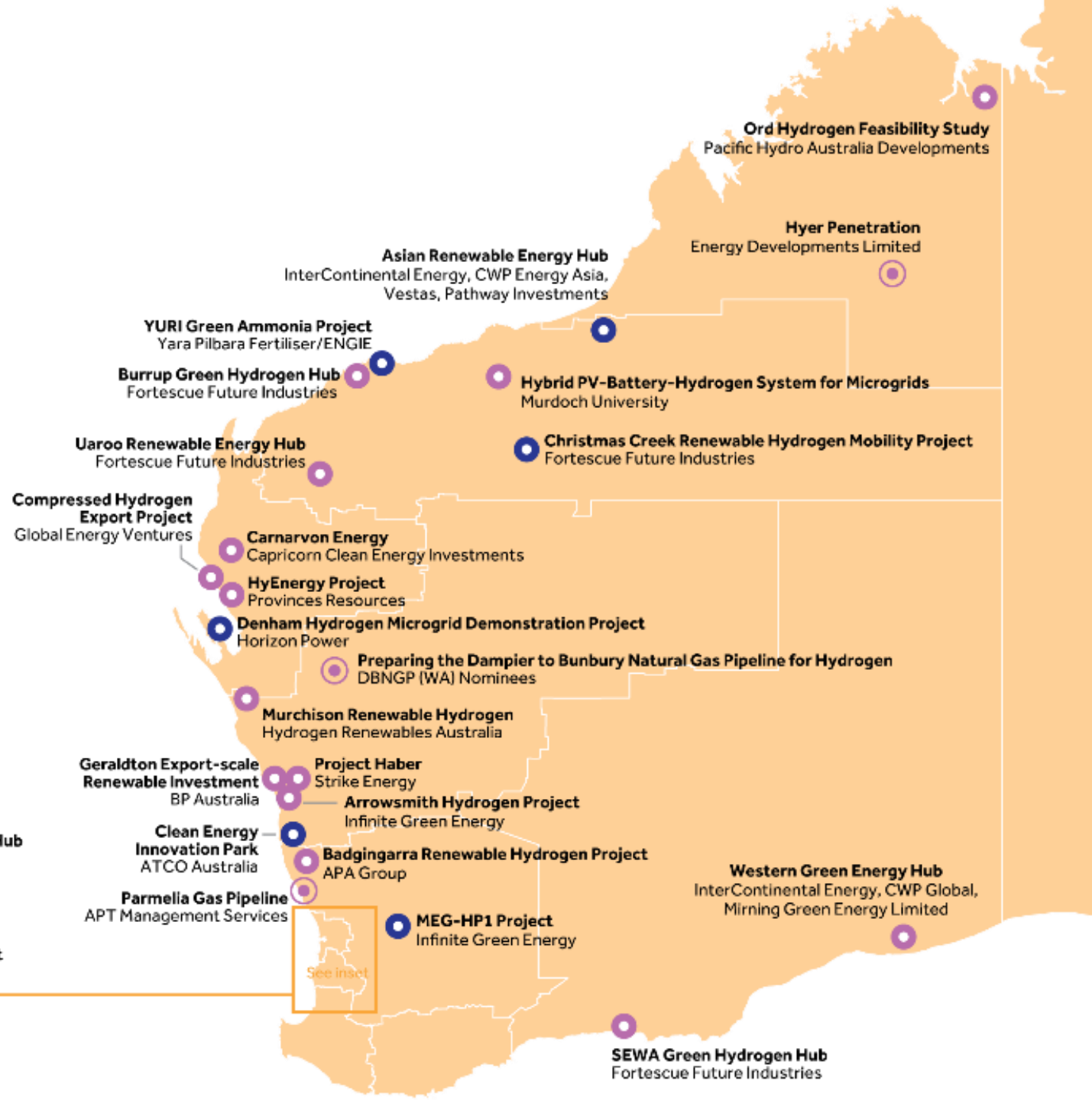
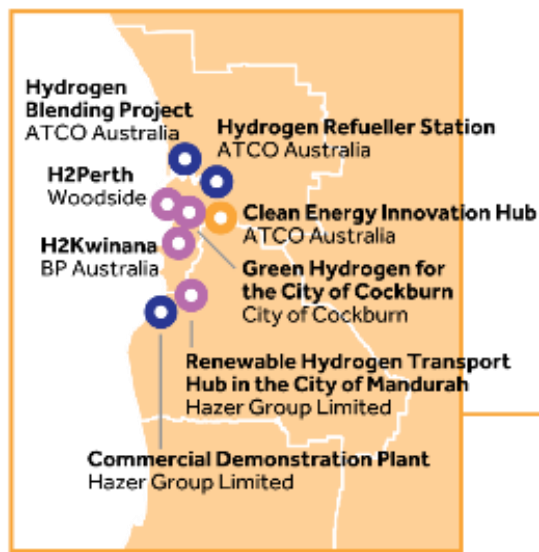
European import target of 10 mtpa by 2030

