

Agenda

Welcome and karakia	9.00 – 9.05
Part 1: Our approach and limiting warming to 1.5 deg	9.05 – 10.00
Break	10.00 – 10.30
Part 2: Multisector Approach, Land and Waste	10.30 – 11.15
Part 3: Transport and Heat, Industry and Power	11.15 – 11.55
Wrap up and karakia	11.55 – 12.00

Climate Action in Aotearoa

February 2021



He Pou a Rangi
Climate Change Commission

Part 1: Our Approach

Our advice

We have a vision of a thriving, climate-resilient and low emissions Aotearoa.

We have advice that tells us we can get there.

Our advice provides Aotearoa with a comprehensive strategy for tackling climate change.

It includes four parts:

1. Level of the first three emissions budgets from 2022-2035
2. Direction of policy for the Government's Emission Reduction Plan
3. Consistency of New Zealand's first NDC with staying below 1.5°C of warming
4. Eventual reductions in biogenic methane which might be required by 2100

Change is needed - there are critical actions to make it happen

- We can reach net zero of long-lived gases and reduce methane significantly by 2050.
- We will not reach our targets under current policy settings.
- Work to reduce emissions must be accelerated.

Seeking an equitable transition for Aotearoa

- People must be supported and empowered through some big change.
- There will be concentrated impacts and we will need to manage these well.
- There will also be opportunities with new technologies and new industries.

