

# Climate Change : Australia's journey to net zero and its economic implications

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# What are we talking about today?

- What is a baseline forecast and why is it important in the context of climate change?
- Are we on track to meet Australia's climate targets?
- Which sectors are doing the heavy lifting?

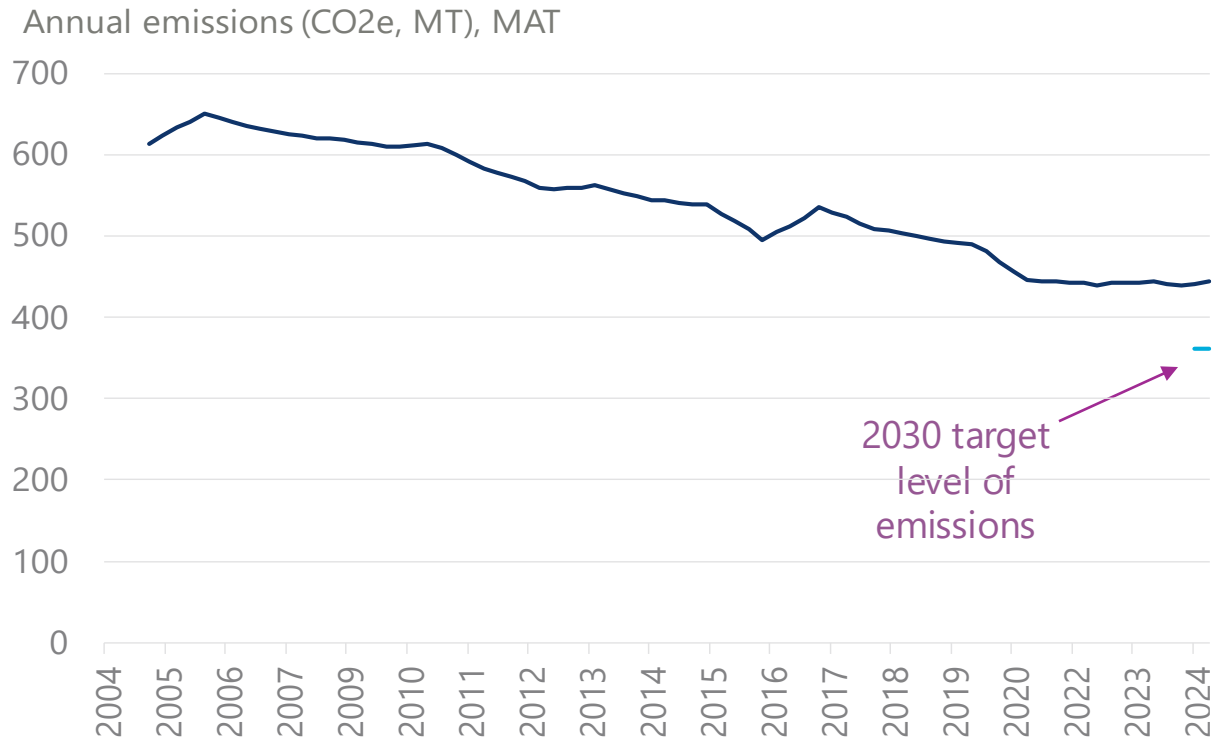
# The baseline

The most likely forecast outcome

# How are we tracking?

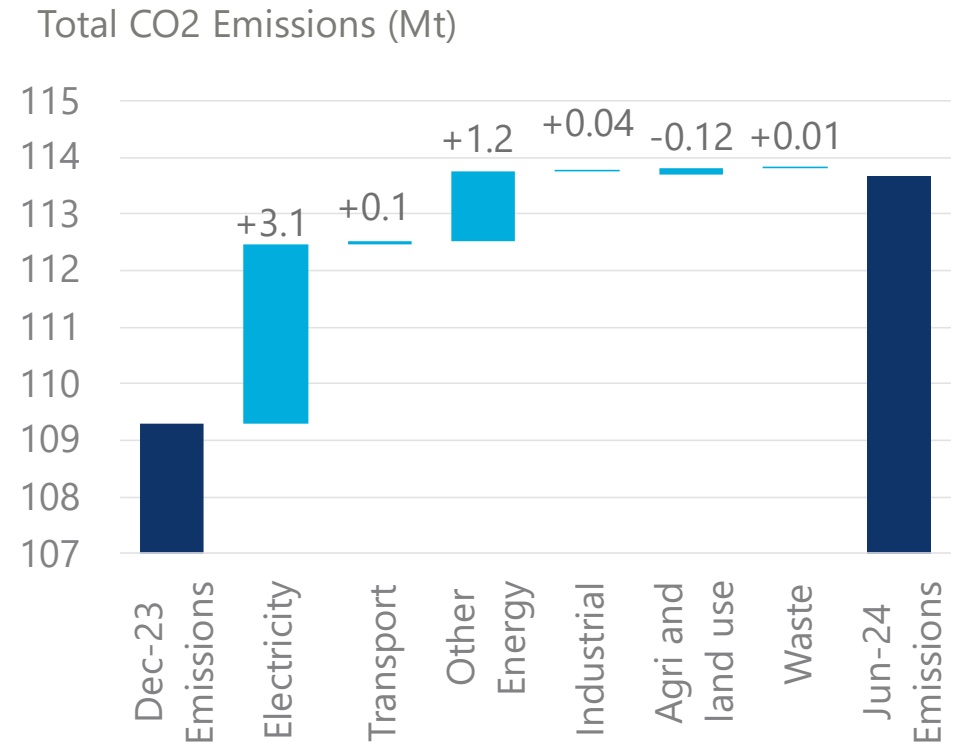
## History hasn't been on our side lately