South Korea 3% renewable hydrogen energy generation by 2030

# WA Renewable Hydrogen Strategy and Roadmap

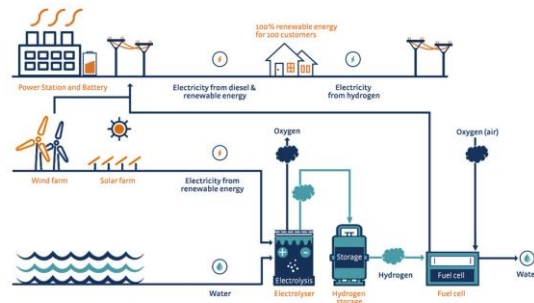
## Project status (as at June 2022)

- Investigation study
- In progress
- Completed
- ⊙ Multiple sites and/or regions



# Significant Hydrogen Projects

## Horizon Power Denham Hydrogen Demonstration



## FMG / Fortescue Future Industries



## Australian Renewable Energy Hub



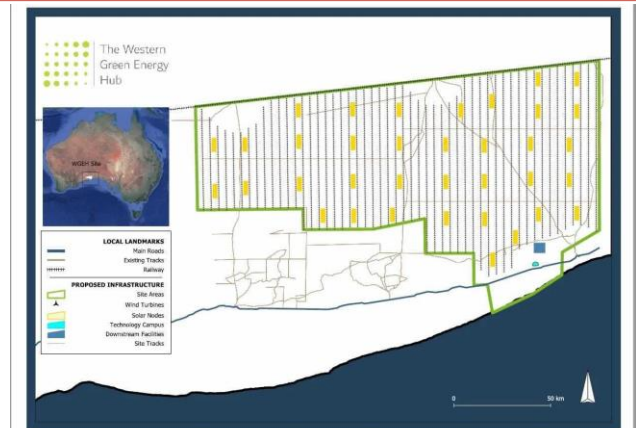
## Copenhagen Infrastructure Partners Murchison Hydrogen Renewables Project



## Yara - ENGIE YURI Green Ammonia Project



## Intercontinental Energy Western Green Energy Hub



# UPSTREAM OPPORTUNITIES



## Renewable Hydrogen Infrastructure

Wind Turbines, Electrolysers,  
Mining Vehicles



# DOWNSTREAM OPPORTUNITIES



**Downstream Manufacturing**  
Green Iron, Green Steel, Green  
Aluminium, Green Cement

# Forming International Partnerships



# Demand Stimulation

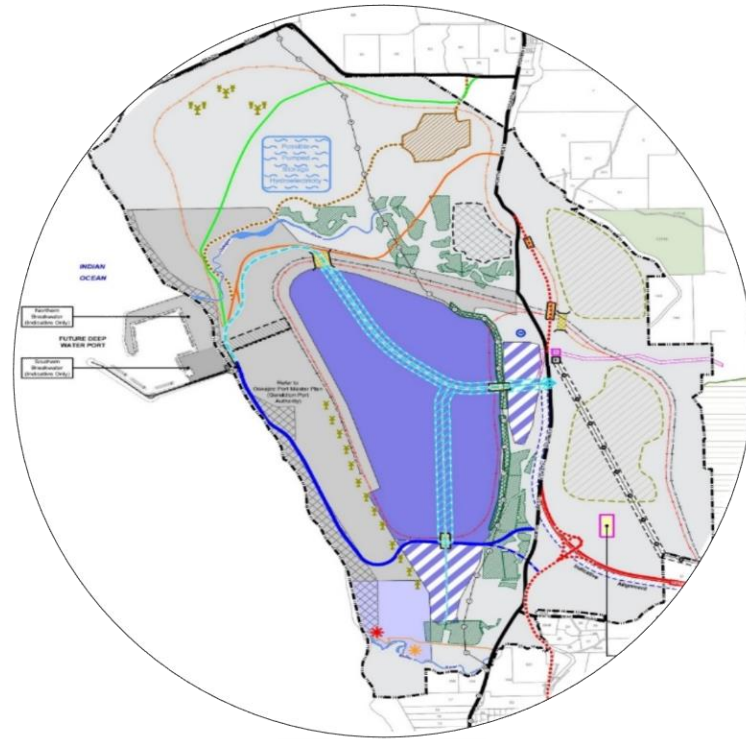
- Renewable Hydrogen Target
- Hydrogen Fuelled Transport Program



# Hydrogen Hubs



**Pilbara Hydrogen Hub**



**Oakajee Strategic  
Industrial Area - Mid West**



**Potential East Kimberley  
Hydrogen Hub**



**Invest & Trade**  
WESTERN AUSTRALIA

WESTERN AUSTRALIA  
**IT'S LIKE NO OTHER.**

# International Hydrogen Day

8 October 2022  
Hon Alannah MacTiernan MLC