Agenda

- CNGP requirements

- Target setting scope and base year

- Top-down and bottom-up targets

- What is a '1.5°C-consistent' target?

- Effect of base year on targets

- The CNGP target setting tool

Q&A

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CNGP purpose and focus for today

CNGP programme aims to reduce participating agencies GHG emissions, by setting gross emissions reduction targets, consistent with the intent of the Zero Carbon Act and the Paris Agreement of limiting global warming to 1.5°C above pre-industrial levels

CNGP participants should:

- measure, verify and report their emissions annually

- **set gross emissions reduction targets and longer-term reduction plans**

- introduce a plan to reduce their organisation's emissions

- offset remaining gross emissions from 2025 to achieve carbon neutrality.

(Note: guidance on offsetting framework will be developed during FY21-FY23)

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CNGP Programme Reporting requirements

CNGP agencies must:

- set gross emissions reduction targets for FY2024-25 and FY2029-30

  - by Dec 2022 for tranche 1 agencies

  - by Dec 2023 for tranche 2 & 3 agencies

- measure & report progress towards their targets annually

- include commentary about your progress and challenges

These targets must be set with reference to:

- an emissions pathway consistent with limiting global warming to 1.5°C and

- the reduction potential within your agency

CNGP Target reviews in 2025, 2028 and 2030

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Scope of emissions for target setting

- Must include <u>all gross emissions sources</u> in your inventory including:

- All Scope 1 and 2 emissions
- Scope 3 emissions i.e. mandatory and material 'additional' Scope 3 sources

Additional targets (e.g. intensity-based, or source-specific) can be set, but this is not a requirement

Targets are about reducing absolute/gross emissions

- Do not include offsets from products or services e.g. Flight-off sets
- Offsets are separate from reduction targets and will come later

- Do not include forestry (model separately due to cyclical nature)

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Base year

Base year is
- 12 consecutive months of data representative of typical year,
- or an average baseline of (preferably) 3 years of verified data. (Updated MfE guidance v2.1 October)

Covid year challenges

- Historic base year permitted, no earlier than FY 2015-16
- no later than FY21-22 Tranche 1
- no later than FY22-23 Tranche 2 & 3

Base year and FY20/21 must be verified – exception for intervening years average totals is allowed.

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Timing

- Complete your verified inventory

- In parallel, conduct investigations and studies to obtain good estimates of potential change from emission reduction projects and expected 'business as usual' growth

- Bring together to do target setting exercise at earliest opportunity

- Remember to leave time for senior level engagement and sign off

Target setting and the CNGP target setting tool

Tool available from CNGP Website: Tool for setting emissions targets | Ministry for the Environment

Ways to set targets

Deciding the *magnitude* of your target:

Top down – based on a driver or imperative external to the organisation
(e.g. legislation, environmental limits)

Bottom up – based on what the organisation thinks is achievable, informed by:
- What is already planned
- Assessments of its potential to change
- Non-negotiable levels of service it must provide
- Historic trends

Target values can be based on a mixture of both approaches, combining aspiration and realism.

Comparing methods of target setting

Top-down

PROS
- Sets ambition level equal to the problem that needs to be solved
- 'Stretching' targets can encourage creative thinking/innovation/trying new approaches

CONS
- Does not acknowledge the limitations that an organisation has to work within, including its primary mission (which will be something other than carbon reduction).
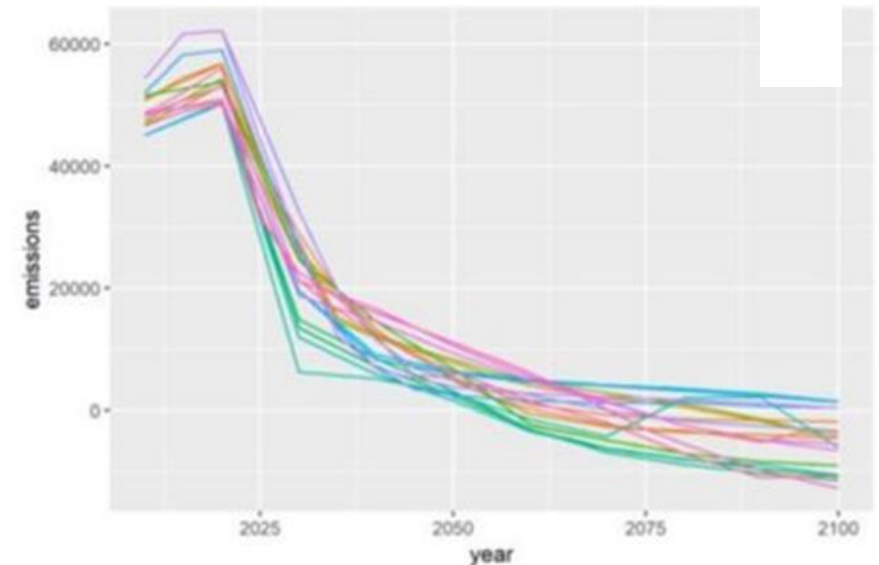
Bottom-up

