

# Green ammonia market study AHC Member Meeting

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Branch

- Final stages, due for release in late June/early July.
- Being delivered in partnership with AHC.
- Worley Consulting engaged to support the project.
- Purpose is to better understand the green ammonia market, in particular:
  - current uses, emerging uses and key demand countries
  - NSW and Australia's competitiveness in supplying
  - how to grow the supply chain.



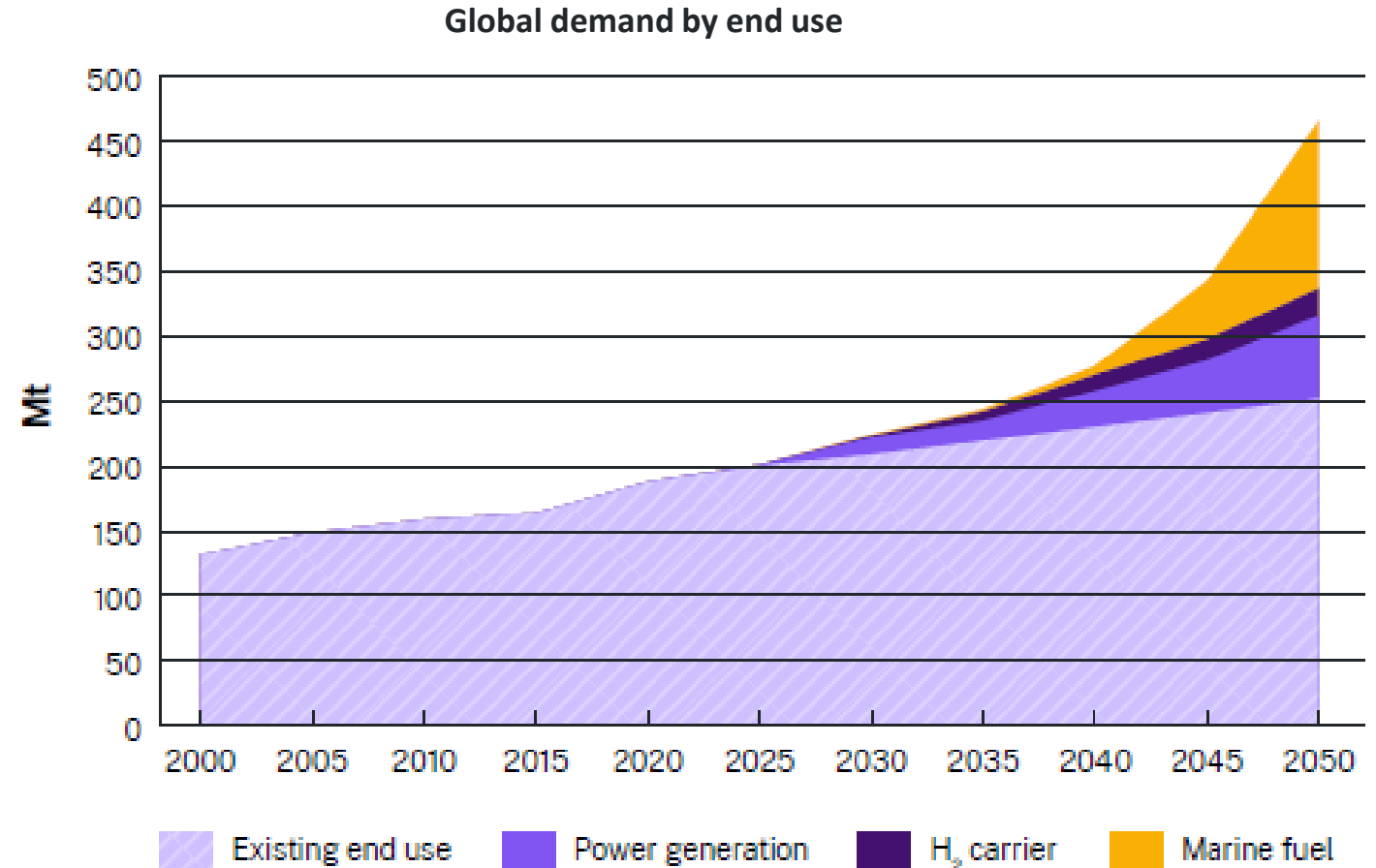
# Key findings

- Strategic investment in green ammonia will help decarbonise ammonia production and unlock the opportunities of the hydrogen industry.
- In the early stages of the industry, green ammonia will require government policy support – but the need for support is likely to subside over time.
  - Reducing government support will require a reduction in the cost of electrolyzers and green electricity.
- With current incentives, NSW and Australia are likely to be among the most cost competitive jurisdictions in key Asian markets.
  - In addition, NSW/Australia can leverage non-price factor advantages such as supply security and cost certainty.



