



**COAG**  
**Energy Council**

# AUSTRALIA'S NATIONAL HYDROGEN STRATEGY



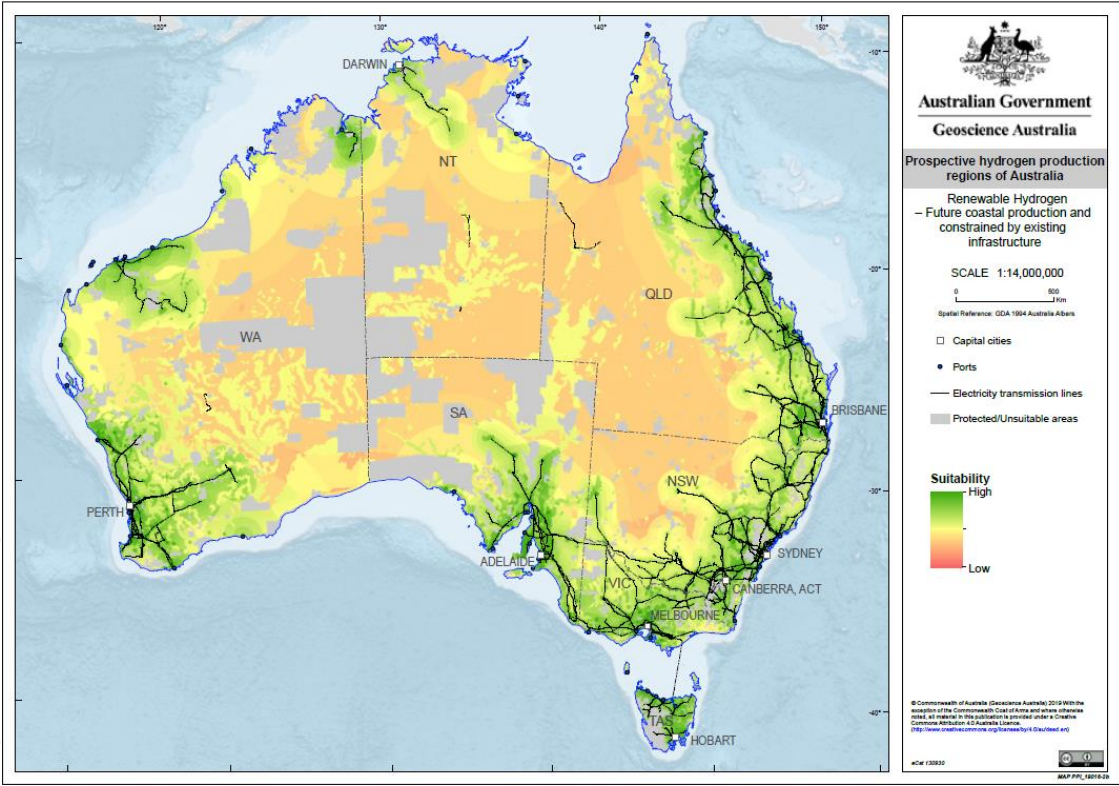
Australia's adaptive pathway to a clean, innovative, safe and competitive global hydrogen industry.

