Carbon Neutral Government Programme

A guide to managing your greenhouse gas emissions – measuring, reporting, target-setting and reduction planning

Version 4.0 March 2025

Carbon Neutral Government Programme

Te Kāwanatanga o Aotearoa
New Zealand Government

Purpose

This document contains guidance for Carbon Neutral Government Programme (CNGP) organisations on measuring and reporting their greenhouse gas (GHG) emissions, setting reduction targets and emissions reduction planning. It includes information on what sources of GHG emissions organisations need to collect, standards to follow, methods for calculating emissions and targets, what information to report, who to report to and by when. For further enquiries, contact cngp@mfe.govt.nz.

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Version control and updates

Updates to this document are as follows:

Date	Update
Version 1.0: 5 January 2021	Initial version circulated to Tranche 1 organisations.
Version 2.0: 30 June 2021	Full version circulated to Tranche 1 organisations and to Tranche 2 organisations as part of consultation on a whole-of-government direction. This version provides updated and expanded guidance on measuring, verifying and reporting emissions.
Version 2.1: 1 October 2021	Revision following consultation on whole-of-government direction and confirming alignment with ISO 14064-1:2018 and the Greenhouse Gas Protocol. Key updates: • section re-ordering and full contents added for easier navigation • additional information on standards • clarity on scope of reporting • inclusion of all scope 1 and 2 emissions and mandated and material scope 3 emissions in table 3 and appendix 1 • inclusion of subsidiaries and international sites within mandated scope of reporting as relevant • average base year added • extra guidance on selecting emission factors.
Version 3.0: May 2023	Updates made to further clarify guidance and integrate guidance issued since the previous version. Key updates: • adding CNGP objectives • clarifying reporting timeframes and guidance on setting an average base year • new guidance on restating historical emissions and recalculating base year emissions, allowances/exceptions in reporting, intensity measures, boundaries between organisations participating in the CNGP, measuring scope 3 emissions, reporting emissions from construction projects, measuring working from home and staff commuting emissions, target-setting • referring to the Treasury's guidance on what to include in the annual report • minor additions on priority reduction areas and offsetting • adding communities of interest • adding appendices on reporting to CNGP Programme Lead and emissions reduction plan template.
Version 4.0: March 2025	Updates made to further clarify guidance, incorporate programme changes, and address specific issues. Key updates: • guidance on target setting for newly established organisations • update to section on developing emissions reduction plans

Date	Update
	• guidance on target setting for major projects • removal of information on offsetting • removal of references to State Sector Decarbonisation Fund • removal of appendices containing annual reporting template and emissions reduction plan template

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1 Carbon Neutral Government Programme requirements

This section provides important information and key dates for your participation in the Carbon Neutral Government Programme (CNGP).

1.1 Background

Climate change is one of the greatest challenges of our time. Aotearoa New Zealand has committed to taking urgent action on greenhouse gas (GHG) mitigation and climate change adaptation through the Paris Agreement[1] and the Climate Change Response (Zero Carbon) Amendment Act 2019. The Government also needs to show leadership within and outside Aotearoa to reduce emissions from its own activities. It needs to demonstrate what is possible to other sectors in the economy and showcase positive action to the rest of the world.

On 2 December 2020, the New Zealand Government announced the CNGP – with the aim of reducing GHG emissions faster and working towards carbon neutrality. The Government and many of our partners and stakeholders expect organisations to take responsibility for their own GHG emissions.

1.1.1 CNGP objectives

The objectives of the CNGP are to:

- show leadership to reduce the Government's own emissions and demonstrate what is possible to other sectors of the economy
- accelerate emissions reductions across the public sector – including by reducing gross emissions and working towards carbon neutrality.

1.1.2 CNGP participants

CNGP organisations were included in the programme through different mechanisms with some organisations required and some encouraged to participate.[2] .[3]

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1 See: United Nations Framework Convention on Climate Change Secretariat. *The Paris Agreement*. Retrieved 12 April 2023.

2 See the list of organisations included in the CNGP. CNGP Participants. December 2023. Retrieved 26 September 2024.

3 For information on how individual organisations in Aotearoa New Zealand are categorised, see Public Service Commission. *Central government organisations*. Retrieved 12 April 2023.

- **Tranche 1** organisations include public service departments, departmental agencies and non-public service departments in the Executive Branch – instructed (via Cabinet minute) to participate via a cabinet minute (New Zealand Cabinet, 2021).
- **Tranche 2** organisations include Crown agents – directed to participate via a Whole of Government Direction and school boards of trustees, excluding state-integrated schools (via the Ministry of Education).
- **Tranche 3** organisations include the Reserve Bank of New Zealand, the Offices of Parliament, the Office of the Clerk of the House of Representatives, the Parliamentary Service, tertiary institutions and state-owned enterprises – encouraged to participate.

1.1.3 Programme Lead

The Programme Lead referred to throughout this document is the lead agency coordinating the CNGP, currently the Ministry for the Environment (MfE). MfE works closely with the Ministry of Business, Innovation and Employment (MBIE) and the Energy Efficiency and Conservation Authority (EECA) to manage the programme.

1.2 What you are expected to do

This section outlines the key requirements in this long-term work programme.

1.2.1 Measure and report your organisation's GHG emissions, and set gross emissions reduction targets

This guide walks you through the measuring, reporting and reduction requirements Cabinet has agreed to (New Zealand Cabinet, 2020, 2021).

- Report your emissions and set a gross emissions reduction target for 2025 and 2030, using this guidance to develop and implement credible reduction plans to help you reach your gross emissions reduction targets.
- Report your emissions, reduction plans and progress towards your gross emissions reduction targets to the Programme Lead by 1 December each year, using the guidance.
- Report emissions, targets and reduction information in your annual reports.

1.2.2 Reduce your organisation's GHG emissions

Cabinet agreed to a range of actions under the CNGP to reduce organisational GHG emissions across government. Initial priority areas included:

- phasing out state sector coal-fired boilers, with a focus on removing the largest and most active by the end of 2025 through the State Sector Decarbonisation Fund
- requiring organisations that must apply the Government Procurement Rules to:
  - optimise their fleets with the aim of reducing the number of vehicles

  - choose a battery electric vehicle, or plug-in hybrid electric vehicle if a battery electric vehicle is not appropriate, when replacing vehicles (unless operational requirements or other circumstances prevent them from doing so)
- continuing to invest in low-emissions heating, cooling and vehicles, and energy-efficient lighting through the State Sector Decarbonisation Fund
- requiring property-mandated agencies to use the NABERSNZ rating tool (a system that rates the energy efficiency of office buildings) where they are occupying large office spaces (over 2,000 square metres)[4]
- requiring procurement-mandated organisations, when constructing a new government-owned non-residential building, to achieve a minimum 5 Green Star rating for projects with a capital value of $25 million and over from 1 April 2022, and for projects with a capital value of $9 million and over from 1 April 2023.

Table 1 sets out the timeframes for reporting. In summary, CNGP participants will report as follows.

- Report to the Programme Lead by 1 December annually. Submit your GHG inventory, other supplementary information and evidence of verification (that is, your assurance statement or verified disclosure statement) covering the period 1 July to 30 June (noting allowances/exceptions in section 1.3.1).
- Report updated emissions, targets and reduction information in your annual report, following your organisation's normal annual reporting timeframes. (The principle here is that you treat emissions information like financial information and so report it in the same time period.)
- In the first year that you make a submission, if you have set a base year that comes before the most recent financial year, submit your base year inventory and accompanying assurance statement.

Table 1: High-level timeframes for CNGP reporting requirements*

Milestone	Timeframe
Start measuring your organisation's emissions for the financial or calendar year	1 July or 1 January
Get your GHG inventory for the year verified**	July–September (recommended for financial year reporting) or January–March (recommended for calendar year reporting)
Provide information in your annual report	In line with annual reporting timeframes
Report your verified emissions for the previous financial year, plus targets for 2025 and 2030 and reduction plans, to the Programme Lead	By 1 December
Repeat the steps above annually	

[4] Agencies entering a new lease or renewing an existing lease should target a rating above five stars, and achieve a minimum of four stars. Agencies planning a new build project need to achieve a minimum rating of five stars.

Milestone	Timeframe
Review gross emissions reduction targets and collective progress made against targets so far	December 2025
Review gross emissions reduction targets across the programme	December 2028 December 2030

Note: * Please note the allowances/exceptions in section 1.3.1. ** See allowances/exceptions in section 1.3.1 about verification.

Following the 1 December submission deadline, the information from CNGP organisations will be collated, analysed and shared with CNGP Ministers and then made publicly available. It will also inform the CNGP reviews of collective progress on meeting the 2025 and 2030 gross emissions reduction targets in 2025, 2028 and 2030, to ensure the targets are ambitious but also achievable.

1.3 CNGP reporting requirements

Table 2 sets out the information to provide in your annual report and to the Programme Lead.

Table 2: Information to provide each year

Information required	In annual report	To Programme Lead by 1 December annually
Total annual emissions (including all mandatory and material emissions scopes/sources) for the financial year, reported as total tonnes of carbon dioxide equivalent units (tCO_2e)	Yes	Yes
Emissions profile broken down by emissions source/scope (tCO_2e)	Yes	Yes
Restatement of historical emissions (if relevant – see section 3.6)	Yes (if relevant)	Yes (if relevant)
Base year period and total emissions for that year (tCO_2e)	Yes	Yes (if changed)
The consolidation approach chosen (control or equity share)	Optional	Yes
Full-time equivalent (FTE) staff in the reporting period (based on what is reported in your organisation's annual report)	Yes (will already be included)	Yes
Total expenditure in the reporting period (based on what is reported in your organisation's annual report)	Yes (will already be included)	Yes
Change in total emissions for the year you are reporting on compared with the base year (tCO_2e)	Optional	Yes
2025 and 2030 gross emissions reduction targets (%)	Yes	Yes
Progress towards 2025 and 2030 targets compared with base year (%)	Yes	Yes
Qualitative commentary on results – your organisation must explain: • your initiatives for reducing emissions and progress towards these • the context of your emissions inventory and progress – for example, any data gaps, emissions sources excluded and why, challenges or significant changes experienced, and plans for improvement over time	Yes (summary)	Yes (more detail)

Note: The CNGP refers mainly to 'scopes' because it is still the term that is most widely used and understood. For the same reason, we use it for Programme reporting purposes. However, you can use whichever categorisation suits your own internal purposes.

For further information on what to include in your annual report, see the Treasury's guidance for departments (Treasury, 2024a) and Crown agents (Treasury, 2024b). The Office of the Auditor General (OAG) has also released guidance regarding Carbon targets and ambiguity: the scrutiny to expect from an auditor.

Each year, information that organisations submit to the Programme Lead will be summarised, collated, shared with Ministers and made publicly available.

1.3.1 Allowances/exceptions

There are allowances for instances in which your reporting period, verification or annual reports don't line up with submission dates.