PROS
- Can be based on transparent assumptions and the best available information
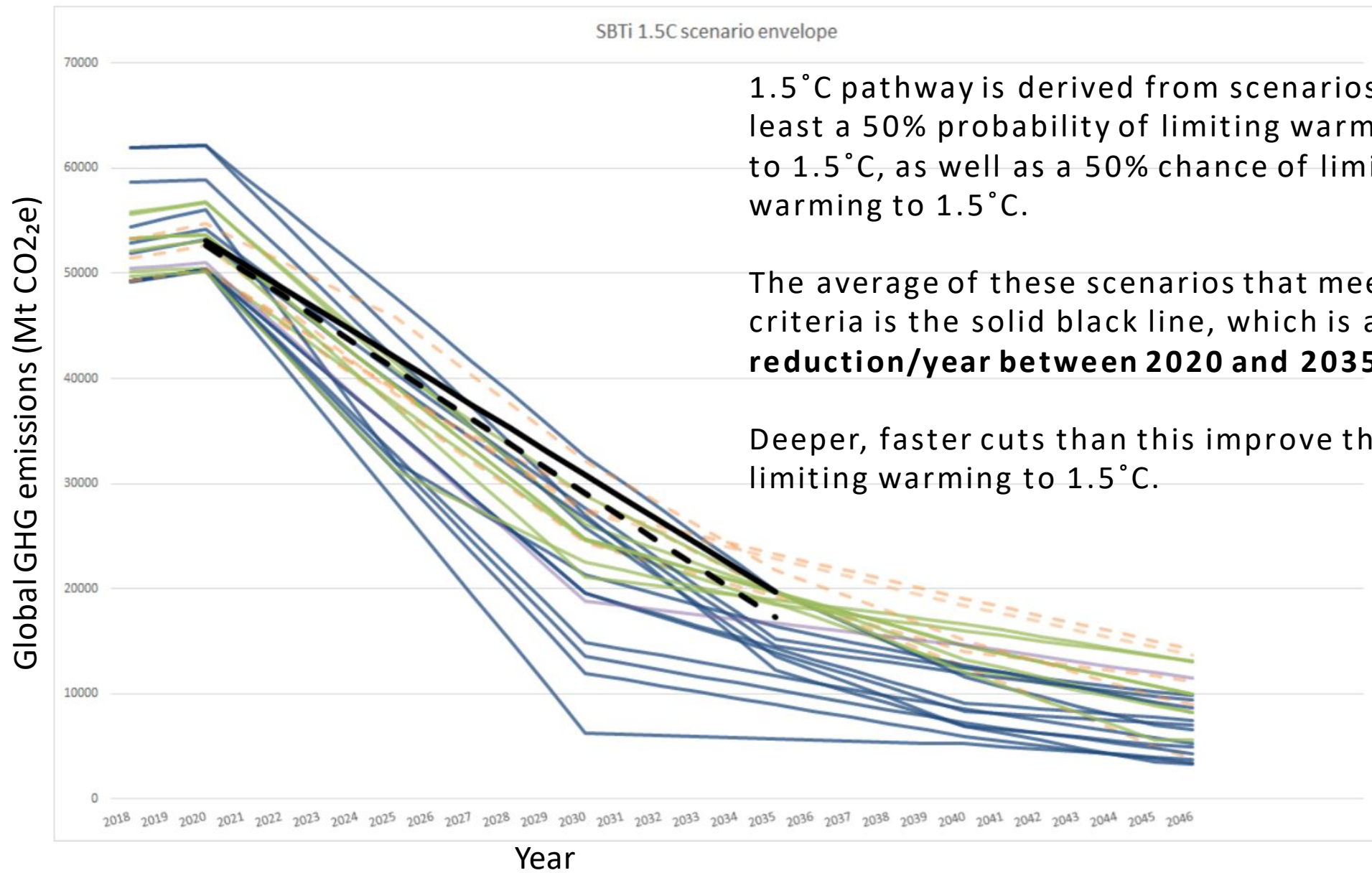- Methodical approach allows for easy review and update once new information becomes available

