



UNIVERSITY OF
NEWCASTLE

MGA THERMAL

Industrial heat is overdue for disruption - and MGA Thermal is leading the charge!

MGA Thermal is pioneering breakthrough latent heat Electro-Thermal Energy Storage technology, using Miscibility Gap Alloy blocks to convert intermittent renewable electricity into affordable, continuous, industrial-grade steam - available anytime. This groundbreaking technology offers a viable pathway to 24/7 renewable heat for industries, effectively replacing reliance on carbon-intensive fossil fuels.

PARTNERSHIP CAPABILITIES

- Scalable thermal energy storage solutions
- Long-duration energy storage technology
- Industrial steam generation from renewable sources
- Collaborative test projects for industrial heat/steam users
- Customised decarbonization strategies

PROVEN IMPACT

- Commercial-scale demonstration plant storing 5 MWh of energy
- 500kW thermal dispatch power providing continuous superheated steam for 10 hours
- Potential to scale to GWh storage capacities
- Economically competitive with traditional fossil fuel technologies at industrial scale
- On track to abate 30 million tonnes of CO₂ by 2030

SCALED ENERGY SOLUTIONS

MGA Thermal's commercial-scale demonstration plant was launched in April 2025. Measuring 12m x 3m x 4m, the unit stores 5 MWh of energy and delivers 500 kW of thermal dispatch power. It can generate continuous superheated steam (up to 550°C) for 24 hours straight - enough to supply energy to over 270 homes for the same duration. Proving the viability of MGA Thermal's technology at scale this unit offers a firsthand look for those eager to see it in action.

MGA Thermal, in partnership with Knode, also recently announced the completion of a pre-feasibility study for Australia's largest (180 MWh) industrial-scale thermal energy storage project. Located in WA, the project represents one of the country's most advanced industrial decarbonisation initiatives, capable of delivering 20 tonnes per hour of steam to industrial sites while being economically competitive with traditional fossil fuel technologies.



CONTACT US:

Alexander Post

Co-founder and Chief Technology Officer
alex.p@mgathermal.com

