

Australia's Hydrogen Technology Clusters

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NERA

NATIONAL
ENERGY RESOURCES
AUSTRALIA



HYDROGEN
TECHNOLOGY CLUSTER
AUSTRALIA

NERA has been a trusted independent partner to leading organisations across the energy resources sector since 2016



Independent not-for-profit organisation connecting the energy resources sector



Australia to be the **leading source of technology, knowledge and solutions** for the energy resources sector



Leading joint industry action



Building a high-performing domestic supply chain



Strengthening connections



Improving translation of Australian research and IP



Clean energy
transition



Policy
support



Decarbonising
the economy



Competitive
advantages

Hydrogen is a
key future fuel
for Australia
and our major
energy trading
partners.

H₂
Hydrogen

0 ZERO
emissions



Australia is well-positioned to play a leading role in the emerging hydrogen energy market

Clean hydrogen presents an opportunity for Australia to take the lead in the emerging global market for low and zero emissions energy.

Australia has the **resources, infrastructure and established trade relationships** with markets in Asia, and **demonstrated know-how** to reliably, safely and efficiently **scale production** and export of technology, capability and energy resources.

Australia is targeting 'H2 under \$2': How can this be achieved?



Scale will be the biggest driver of cost reduction
90 per cent of cost reduction for non-transport applications
are from scaling up the supply chain.

Hydrogen Council Report 'Path to hydrogen competitiveness — A cost perspective' (20 January 2020)

Clusters can help Australia get there

- ✓ *Increased productivity*
- ✓ *More rapid innovation*
- ✓ *New business formation*



“A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities...” — Michael Porter

Understanding hubs and clusters

Hubs

- Physical locations that aggregate users of hydrogen in an area
- Enable more cost-effective development of supply chain infrastructure
- Promote sector coupling and support innovation



Understanding hubs and clusters

Clusters

- Regional ecosystems of related industries and competencies
- Connect to accelerate the development of specialised expertise, services, resources, suppliers and skills
- Interface with and compliment hubs and large-scale demo projects



Developing the **Hydrogen Technology Cluster Australia (H2TCA)** network

Feb 2016

NERA established as the IGC for energy resources

Feb 2020

NERA held workshops around Australia to inform development of national cluster

Oct 2020

HyResource launched with CSIRO, AHC and Future Fuels CRC

May 2021

- › Two additional Queensland clusters announced
- › National capability mapping and supplier directory

Nov 2019

Australia's Hydrogen Strategy released. NERA tasked to lead National Hydrogen Cluster formation