James Hetherington  
Lead, Hydrogen Strategy team

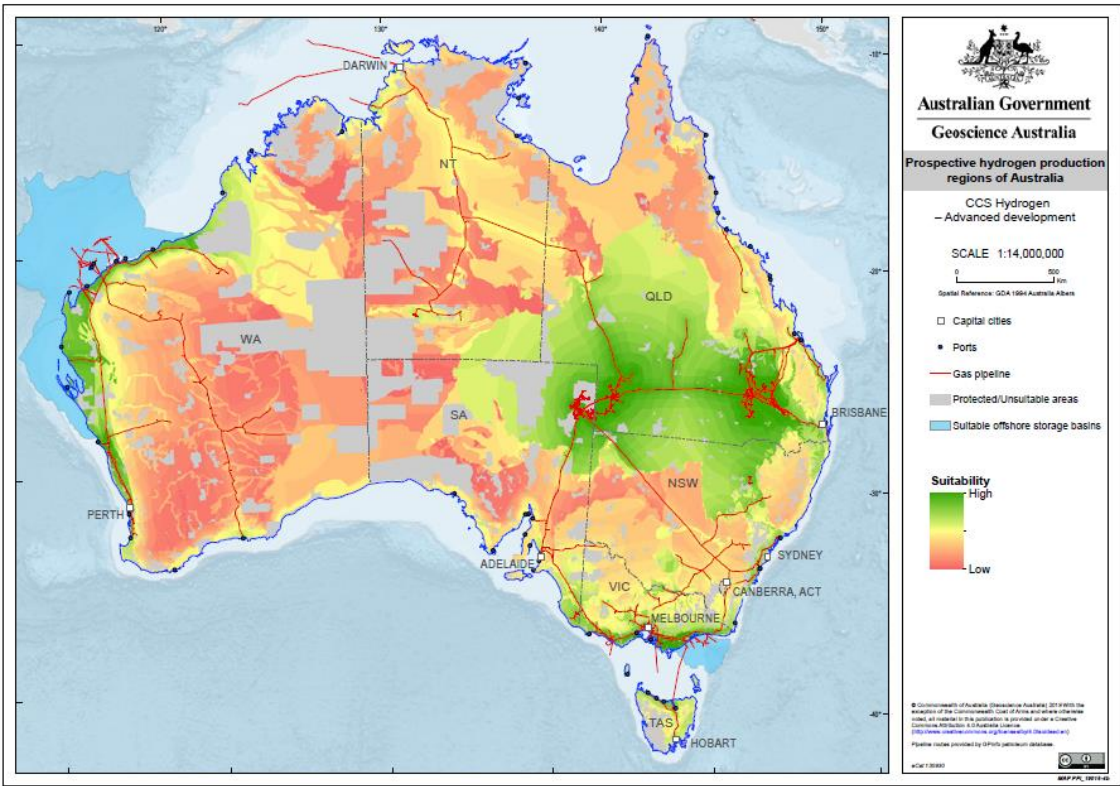
[industry.gov.au/hydrogen](http://industry.gov.au/hydrogen)

# Why hydrogen for Australia?

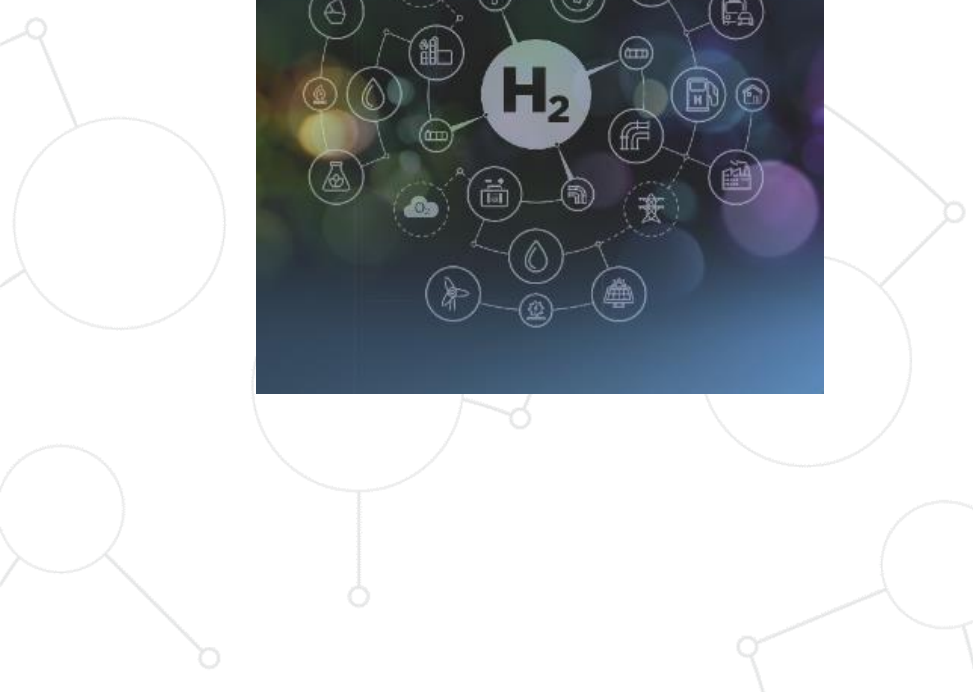
## Highly Prospective Production Areas Renewable Hydrogen



