



# JAEA HIGH TEMPERATURE REACTORS: THE UK PERSPECTIVE

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## HTGRs – the UK Perspective

- New UK law – net zero emissions by 2050
- Decarbonising UK energy demand:
  - 20% electricity
  - 80% heat, transport, industrial processes



## Penultimate Power UK's Technology Criteria

### (1) Enhanced Safety:

Inherently safe, not just probabilistically safe

Designed in such a way as to eliminate accidents occurring, rather than coping with the consequences

### (2) Affordability:

Less complex, inherently safe design, modular construction, reduced risk

Price comparison factors

### (3) Flexibility:

Carbon-free heat, for carbon-free electricity, industrial processes, hydrogen production, load following to complement renewables



## Penultimate Power UK's Technology Criteria....pg 2

### **(4) TRL Technology Readiness Level:**

Not a design concept but a proven Generation IV technology,  
to compete for market share now,  
to start making an impact on carbon emissions before 2030

### **(5) UK Supply Chain:**

A large % could be built with the UK supply chain, taking advantage of the advanced manufacturing and engineering facilities across the Northern Powerhouse region, from Newcastle to North Wales.



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## **Japan/UK HTGR Deployment**

- (1) A Joint Venture that enables all the stakeholders to commit to commercialising the HTGR in the UK**
- (2) Early co-operation between UK and Japan regulators**
- (3) Continued support from JAEA to promote the HTGR in the UK**



# The Vision

Selling high quality  
**carbon-free HEAT**



Energittabu™

Compact, ultra-safe energy hubs  
that customers can plug into for their energy needs



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