



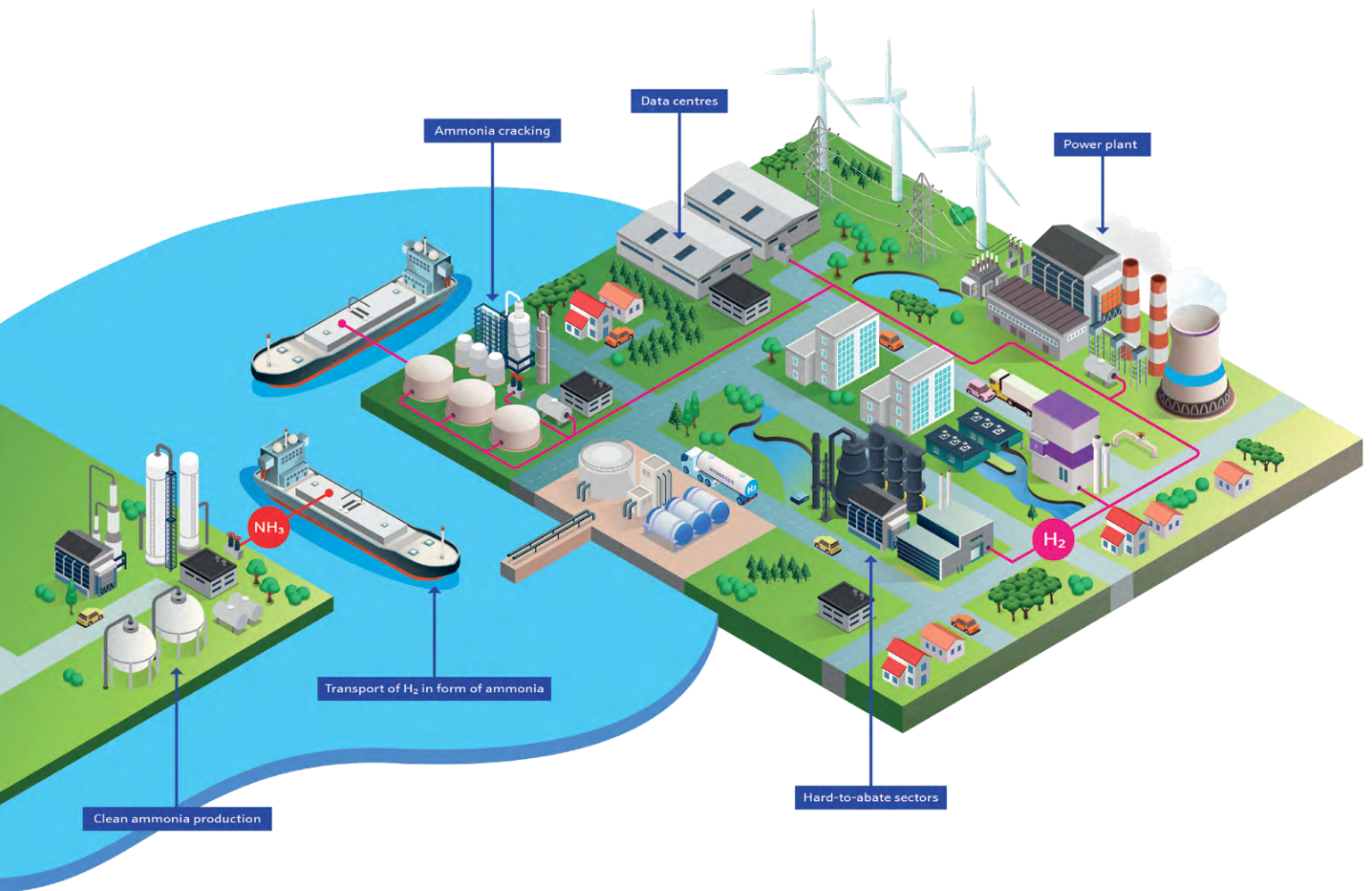
Fuelling progress

ADEPT technology

cracking ammonia, fuelling tomorrow

Johnson Matthey's **ADEPT™** technology for ammonia cracking delivers competitive ammonia consumption guarantees with commercially available catalysts.