CONS
- Inherently conservative
- Does not drive innovation

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What is a '1.5°C-consistent' target?

- Signatories to the Paris Agreement agreed to the goal of limiting global warming to no more than 1.5°C compared to the pre-industrial baseline.

- There is fixed global carbon budget relative to each probability of limiting warming to a certain temperature. This constrains possible emissions pathways (future increases or decreases) starting from where we are emitting at present.

- If an entity aligns its targets to 1.5°C, it usually means that it **reduces its absolute emissions at the same percentage rate as the global 1.5°C-consistent pathway**. Note this approach ignores different actors' differing levels of responsibility for past emissions.
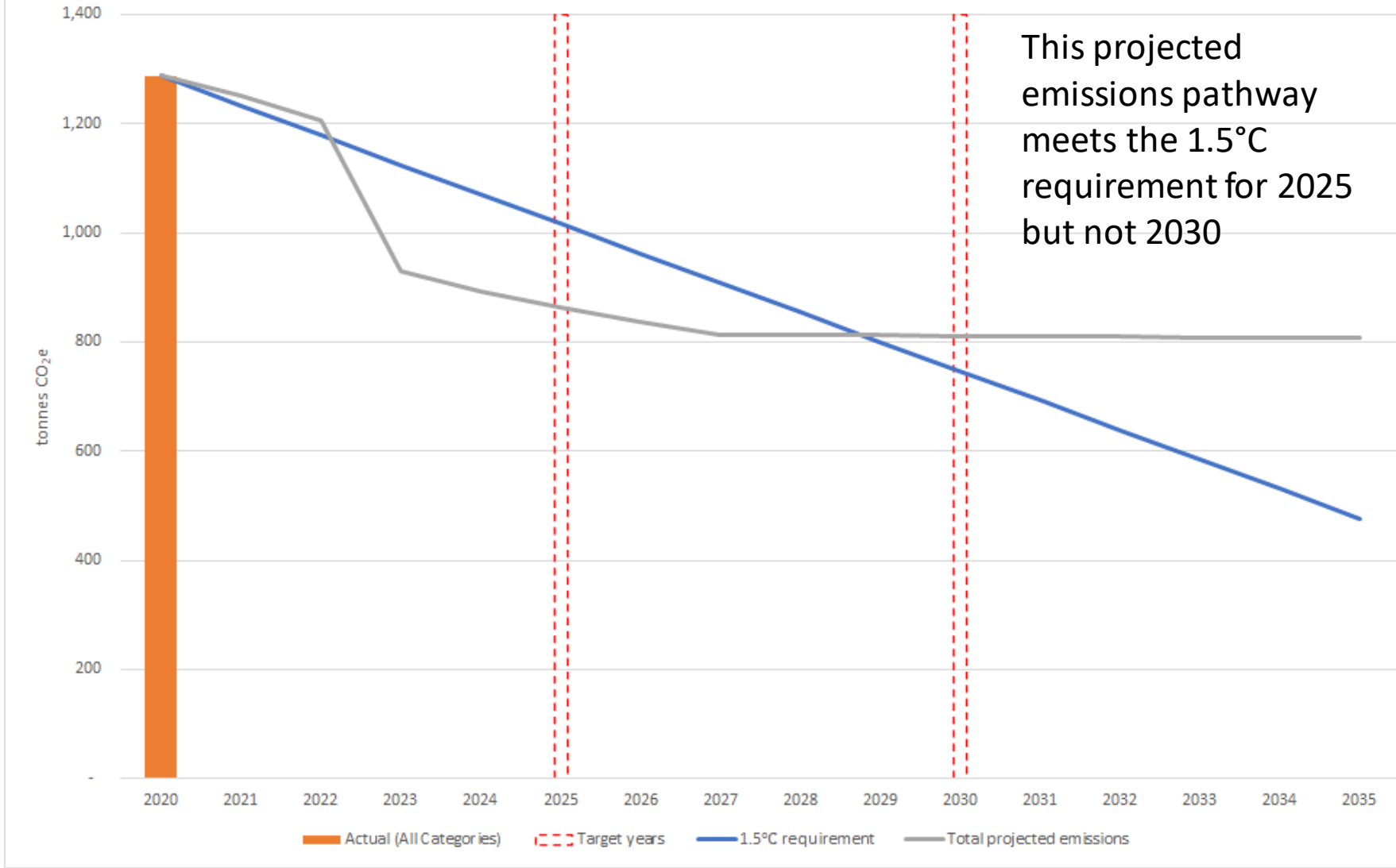
SBTi 1.5C scenario envelope