# Global ammonia demand is expected to double by 2050, driven by emerging uses.

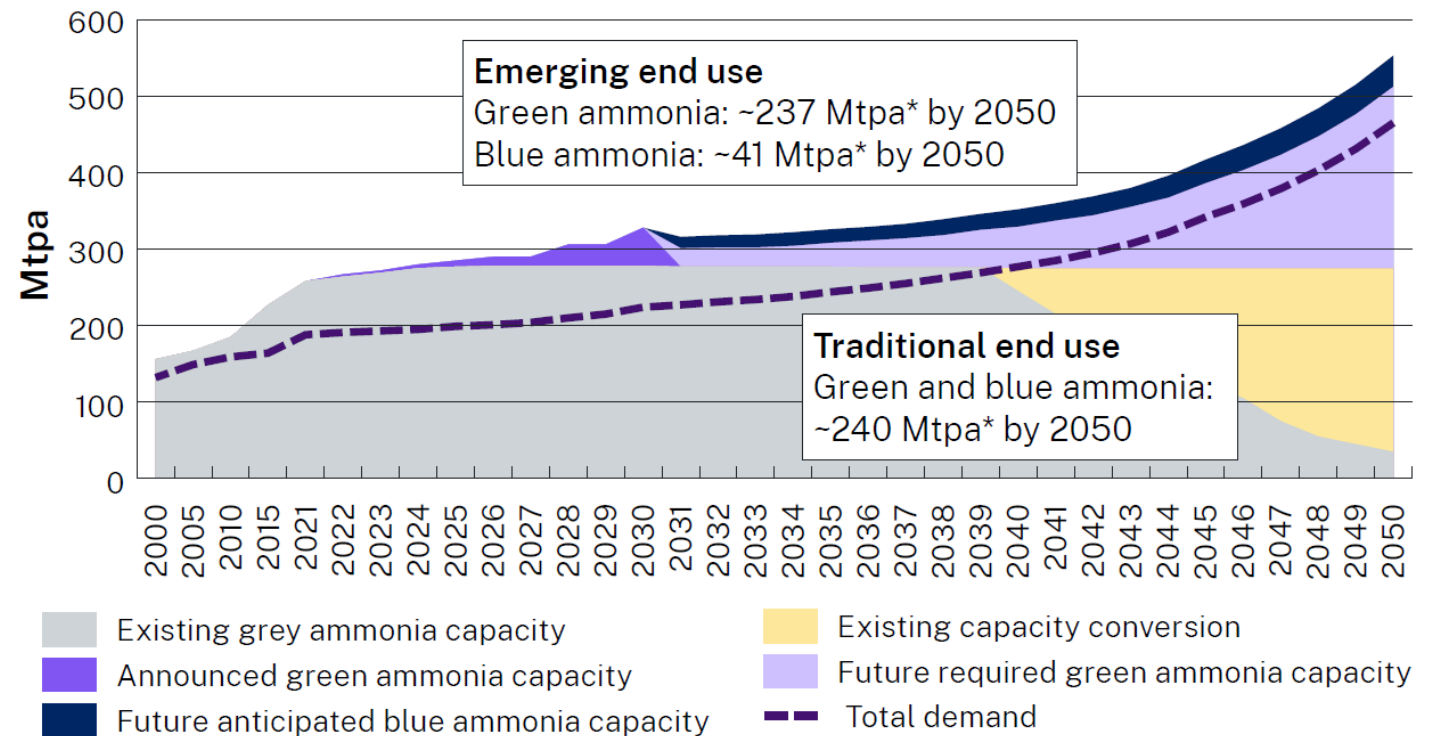
- Key markets for Australia are Japan, South Korea and Germany.
  - Japan and South Korea: co-firing with coal.
- By 2050, the green ammonia demand for emerging uses (214 Mtpa) will likely be made up of 30% from power generation, 10% from use as a hydrogen carrier, and 60% from marine fuel.



# To meet the potential global demand of 465 Mtpa by 2050, supply capacity will need to more than double to around 553 Mtpa.

- Meeting the global supply capacity requirements of 553 Mtpa of green ammonia by 2050 would require approximately 650 gigawatts (GW) of electrolyser capacity.

Future Supply Outlook



\* Assumes a utilisation factor of 75%

# The Middle East is currently Australia's main competitor for green ammonia exports.

- Announced total capacity of global green ammonia projects is 106 Mtpa.
- Based on announced projects, Australia and Oman account for 66% of the global planned green ammonia capacity.
- Markets currently served by Indonesia, Trinidad and Tobago, Iran and Russia could be open to competition due to the potentially slow transition to green ammonia production in those countries.

Announced green ammonia production capacity (Mtpa)