Analytical approach

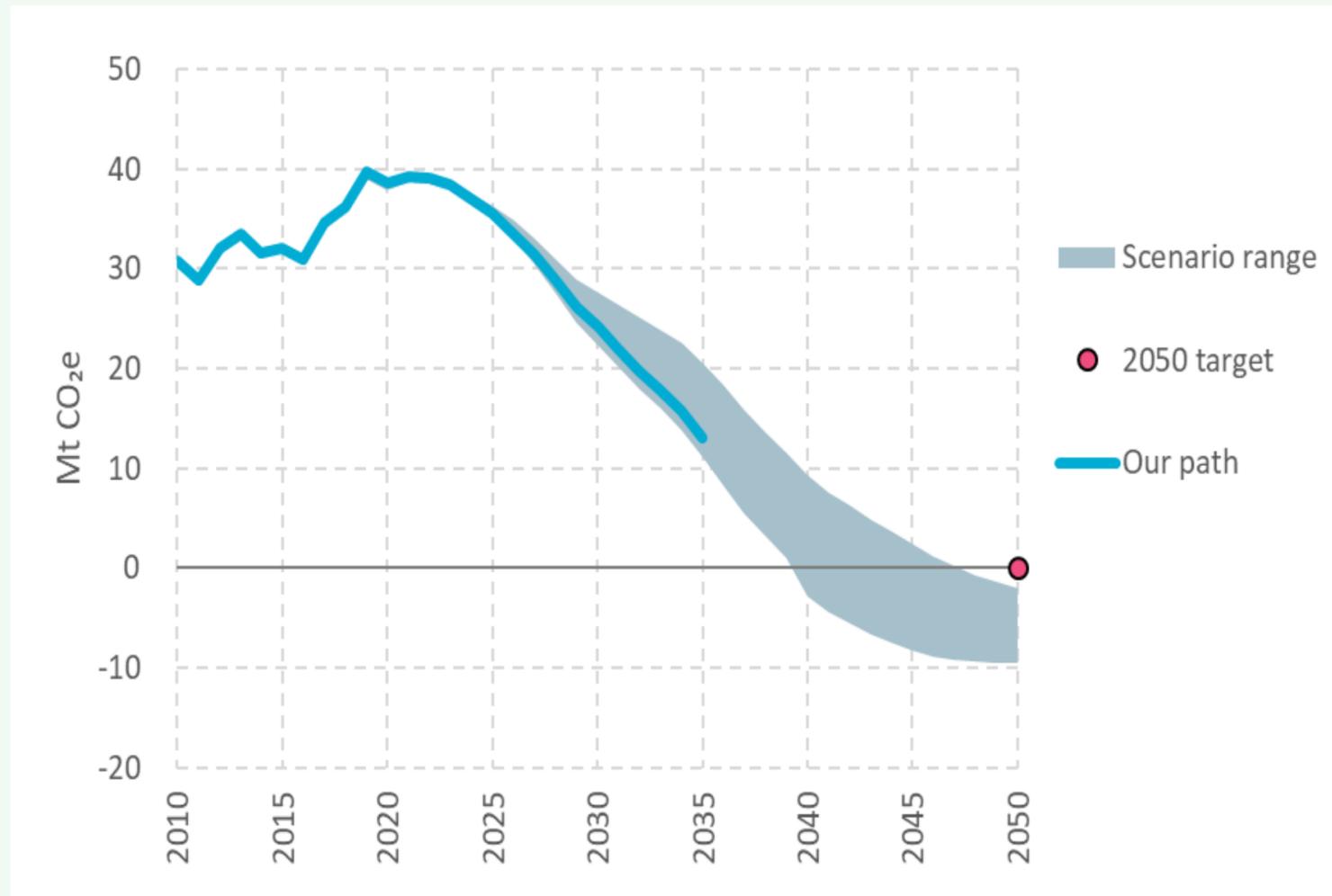


He Ara Waiora

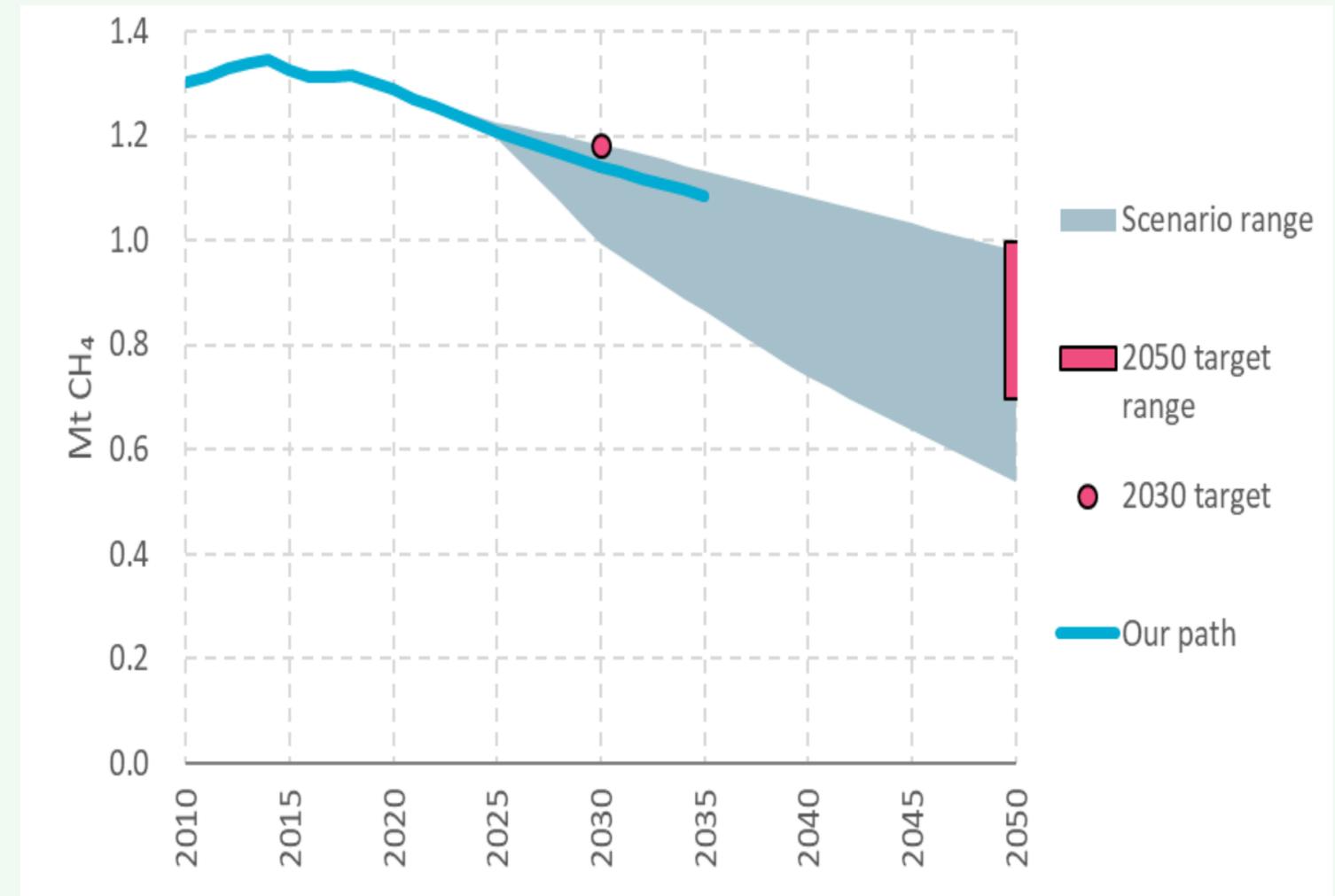


Proposed path relative to scenario range

Long-lived gases



Biogenic methane



Direction of travel for business investment