- Notify the Programme Lead if your annual report is published after the December deadline.
- If your timeline for verification does not meet your annual report deadlines, you can include provisional and unverified data. However, your annual report should clearly state the nature of the data and you should include the verified data in the next year's annual report.
- If you have construction-related emissions, identify emissions from construction projects separately to other scope 3 emissions sources in your reporting, both for annual reporting and for reporting to the CNGP, by 1 December each year. See also Measuring and reporting emissions associated with construction projects in section 3.3.3 and in Embodied emissions of buildings Reporting and target setting in the Carbon Neutral Government Programme (MfE, 2024).
- If you have a January–December financial year, you can submit the information set out in table 2 on a calendar year basis rather than a July–June financial year basis, to align with your reporting cycles. This means you need to submit the previous calendar year's verified information by 1 December each year to the Programme Lead. You should still aim to submit emissions information, targets and reduction plans in your annual report to align with the relevant period if you can.
- If you are from a departmental agency, you can talk to your host agency about reporting separately or together. See Departmental agencies at the end of this section for further detail.
- Newly established organisations are exempt from the CNGP requirements for the first financial year following their establishment, although they should factor in the requirements for their system set up and may choose to meet some or all of the requirements earlier. See also base year and target setting requirements for 5.5.4 Newly established CNGP organisations.
- If your organisation experiences significant peaks in your emissions profile due to a project or an event that occurs on a less than annual but recurring basis (e.g. the organising/hosting of bi-annual events or conventions), you may want to segregate emissions associated with your irregular activities from those associated with business-as-usual activities when submitting your information to the Programme Lead. When presenting progress against targets, please provide

two sets of results. One reflecting the annual performance, comparing it to the base year emissions, which includes regular BAU activities. The other set reflecting project/event-associated emissions, also compared to the base year. This two-fold approach helps provide a comprehensive view of your progress, considering both the ongoing BAU emissions and the additional emissions attributed to projects/events. If your organisation has set an average base year, it is advised that at least one of the years included to calculate the average base year includes a non-BAU year for representativeness. Please contact the Programme Lead for assistance to determine what is a non-BAU project. This exemption only applies to non-annual activities that comprise a significant proportion of an organisation's emission profile and is expected to apply to a very limited number of CNGP participants. You should discuss your situation with the CNGP lead before adopting this approach.

1.3.2 Intensity measures

In addition to reporting progress towards gross emissions reductions, organisations may choose to track intensity measures and include them in their annual report and/or reporting to the Programme Lead. For example, an intensity measure could be total gross emissions per full-time equivalent (FTE) of staff or total expenditure in millions of dollars (see table 3).These measures can help to track your emissions performance relative to organisational growth, alongside your absolute reductions (which should be decoupling organisational growth from growth in emissions).

Table 3: Example of emissions intensity reporting

GHG emissions per KPI	2018	2019	2020
Total gross GHG emissions per FTE	3.68	3.11	1.31
Total gross GHG emissions per dollar of expenditure ($ million)	18.81	16.62	6.91

Note: FTE = full-time equivalent; GHG = greenhouse gas; KPI = key performance indicator.

1.3.3 Departmental agencies

Departmental agencies can either report their own emissions to the Programme Lead, or they and their host agency can agree to include the emissions from the departmental agency in the host agency's emissions-reporting boundary. This means the host agency agrees to be accountable for the emissions (and their verification), targets, progress against targets and reduction initiatives of the departmental agency.

To ensure accountability for all the CNGP requirements, please establish a written agreement between the relevant people in each organisation to confirm these arrangements, and advise the Programme Lead how you intend to report.

The agreement should confirm the following points.

- The host agency agrees to include the emissions from the departmental agency in the host agency's emissions reporting boundary.

For example, a reporting boundary chart (see figure 1) can illustrate how emissions from different departments and locations are included within the scope of reporting.

- The host agency agrees to be accountable for the emissions (and their verification), targets, progress against targets and reduction initiatives of the departmental agency.

  These can be integrated into one set of emissions, targets and reduction plans, or the host agency can choose to split them out for each organisation in a similar way to splitting out different business units.

- The host agency sets out its specific expectations of the departmental agency (such as abiding by emissions budgets), which the departmental agency agrees to meet.

If the host agency and departmental agency agree to change this arrangement over time, you must notify the Programme Lead.

2 Planning for emissions measurement

2.1 Standards to follow

Your GHG emissions inventory should be prepared using the criteria stated in the international standards: the ISO 14064-1:2018 standard (International Organization for Standardization, 2018) and/or Greenhouse Gas Protocol standards. Both sources provide best practice and are widely adopted for organisational GHG reporting. Sector-specific standards aligned to these standards may also potentially be used, but check this with the Programme Lead prior to adopting them.

Verification of emissions inventories should be conducted in accordance with the ISAE (NZ) 3410 standard (XRB, 2012) or the ISO 14064-3:2019 standard (International Organization for Standardization, 2019). See section 4.1.

2.1.1 Greenhouse Gas Protocol standards and guidance

The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (the GHG Protocol Corporate Standard) (World Resources Institute and World Business Council for Sustainable Development, 2004) is used globally for organisational GHG accounting. It defines three scopes of emissions reporting, which are covered in more detail in section 3.3.

The Greenhouse Gas Protocol for the US Public Sector (the US Public Sector Protocol) (World Resources Institute and LMI, 2010) is based on and aligned with the GHG Protocol Corporate Standard. This useful guidance interprets the GHG Protocol Corporate Standard for the public sector context.

A supplementary standard is the Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Corporate Value Chain (Scope 3) Standard) (World Resources Institute and World Business Council for Sustainable Development, 2011). This standard recognises that emissions in value chains often represent the largest source of an organisation's emissions and present the most significant opportunity to influence GHG reductions. The standard is designed to promote best practice in developing a full GHG inventory that incorporates scope 1, 2 and 3 emissions. This enables organisations to understand their full emissions impact across value chains and focus efforts where they can have the greatest impact.

These documents are freely available and contain useful practical guidance for setting up GHG accounting for organisations. Additionally, the Technical Guidance for Calculating Scope 3 Emissions (World Resources Institute and World Business Council for Sustainable Development, 2013) provides useful guidance on practical approaches to data collection.

2.1.2 ISO 14064-1:2018

ISO 14064-1:2018 (International Organization for Standardization, 2018) provides a standard for organisations to quantify and report their emissions, which is largely based on and aligned with the GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004). It is part of a broader suite of standards. Part 2 provides standards for the project level and Part 3 deals with verification and validation.

2.1.3 Key principles for CNGP implementation

The principles set out in the ISO 14064-1:2018 (International Organization for Standardization, 2018) and the Greenhouse Gas Protocol standards aim to create an emissions inventory at the organisational level that is relevant, complete, consistent, accurate and transparent. Aligning with the principles in these international guidelines ensures you are following best practice to consider your organisation's full emissions and where you can focus efforts to have the greatest reduction impact.

As you measure and report your emissions, keep the following three CNGP principles of implementation in mind.

Credibility
We are doing this to show leadership, credibility and integrity in reporting emissions and emissions reductions.

Consistency
We measure and report GHG emissions in a consistent and coordinated way, enabling annual comparability for each organisation. We take responsibility for our own organisations, while working to ensure we act as a whole in government.

Collaboration
We empower our 'champions', share best practice, and commit collectively to building our capacity to measure, report and reduce our organisations' emissions.

3 Technical guide to measuring your GHG emissions

This section provides technical guidance on how to measure your organisation's emissions. This is the information you submit to the Programme Lead and provide in your annual report.

Measuring and reporting your organisation's GHG emissions tells you where your emissions come from and enables you to embed emissions management in your organisation's systems and processes. It also means you can develop reduction plans that are practical and effective for you – you know best how your organisation works. Transparent reporting will help you be accountable to Ministers and other stakeholders for your GHG emissions and the reductions you make.

Table 4 shows an overview of actions required for compiling an organisational GHG inventory, which we explain in more detail on the following pages. You can use the inventory to help you set and update your targets and reduction plan.

Table 4: Actions required for compiling a GHG inventory

The groundwork	Action	Outcome
Understand your organisation's facilities, assets and activities.	Define your base year.	A base year emissions inventory to measure the changes in your emissions over time and develop your reduction plans.
An asset register can be useful in identifying potential emissions sources within your organisation. A list of suppliers can be useful in identifying emissions sources within your organisation's control.	Define your organisational boundary – based on legal structure, sites, assets and activities that your organisation is responsible for. Identify boundaries between organisations participating in the CNGP – ie, boundaries for shared resources, or where one party undertakes work on behalf of another.	A clear organisational boundary to define the sites, assets and activities that are deemed to be within the scope of your GHG reporting.
Procurement teams can often provide data on financial spending by supplier. Identify key people within your organisation with relevant information (eg, facilities managers, finance managers, procurement managers).	Create an inventory to quantify all emissions sources within scope of your organisational boundary for that year. Refer to the GHG emissions sources reported under the CNGP illustrated in table 6 and appendix 1. Consider the criteria to determine the significance of emissions sources to be included, see table 7.	List of all material sources of emissions for your organisation. List of any exclusions and why.
	Document information and assumptions for each emissions source, number of suppliers and	Total consumption/usage of emitting activities, and total emissions removals.

The groundwork	Action	Outcome
Dedicate resource to this work. Identify existing sources of information and systems that provide the reporting you need. Review your organisation's annual OPEX and CAPEX reports to ensure key activities are not omitted.	how/where you obtained the information. Include any assumptions you have made in calculating the total activity data.	
	Apply the appropriate emission factor to the sources and calculate the total emissions per source. Document any assumptions you have made related to emission factors. Recalculate base year or historical year emissions if the changes are significant based on your organisation's significance threshold.	Total GHG emissions per source/sink.
	Have your inventory verified. Document your methodology in an inventory report or emissions database (or both) to ensure your inventory is verifiable, traceable and transparent. Seek early feedback from your assurance/verification provider that the inventory methodology and approach you are following aligns with the standards and CNGP requirements.	Assurance statement. Your inventory is documented, traceable and transparent. The results can be summarised easily for reporting processes. The method followed can be understood, verified, and picked up and repeated by others in your organisation.

3.1 Define your base year

A base year emissions inventory allows you to measure the changes in your emissions over time and develop reduction plans. Your base year inventory and your inventories that follow it are accounts of the total GHGs emitted through your organisation's activities for a given year.

Your base year should be representative of your organisation's typical emissions profile. You should document your rationale for choosing your particular base year period. It must consist of 12 consecutive months, or an average of up to 3 consecutive years of verified annual data.

When compiling your base year inventory, you must draw activity data from the specified period. That means you cannot combine activity data from one year with activity data from another to form a representative base year.

In general, the base year you set under the CNGP should be no earlier than 1 July 2015 to 30 June 2016 and no later than 1 July 2021 to 30 June 2022 for Tranche 1. Tranches 2 and 3 may have a base year no later than 1 July 2022 to 30 June 2023, or 1 January to 31 December 2022 if using a calendar year. These dates apply to organisations that were in existence when the CNGP was established. New organisations that commence after FY2020/21 should set a base year that reflects 'business as usual' operation (see 5.5.4 Newly established CNGP organisations).

Tranche 1 organisations who stated a base year between 2020 and 2022 in their 2022 reporting may have found that their base year was significantly affected by COVID-19. If your base year is not representative of your organisation's usual emissions profile, there are options available to change your base year.

- First, consider using an earlier base year that is representative of 'business as usual'. You may need to 'back-cast' to estimate some data that cannot be retrospectively captured. Speak with your auditor about the reliability of any estimated data and the proportion of your inventory this comprises, as these factors may affect your level of assurance.
- If you cannot obtain sufficient data to establish an earlier base year, you may be able to use the 2022/23 financial year as your base year.

To change your base year, contact the Programme Lead with evidence of the COVID-19 impact and the reasons an earlier period cannot be used.[5] Any change should not contradict the principles set out in section 3.6.

Where an organisation's data vary greatly between years, to the extent that a single year's data are not representative of its typical emissions profile, or in instances where the organisation is newly established, the organisation can use an average base year of up to three consecutive years to smooth these fluctuations. Using an average base year may better support you in decision-making and effective planning of your reduction efforts.

3.1.1 Verification of base year data

You must obtain external verification of your base year inventory, whether that represents a single year, or an average drawn from up to three verified consecutive annual inventories. However, verification of inventories for intervening years – between the base year and the year your organisation is required to start reporting – is optional. For further information, see section 4.1.

3.2 Define your organisational boundary

Both the ISO 14064-1:2018 (International Organization for Standardization, 2018) and the Greenhouse Gas Protocol standards provide guidance on how to set an organisational boundary.

For measuring and reporting GHG emissions, the main GHG standards recommend organisations select an approach for grouping activities or the GHG-emitting sources under the organisation's responsibility. Two consolidation approaches are control (financial or operational) and equity share.[6] In most cases, financial or operational control is more likely to apply to public sector organisations

[5] Note also that this will reduce the amount of time available to meet the 2025 and 2030 gross emissions reduction targets your organisation sets.