1.5˚C pathway is derived from scenarios with at least a 50% probability of limiting warming in 2100 to 1.5˚C, as well as a 50% chance of limiting peak warming to 1.5˚C.

The average of these scenarios that meet the criteria is the solid black line, which is a **4.2% reduction/year between 2020 and 2035**

Deeper, faster cuts than this improve the chance of limiting warming to 1.5˚C.

Global GHG emissions (Mt CO2₂e)

Year

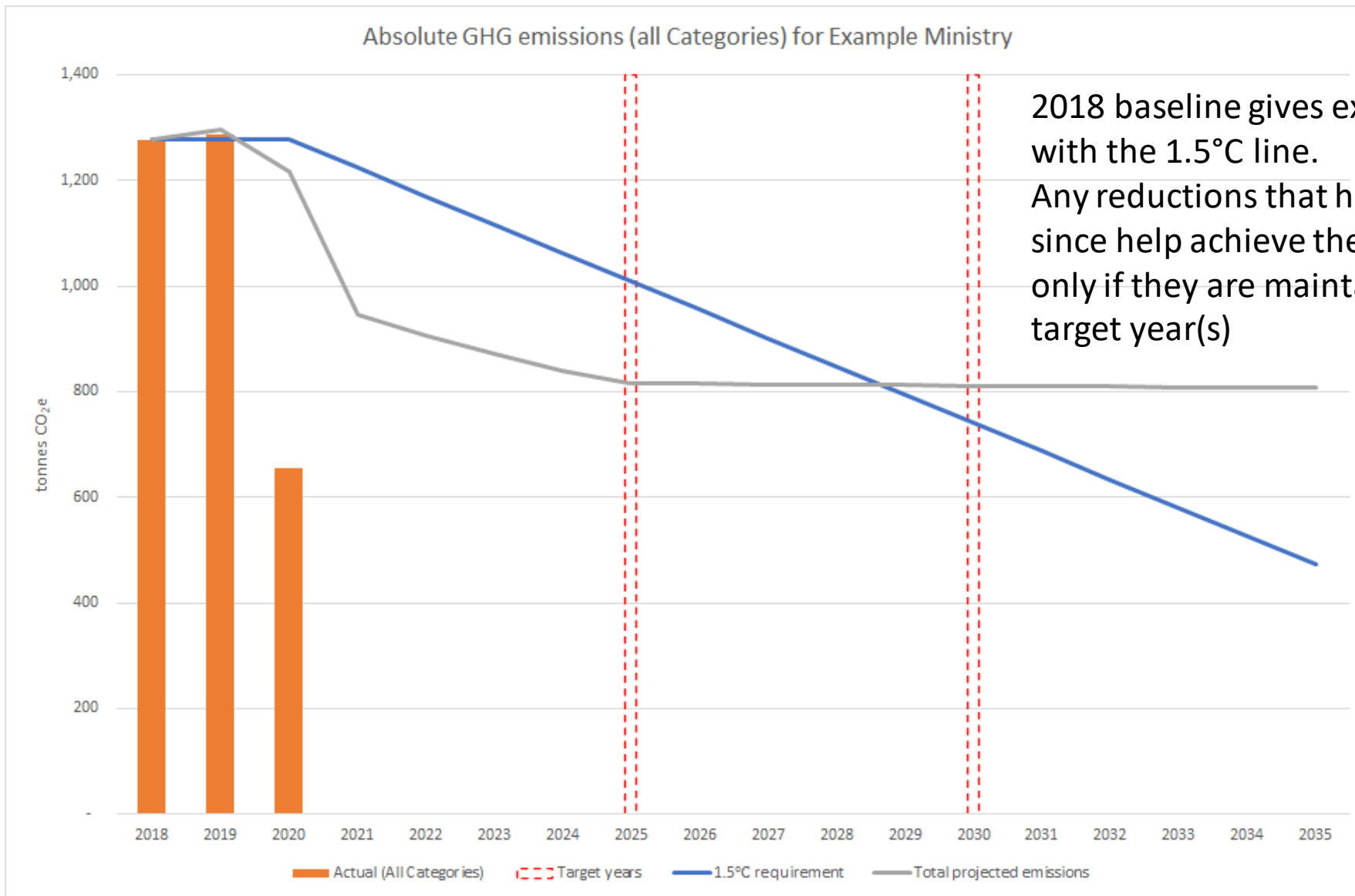https://sciencebasedtargets.org/resources/legacy/2019/04/foundations-of-SBT-setting.pdf
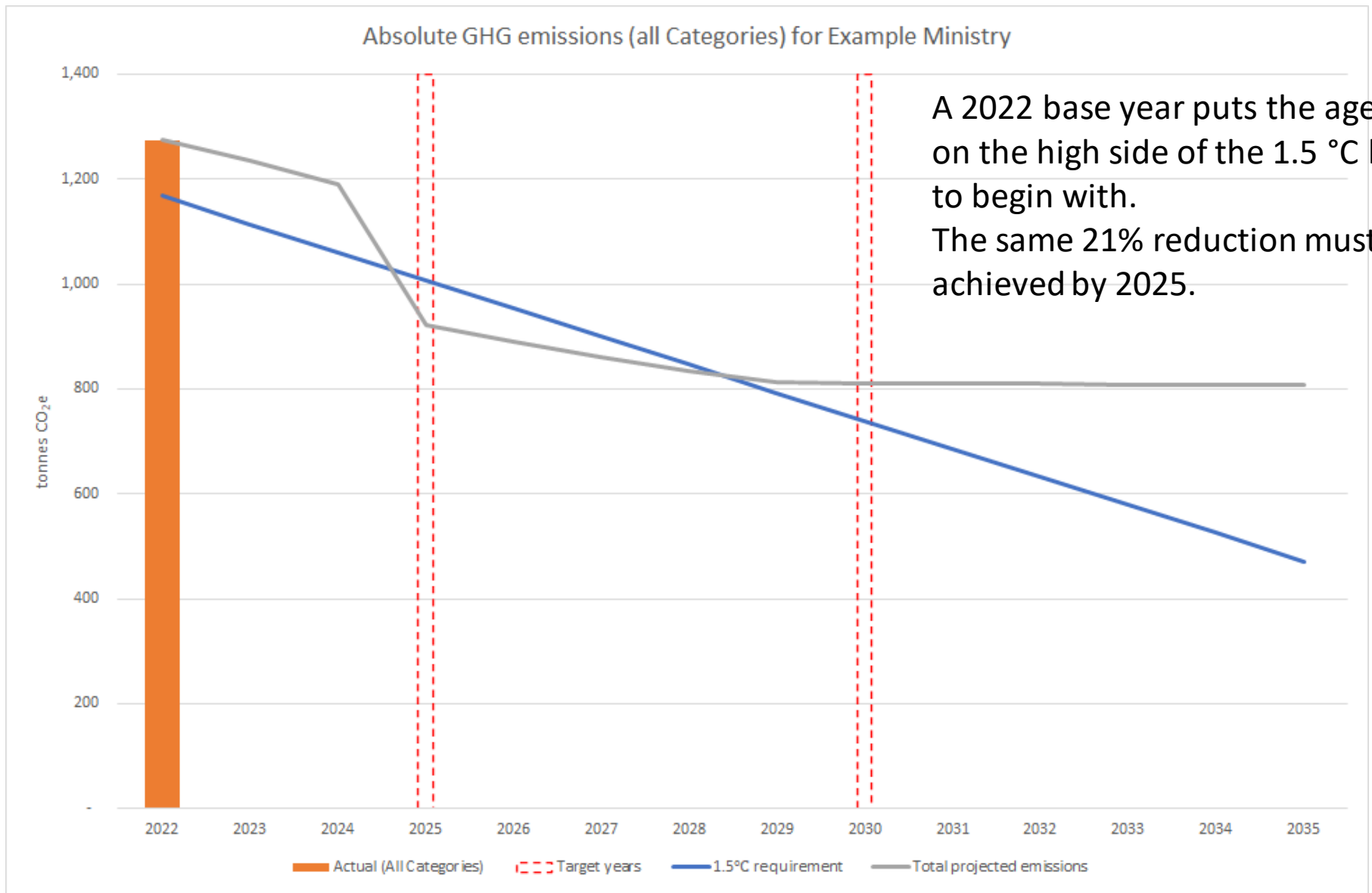
Effect of choosing different base years