1. Actions to reduce emissions now

- Deploying existing low emissions technologies
- Increasing efficiency and improving practices

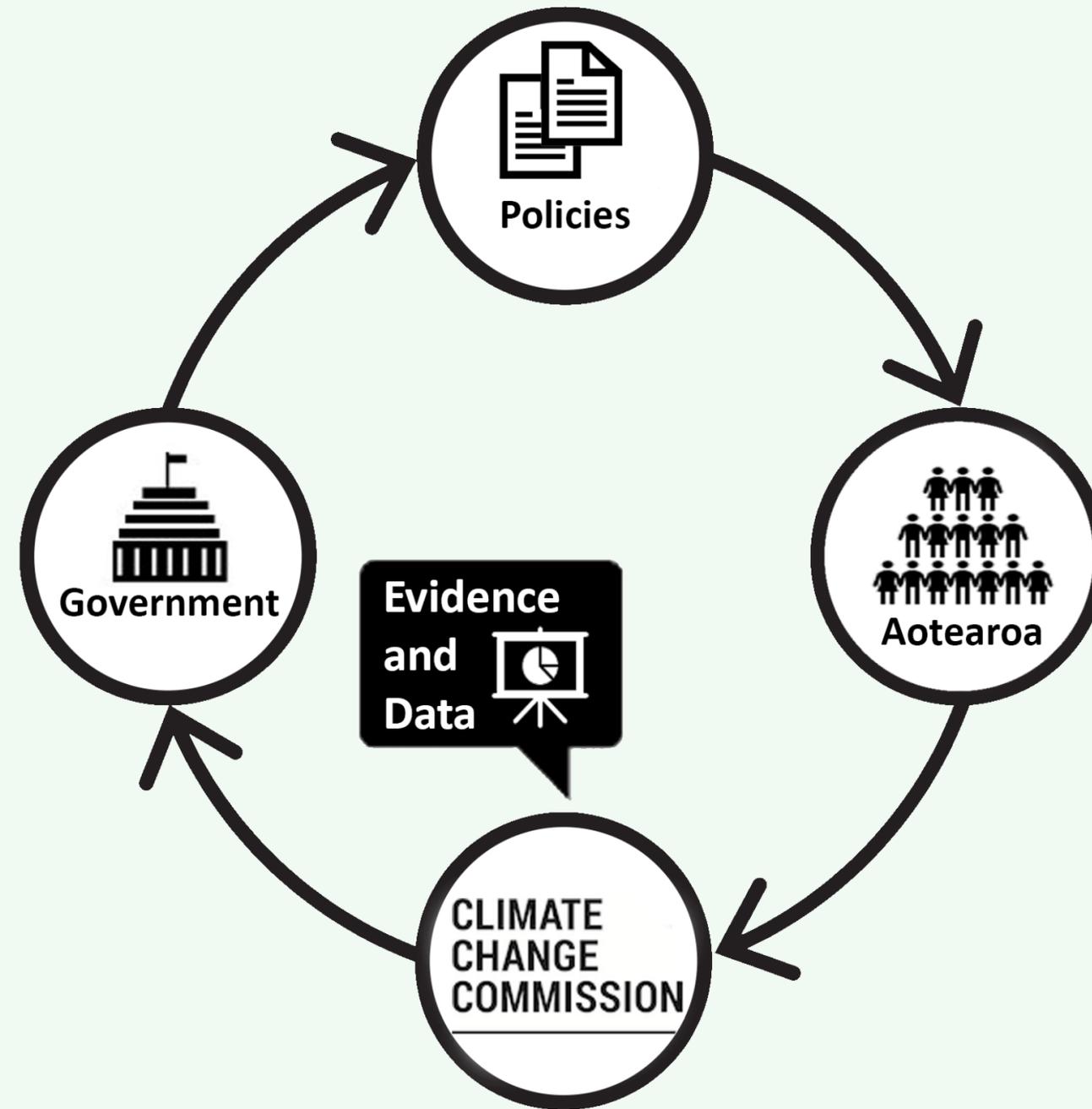
2. Actions to give us low emissions options for the 2030s, 2040s