[6] Control means the organisation accounts for all GHG emissions from facilities over which it has financial or operational control. Equity share means the organisation accounts for its portion of GHG emissions from respective facilities, subsidiaries or investments. The GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004) explains these two approaches.

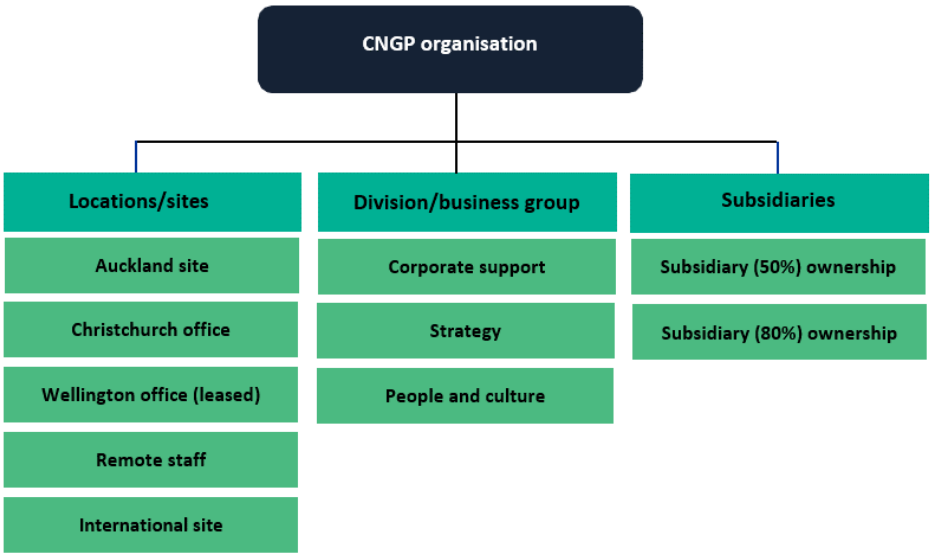
(see World Resources Institute and LMI, 2010, pp 17–21). The Programme Lead does not have a view on a preferred method.

Quick tip

International standards provide guidance on setting your organisational boundary. Speak to your legal or financial team about this, as the boundary of the organisation typically aligns with the legal and/or organisational structure.

Figure 1 gives an example of a CNGP organisational boundary chart and (if relevant and deemed significant) how GHG emissions from subsidiaries/facilities and international sites are included within the scope of reporting.

Figure 1: Example of CNGP reporting boundary chart



If your organisation does have partial or full ownership of a subsidiary organisation or facility, you will need to decide whether to include a subsidiary, based on your consolidation approach. For a worked example, see figure 1 in the GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004, p 22). If you report on emissions associated with separate entities, you may wish to track them separately. Document anything you considered but ruled out of the boundary and explain why, so this information is available for your auditors completing verification.

3.2.1 Boundaries between organisations participating in the CNGP

It is important that organisations keep the focus on emissions reductions, rather than practices that push emissions into the sphere of another organisation. It is essential that agencies discuss and negotiate the approach up front with each other (and include those involved in GHG reporting in those conversations).

Where your agency shares space or works closely with another CNGP organisation (creating a risk of double counting or missed emissions), talk to contacts at the other organisation about where lines are drawn, so that you can apportion activity correctly, rather than missing or double counting it. If you need help to connect with the CNGP contact at another agency, contact cngp@mfe.govt.nz.

When considering whether to include an emissions source in your inventory in general, use the criteria set out in table 7. Under the GHG Protocol Corporate Standard, in situations where one organisation commissions work or outsources it to another, both organisations may account for the emissions. For example, scope 1 fuel emissions for the organisation carrying out the work would be scope 3 supply chain emissions for the organisation purchasing the service.

However, under the CNGP, it is preferable to avoid two participating organisations accounting for emissions from the same activity, as this would result in an overestimate of emissions for the programme as a whole. In a situation where one CNGP organisation commissions another CNGP organisation to do some work, the organisation undertaking the work should account for the emissions, provided it does not contravene its consolidation approach. This provides a simple and consistent approach across the CNGP. The organisation performing the work typically has access to the activity data and influence over how the work is conducted, and the emissions are more closely categorised as scope 1, scope 2 or mandatory scope 3. If the other organisation is not a CNGP agency, you should decide whether to account for these emissions using the criteria in table 7. In many cases these emission sources would be Scope 3 (other material).

The most common consolidation approach in the CNGP is 'operational control'. The GHG Protocol Corporate Standard defines operational control as where an organisation has "full authority to introduce and implement its operating policies at the operation". This does not mean that the organisation "necessarily has authority to make all decisions concerning an operation" (World Resources Institute and World Business Council for Sustainable Development, 2004, p 18). In some cases, it may not be clear how much operational control the organisation conducting the work has, with the level of control depending on the nature of the contractual arrangement. In such situations, to avoid disputes, organisations should negotiate issues around the carbon intensity of commissioned activities at the contract stage.

If your organisation is using a different consolidation method, such as 'financial control' or 'equity share', you should apply those principles accordingly. For further guidance on applying these approaches when setting organisational boundaries, see chapter 3 of the GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004, pp 16–23).

Example
Ministry A commissions a service from Crown agent B. Crown agent B can recover its costs for this work from Ministry A. Crown agent B undertakes activities in line with the service contract. This includes travel for its employees and other independent experts and service providers required to complete the work. Both organisations use an operational control approach to consolidate their emissions. Ministry A is the commissioning organisation, but Crown agent B undertakes the work to fulfil the service contract and therefore accounts for the emissions. Ministry A confirms Crown agent B is accounting for these emissions in its inventory and does not include the emissions in its own inventory, to avoid double counting within the CNGP.

3.3 Create an inventory

Your organisation will have GHG emissions associated with a wide range of owned and leased assets, and purchased products and services, through its value chain. You will need to group emissions sources into 'scopes' or 'categories' in line with international standards referenced in section 2.1.

The ISO 14064-1:2018 (International Organization for Standardization, 2018) and Greenhouse Gas Protocol standards contain extensive guidance on GHG measuring and reporting. What you report in each scope will vary depending on your organisation's activities, assets and functions.

3.3.1 Direct and indirect sources

GHG measuring and reporting standards categorise emissions as direct or indirect sources. This is to manage double counting of emissions (such as between an electricity generator's direct emissions associated with generation and the indirect emissions linked to the user of that electricity).

Direct GHG emissions come from sources the organisation controls. Indirect GHG emissions are a consequence of the activities of the organisation that occur at sources owned or controlled by another organisation. The GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004) places emissions sources into scope 1, scope 2 and scope 3 activities.

Note the international standards differ in their approaches to categorising scope 3 emissions. ISO14064-1:2018 uses the term 'categories' instead of 'scopes'. Scope 1 and 2 are the same as categories 1 and 2, respectively. Scope 3 includes categories 3, 4, 5 and 6, as table 5 shows. Category 5 is unlikely to apply to most CNGP participants. Category 6 is intended to capture any emissions not reported elsewhere.

Table 5: Comparison of GHG emissions categorisation by international standards

GHG Protocol Corporate Standard	ISO 14064-1:2018
Scope 1: Direct GHG emissions from sources the company owns or controls (ie, within the organisational boundary) – for example, emissions from the combustion of fuel in vehicles that the organisation owns or controls	**Category 1:** Same as scope 1
Scope 2: Indirect GHG emissions from the generation of purchased energy (in the form of electricity, heat or steam) that the organisation uses	**Category 2:** Same as scope 2
Scope 3: Other indirect GHG emissions occurring because of the activities of the organisation but generated from sources it does not own or control (eg, air travel) These are broken down into 15 further categories within the GHG Protocol's Corporate Value Chain (Scope 3) Standard (see pp 31–32).	**Category 3:** Indirect GHG emissions from transportation
	Category 4: Indirect GHG emissions from products used by an organisation
	Category 5: Indirect GHG emissions associated with the use of products from the organisation
	Category 6: Indirect GHG emissions from other sources

The CNGP refers mainly to 'scopes', as it is still the most widely used and understood term. For the same reason, we use it for the programme's reporting purposes. However, you can use whichever categorisation suits your own internal purposes.

3.3.2 CNGP mandatory and material GHG emissions sources

For the purposes of the CNGP, table 6 outlines a defined minimum mandatory set of emissions. This covers all scope 1, all scope 2 and specified scope 3 emissions. CNGP participants should aim to include other material emissions to the extent possible in their GHG emissions inventory.

This means you may have additional scope 3 emissions you need to include, depending on the activities of your organisation. Material (scope 3) emissions are other significant indirect sources that your organisation is responsible for. See table 7 for more details of the criteria you should use to determine whether to include or exclude such sources. You need to disclose and justify any specifically excluded emissions sources, including if accurate data are not available.

The Programme Lead acknowledges that it may take several years to gather data and mature your approach to supply chain reporting. This applies particularly to organisations with more complex portfolios and supply chains.

Note that any emissions source across any scope can be excluded if it is *de minimis*, meaning less than 1 per cent of your organisation's total inventory. The total of all sources excluded for being *de minimis* should be no higher than 5 per cent of the total inventory.

Table 6: GHG emissions sources reported under the CNGP

All scope 1 emissions	All scope 2 emissions	Mandatory scope 3 emissions and material scope 3 emissions
Category 1 Direct GHG emissions	**Category 2** Indirect GHG emissions from imported energy	**Categories 3, 4, 5 and 6** Indirect GHG emissions from transportation, products an organisation uses or supplies, or other sources
Examples: • Fuel use (eg, aviation fuel, biofuel and biomass (N_2O, CH_4), coal, diesel, light and heavy fuel oil, LPG, natural gas, petrol) • Refrigerant and other gas use (eg, HVAC, medical gases) • Composting • Wastewater treatment plant (owned) • Solid waste facilities (owned) • International operations (scope 1) • Agriculture and forestry (eg, enteric fermentation, fertiliser use, forest growth, forest harvest)	**Examples:** • Purchased electricity • Purchased heat or steam • International operations (scope 2)	**Mandatory scope 3 emissions:** • Staff travel for work (eg, domestic and international air travel, hotel stays, taxis, private cars, public transport, rental vehicles) • Freight transport • Staff working from home • Transmission and distribution losses • Water supply • Wastewater services • Waste to landfill **Material scope 3 emissions:** • All other scope 3 emissions material to the organisation
Biogenic emissions to be reported separately from scope 1		
Examples: • Biodiesel (the CO_2 from the biofuel proportion) • Bioethanol (the CO_2 from the biofuel proportion) • Biomass (the CO_2 from the biomass proportion)		

Note: CH_4 = methane; CO_2 = carbon dioxide; HVAC = heating, ventilation and air conditioning; LPG = liquid petroleum gas; N_2O = nitrous oxide.

3.3.3 Emissions in your value chain (other scope 3 material emissions)

Emissions from value chains represent a significant opportunity for the Government to influence the wider economy, and they are the majority of emissions for some organisations. Engaging with your value chain is a process that can take several years and have a bearing on supplier contracts. Figure 2 below shows how organisations can increase their influence on value chain emissions sources over time.