### Historical trend in annual total emissions (CO<sub>2</sub>e): Sep-04 to Jun-24



Source: Oxford Economics Australia/DCCEEW

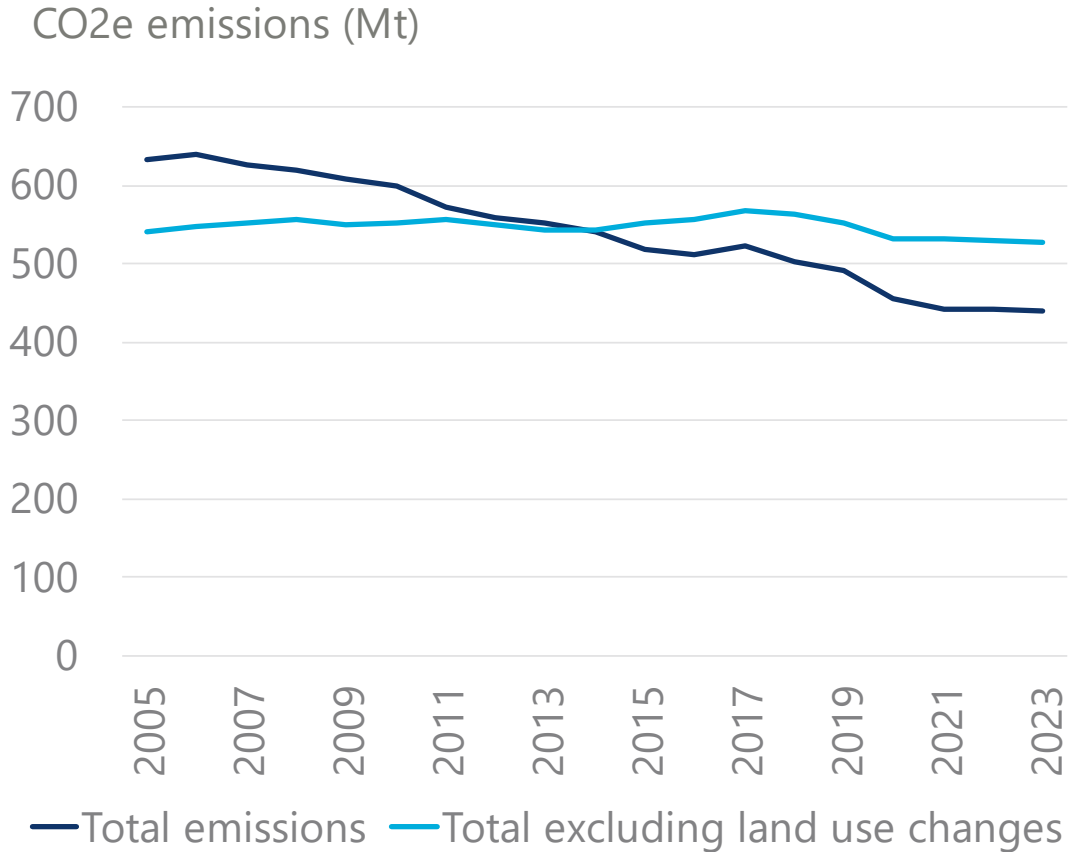
### Change in reported emissions between Dec-23 to Jun-24