- Developing infrastructure & supply chains, RD&D

3. Creating an enduring carbon sink by expanding our native forest

- Offsetting hardest to abate sectors

What Happens from here



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Our path to 2035

Approach to meeting the 2050 targets

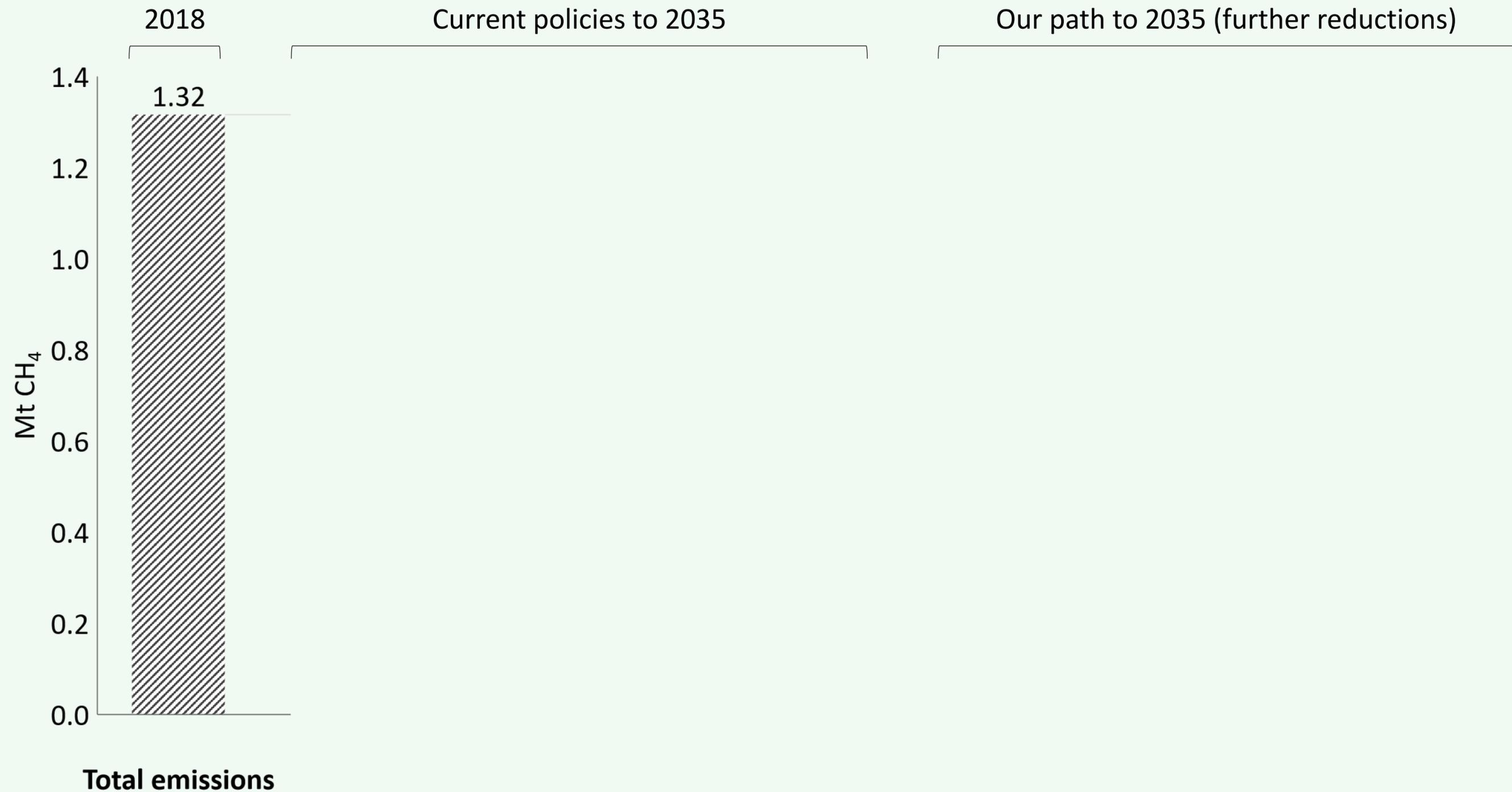
Adapting current policies would not reduce gross emissions, but instead meet the 2050 net zero target through additional forestry.