- Cumulative emissions matter to the climate – starting earlier means you can reduce slower to stay within a 'carbon budget' compared to starting later

- However, using this approach for CNGP is not practical, as most affected agencies don't know their historic emissions, and determining individual carbon budgets for agencies would be very complex

- CNGP uses a simplified method of defining '1.5°C-consistent' levels of reduction:

  - **Reducing gross emissions by 21% by 2025 and 42% by 2030 regardless of base year**

  - Provides an advantage to those that started measuring and reducing earlier

  - CNGP's single year targets mean that staying 'under the line' is not a requirement

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Absolute GHG emissions (all Categories) for Example Ministry

This projected emissions pathway meets the 1.5°C requirement for 2025 but not 2030

Legend: Actual (All Categories) — Target years — 1.5°C requirement — Total projected emissions

Absolute GHG emissions (all Categories) for Example Ministry

2018 baseline gives extra 'headroom' with the 1.5°C line.
Any reductions that have occurred since help achieve the target, but only if they are maintained up to the target year(s)

Legend: Actual (All Categories) | Target years | 1.5°C requirement | Total projected emissions

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Absolute GHG emissions (all Categories) for Example Ministry

A 2022 base year puts the agency on the high side of the 1.5 °C line to begin with.
The same 21% reduction must be achieved by 2025.

Base year considerations

Earlier base year

PROS
- Can gain credit for any reductions that have occurred already if your emissions used to be higher and the reductions can be maintained

CONS
- Additional work to find and verify historic data if you do not already have it
- Can reduce ambition and absolute reductions
- Less gross reduction = more offsetting

Current base year

PROS
- Less work to set up
- Focusses effort on the future

CONS
- If current year's emissions are abnormally low, it may make achieving a certain percentage level of reduction much harder

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CNGP target setting tool features

CNGP target setting tool

What it does

- Calculates the combined effect on emissions of possible changes to activity levels and emissions factors projecting forward from a base year

- Compares this to the '1.5°C- consistent' reduction pathway

- Calculates the difference between the two for 2025, 2030 and an 'end year'

- Tabulates and summarises results

- Calculates carbon intensity metrics

What it doesn't do

- Provide emissions factors (except for grid electricity)

- Tell users how much reduction they can expect from different measures

- Tell users exactly what their target should be

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Input activity data (base year and any actuals)
- Business unit
- Source
- Scope
- Units
- Quantities