Source: Oxford Economics Australia/DCCEEW

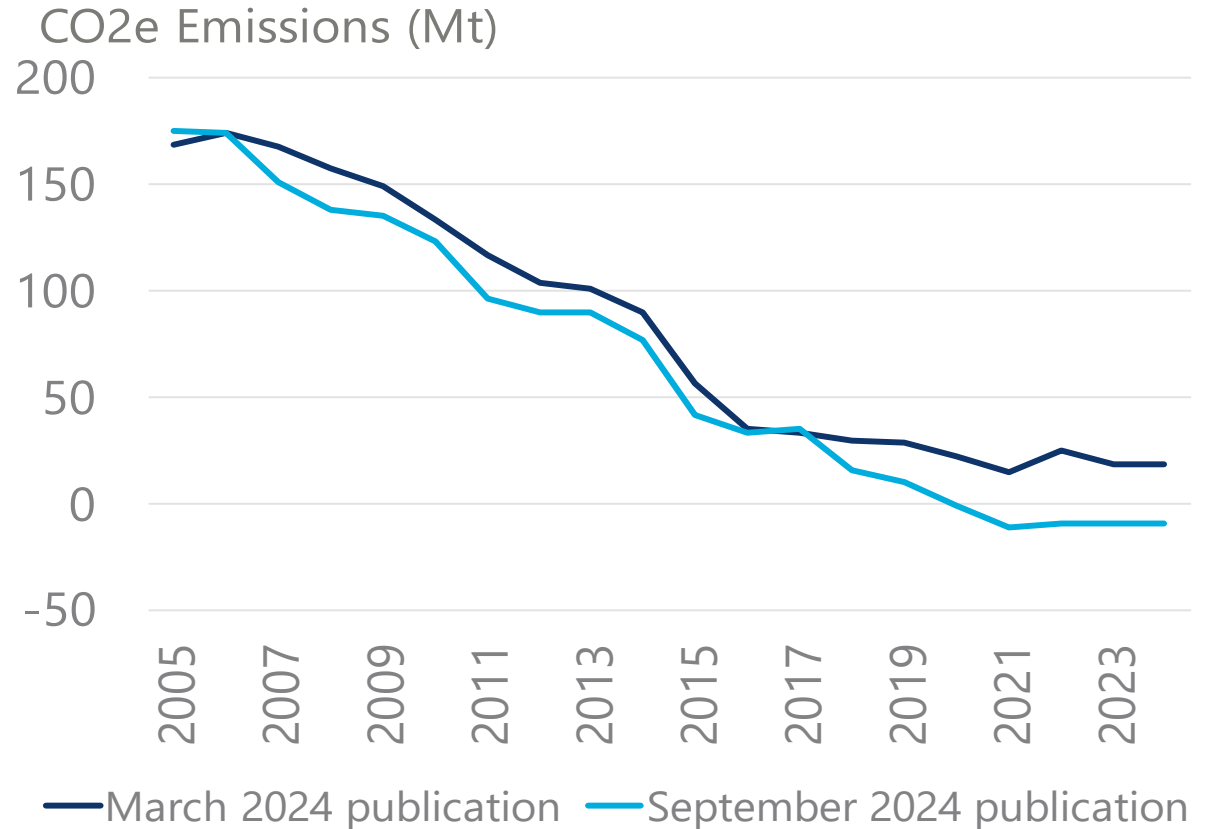
# Land use change is the primary driver of emissions reduction

Total emissions vs. Emissions excluding land use changes (2005-23)



Source: Oxford Economics Australia/DCCEEW

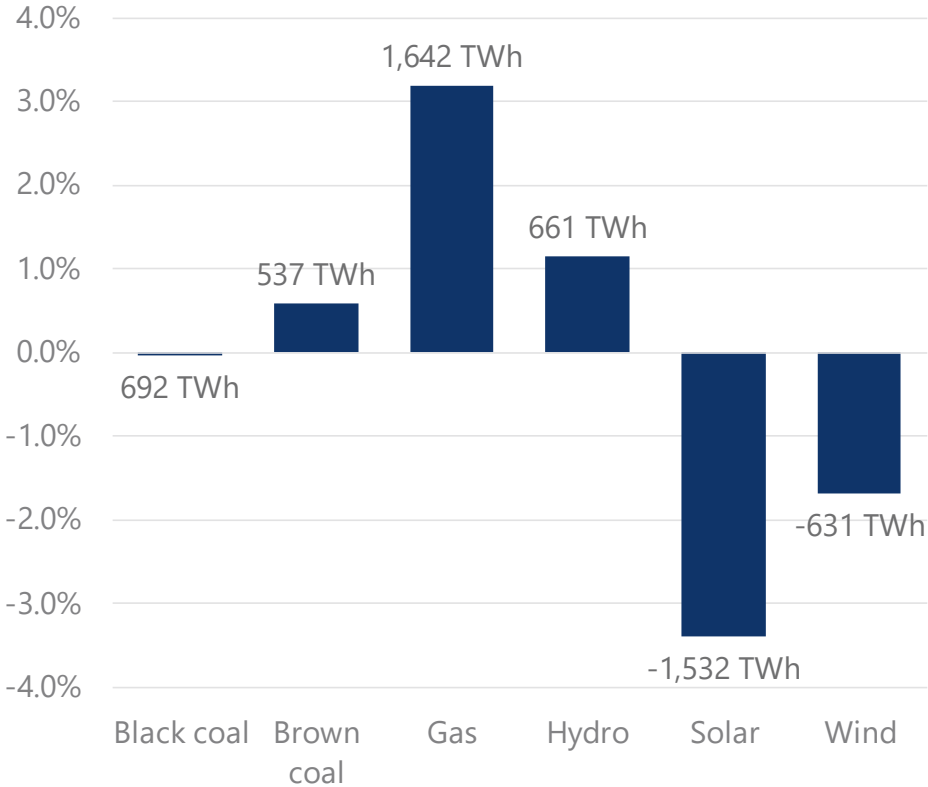
Agriculture, Forestry & Land Use sector greenhouse gas emission: History