## Highly Prospective Production Areas CCS Hydrogen



# Australia's National Hydrogen Strategy



Released 22 November 2019

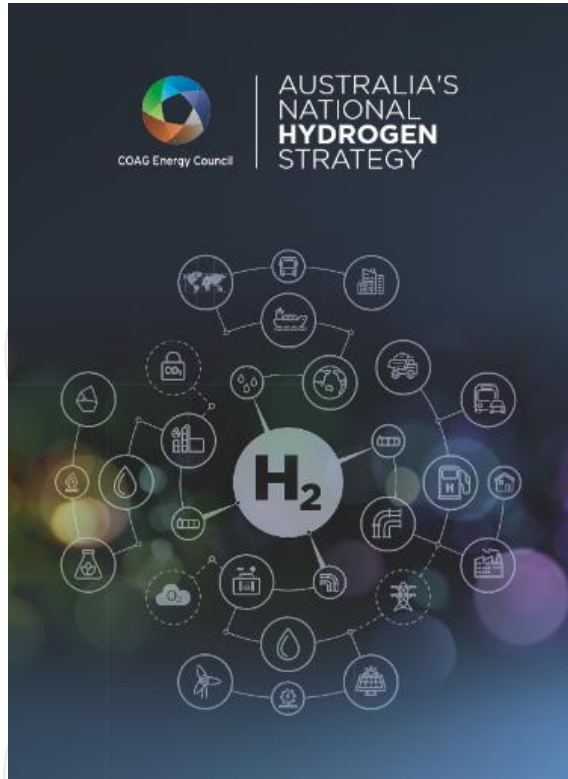
Jointly developed by all Australian governments

## An adaptive industry development framework

57 initial actions



# Strategy's Key Findings



- Strong competitive advantage
- Proven technology, but commercially risky
- Increasing momentum
- Scale is key, as is demand

# An adaptive approach

**The vision: a clean, innovative, safe and competitive Australian hydrogen industry that benefits all Australians and is a major global player by 2030**