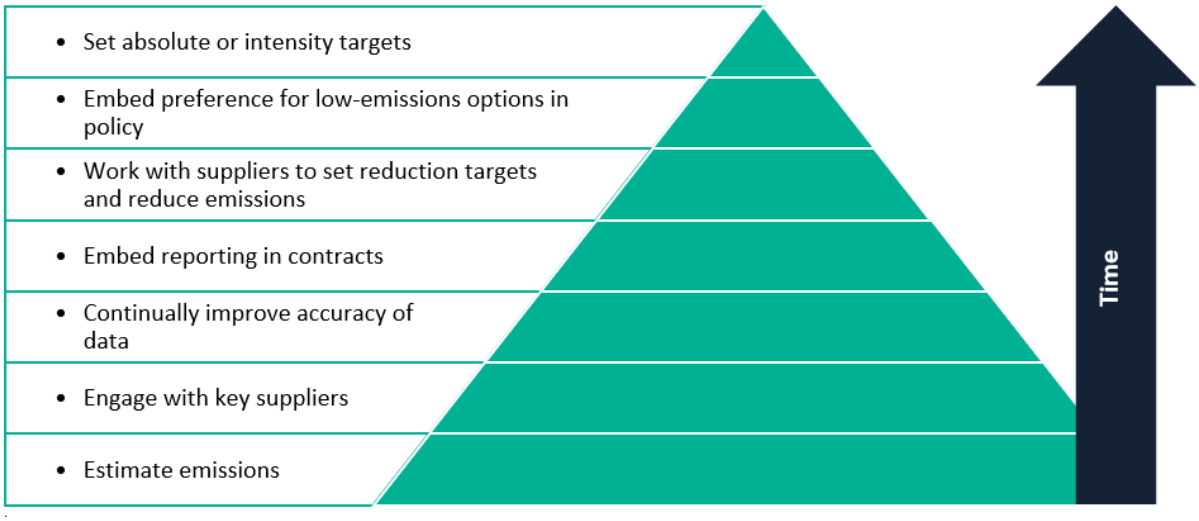
When engaging with your value chain, consider:

- the size of your emissions overall – those with large emissions profiles in their value chain would be expected to make more effort

- the proportion of your emissions that sit in your value chain – focus your efforts on where your largest emissions sources are (for some organisations this will be within their mandatory emissions sources, and for others the vast majority will be in the wider value chain)
- focusing on your largest suppliers – be pragmatic and work with suppliers over time on their transition
- the size and attributes of the supplier – consider the implications for small and medium businesses and what is reasonable to expect from them, or from suppliers who already face procurement barriers
- taking the suppliers on the journey – where possible, align expectations with your providers and support them with specific guidance and tools to focus their effort with consistency and transparency.

Consumption-based emission factors estimate the emissions from purchased goods and services based on their dollar value.[7] Consumption-based emission factors are a useful starting point for determining which areas of your value chain are most important to focus on. Engaging with suppliers to obtain supplier specific data will enable more meaningful reporting and reduction targets.

Figure 2: Hierarchy of influence



Outsourced activities

If you outsource some activities to third parties to deliver on your behalf, include emissions associated with outsourced activities under your material scope 3 emissions – if you consider them to be significant and within your reporting boundary.

[7] Examples of sources of consumption-based emission factors include: Auckland Council's Consumption emissions modelling - Knowledge Auckland (2023), Motu's Consumption-based Greenhouse Gas Emissions Input-Output Model (2014), GOV.UK's Department for Business, Energy and Industrial Strategy's Greenhouse Gas Reporting: Conversion Factors (2024), and Thinkstep ANZ's Emission Factors for New Zealand: Greenhouse Gas Emission Intensities for Commodities and Industries (2024). Retrieved 18 July 2024.

Measuring and reporting emissions associated with construction projects

For CNGP participants with significant construction and infrastructure projects, the embodied emissions of construction materials and products – including the emissions associated with construction processes – are likely to be a significant source of scope 3 GHG emissions. If they are a material (significant) emissions source for your organisation (as outlined in table 7), include these in your emissions measurement and reporting, to the extent possible.

As noted under Allowances/exceptions 1.3.1 Allowances/exceptionsin section 1.3.1, you should identify and report the emissions associated with construction projects separately to other scope 3 emissions sources – both for organisational reporting and for reporting to the CNGP by 1 December each year. This is because a different base year and reduction target-setting method may apply to construction projects. Further, time periods used for reporting construction-related emissions may differ from July to June, to reflect the relevant construction project timescales. Further guidance on reporting and target setting of your embodied construction emissions can be found in Embodied emissions of buildings: Reporting and target setting in the Carbon Neutral Government Programme (MfE, 2024).

Measuring working from home and staff commuting emissions

Just as an organisation's GHG inventory captures emissions from its offices, it is appropriate for the inventory to include emissions generated from staff working from home as part of an organisation's operations. Under the CNGP, emissions from staff working from home are a mandatory scope 3 emissions source.

Where emissions increase due to staff working from home, emissions due to staff commuting often decrease at the same time. While staff commuting is not currently a mandatory scope 3 emissions source under the CNGP, capturing these emissions shows more clearly how these trends relate to changes in emissions due to staff working from home and improves insight into the impact that emissions reduction initiatives may have.

A group representing a number of CNGP organisations have developed a practical resource providing advice on undertaking a commuting survey within your organisation including a survey decision tool, survey templates, and a survey analysis workbook. This resource is made available for other CNGP organisations to utilise and to share knowledge and experience across the programme. These resources are available via the CNGP webpage.

For emission factors for working from home and for various vehicle types and modes, see the Ministry for the Environment's (2024) measuring emissions guide. The measuring emissions guide includes default and average factors that you can use when you lack more specific data. It is up to your organisation to decide the level of effort that is practical and warranted in gathering data on working from home. You may decide to use more advanced methods in later years as you become more experienced with measuring these emissions.

3.3.4 Further information on specific emissions sources

Appendix 1: Emissions sources for reporting under the CNGP provides further information on what each emissions source covers and how to collect this information.

Appendix 2: Further information on emissions sources covers specific emissions sources in relation to:

- air travel emissions
- information and communications technology (ICT)
- electricity emissions
- clarifying leasing arrangements
- clarifying biogenic GHG emissions
- financed emissions (emissions from investments)
- waste audit methodology
- accounting for land use, land-use change and forestry
- accounting for agricultural emissions.

3.3.5 Determining the significance of an emissions source

When evaluating all potential GHG emissions sources, you can use the criteria in table 7 to help determine which sources to include in your GHG inventory. Clearly document the rationale for excluding an emissions source.

Table 7: Criteria to determine sources to include in your GHG inventory

Criterion	Description
Size of the source in relation to total inventory	A GHG emissions source that is expected to make up a significant portion of your total operational emissions, or that is expected to make up a significant portion of the total scope 3 emissions (see CNGP mandatory and material emissions sources earlier in this section). Also consider if there are any sources that will become more significant in the future due to factors such as expansion, growth or change of operations.
Risk	You may consider that some sources significantly contribute to your organisation's GHG risk exposure (eg, risks related to climate change, such as financial, regulatory, supply chain, product and technology, reputational and physical risks).
Influence	You may decide your organisation has significant potential to influence emissions reductions or better practice (eg, Can I implement travel budgets? Can I influence our staff to use less paper? Can I influence key suppliers to reduce their emissions?)
Stakeholders	Consider whether stakeholders such as employees, suppliers, investors, Ministers or the general public have an interest in or expectation of your organisation to be measuring and reducing the emissions sources you are evaluating.
Outsourcing	Many government agencies outsource some core activities. You should evaluate whether your organisation has any outsourced activities that may significantly

Criterion	Description
	contribute to your organisation's total operational emissions or represent an activity your organisation typically performs 'internally' with its own staff and facilities.
Access to data and data quality	Some data sources may not be possible to collect, or they may have low accuracy. This may affect your ability to include the data in your inventory. As part of your commentary to the Programme Lead, you should document how you plan to resolve such issues over time.

3.4 Document information and assumptions for each emissions source

In your inventory report, document from whom, how and where you obtain the information for each emissions source (for both the activity data and emission factors). Also include the number and details of the suppliers or internal points of contact for each source.

Document whether you have excluded any emissions sources and, if so, why (see CNGP mandatory and material GHG emissions sources in section 3.3 for guidance on when you can exclude an emissions source).

Include any assumptions you have made in calculating the total activity data so you can explain your calculations when it comes to the annual verification of your information.

See appendix 1 for more information on collecting data and measuring these emissions.

3.5 Apply emission factors

There are many things to consider when selecting emission factors for your GHG inventory (see table 8). However, common factors are available from the Ministry for the Environment's (2024) measuring emissions guide, which you should use wherever possible.

In some instances, more accurate factors may be available. For example, the freight company you use may be able to provide an emission factor (or a customised emissions report) specific to its freight service. This is referred to as a 'supplier-specific' emission factor. Provided the company's factor has been verified to an appropriate standard, this would be more accurate than the default freight emission factor from the measuring emissions guide (Ministry for the Environment, 2024). The use of supplier-specific emission factors will likely increase over time. These factors can help in choosing suppliers that are operating in a low-emissions way.

If you cannot obtain a suitable emission factor from either the measuring emissions guide (Ministry for the Environment, 2024) or your suppliers, you may want to seek expert help in finding other emission factors from other sources and reviewing their appropriateness. These sources could include other Aotearoa New Zealand government data, industry research, Intergovernmental Panel on Climate Change (IPCC) reports or foreign government publications (such as the Australian or UK Government emission factors publications). No matter which approach you choose, your inventory verifier will need to be satisfied that you have selected an appropriate emission factor that

adequately matches the type of activity for each of your emissions sources. You will need to provide your verifier with a reference to the origin of each emission factor you use.

Table 8: How to select suitable emission factors

Considerations for selecting suitable emission factors	
1	Geographic – does the factor relate to the area where the activity is occurring? For example, grid electricity emissions depend strongly on the generation mix of the country in question.
2	Applicable time period – does the factor relate to when your activity occurred? For example, grid electricity emission factors vary from year to year.
3	Has the factor been peer reviewed and/or verified? For example, have independent experts checked it?
4	Does the factor include the warming effect of all the different gases the activity will generate?
5	Would you be using the factor for the use it was intended for? Does it matter that you do?
6	How old is the factor? Could it have been updated?
7	Are there alternatives? How do they compare in terms of magnitude?

Your organisation needs emission factors so you can determine your organisation's direct and indirect emissions in tonnes of carbon dioxide equivalent (tCO_2e).

For direct emissions, apply unmodified emission factors that include only the direct warming effects of the gases emitted. For air travel and air freight, you need to apply the emission factors that include a radiative forcing multiplier.[8] (Note the air travel and air freight factors in the measuring emissions guide (Ministry for the Environment, 2024) include options with and without radiative forcing multipliers.)

Emission factors may vary slightly from year to year. You need to review and update them each year in your GHG inventory. Use the most recent emission factors available that apply to your reporting year.

If your use of updated emission factors significantly affects your base year or other historical GHG reporting, refer to section 3.6.

3.6 Recalculating base year or historical year emissions

To track emissions consistently over time, you may need to recalculate base year emissions to ensure your organisation continues to compare 'like with like'. Triggers for recalculating base year emissions are when an organisation undergoes significant structural changes, expands its inventory to include emissions sources not previously measured, or identifies an error or methodological change in emission factors.

Chapter 5 of the GHG Protocol Corporate Standard provides useful details and examples (World Resources Institute and World Business Council for Sustainable Development, 2004, pp 34–40), as

[8] The CNGP has chosen to follow best practice and be conservative in the case of uncertainty. For this reason, a radiative forcing multiplier is to be included in air travel and air freight.

does chapter 5 of the US Public Sector Protocol (World Resources Institute and LMI, 2010, pp 36–44), which interprets the earlier protocol for a public sector audience.

3.6.1 Recalculation policy

Under international standards, organisations are required to develop a base year recalculation policy. This section acts as the recalculation policy for CNGP organisations, but CNGP organisations need to determine and disclose their own significance threshold. Your CNGP organisation may document additional policy or guidance specific to the organisation if it wishes. However, that policy or guidance should not contradict the guidance provided in this document.

3.6.2 Recalculation significance threshold

Recalculation is triggered when the cumulative total of changes reaches a significance threshold that your organisation has set. The CNGP recommends a significance threshold between 5 and 10 per cent of the total measured emissions. This threshold applies to both increases and decreases in GHG emissions. Significant changes result not only from single large changes, but also from several small changes that are cumulatively significant.

When setting your significance threshold, consider the administrative and financial implications of recalculating your base year emissions, along with the impact of material changes to your inventory.

3.6.3 Overall rationale for whether to recalculate

When deciding whether you need to recalculate, consider whether the changes are the result of a **transfer** of emissions from one organisation to another, or a **change** in emissions to the atmosphere. If emissions are transferred, or they previously existed but were not measured, recalculation is triggered (provided they meet the significance threshold).