Source: Oxford Economics Australia/DCCEEW

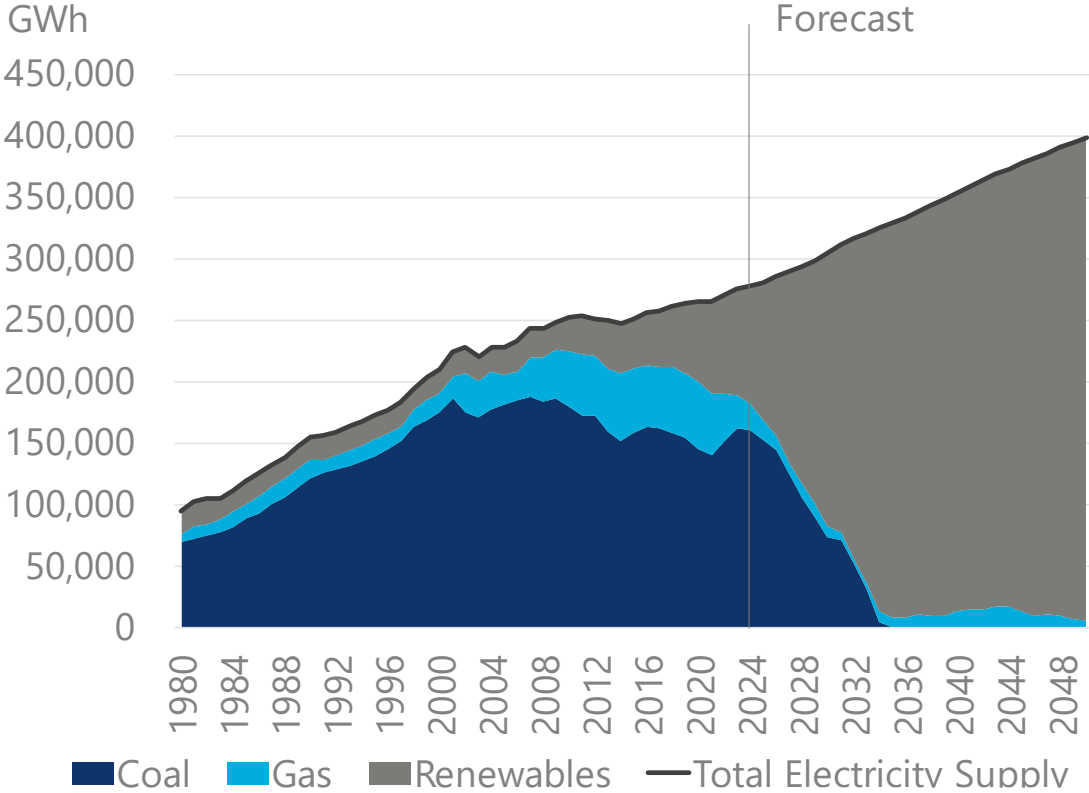
# Why have our electricity emissions increased?