**AUSTRALIA**  
is one of the top three  
exporters of hydrogen  
to Asian markets



**AUSTRALIA**  
has an excellent  
hydrogen-related  
safety track record




**HYDROGEN**  
is providing  
economic benefits  
and jobs in Australia



**AUSTRALIA**  
has a robust, internationally  
accepted, provenance  
certification scheme in place

# The adaptive pathway – phase 1

## FOUNDATIONS AND DEMONSTRATIONS

→ TO 2025 

### Scale-up activities



Advance priority pilots, trials and demonstration projects



Assess supply chain infrastructure needs



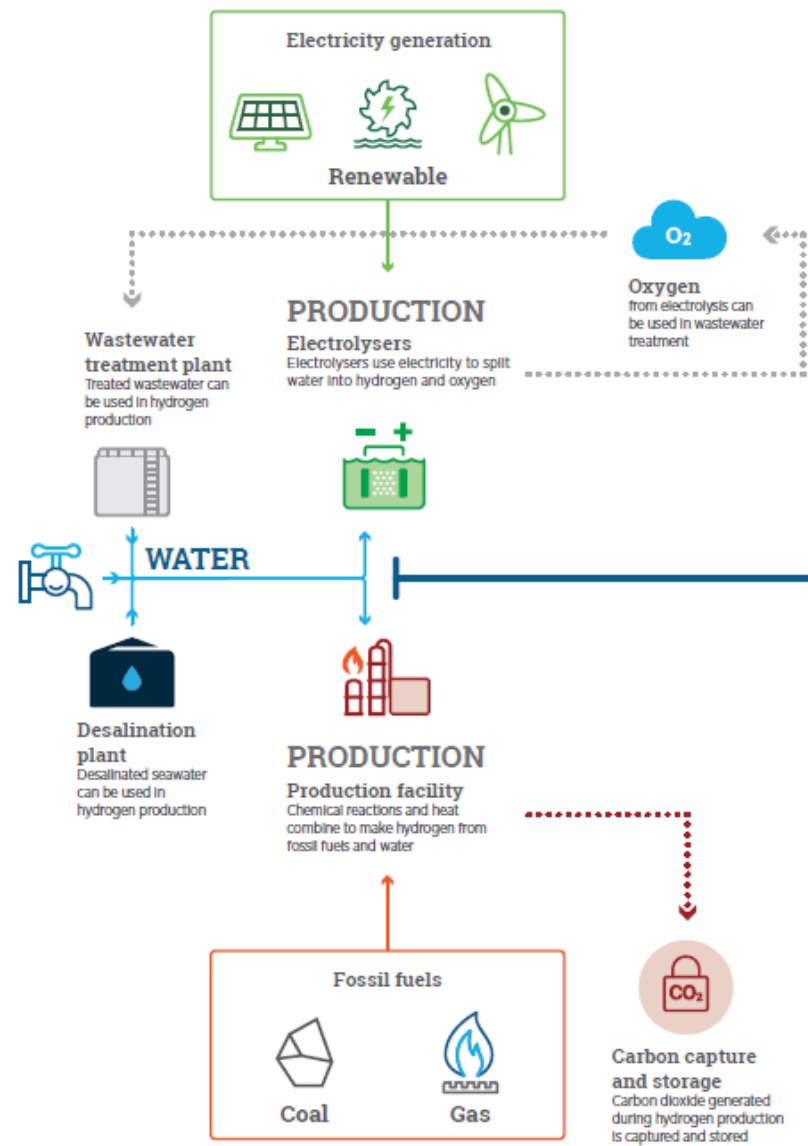
Build demonstration scale hydrogen hubs



Develop supply chains for prospective hydrogen hubs

*Hubs are regions where various users of hydrogen across industrial, transport and energy markets are co-located.*

# Hydrogen hubs



## HYDROGEN HUB

Hubs make the development of supply chain infrastructure more cost-effective by aggregating various users of hydrogen into one area. These may be at ports, cities or remote areas. Hubs could also foster innovation and promote sector coupling.

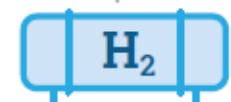
### Industrial use

Hydrogen can be used by industry as a chemical feedstock or as a fuel for heating, electricity generation or mobility applications.



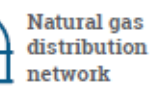
### STORAGE

Hydrogen is stored under pressure



### Exports

Hydrogen is liquefied or converted to another chemical for shipping



Natural gas distribution network

### Gas blending

Hydrogen can be blended with natural gas to supply lower emissions heating and cooking



### Transport

Hydrogen can power buses, cars, ships, trains and trucks.



# The adaptive pathway – phase 2



FROM 2025



**LARGE-SCALE MARKET ACTIVATION**



Identify signals that large-scale hydrogen markets are emerging



Scale up projects to support export and domestic needs



Build Australian hydrogen supply chains and large-scale export industry infrastructure



Build and maintain robust and sustainable export and domestic markets and supply chains



Enable competitive domestic markets with explicit public benefits

*Supply chain infrastructure includes powerlines, pipelines, storage tanks, refuelling stations, ports, roads and railway lines and any other facilities needed for hydrogen supply.*



**Over half a billion  
\$ in support**



**ARENA**



**Australian Government**  

---

**Australian Renewable  
Energy Agency**



# Implementation | 2020 priorities



**International partnerships  
and engagement**



**Reviews supporting use of  
hydrogen in Australian gas  
networks**



**State of Hydrogen report**



**National coordination**



**Guarantee of Origin  
Certification scheme**



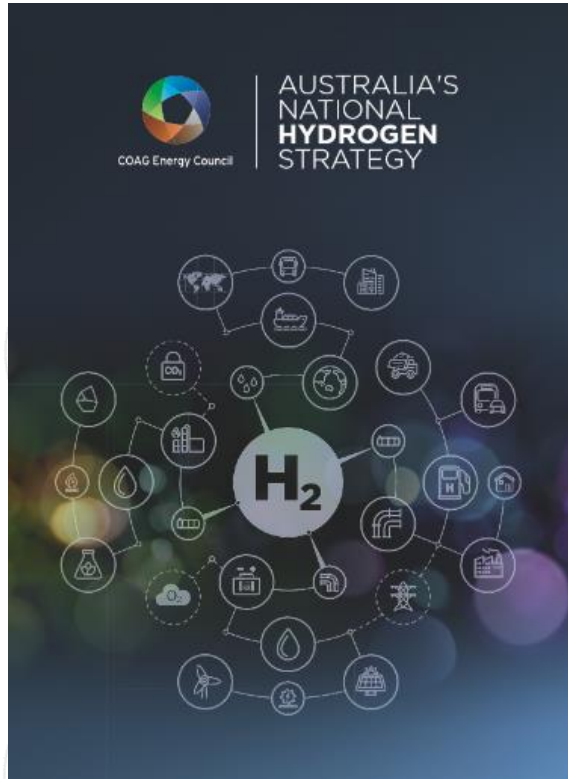
**Legal framework reviews**



**Skills and training**



**Support for pilots, trials  
and demonstrations**



[www.industry.gov.au/hydrogen](http://www.industry.gov.au/hydrogen)

- Read the Strategy and supporting reports
- Sign up for our newsletter

*Thank you for your attention*



COAG  
Energy Council

# AUSTRALIA'S NATIONAL **HYDROGEN** STRATEGY

