

New H2 Knowledge Exchange

October 20 2021

Matthew Hingerty
Deputy CEO



About Us

Star Scientific Limited

Private hydrogen Research and Development company located on the Central Coast, north of Sydney, Australia and south of the industrial port of Newcastle.

Founded by Andrew Horvath in 1997.

Governed by a Board of Directors, Andrew Horvath is Chair.

Backed by private investors - all share our passion to deliver clean, affordable and reliable heat and energy.

Star Scientific Limited in Australia - Design and Engineering, Technology and Manufacturing.



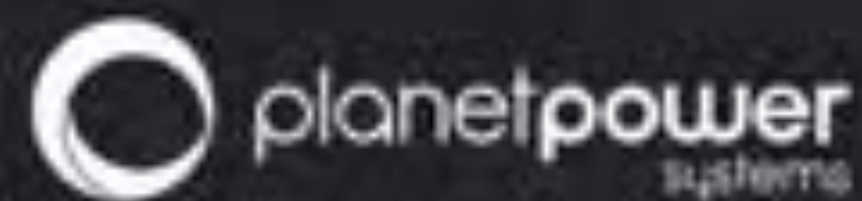


Who We Are

Star Scientific Group

Global scope - Star Scientific Group is consists of:

- Star Scientific Limited
- Star Scientific Europe
- Planet Power Systems
- Planet Power Finance.



HERO® the true catalyst

When introduced to hydrogen and oxygen in a closed environment, the catalyst can generate industrial scale heat – over 700 degrees Celsius in just over 3 minutes.

Once the feed gases are removed it quickly reverts to its inert state with zero combustion.

Not used up in the catalytic process.

The only other output is pure water, which can be re-used in the process of hydrogen generation.

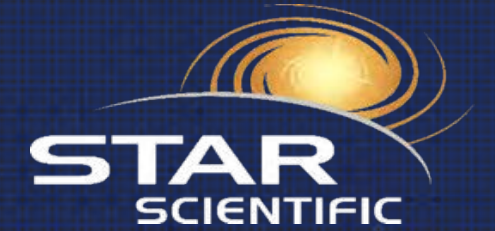
Deployable for small scale power solutions in remote locations; can also be scaled up for large scale legacy industrial sites such as coal-fired power stations.



HERO[®]
Demonstration



Flipping fossil-fuel infrastructure



Retrofitting fossil power

The retrofitting of existing fossil-fueled infrastructure to green hydrogen is a key commercial pathway.

Cambridge Econometrics has valued potentially stranded fossil-fuel assets as up to US \$4 trillion globally.

Studies show that swapping HERO® for a coal-fired boiler provides a power station with a new lease on life in a post-fossil fuel environment.

The retirement of coal-injection infrastructure, pollution control infrastructure and reclamation of parasitic energy provides significant capital savings.

Who We Are

Global Recognition

S&P Global Platts: In October 2020, Star Scientific won the Global Energy Awards' Emerging Technology of the Year category, acknowledging the ingenuity of HERO[®] and its potential to change global hydrogen use.

Sustainable Energy Council Award: In March 2021, Star Scientific won the Sustainable Energy Council's inaugural World Hydrogen Awards' Industrial Application category. This award designated HERO[®] as a leading solution for industrial scale hydrogen use.



Industrial heat

Transitioning domestic industry to carbon-free heat

Heat is the key input into most human endeavour.

Heat can be for real products (construction materials, plastics, foodstuffs, chemicals, transport, textiles, tools) OR services supplied using digital infrastructure powered by green energy, such as 5G and the Internet of Things.

Carbon will be priced into global trade regardless of what governments do.



ZERO CARBON CERTIFICATION SCHEME FOUNDING PARTNERS



ACT
Government



Queensland
Government



WESTERN AUSTRALIA



**UN COP26 High
Level Champions**



AMMONIA ENERGY
ASSOCIATION



evoenergy



energy web



Power Ledger



G A S B O T



Green Hydrogen Catapult



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National
University

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