Difference in NEM generation mix: Q1 2024 vs. Q2 2024



Source: Oxford Economics Australia/AEMO

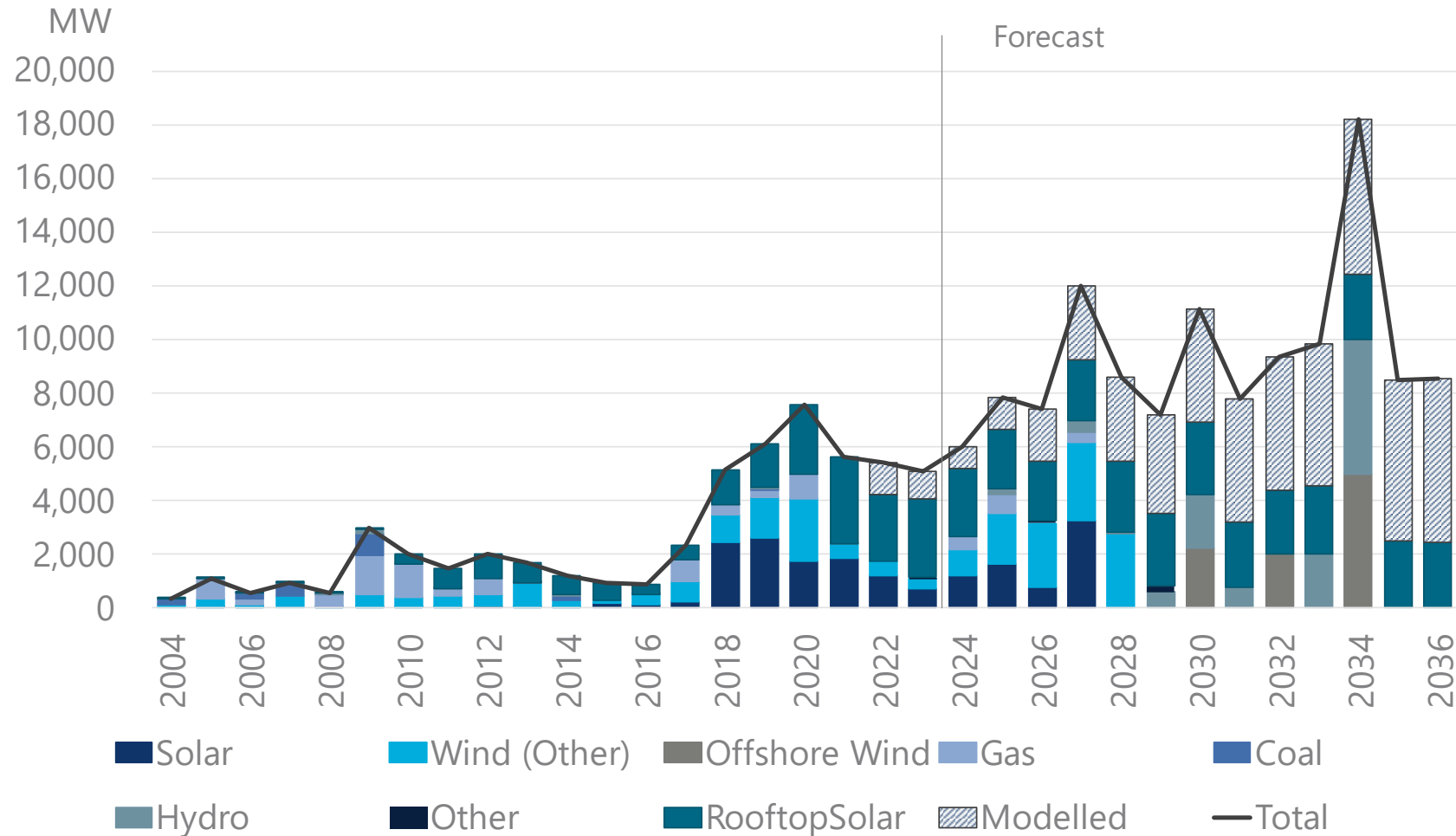
Electricity Supply history & forecast, by fuel source



