

# Sustainability

## Clearer path to net-zero emissions by 2050

The Climate Change Authority (CCA) has published its review of potential emissions reduction pathways that support Australia's transition to net-zero emissions by 2050.

It assessed six sectors, including agriculture and land, and identified the range of emissions reductions that can be achieved through current and prospective technologies. It outlines barriers, opportunities, and enablers across each sector.

Based on the review's modelling, agricultural emissions are expected to remain stable around current levels to 2035, followed by modest reductions to 2050 as new, low-emissions technologies become commercially viable. Key technologies identified include methane-reducing feed supplements, slow-release or nitrification-inhibitor-coated fertilisers, and renewable-fuel-powered vehicles and machinery.

It also highlights the importance of land-based removals, with sequestration in the land sector more than doubling between 2025 and 2050 under the modelled scenario.

Growing pressures on land resources are flagged as a potential challenge, with the sector facing the need to balance food security, economic value, healthy ecosystems, and provision of land-based removals.

The CCA examined the role of land-based removals as offsets. It observed a low level of understanding among carbon market participants of the finite nature of land-based removals. It also signalled potential to put policy guardrails in place to ensure removal potential is used in ways that optimise economic and environmental outcomes.

Outside agriculture, the review expects the most steep and rapid reductions for the electricity and energy sector, due to the relative availability of mature and scalable technologies.

The review was commissioned by the Australian Parliament and is designed to support the development of the government's Net Zero Plan. Its findings could inform how the Australian government approaches action on climate change.

### What to watch:

- **Australia will host the first Global Nature Positive Summit in Sydney on 8-10 October 2024** – The summit aims to build consensus on the economic settings needed to increase investment in nature, showcase best practice, and explore pathways to better valuing nature. Outcomes from the summit will provide insights into the potential future direction of nature-related policies and markets.



Anna Drake  
Sustainability Analyst

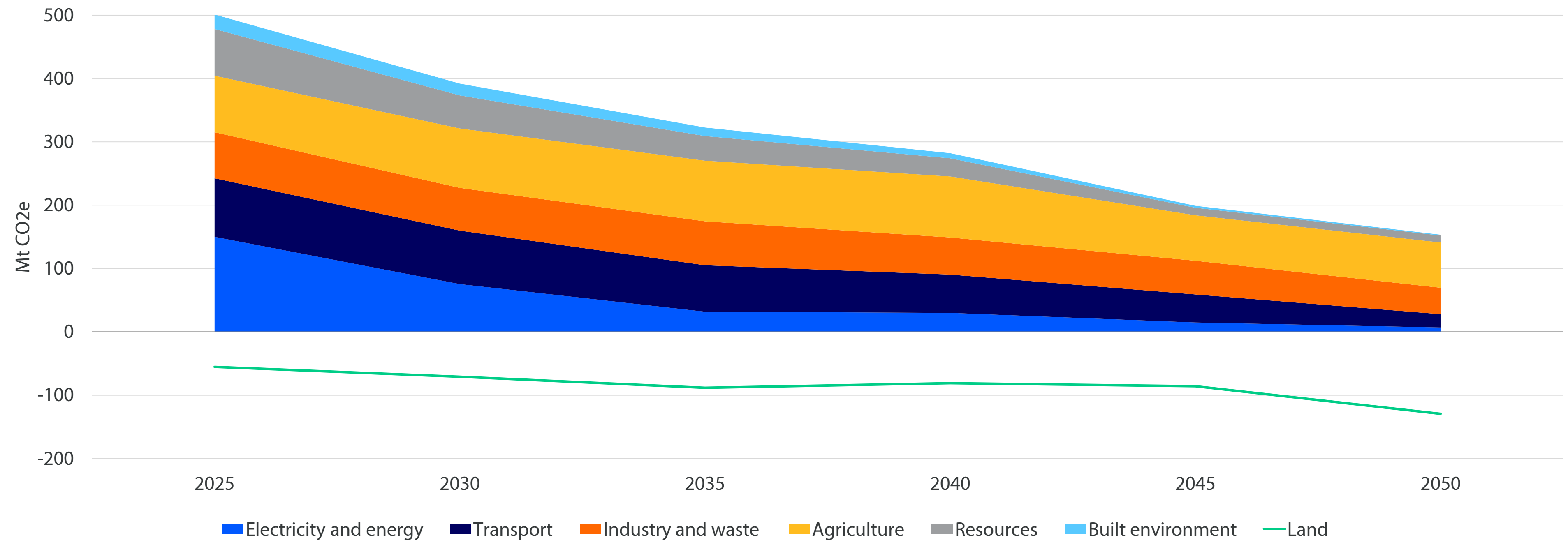
[Anna.Drake@rabobank.com](mailto:Anna.Drake@rabobank.com)  
X: @itsadrake



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## Sector-level emissions reductions and increased land-based removals needed to get to net zero

*Trajectories to national net zero under a scenario consistent with Australia achieving its current emissions reduction targets*



Source: Climate Change Authority, RaboResearch 2024