

## Net Zero Emission Futures: What does it look like for Australia and what membrane technologies will we need?

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The energy transition will not be straightforward. The current situation in the Australia energy markets are the perfect example where global instability, supply chain pressures and the impacts of climate change are colliding with our ambitions for net zero emissions by mid-century. The Net Zero Australia Project identifies pathways and requirements by which Australia could achieve net zero emissions whilst having the most competitive domestic energy system and clean exports by mid-century. Here we present our interim regional results and identify areas where R&D breakthroughs for membrane technologies (in both the water and energy space) could make a critical difference to the speed and cost of the transition. This Project is a partnership between the University of Melbourne, the University of Queensland, Princeton University and the Nous Group, is supported by Australian industry and philanthropy, and is advised by leaders from Australian industry and civil society.