Source: Oxford Economics Australia/AEMO

# Renewables dominate pipeline for new capacity

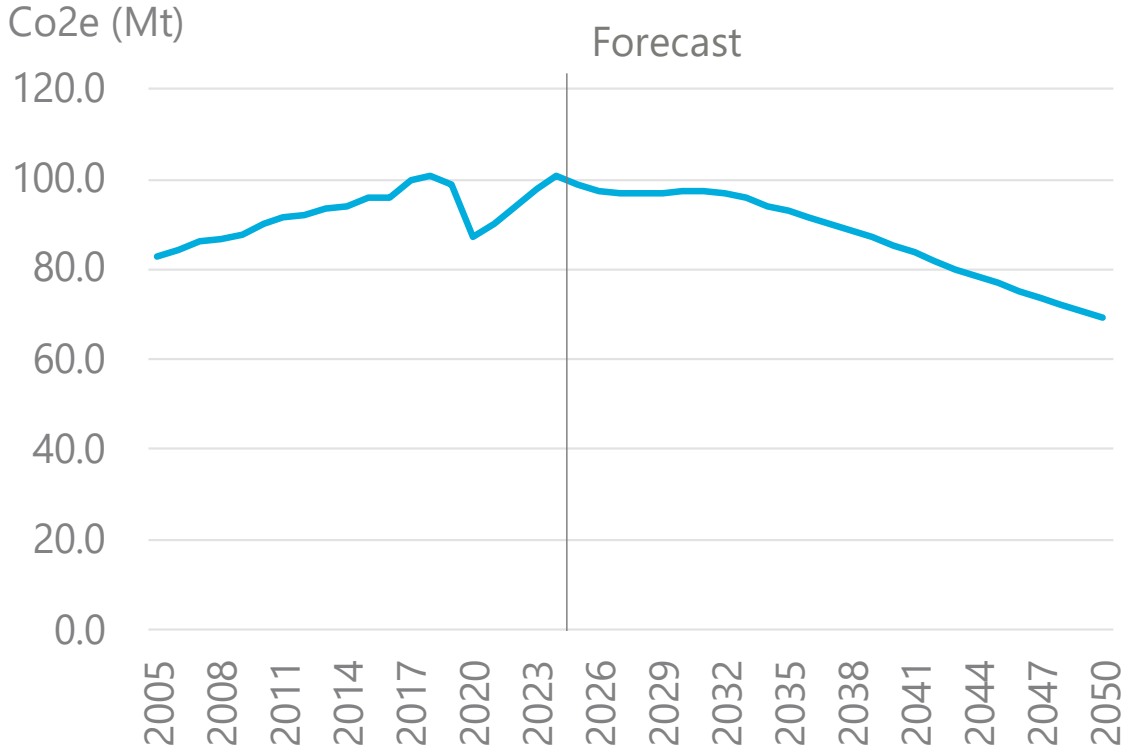
Generation capacity by source of generation: History & Forecast



Source: Oxford Economics Australia/ Clean Energy Regulator/ AEMO

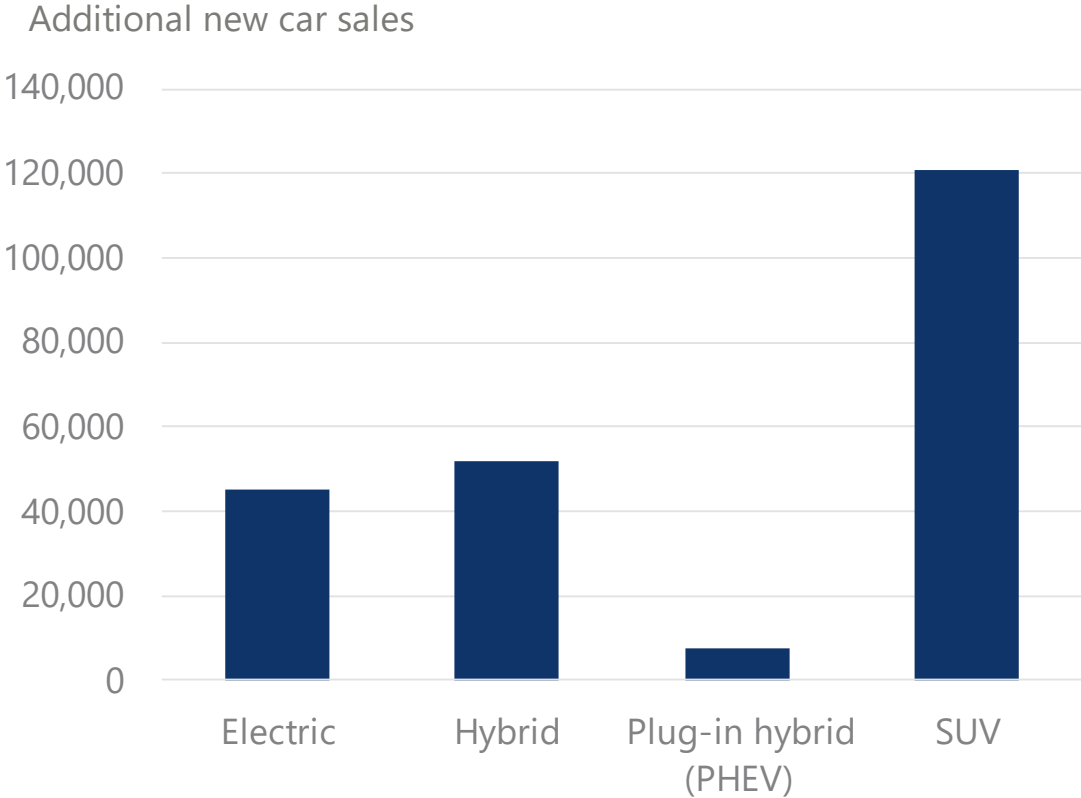
# The electric vehicle transition will be challenging