- Principles used to guide approach:
 - Focus on decarbonising the economy
 - Create options
 - Avoid unnecessary costs
- We recommend two key transformations to meet the 2050:
 - Decarbonise the sources of long-lived gas emissions wherever feasible.
 - Build a long-term carbon sink through new native forests

Our path to 2035 – reducing long lived gases



Our path to 2035 – reducing biogenic methane



A well-signalled and equitable transition

- The transition to a low emissions society will bring a mix of opportunities, benefits, challenges and costs
 - *Overall costs* estimated at less than 1% of projected annual GDP in 2050
 - *Electricity prices* not expected to increase above today's level before 2035
 - *Natural gas* prices increase as ETS price increases
 - *Petrol prices* expected to increase an additional 2c/litre per year to 2035
- There are risks to market access from delaying climate action

→ A well-signalled transition will allow businesses time to plan and adapt

Perspectives from iwi/Māori



Rangatiratanga
Treaty Partnership



Wairuatanga
Wellbeing



Taiao
Environmental Wellbeing



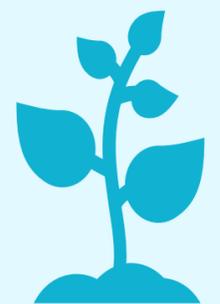
Mana Tuku Iho
Identity & Belonging



Mana Tau utuutu
Independent Rights &
Responsibilities



Mana Āheinga
Aspirations & Capabilities



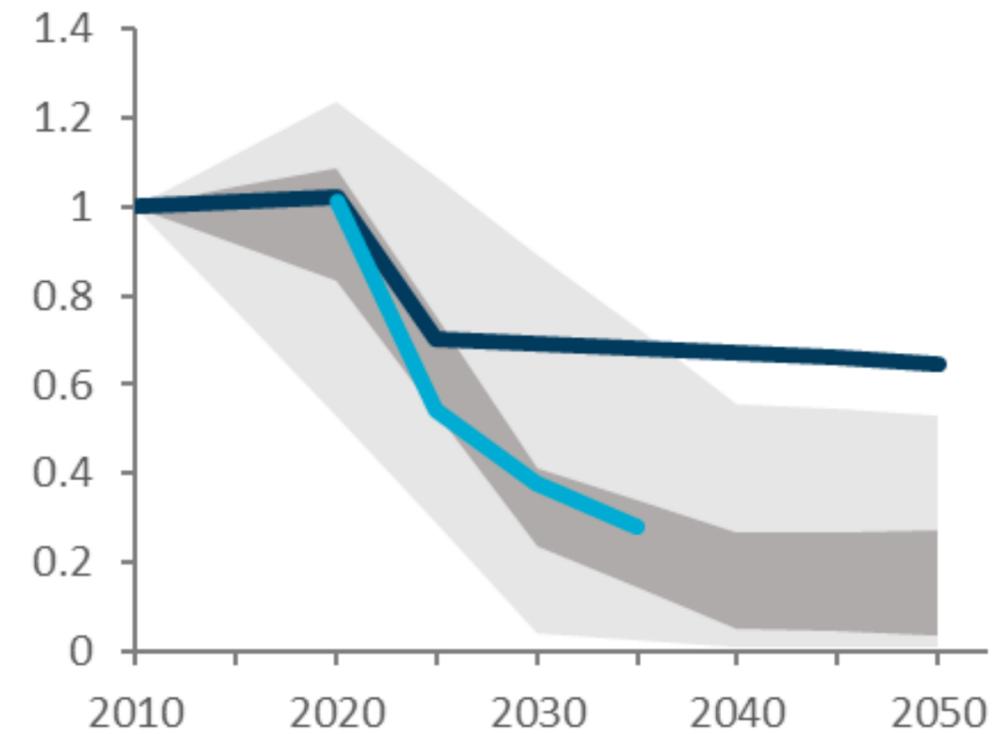
Mana Whanake
Sustainable
Prosperity

3

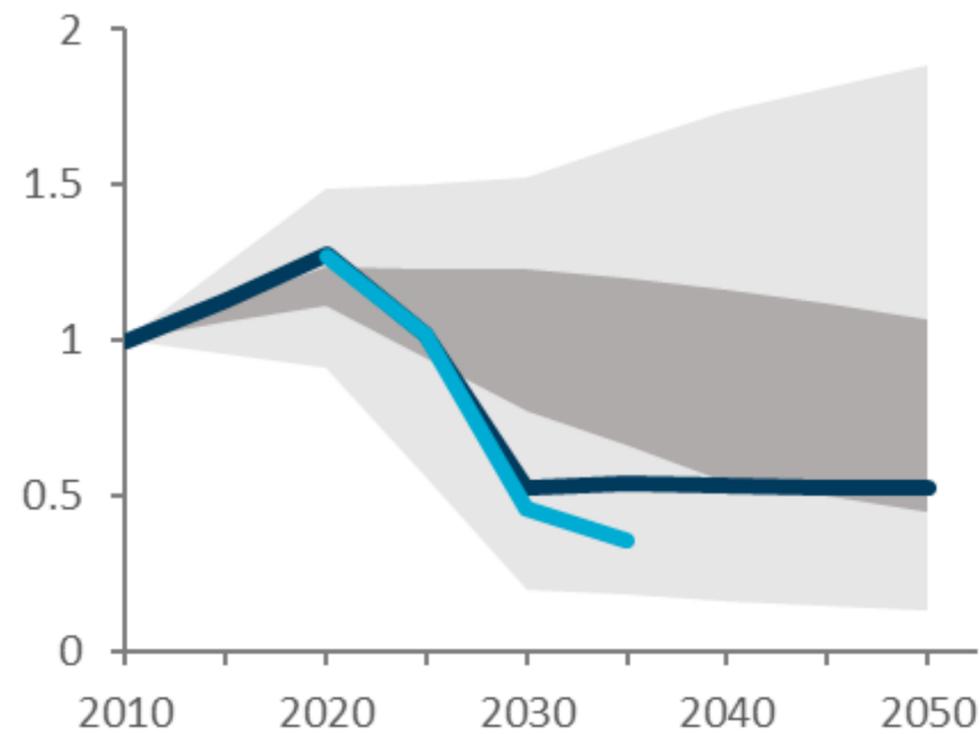
Limiting warming to 1.5 degrees

Our budget pathway compared to the IPCC 1.5°C pathways – coal, gas and oil