If the changes are the result of an actual increase or decrease in emissions to the atmosphere, no recalculation is triggered (in order to reflect the real change to emissions in the atmosphere within the organisation's inventory).

3.6.4 Situations that may trigger recalculation of base year emissions

Structural changes. Structural changes can transfer emissions from one organisation to another. If these changes are significant, both of these organisations may need to recalculate their base year. Structural changes include consolidating or creating a new organisation, dividing an organisation or transferring programmes or functions. For illustrative examples, see figures 6 and 7 of the GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004, pp 36 and 37).

Inclusion of emissions sources not previously measured. As an organisation matures and extends its focus into its supply chain, it adds into its inventory emissions sources that previously existed but

which it has not yet measured. You may wish to consider the timing of including additional sources; including all additional sources in one recalculation may be more efficient because it reduces verification costs and time.

Methodological changes. Over time, emission factors or activity data accuracy may improve – for example, where an organisation replaces estimated assumptions with actual data. Your organisation may be able to apply these improvements to previously reported periods.

Correction of errors. Your organisation may identify errors or mistakes in one or more previous emissions inventories or emission factors.

3.6.5 Situations that do not trigger recalculation of base year emissions

Operations that did not exist in the base year. Your organisation may establish a new function or programme that did not exist in the base year.

Organisational growth or decline. Your organisation may expand or contract, or take on new responsibilities that are not a transfer from another organisation.

Insourcing or outsourcing. Your organisation may bring in activities previously contracted out, or contract out activities previously done in-house.

- If the activity is in your base year inventory, this may just result in a change in scope, and generally no recalculation is required.
- If the activity existed in your base year but is not in your base year inventory, see Inclusion of emissions sources not previously measured above.

See figure 5.2 in the US Public Sector Protocol for further context (World Resources Institute and LMI, 2010, p 40).

3.6.6 Verifying and reporting recalculations

As part of the verification process for the current year of emissions, the verifier will check the organisation has followed their base year recalculation policy and threshold. Typically they do not reverify the base year itself. If your organisation makes any change in the base year, you should report it to the CNGP in the next reporting period, along with an explanation of why the change took place, and explain it in your publicly available emissions information, such as your annual report. Your explanations should also cover any impact this change has on your reduction targets.

Table 9 summarises the guidance on recalculating your base year. For an example of reporting on a recalculated base year, see Meridian Group's (2021) Greenhouse Gas Emissions Inventory Report (p 28).

3.6.7 Restating historical year emissions (other than your base year)

Your organisation can choose, but is not obliged, to recalculate and report changes to reporting periods between the base year and current year where it meets the recalculation criteria and threshold. Likewise, a reverification is not required. However, it is good practice to acknowledge changes to historical totals in your publicly available emissions information each year, such as your annual report.

Table 9 summarises the guidance on recalculating your historical year emissions.

3.6.8 Changing base year

International guidance offers little detail about setting a new base year once you have already established your base year. The Corporate Value Chain (Scope 3) Standard states, "As an alternative to recalculating base year emissions in the event of a major structural change, companies may reestablish the base year as a more recent year" (World Resources Institute and World Business Council for Sustainable Development, 2011, p 104).

Your organisation should think very carefully before changing its base year, given the potential risk of greenwashing, erosion of public trust and/or undermining the leadership and exemplar nature of the CNGP – particularly if you are moving to a base year with a higher level of emissions. Changing your base year some way into the programme may also make it more difficult to achieve your emissions reduction targets for 2025 and 2030. For these reasons, changing to a new base year is not recommended except for the allowance in section 3.1.

Please contact the Programme Lead at the earliest opportunity if you are considering moving to a new base year.

If you do change base year, report this to the CNGP in the next reporting period along with an explanation of why the change took place, and explain it in your publicly available emissions information, such as your annual report. Your explanations should also cover any impact this change has on your reduction targets.

Table 9: Summary of guidance on recalculating base year or historical year emissions

Outcome	Scenarios	Action
Recalculation may be triggered if changes meet the significance threshold	An organisation acquires a division, programme or function from another organisation, or transfers the like to another organisation.	This is a transfer of emissions, and both organisations may need to recalculate their base year to include/exclude this function if this reaches the significance threshold. You can do this by: • obtaining activity data from the base year if available • back-casting activity data to the base year if base year data are not available.

Outcome	Scenarios	Action
	An organisation begins measuring one or more material scope 3 emissions sources that existed in the base year, but that it did not previously include in the inventory.	Recalculate the base year to include these sources if the combined total reaches the significance threshold. You can do this by: • obtaining activity data from the base year if available • back-casting activity data to the base year if base year data are not available
	An organisation finds a more accurate emission factor for an activity or uses a new methodology to measure the activity.	Recalculate base year if the change reaches the significance threshold.
	An organisation identifies an error in an emission factor or in the base year inventory.	Recalculate base year if the change reaches the significance threshold.
No recalculation is triggered	An organisation insources or outsources an activity that was present in its base year.	You need not recalculate, but do ensure this activity remains in your emissions inventory under the appropriate scope.
	An emission factor changes as a result of an actual change in emissions – eg, electricity use becomes more or less emissions intensive.	You need not recalculate, as this represents a real change to emissions in the atmosphere.
	An organisation grows significantly by performing additional work, rather than through acquiring work from another existing organisation. This results in an increase in emissions.	You need not recalculate the base year, as this represents a real change to emissions in the atmosphere.
	An organisation stops performing some work and no other organisation takes up this work. This results in a decrease in emissions.	You need not recalculate the base year, as this represents a real change to emissions in the atmosphere.

Note: Recalculation is triggered when the cumulative total of changes reaches the significance threshold that your organisation has set.

3.7 Support to compile your own inventory

The Ministry for the Environment (2024) has published a measuring emissions guide for organisations of all sizes and levels of expertise. This includes organisations measuring their emissions for the first time and those who have been reporting for many years.

The guidance includes examples of an emissions inventory and an emissions inventory report, as well as a spreadsheet you can use as a starting point to produce your own inventory.

For a list of some (but by no means all) suppliers who may be able to provide support in compiling your emissions inventory, see the CNGP resources webpage: Measuring and reducing your emissions through the Carbon Neutral Government Programme.

4 Inventory verification

4.1 Have your inventory verified

Obtain third-party verification of your emissions inventory to ensure that you have measured your emissions correctly and this information can be publicly reported and scrutinised. You should seek verification of your base year emissions inventory for CNGP purposes, and again every subsequent reporting year.[9]

For the purpose of verification, you must prepare your organisation's GHG inventory/statement in line with ISO 14064-1:2018 (International Organization for Standardization, 2018) and/or the GHG Protocol Corporate Standard (World Resources Institute and World Business Council for Sustainable Development, 2004).

You need to consider several criteria when verifying your emissions. One is the need for verifiers to be independent, suitable professionals with experience and understanding of ISO 14064-1:2018 and/or the GHG Protocol Corporate Standard. For some other criteria to consider, see section 2.4 of the Ministry for the Environment's (2024) Measuring emissions guidance.

An independent third-party organisation or individual must conduct the verification of a GHG emissions inventory. When seeking verification of your GHG inventory submitted to the CNGP, it is recommended that your chosen verifier holds an accreditation or certification. Examples of accreditation or certification of verifiers include: a professional recognition from the New Zealand Institute of Chartered Accountants, a carbon auditor certification from Carbon and Energy Professionals New Zealand, or organisations accredited to ISO 14064-3:2019 (International Organization for Standardization, 2019).

For a list of some (but by no means all) suppliers, see the CNGP resources webpage: Measuring and reducing your emissions through the Carbon Neutral Government Programme.

4.2 Acceptable levels of assurance

Assurance is generally the outcome of the verification process. Your independent verifier must conduct the assurance engagement in line with the *ISAE (NZ) 3410 – Assurance Engagements on Greenhouse Gas Statements* standard (XRB External Reporting Board, 2012) or the ISO 14064-3:2019 standard (International Organization for Standardization, 2019). The assurance statement the verifier provides is what you will share with the Programme Lead to confirm your inventory has been verified.

[9] An exception for intervening years between base year and the first year of reporting is made where verification of inventories is optional.

Acceptable levels of assurance include both reasonable and limited assurance, but you should obtain reasonable assurance over your Scope 1 and 2 sources where practicable. Speak to your verifier about the methodology.

4.3 Engage with your verifier early

Collect and input data throughout the year, rather than leaving everything to the end of the financial year. In this way, you can address any issues as they arise. If data from the last month/quarter are late due to any delays, such as in supplier invoicing, you can start the verification process and then fully sign it off once you have included the final data.

It is highly recommended that you organise a verification provider far in advance to ensure timings are manageable. You can seek early feedback from your verification provider that your methodology and approach align with the standards and CNGP requirements. See section 7.1 for more information on external support, including a link to a non-exhaustive list of suppliers.

If your timeline for verification does not meet your annual report deadlines, you can include provisional and unverified data. However, you need to clearly state that you have used data of this nature and then include the verified data in the next year's annual report.

5 Developing emissions reduction targets

In addition to producing your emissions inventory each year, you need to set or update your organisation's gross emissions reduction targets.

5.1 Setting your gross emissions reduction targets

The CNGP requires participants to set gross GHG emissions reduction targets that are:

- consistent with the intent and purpose of the Climate Change Response (Zero Carbon) Amendment Act 2019 and the Paris Agreement of limiting the global average temperature increase to 1.5 degrees Celsius (°C) above pre-industrial levels[10]
- measured against a base year set by each organisation
- based on the reduction potential within their organisation (New Zealand Cabinet, 2021).

The guidance and tool described here are based on a bespoke approach and methodology for CNGP participants, which largely aligns with international best practice for individual organisations, drawing on research from the Science Based Targets initiative (SBTi). This approach helps provide definition and a simplified calculation at the organisational level for CNGP participants.

CNGP participants can use methods other than those set out in this guidance, such as the SBTi target-setting tool or the SBTi FLAG guidance (Science Based Targets, 2023) for agricultural emissions. To do so, they must demonstrate how their targets are consistent with a 1.5°C pathway (for example, by providing the calculations, models and resources they have used).

5.2 Support to set emissions targets

The Ministry for the Environment has published a CNGP target-setting tool (see figure 4 in section 5.6), which supports CNGP organisations to test their gross emissions reduction targets and demonstrate that those targets are consistent with a 1.5°C pathway. This tool sets out a simplified calculation at the organisational level for CNGP participants.

In the CNGP target-setting tool, users can enter an organisation's GHG emissions inventory for their base year and calculate what their emissions would be in future years for a given set of changes and assumptions that they specify. The tool compares projected emissions reductions from the base year with the level of reduction that is consistent with limiting global warming to 1.5°C. The tool focuses on the financial years 2024/25 and 2029/30, for which CNGP organisations must set gross emissions reduction targets (or for calendar years 2025 and 2030). The accuracy and usefulness of the outputs

[10] Following a 1.5°C pathway means setting individual organisation targets in line with the goal of limiting the increase in global average temperature to 1.5°C above pre-industrial levels.

of the tool for target setting and other planning depend on the quality of the inputs, including your assumptions about future changes.

Note an assumed emission factor for grid electricity has been included from the financial year 2019/20 onwards.

A demonstration version of the target-setting tool shows how the tool functions and how you can use it for testing. It has been pre-populated with examples of greenhouse gas inventory data from various organisations.

See a presentation that explains the CNGP requirements for setting emissions reduction targets and outlines the target-setting tool.

See a tutorial video that explains how to use the target-setting tool.

If your organisation already had targets and longer-term reduction plans in place before the CNGP began, it is recommended you check whether your current targets are in line with a 1.5°C pathway.