Transport sector greenhouse gas emission: History & Forecast



Source: Oxford Economics Australia/FCAI/Haver Analytics

Increase in car sales by vehicle type (YTD May-23 to YTD May-24)

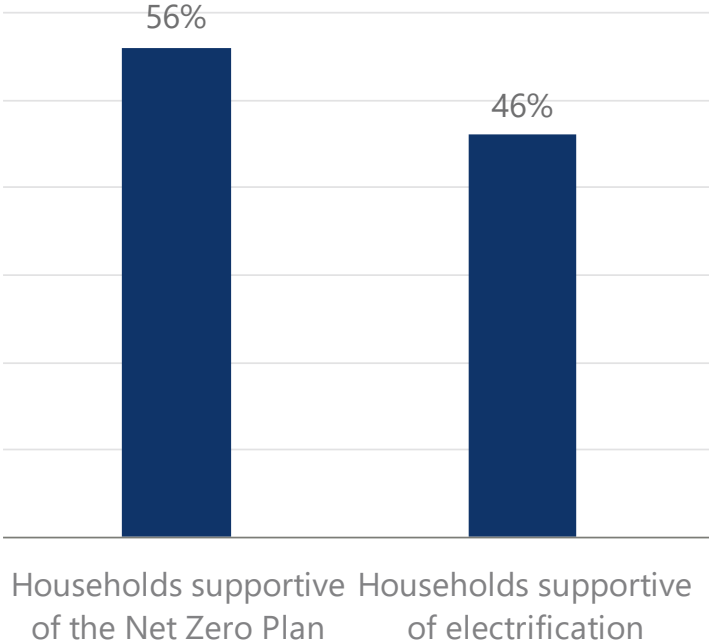


Source: Oxford Economics Australia/DCCEEW



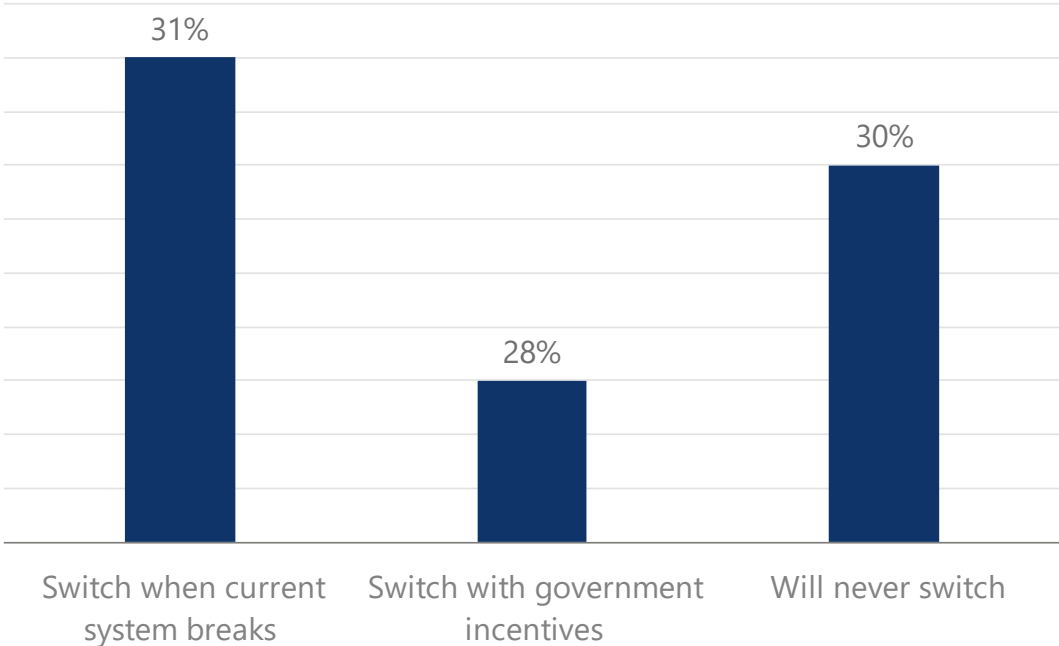
# Household attitudes to electrification remain subdued

Survey responses for household attitude to climate transition and electrification



Source: Oxford Economics Australia: Household Appliances Survey

Survey responses to conditions under which households will proactively switch from gas to electricity appliances