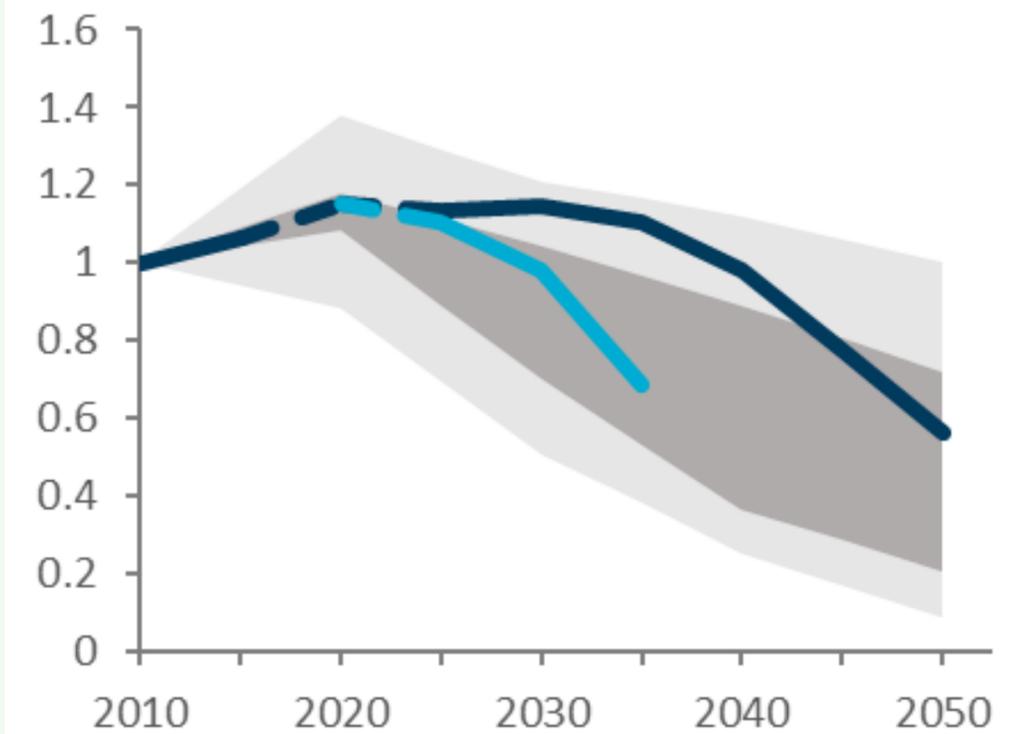
Coal primary energy



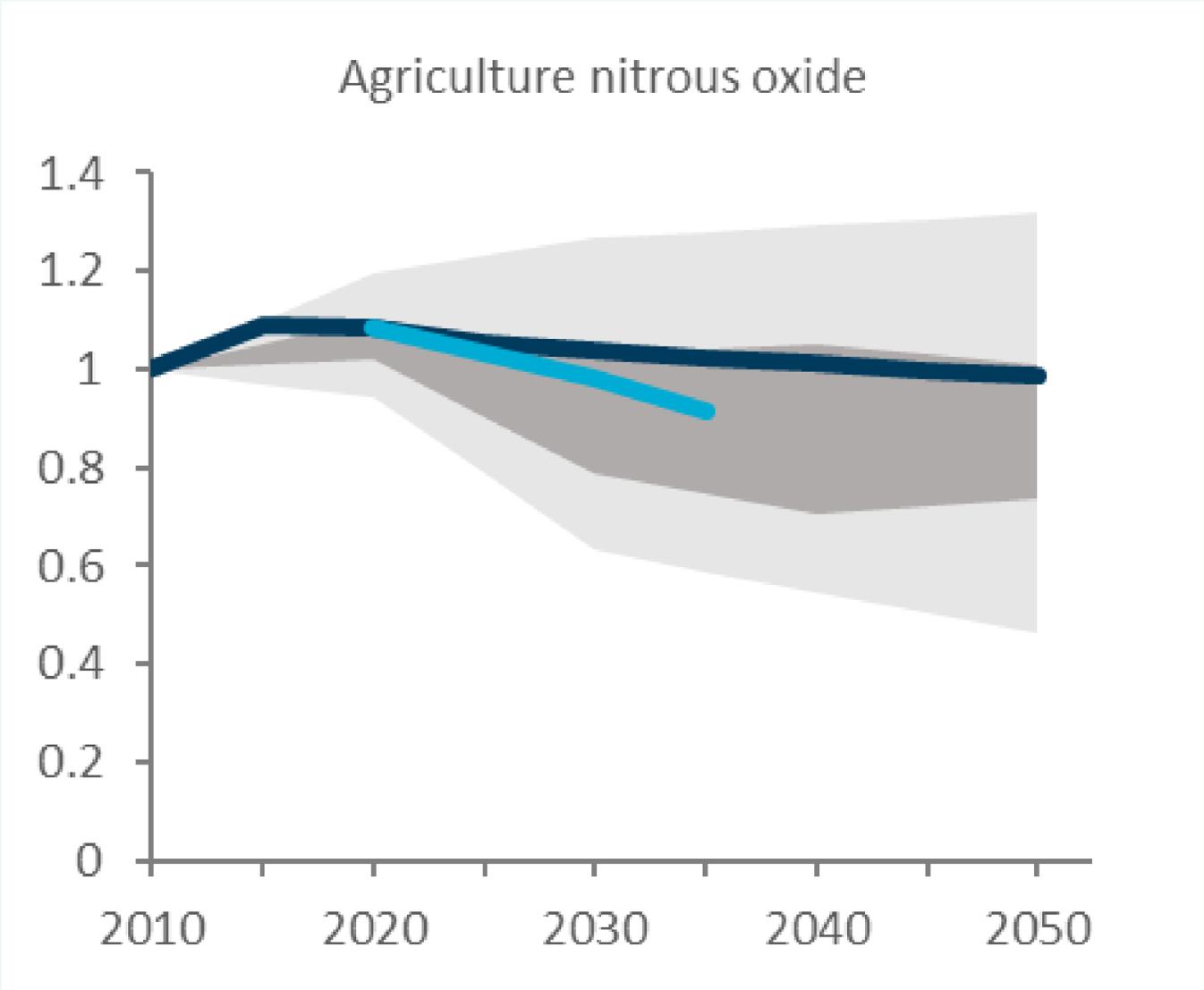
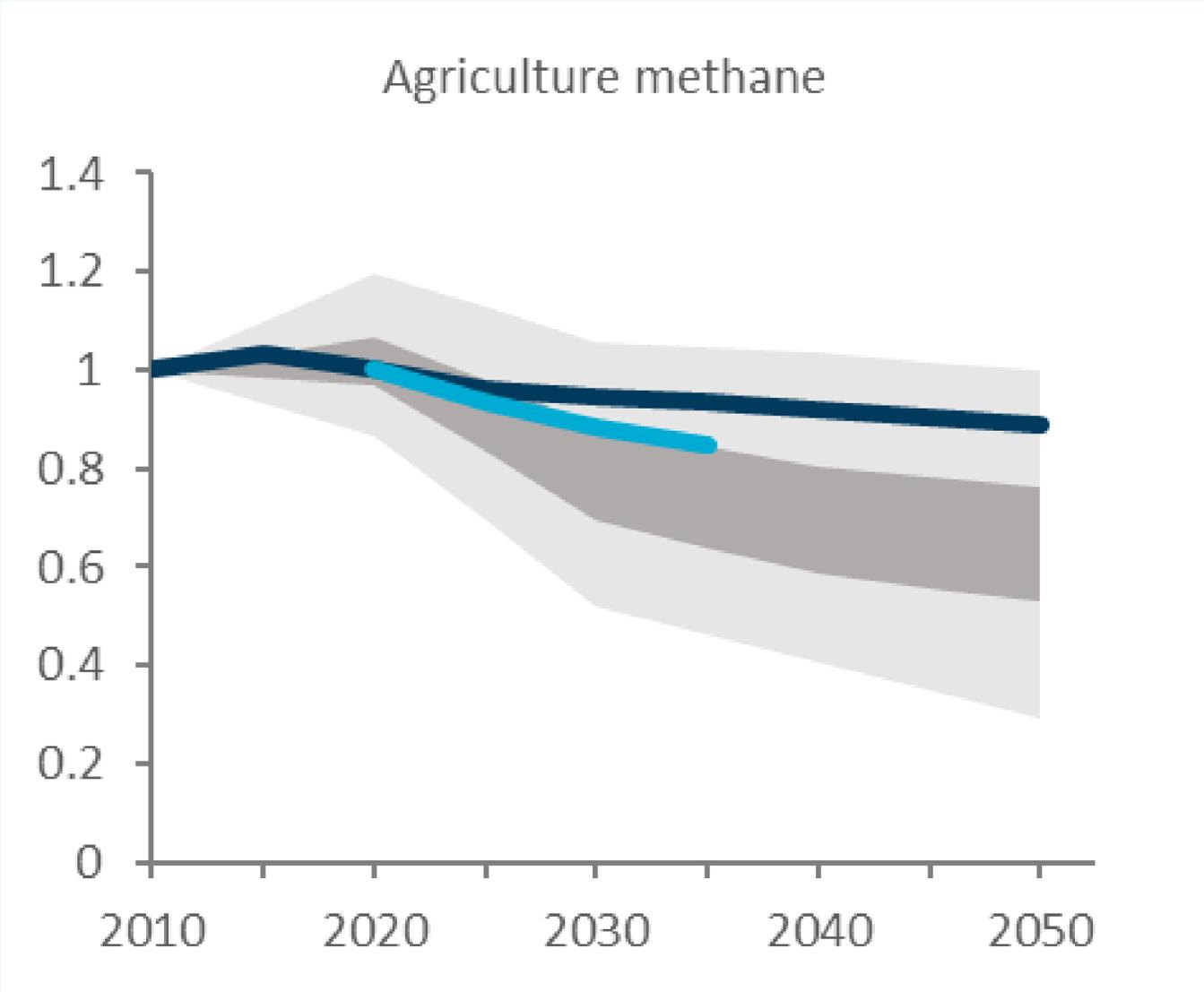
Gas primary energy



Oil primary energy



Our budget pathway compared to the IPCC 1.5°C pathways – methane and nitrous oxide



NDC findings and recommendation

- Our analysis has found that the first NDC **is not compatible** with contributing to global efforts to keep warming to 1.5°C.
- If Aotearoa is to play its part as a developed nation, the NDC would need to be strengthened to reflect reductions of much more than the global average.
- To achieve our NDC, Aotearoa will need some offshore mitigation. We are not using this to do less domestically – but to bridge the gap while our policies take effect at home.

Methane – findings

- By 2100, Aotearoa could need to reduce biogenic methane emissions by 49-60% below 2017 levels.
- Our analysis for our emissions budgets shows Aotearoa can achieve methane reductions of 24% by 2050 without any technology developments.

Break



Part 2: Multi-sector strategy, Land and Waste

Direction of policy

- The Government's emissions reduction plan must contain:
 - A multisector strategy
 - Sector specific policies
 - A strategy for mitigating impacts on employees, employers, regions, iwi and Māori, and wider communities
- Our overarching message - a full suite of policies is needed

Multisector strategy recommendations

- Align investments for climate outcomes
- Drive low emissions choices through the NZ ETS