5.3 The reasons behind a 1.5°C pathway

The Paris Agreement (which Aotearoa New Zealand ratified in 2016 and which took effect in 2020) aims to keep global temperatures well under 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.[11] As outlined in the IPCC reports (AR6), if warming exceeds 1.5°C (emphasis in original):

> ...then many human and natural systems will face additional severe risks, compared to remaining below 1.5°C (*high confidence*). Depending on the magnitude and duration of overshoot, some impacts will cause release of additional greenhouse gases (*medium confidence*) and some will be irreversible, even if global warming is reduced (*high confidence*). (IPCC Working Group II, 2022, para B.6)

One of the purposes of Aotearoa New Zealand's national climate change legislation[12] is to provide a framework by which the country can develop climate change policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5°C above pre-industrial levels.

Government organisations have a leading role in reducing emissions and, by their actions, can demonstrate what is possible and galvanise the private sector and the public at large into further change.

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[11] The Paris Agreement's other goals are: to increase the ability to adapt to the adverse impacts of climate change, and foster climate resilience and low GHG emissions development; and to make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development.

[12] Parliamentary Counsel Office. Climate Change Response Act 2002. Retrieved 12 April 2023.

5.4 What a 1.5°C pathway looks like in the CNGP

The IPCC has published emissions reduction pathways consistent with limiting warming to 1.5°C above pre-industrial levels. The IPCC assessed many scenarios, with varying degrees of overshoot (IPCC, 2018) ('overshoot' is where global surface temperatures exceed the 1.5°C threshold for a time and then return below it by 2100). The IPCC pathways represent averages of the reductions required at a global scale. Researchers have explored how these global pathways translate into reduction targets for individual organisations that want to align their emissions reductions with a 1.5°C pathway.[13]

For CNGP purposes, a 1.5°C pathway means the IPCC scenario that gives at least a 50 per cent probability of limiting global warming to 1.5°C this century with low or no overshoot, which is the scenario the SBTi used (and an approach many organisations around the world have adopted as best practice). In practical terms, this equates to a **minimum** 42 per cent reduction in gross emissions by 2030, based on a 2020 base year. Where an organisation's base year is later than 2020, a steeper reduction trajectory is required, to reach 42 per cent by 2030.

This guidance sets out approaches for calculating consistency with a 1.5°C pathway that are specific to the CNGP and differ from the approaches underpinning Aotearoa New Zealand's emissions reduction targets in its 2030 NDC. This different approach is because the circumstances that apply to individual government organisations differ in some ways from the circumstances that apply to Aotearoa New Zealand as a whole. Some circumstances that apply to Aotearoa New Zealand as a whole but not to individual organisations are the influence of forestry on the country's emissions profile, and the desirability of maintaining a degree of continuity with our international emissions reduction targets over time.

5.5 How to set targets consistent with a 1.5°C pathway

CNGP targets must be set for gross emissions and cover all mandatory emission sources as a minimum. Where possible, targets should also cover other material emissions sources, noting that obtaining quality data to set targets over these sources can take time. In some cases, other target methodologies are more appropriate (such as supplier engagement, data improvement, or intensity-based methods for building and construction emissions). Agencies should explain how other types of targets are 1.5°C aligned or are based on the reduction potential within the organisation. When reporting to the Programme Lead, you will report your Mandatory Emissions Plus emissions separately to any Scope 3 (other) emissions that are covered by other types of targets (see 3.3.3 Emissions in your value chain (other scope 3 material emissions)). Your targeted or Mandatory

[13] Based on research into cross-sector emissions corridors that align with remaining IPCC emissions budgets between 2020 and 2035, findings indicate that emissions targets need to be at least 42 per cent lower by 2030, compared with a 2020 base year, under an absolute contraction approach. SBTi uses a linear trajectory equating to a minimum 4.2 per cent reduction per year for a minimum 5-year period. The CNGP used a point-in-time target for 2025 and 2030, with a common 2030 target of 42 per cent and interim 2025 target relative to base year (Chang et al, 2021; Science Based Targets, 2019).

Emissions Plus target must cover all mandatory emission sources and may also cover some, or all, of your Scope 3 (other) emissions.

Minimum emissions reduction targets under the CNGP must have the following features.

- Gross emissions targets are before any offsets or removals.[14]
- Guidance on use of service providers with zero carbon certified products or services. The CNGP does not currently allow for zero-carbon certified products or services to be included as '0' in the inventory. For this reason, you must include them in your inventory in the usual way (see section 3.5).
- You must set targets for 2025 and 2030. Because most CNGP organisations work on a financial year basis, 2025 generally means the 2024/25 financial year and 2030 means the 2029/30 financial year. For organisations reporting on a calendar year, this means the 2025 and 2030 calendar years.
- Targets are 'point-year' based, meaning that an organisation's emissions need to reach its target in the relevant year (2025 or 2030), but they do not need to reach or exceed the relevant target in earlier years. It also means that a target does not need to comprise an emissions 'budget' that a participant must comply with over multiple years before and between target years. This reflects the fluctuations involved in an individual organisation's pathway to reducing emissions.
- Targets are measured against an organisation's base year. Each organisation chooses its own base year, but must set it no earlier than the 2015/16 financial year. Setting an average base year is also permitted, which would represent an organisation's mean emissions generated over up to three years of verified annual data.[15] If you are using an average base year, it can extend no more than 12 months beyond the base year timeframes as specified in section 3.1. Situations where you may need to recalculate your base year emissions are described in section 3.6.

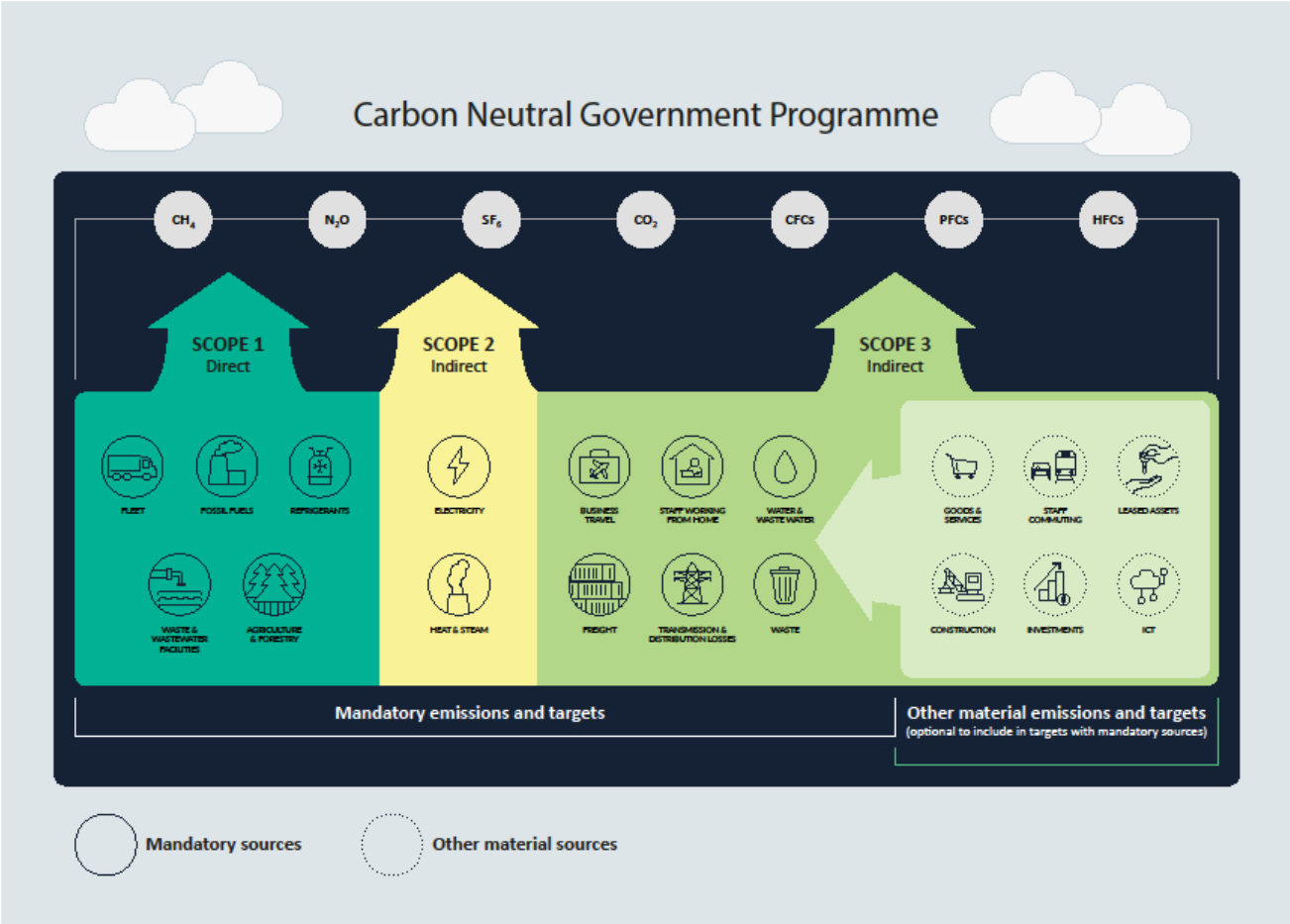
As a minimum, you must set a 42 per cent reduction by 2030 regardless of the base year. There are some exemptions for newly established organisations as outlined in 5.5.4 Newly established CNGP organisations.

Figure 3 provides a graphic representation of the relationship between CNGP mandatory and other material emissions and targets.

[14] Where you report removals in your inventory, such as forestry, you must not include them when setting these targets. Instead, model them separately due to their cyclical nature. This approach avoids the possibility of two organisations accounting for the same removals and ensures real emissions reductions are counted separately to any removals. Do not include offsets from products or services such as flight offsets. Offsets are separate from reduction targets and will come later in the programme.

[15] If you are using an average base year, contact cngp@mfe.govt.nz for guidance on how to determine your target for 2025.

Figure 3: CNGP mandatory and other material emissions and targets



5.5.1 For organisations with a base year of 2019/20 or earlier

Organisations with a base year of 2019/20 or earlier should set a **minimum** target of 21 per cent for 2025 (and 42 per cent for 2030). This is calculated from the launch of the CNGP in 2020 and is half of the 2030 target, for half of the time period. It recognises the early action these organisations have taken to reduce their emissions.

5.5.2 For organisations with a base year after 2019/20

For organisations with a base year after 2019/20, the 2030 target is still a minimum of 42 per cent reduction, while they can calculate a 2025 target as follows.

Step 1: Calculate the number of years between your base year and 2030 (*n*30).

Step 2: Divide 42% by this number.

Step 3: Multiply by the number of years between your base year and 2025 (*n*25).

$$\mathbf{2025}\ \boldsymbol{Target} = \frac{42\%}{n30} \times n25$$

Example 1

Ministry A is new to emissions reporting. As a Tranche 1 organisation, its instructions are to measure emissions from 1 July 2021. However, it has chosen to go back and establish a 2018/19 base year to reflect business as usual, before the disruptions of the COVID-19 pandemic.

Ministry A's 2025 (ie, 2024/25) target is 21 per cent, as its base year is earlier than 2020.

Its 2030 (ie, 2029/30) target is 42 per cent, in common with all other CNGP organisations.

Example 2

Authority B is a Crown agent. As part of Tranche 2, its directions are to measure emissions from 1 July 2022. It is new to emissions measurement and is planning to use 2022/23 as its base year.

There are seven years between 2022/23 and 2029/30.

42 per cent divided by 7 = 6 per cent.

There are two years between 2022/23 and 2024/25.

6 per cent multiplied by 2 = 12 per cent.

Authority B's 2025 target is 12 per cent.

Its 2030 target is 42 per cent, in common with all other CNGP organisations.

5.5.3 Achieving reductions over short timeframes

The science clearly demonstrates that we need to make deep and immediate emissions reductions before 2030. However, achieving substantial reductions over a few years can be challenging, given that some projects (such as fleet transition or boiler replacements) are often multi-year by nature.

The 2025 target ensures that CNGP organisations are taking urgent action. The 2030 target provides the focus for reducing your organisation's gross emissions on a slightly longer timeframe, to align with a 1.5°C pathway. For both these targets and your associated reduction plan, you will need to explain the context of your organisation's unique emissions profile, reduction potential and set of circumstances.