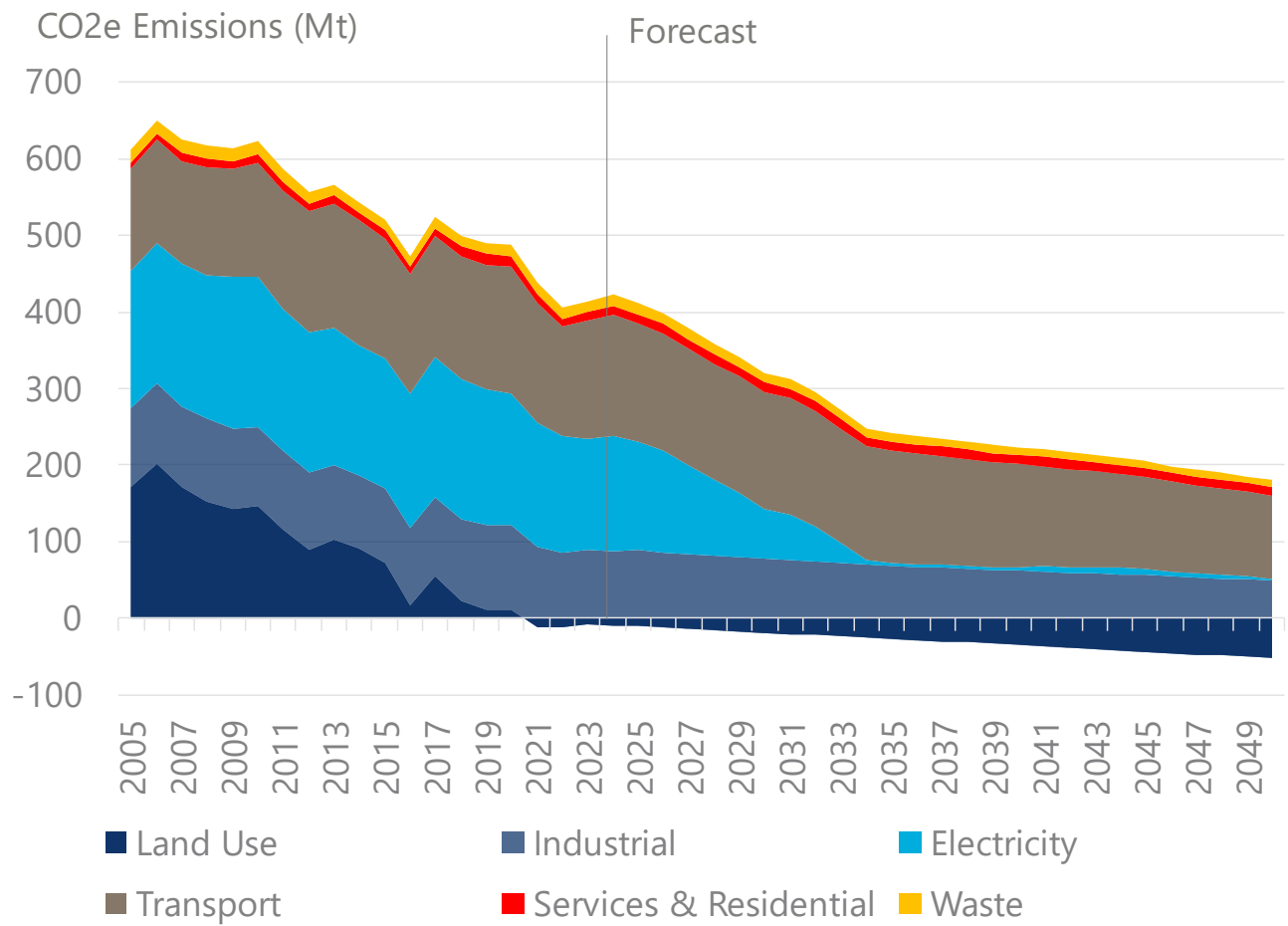


Source: Oxford Economics Australia: Household Appliances Survey

# Despite recent disappoint, we're on track to meet our 2030 target

But it'll be a bumpy road and net zero appears aspirational

Total emissions outlook by sub-sector



Source: Oxford Economics Australia/DCCEEW

# Summary time

- **What is a baseline forecast and why is it important in the context of climate change?**
  - The baseline is the most likely forecast based on the macroeconomic outlook, implemented policy and expected technological progress.
  - The baseline has two important purposes:
    - Assess whether we're on track to meet our obligations
    - Assess the cost of our actions
- **Are we on track to meet Australia's climate targets?**
  - We're broadly on track to meet our 2030 emission reduction target
  - We're not currently on track to meet net zero by 2050 – but that can change in the future
  - We have to be careful about setting our 2035 target as it'll require a successful shift towards transport and industry reductions
- **Which sectors are doing the heavy lifting?**
  - Land use and the electricity sectors will see us through to the early 2030s
  - Harder to abate industry and transport emissions will need to be reduced thereafter