Emissions values used in our scenarios

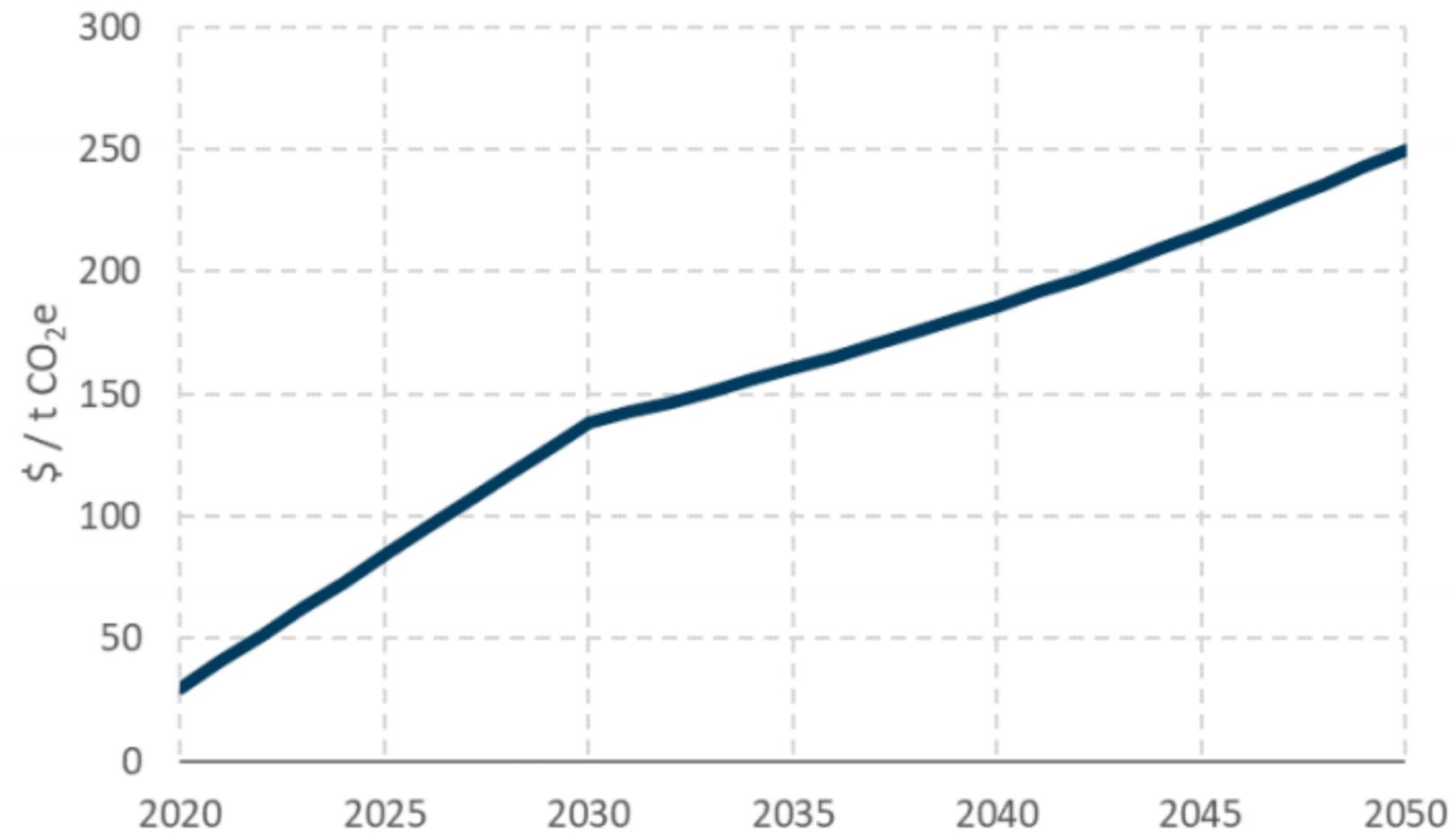


Figure 8.2: Emissions values used in the bottom-up scenario modelling in ENZ. These apply to the energy and transport sectors only.

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Agriculture

Agriculture - Context

- An Industry / Government arrangement (He Waka Eke Noa) is developing tools to support farmers to reduce emissions
- There is limited technology to reduce agricultural emissions
- There are barriers to developing low emissions land uses



Agriculture - Recommendations

- Ensure He Waka Eke Noa provides enduring solutions
- Decide on a pricing mechanism by 2022.
- Get rural areas connected to the internet
- Ensure our R&D strategy is suitable
- Get new tech out on farms once it's here



What this means for business

- Many small businesses in NZ will be required to make significant changes
- Overall production could be maintained
- There is a strong role for the Agricultural service industry
- Supply chains and paths to market will be needed for low-emissions products
- NZ's exports will have higher environmental credibility

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Forests

Context for Forestry

- We have a large native forest estate that could be at risk from pests
- Native forests grow more slowly, can balance hard-to-reduce emissions and have other co-benefits.
- Exotic forests have played a key role in meeting past climate targets
- Exotic forests remove carbon rapidly, and could supply a future bioeconomy



Manage forests to provide a long-term carbon sink

- A lot more native afforestation
- Management plans for 'permanent' forests
- Reduce reliance on exotics
- Change ETS and resource management roles to reflect these priorities
- Exotic forests remove carbon rapidly, and could supply a future bioeconomy

What this means for business

- The native afforestation industry will have to scale up significantly
- The 30,000 to 40,000 small businesses will have more opportunity around
- Forests' role in the ETS will change – more emphasis on emissions reductions
- There will be a lot of biomass in the economy for the indefinite future



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Waste

Waste Context

- Increasing waste generation – 50% increase in the last 10 years
- Waste makes up 10% of biogenic methane emissions – but acting on waste can affect the whole economy
- The Government has new measures in place, such as an increase in the waste levy
- NZ has signed onto the Kigali amendment with a phase down schedule for refrigerants (HFCs)



Waste recommendations

- Follows the waste hierarchy – reduce, recover/reuse, recycle.
- Set ambitious targets in the New Zealand Waste Strategy
- Invest in resource recovery, reuse
- Measure and increase the circularity of Aotearoa's economy
- Extend product stewardship schemes
- Get better data

What this means for business

- Reduce waste generation – which often comes with efficiencies
- Increased circularity means:
 - Using ‘waste’ from other businesses/industries as a feedstock for yours
 - Reducing your ‘waste’ and exploring avenues to sell it
 - Investing in realizing efficiencies in your processes
- Product stewardship schemes means that priority high emissions products will be regulated to achieve circularity