The CNGP is set to review emissions reduction targets in 2025, 2028 and 2030. The purpose of these reviews is to ensure that targets remain ambitious and practical, and take into account actual GHG emissions from participants, as well as the evolving science.

One of the purposes of the CNGP is to show leadership. You are encouraged to consider changes to your operations that will significantly reduce emissions, and to be ambitious when it comes to establishing reduction targets for your organisation.

5.5.4 Newly established CNGP organisations

Newly established organisations (i.e. organisations established after FY2020/21) are exempt from the CNGP requirements for the first financial year following their establishment. The Programme Lead also recognises that newly formed organisations may find it challenging to set reduction targets and realise reductions during the establishment phase of their organisation which may extend over more than one year. Hence, organisations established after FY2020/21 are also exempt from setting a base year and from setting a 2030 gross GHG emissions target in the first two financial years following their establishment. Newly established organisations are not required to set a 2025 reduction target. However, you must submit at least the following information alongside your greenhouse gas inventory and accompanying assurance statement to the Programme Lead from the second year following your establishment:

1. Strategic ambition: This shall comprise your organisation's objectives, priorities and timelines for developing a GHG emissions reduction plan and targets.

2. Governance: A description on how you are planning to embed the development of your GHG emissions reduction plan and targets within your organisation's governance structures.

3. Resources: Information about how your organisation is currently resourcing and plans to resource current and planned activities including levers and capabilities you have available pertaining to developing a GHG emission reduction plan and targets.

Newly established organisations should set a base year that represents 'business as usual' operation. This may be any of the first three financial years following establishment or an average of up to three financial years (see 3.1 Define your base year).

2030 targets for newly established organisations should be ambitious and based on the reduction potential of their organisation. They should also reflect the same level of ambition as the overall programme on a pro-rata basis. The 2030 reduction target for organisations that existed at the start of the programme in 2020 is 42 per cent. This equates to a 4.2 per cent reduction per year.

Example 3

Organisation C is a new Crown agent established in July 2022. As part of Tranche 2, it would be due to begin measuring emissions from 1 July 2022. However, organisations are exempt from this requirement in the first financial year following their establishment. Organisation C is taking this exemption to proactively set up emissions measurement and will begin measuring from 1 July 2023. It is also exempt from setting a base year and reduction target for the first two financial years following establishment.

Its first year of measurement will be 2023/24. For this year it will report its emissions and details around its strategic ambition, governance and resources in relation to emission measurement and reduction.

It's second year of measurement will be 2024/25 and this is the year it will set as a base year. It also sets a reduction target for 2030. There are five years between 2024/25 and 2029/30 so it sets a target of 5 multiplied by 4.2 per cent which is 21%.

Organisation C's 2030 target is 21 per cent. It is not required to set a 2025 target.

5.6 Recommended target format

Having a single target and target period simplifies data tracking and communication around the target. It is recommended that you express organisation targets in the format shown in the Example of organisational targets panel. Your organisation may choose to also define different targets for different operational areas, or sub-targets, or other targets specific to your organisation (if you have other targets that differ from the CNGP target reporting years of 2025 and 2030).

Example of organisational targets

A **2025** gross emissions reduction target could be:

- Organisation X has committed to reduce our scope 1 and2 and mandatory scope 3 gross emissions by __ per cent by 2024/25 from a base year of 2019/20.

A **2030** gross emissions reduction target could be:

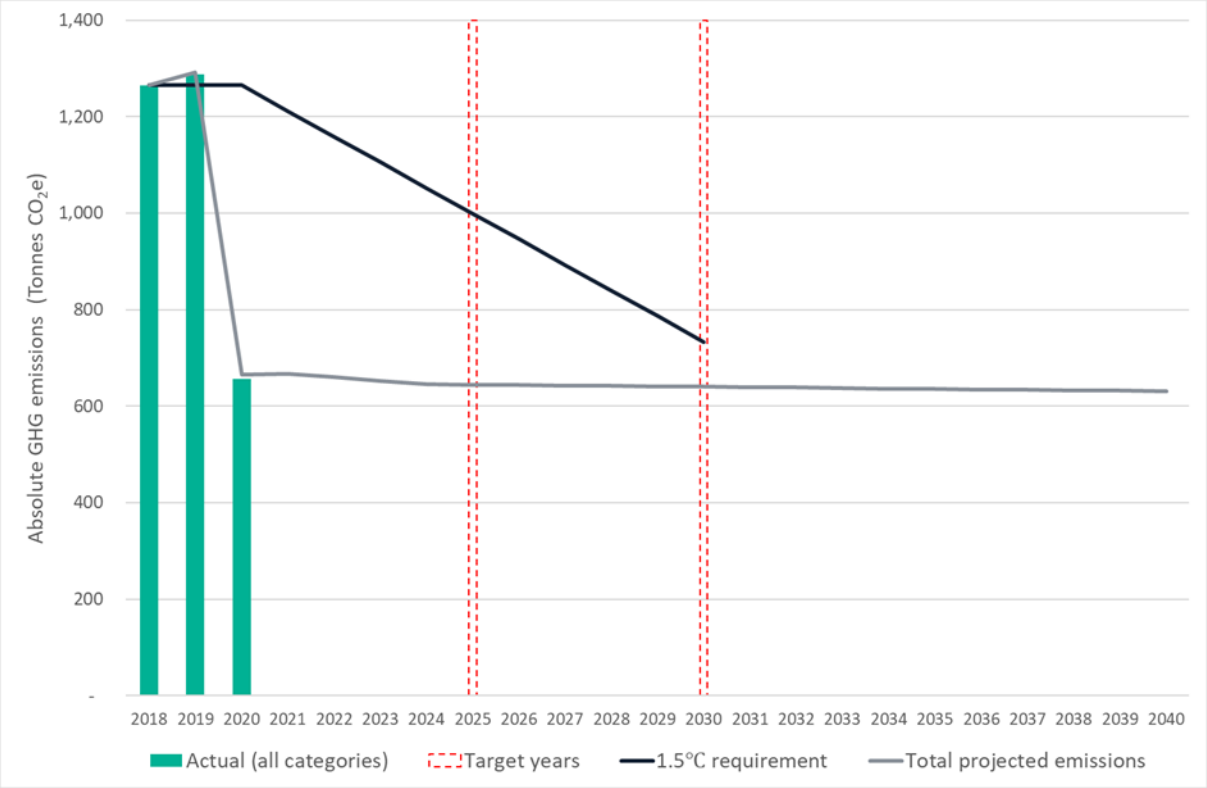
- Organisation X has committed to reduce our scope 1 and2 and mandatory scope 3 gross emissions by __ per cent by 2029/30 from a base year of 2019/20.

Other organisation-specific sub-targets could be to:

- reduce travel emissions by __ per cent by target year from a baseline of *x* tCO_2e in base year
- reduce electricity use by __ per cent by target year from a baseline of *y* tCO_2e in base year
- reduce waste generated by __ per cent by target year from a baseline of *z* tCO_2e in base year.

Figure 4 shows an example projection of emissions against a reduction of 1.5°C, which allows an organisation to identify how it is tracking towards achieving its targets.

Figure 4: Example of a reduction projection relative to a 1.5°C pathway, modelled using the CNGP target-setting tool



6 Developing emissions reduction plans

Develop and implement emissions reduction plans to help you reach your gross emissions reduction targets. These plans must be credible – meaning they must be realistic to implement, consistent with your emissions reduction targets and in line with a 1.5°C pathway (see section 5). .

6.1 Start thinking about your reduction plan early

It is a good idea to identify and investigate potential reduction initiatives as you compile your emissions inventory. This will also help you be better prepared when you set your targets. As you collect your data for the reporting period, you will start to understand the breakdown of your emissions sources. You can initiate discussions with those you will be collecting data from, understand more about your existing operations, and discuss with your colleagues the opportunities or barriers they see for reductions. It is an important time to help others understand what is expected of the organisation and that, to reduce emissions, everyone will need to be on board – including senior management – to support reduction initiatives and to raise issues with Ministers as needed.

Remember that developing and implementing reduction plans is an ongoing process. Approach each reduction plan you prepare or review, year on year, with best efforts and endeavours, and a culture of evaluation, improvement and transparency. Use support networks and speak with your colleagues in other organisations, use resources already available, and keep checking the CNGP website and communications for more information.

The Transition Planning Taskforce (TPT) Disclosure Framework (Transition Planning Taskforce, 2023) is a recent resource increasingly used by organisations to inform the development of transition plans[16]. Based on the principles of ambition, action and accountability, the framework sets out good practice aspects to be included in robust and credible transition plans (emissions reduction and mitigation plans) ranging from governance, implementation, engagement and metrics and targets. The guidance is useful to consider when an organisation is laying the foundations for meeting its GHG reduction targets.

Several Emission Reduction Plans developed by CNGP organisations are available on the CNGP Teams Hub. These examples may offer you some ideas on possible content and structure when developing your own Emissions Reduction Plan. Remember that each organisation is different, and your Emissions Reduction Plan should be fit for purpose for the size, complexity and activities of your organisation.

[16] A climate-related transition plan is an aspect of an entity's overall strategy that lays out the entity's targets, actions or resources for its transition towards a lower-carbon economy, including actions such as reducing its GHG emissions.

6.2 Coal-fired boilers and vehicle fleets

EECA provides expert advice and technical support to facilitate low-emissions energy investments.

EECA contact details are listed below.

For initial queries, please contact:
Paul Bull, Manager – Public Sector Portfolio
Paul.Bull@eeca.govt.nz

P +64 4 470 2200
DDI +64 4 470 2427
Mobile: +64 27 351 2460

For a list of EECA tools and services, including energy audits, management plans, feasibility studies and other useful information, see EECA's Energy and carbon reduction.

For broader information on EECA's work and the support it offers the public sector, see EECA's Government leadership.

New Zealand Government Procurement (NZGP) monitors progress on optimising the government fleet and transitioning it to electric vehicles. For more information and guidance on reducing government fleet emissions, see NZGP's Reducing government fleet emissions.

For all other enquiries on vehicle fleets, contact your NZGP account manager or email vehicles.coe@mbie.govt.nz.

6.3 NABERSNZ

The National Australian Built Environment Rating System New Zealand (NABERSNZ) rates the energy efficiency of commercial buildings. Government Property Group (GPG) provides guidance on using NABERSNZ for government office accommodation – see GPG's Energy efficiency standards.

For enquiries relating to NABERSNZ, contact your GPG Property Portfolio Specialist, or email info@gpg.govt.nz.

6.4 Buildings and construction

NZGP requires organisations to use an approved sustainable building rating system for new government-owned non-residential buildings. For more about these requirements, see NZGP's Building rating systems.

The Procurement Guide to Reducing Carbon Emissions in Building and Construction (NZGP, 2022) provides practical guidance on reducing emissions. For all other enquiries, contact your NZGP account manager or email procurement@mbie.govt.nz.

7 Supporting resources

7.1 External support

If you need external support, you can contract an external provider of emissions measurement services. A non-exhaustive list of suppliers is available on the Ministry for the Environment website, prepared from an open supplier application process to the CNGP. This list is not a pre-qualified list or government panel. Organisations are expected to procure suppliers based on their own policies and procedures, and to conduct their own due diligence.

Having someone with technical expertise and knowledge to call on can be helpful, as preparing an inventory can be challenging. You can procure a provider through a standard competitive process.

It is useful to think of measuring and reporting your emissions in the same way as you think about managing your organisation's finances. Contracting a provider to help is like getting an accountant; they can help you sort out all the technical and complex components and help with the calculations, and an assurance provider can do your verification. Other providers offer services and support to help you develop and implement reduction strategies.

A number of service providers offer software tools to manage GHG inventories and emissions reporting and assist in return-on-investment calculations for emissions reduction initiatives. CNGP participants may wish to consider the costs and benefits of using these systems, including:

- ability to monitor emissions in between annual reporting
- data accuracy
- ability to import data electronically from suppliers
- ability to automate data collection
- ease of verification with all information stored in one place
- ability to report in multiple ways.