Sep 2020

NERA launched National Hydrogen Technology Cluster Seed Funding Program

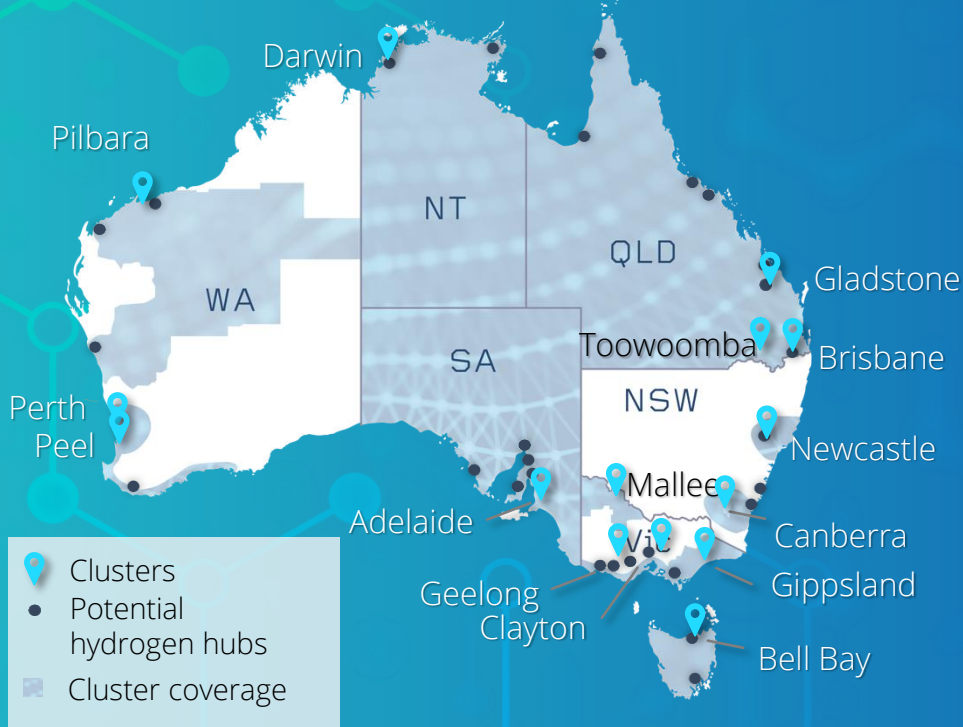
Feb 2021

Announced seed funding of \$1.85million for 13 regional hydrogen tech clusters

Aug 2021

HyCapability - Australian Hydrogen Capability Finder due to launch

Alignment of clusters with potential hydrogen hubs



KEY THEMES & FOCUS AREAS



Supply chain activation



Technology development



Education, Skills and capability



Community - Social Licence



Global opportunities



Green hydrogen



Transportation applications



Research



Standards, certification, safety and regulation



Manufacturing applications



Circular economy



Agricultural applications



Blue hydrogen

Build

Collaborate

Grow

Build regional clusters and local capability



Drive collaboration across the network of clusters

Grow the cluster network across Australia



Grow international relationships to capture global opportunities



Collaborative Cluster Projects



HyCapability – Australian Hydrogen Capability Finder

Search: Industry; Location; Services Provided...

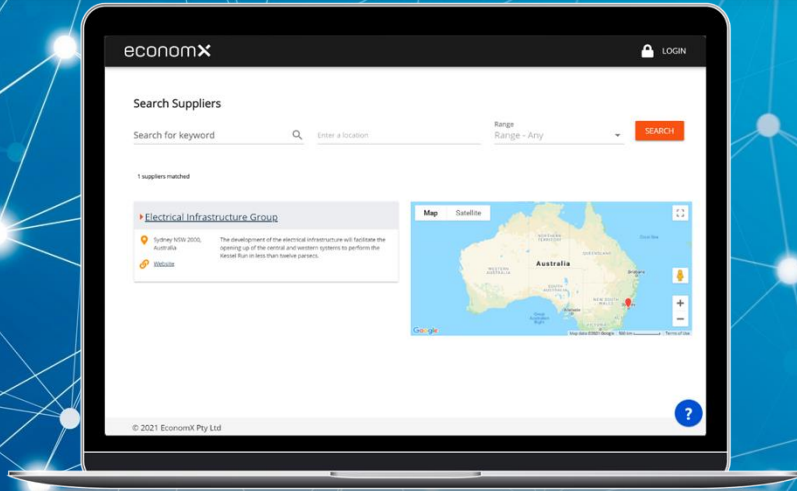


Developing a nationwide supplier directory

Searchable online directory of Australia's hydrogen-related businesses and capability

Promote Australian hydrogen businesses to domestic and international market

Go to www.nera.org.au/hycapability register a free company profile today



We are aggregating knowledge and connections across the growing H2TCA network to develop an Australian Hydrogen Technology Supercluster



Unified brand for Australian Hydrogen-related technology and expertise



International hydrogen connections



Alignment with existing hydrogen associations and programs

HyResource

HyResource is the **single source of information** on key hydrogen-related organisations, policies and projects in Australia with supporting information on NZ.

NERA collaboration with CSIRO, Australian Hydrogen Council and Future Fuels CRC.

Tracking around **90 projects**, including large-scale, demonstration and pilot facilities and proposals as well as research and development activities arising from major funding programs.



<https://research.csiro.au/hyresource/>

The time to

SUPPORT,

INVEST &

GET INVOLVED

...is **NOW.**

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