Input possible changes to activity data
- Asset changes (acquire/dispose)
- Fuel switching (EVs, boilers)
- Energy efficiency
- Reductions (e.g. fewer flights)
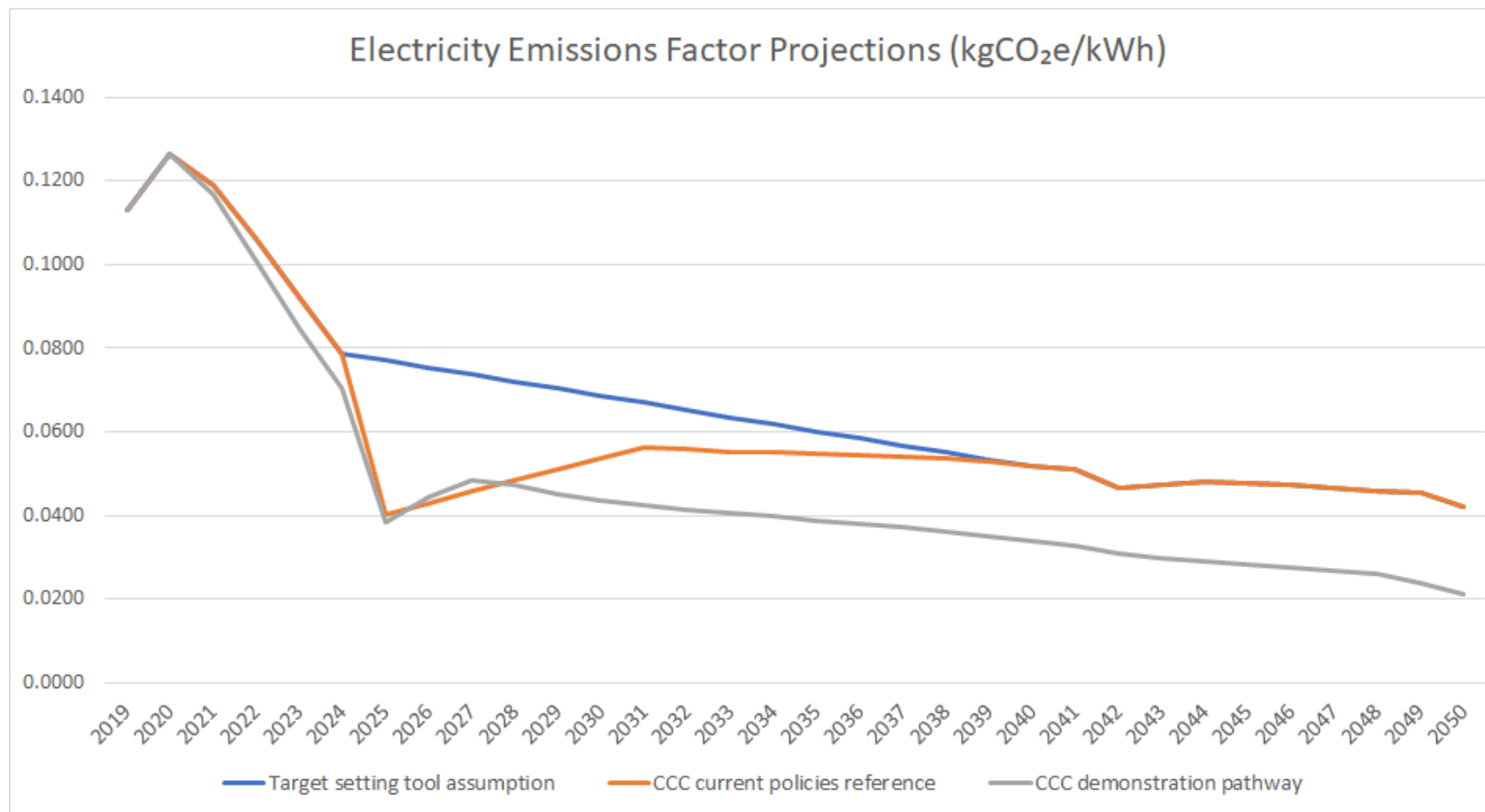- BAU/'background' growth

Projected activity data by year

Projected emissions by year

Input emissions factors

Result - projection and actuals vs. 1.5 ℃ line

Legend:
- Actual (All Categories)
- Target years
- 1.5℃ requirement
- Total projected emissions

y-axis: tonnes CO$_2$e (1,400 / 1,200 / 1,000 / 800 / 600 / 400 / 200 / -)

x-axis: 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035

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Grid electricity assumption built into target setting tool

Electricity Emissions Factor Projections (kgCO₂e/kWh)

Legend: Target setting tool assumption — CCC current policies reference — CCC demonstration pathway

Conservative assumption means if EF goes lower, faster, you'll find meeting your target easier

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Contact

Further 1:1 questions contact: cngp@mfe.govt.nz

Tool available from CNGP Website: Tool for setting emissions targets | Ministry for the Environment

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