Connect and collaborate with trusted technical experts who understand the science; we can support you on your journey of project deployment by driving process optimisation, allowing you to invest with confidence.

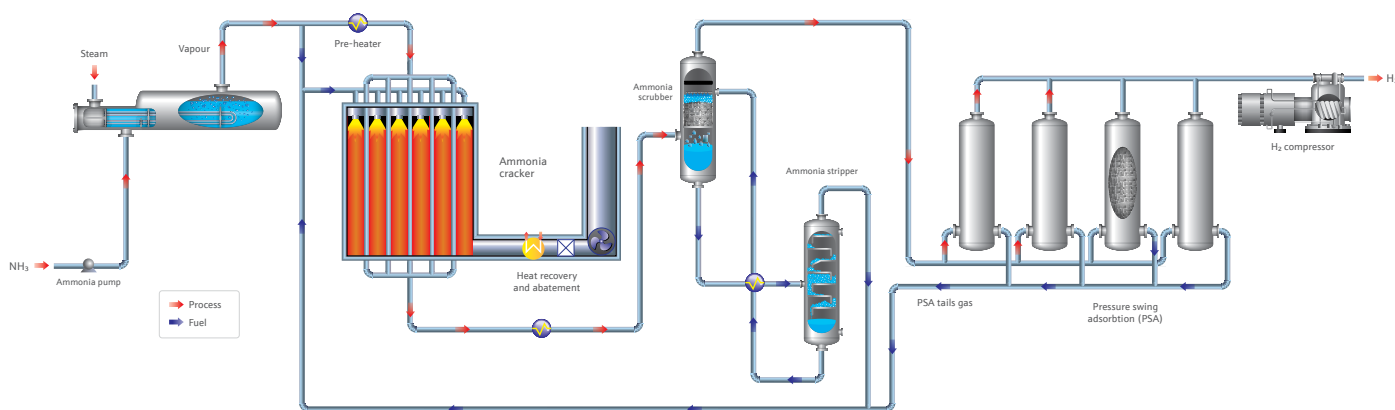


Why ammonia cracking?

The road to net-zero and industrial decarbonisation is a global effort. The hydrogen economy will require production of affordable hydrogen in regions of abundant low carbon energy, which can be located far away from regions of high energy demand. Large quantities of clean energy required by regions such as Northwest Europe and East Asia can be provided by transporting hydrogen in the form of ammonia that is produced either through electrolytic hydrogen with renewable energy or hydrogen with carbon capture and storage (CCS). Ammonia can be transported over long distances using existing knowledge, supply chains and infrastructure and can be converted back into hydrogen using ammonia cracking.

ADEPT technology with flexible fuel options:

- ammonia
- cracked gas
- hydrocarbon



Credible licensor and catalyst provider for ammonia cracking technology

Johnson Matthey (JM) is a credible licensor and catalyst provider for ammonia cracking technology. Our knowledge is based on a combination of more than 50 years of catalyst experience in ammonia cracking applications along with heritage in steam reforming of around 100 years. Leveraging our core competencies in syngas production, we can empower you to thrive in the emerging sustainable landscape.

ADEPT technology offers:

- Futureproofed flowsheet concepts that can seamlessly switch between natural gas and ammonia firing.
- Low carbon intensity ammonia cracking through ammonia firing solution.
- Competitive ammonia consumption guarantee.
- Plant operation at desirable turndown rate.
- Support and guidance from experts in the field.
- JM's ammonia cracking **KATALCO** catalysts.

Ammonia cracking **KATALCO** catalysts

JM's commercially available catalysts consider the different technical requirements. **KATALCO 27-2** and **KATALCO 27-200MQ**, are catalysts for high temperature applications in large scale centralised cracking to generate hydrogen for the energy grid. **KATALCO 27-612** catalyst is for low temperature application in smaller decentralised units for consumer fuel production.

JM's **KATALCO** ammonia cracking catalysts offer:

- High activity, enhanced heat transfer and long lifetimes.
- The benefit of over 50 years JM experience in supplying ammonia cracking catalysts.
- Proven supply chain and continual investment in R&D translates to greater greater performance benefits.



Scan the QR code for more information about Johnson Matthey's **ADEPT** technology and ammonia cracking



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