Part 3: Transport and Heat, Industry and Power

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Transport

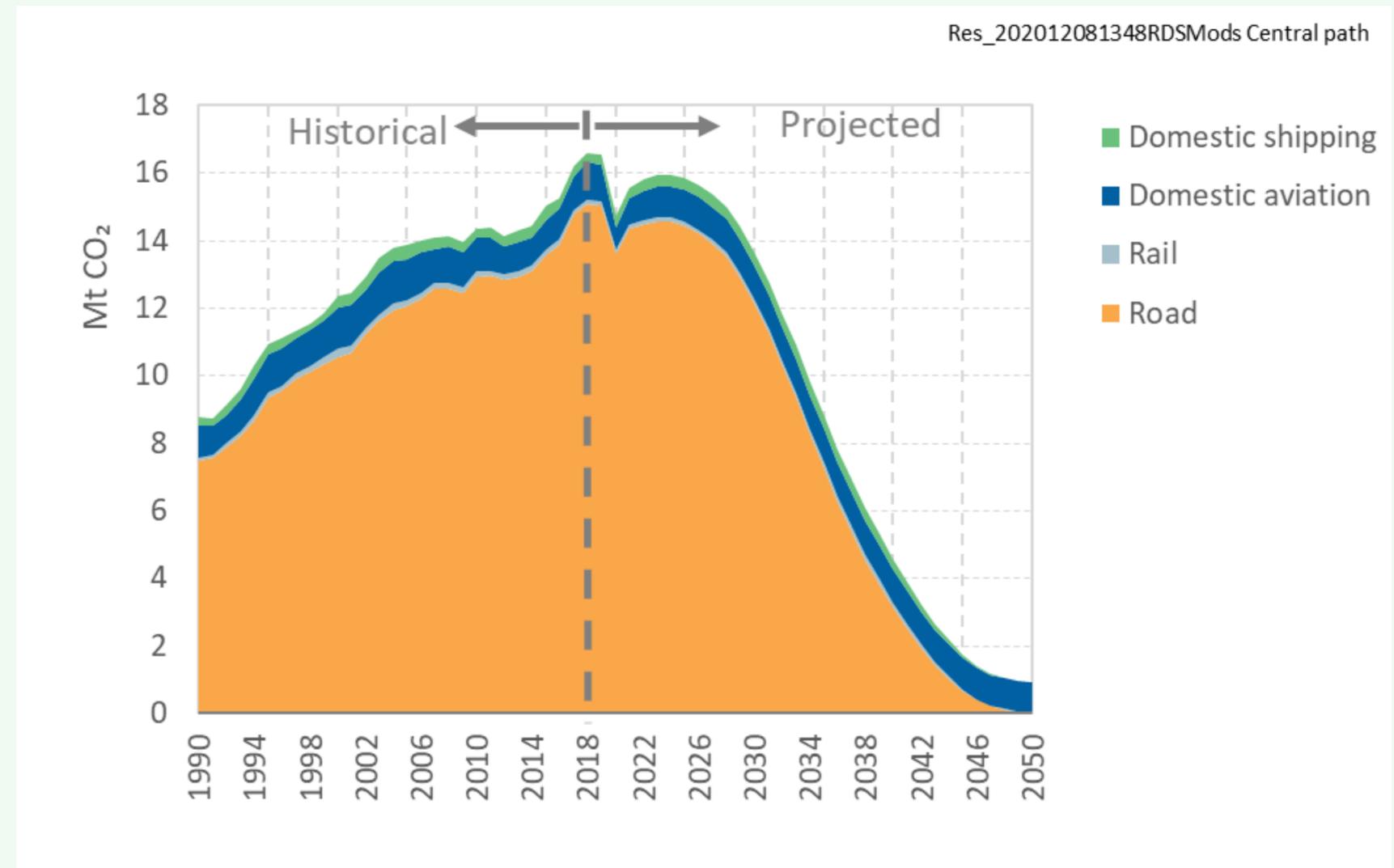
TRANSPORT - CONTEXT

- Reducing transport emissions is crucial to meeting our climate targets.
- In 2018, transport emissions made up 36.3% of total long-lived gases. This is 16.6 Mt CO₂-e.
- Most transport emissions are from fossil fuels used to power vehicles. For example, petrol and diesel used by cars, SUVs and trucks (91%), domestic flights (7%) and rail and coastal shipping (2%).
- By 2035, our path shows transport emissions reduce to 8.8 Mt CO₂-e. This puts us on track to meet our 2050 target.



Package of policies that would rapidly decarbonise the transport sector

- An integrated national transport network should be developed to reduce travel by private car and increase walking, cycling, public and shared transport.
- Accelerate light electric vehicle uptake.
- Increase the use of low carbon fuels for heavy trucks, trains, planes and ships.



WHAT THIS MEANS FOR BUSINESS

- Electric cars, trucks, vans and utes
- Trucks increasingly use low carbon fuels
- Sustainable aviation fuel for aviation
- Freight increasingly moved to trains, ferries and coastal shipping



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Heat, Industry and Power

Context – what is the heat, industry and power sector?

In 2018 emissions from heat, industry and power were 41% of total long-lived gases, or 18.8 Mt CO₂-e.

These emissions come from:

- producing heat and chemical reactions to manufacture products (47%)
- generating electricity (22%)
- oil refining, oil and natural gas production and the operation of coal mines (12%)
- the use of off-road vehicles and machinery (11%)
- fossil fuels used in our buildings and homes (7%).

By 2035, our path shows emissions from the heat, industry and power sector reduce to around 10Mt

Heat, Industry and Power recommendations

1. Target 60% renewable energy by no later than 2035
2. Maximise the use of electricity as a low emissions fuel
3. Reduce emissions from process heat
4. Scale up the provision of low emission energy sources
5. Support innovation to reduce emissions from industrial processes
6. Increase energy efficiency in buildings
7. Reduce emissions from urban form

What this means for businesses?

- Investment in renewables
- Growth of new sectors
- Changes to the way we heat homes and businesses
- Energy efficiency

Thanks



Want to get in touch?
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