7.2 Resourcing

The number of people and the amount of financial resource needed to measure and report an organisation's emissions vary, depending on factors like the size of the organisation, the number of sites and the types of operation. While different parts will require different skill sets, it is important to allocate dedicated resource to establish and maintain your inventory, with ownership inside the organisation.

As participants progress, it is expected their focus will shift to emissions reduction initiatives, improving the quality of data and processes for data management and reporting. It is also highly recommended that you establish a good data-archiving framework so that institutional knowledge

about your inventory (such as documenting assumptions or guidance for internal processes) can be passed on through any personnel change.

For target setting and reduction planning, it is essential to have input from staff from across the organisation. This ensures the plans are relevant and reflect what people can do in different aspects of your organisation's operations. It helps to bring the right people on board and to encourage conversations that generate innovative ways of doing things. Change-management approaches and support can help to achieve successful implementation and buy-in from staff. As part of reduction planning, it is worth remembering the need for transformational change in how we operate.

7.3 Sustainability networks

In the informal All-of-Government Sustainability network, government staff share information, best practice and experiences. If you wish to join, send your request to: jacqueline.dath@ird.govt.nz.

The CNGP also has a shared Teams space for contacting others working on sustainability in government organisations, and for sharing resources and questions. If you would like access to this space, contact cngp@mfe.govt.nz.

Several communities of interest/working groups operate for CNGP participants to share knowledge and work on areas of common interest. These groups are open for staff within any CNGP participating organisation to join. The groups are generally facilitated by staff from participating CNGP organisations. Contact cngp@mfe.govt.nz if you would like more information about communities of interest.

7.4 For all other queries

Please email cngp@mfe.govt.nz.

Emissions sources for reporting under the CNGP

Below is a more comprehensive list of likely emissions sources with notes on data collection and typical use by CNGP organisations.

Access Emissions sources for reporting under the CNGP [XLSX, 59.3 KB] on the Ministry for the Environment website.

Appendix 2: Further information on emissions sources

This appendix contains clarification or further information on:

- Air travel
- Information and communications technology (ICT)
- Electricity
- leasing arrangements
- biogenic greenhouse gas (GHG) emissions
- financed emissions (emissions from investments)
- waste audit methodology
- accounting for land use, land-use change and forestry
- accounting for agricultural emissions.

Air travel

Reporting air travel emissions: International and domestic air travel emissions should be reported separately, with international travel further separated by class of travel. All air travel emissions should be measured and reported in passenger kilometres (pkm) wherever possible.

Air travel associated with work across two organisations: In cases of work undertaken across two organisations, the general principal is that the organisation who can influence how the work is carried out should take responsibility for the emissions. In most cases this will be the organisation that pays for the air travel. If in doubt, follow the principles in 3.2.1 Boundaries between organisations participating in the CNGP and ensure you agree with any other CNGP participants who will account for the emissions to avoid double counting.

Information and communications technology (ICT)

The CNGP supply chain community of interest has developed a practical guide to collecting and reporting emissions data in relation to information and communication technology (ICT). This guide can be found under the resources section of the CNGP webpage.

Electricity

Purchase of renewable electricity: If you purchase electricity through a renewable energy certificate or other form of green tariff, you should still account for the electricity based on the average electricity grid factor. This is because the CNGP uses location-based reporting of electricity emissions rather than market-based reporting. All the renewable electricity in the grid is accounted for in the

average grid factor. If individual organisations account for renewable electricity as zero emissions and it is also accounted in the grid average as a zero emissions component, the benefit is being double counted. See the GHG Protocol Scope 2 Guidance for further guidance on reporting electricity emissions.

Electricity used for electric vehicle charging: The emissions from electricity consumed on charging electric vehicles at sites or facilities you control (i.e. owned or leased) should be reported as part of your normal Scope 2 electricity emissions. Charging of electric vehicles at third party sites (e.g. public charging stations) should be reported as a Scope 3 (other) or Scope 3 plus emission using the CNGP activity group of 'Vehicle charging (offsite electricity)' on the CNGP reporting template.

Electricity generation: If your organisation is generating excess electricity and sells this generated electricity to another organisation, you cannot deduct the associated emissions from your scope 1 emissions in your inventory. If your organisation generates renewable energy, either for its own use or for injection into the national grid, you may wish to voluntarily report the associated renewable kilowatt-hour generated (or non-renewable kilowatt-hour avoided).

Clarification on leasing arrangements

Many public sector agencies lease, operate and exercise control over GHG-emitting sources such as vehicle fleets and office buildings. Leasing arrangements can be complex, and both the lessee or lessor may contribute to total emissions from the leased asset. However, leases can be part of how an agency fulfils its purpose or provides a public service.

A capital lease enables the lessee to operate an asset and gives the lessee all the risks and rewards of owning the asset. If you are a tenant/lessee under a capital lease (for example, you lease an office floor), for CNGP purposes, you have ownership and both operational and financial control of the asset and should therefore include emissions associated with the asset. Those emissions comprise:

1. fuel emissions under scope 1 emissions
2. electricity under scope 2 emissions
3. other relevant sources under your organisation's scope 3 emissions.

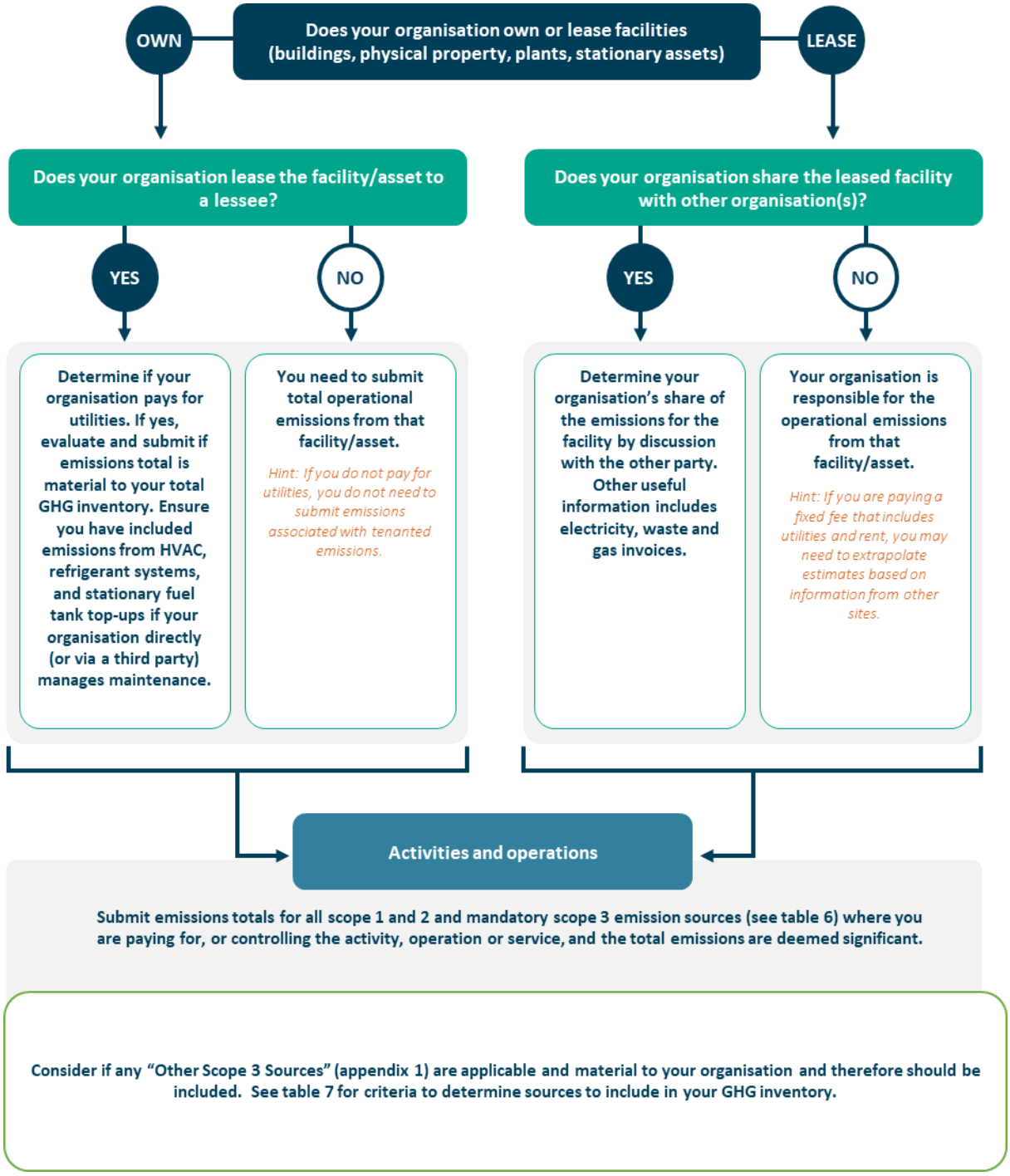
In other words, if you lease a building, a floor of a building, or an asset, you need to include the associated emissions sources if they are material. For a definition of material, see CNGP mandatory and material GHG emissions sources in section 3.3.2 (usually electricity, natural gas and waste to landfill are material sources). If you lease space from or to another government organisation, it is worth cross-checking with that organisation to make sure you are using a consistent approach. Talk to contacts at the other organisation or organisations to discuss where lines are drawn, to ensure activity is apportioned correctly and not missed or double counted. If you need to connect with the CNGP contact at another agency, contact cngp@mfe.govt.nz.

Where your organisation is operating an asset under a short-term operational lease (such as a rental vehicle), your organisation does not obtain any reward or risk associated with owning the asset and so is not considered to own or financially control the asset. Therefore, include emissions associated with the leased asset under your scope 3 emissions.

For CNGP purposes, include all significant emissions associated with a capital or operational lease in reporting. If your organisation is the asset owner or landlord of non-government actors, and your organisation (rather than the tenant/lessee) holds the contract, include your tenant's emissions if you consider them to be significant. See figure 5 for help in determining the emissions to include from owned/leased assets, facilities, operations and activities.

There may be instances where you share the use of assets or have joint control of assets. In these cases, you are encouraged to collaborate on the data collection and allocation of emissions. As an example, if you share a facility with another organisation and divide the direct costs (such as electricity or water bills), decide together on your share of the emissions for the facility. If you pay a fixed fee including utilities and rent, you may need to extrapolate estimates based on information from other sites if you consider the emissions are significant (for more information on how to determine other sources of significance, see table 7 in section 3.3.5). Whatever method you use, document your approach so that it is transparent.

Figure 5: **Determining CNGP reporting requirements of emissions from assets, facilities, operations and activities**



Clarification on biogenic GHG emissions

If you have significant emissions from combustion of biofuels (bioethanol, biodiesel and wood emissions sources), include these in your inventory.

The carbon dioxide (CO_2) emitted from the combustion of biofuels and biomass (including wood) is biogenic, meaning it equates to the CO_2 absorbed by the feedstock during its lifespan. This means the CO_2 portion of the combustion emissions of biofuels is treated as carbon neutral. However, the combustion of biofuels generates anthropogenic methane (CH_4) and nitrous oxide (N_2O), which must be included. As per guidance from the measuring emissions guide (Ministry for the Environment, 2024), calculate the CO_2 emissions in the same way as your (mandatory scope 1) direct emissions. However, instead of including the CO_2 within the emissions total (where CH_4 and N_2O gases are reported) in your annual report, list them as a separate line item under biogenic emissions.

Note that in many cases, the emissions from biofuel blends can be calculated if the specific percentage blend is known. In this case, ensure you multiply the non-biofuel part with the correct emission factor and include emissions under your total (mandatory scope 1 emissions). For the biofuel part, ensure you report emissions as a separate line item under biogenic emissions. For further guidance, see the measuring emissions guide.

Financed emissions (emissions from investments)

Organisations should measure emissions from their funding/investment portfolios if considered material (for a definition, see CNGP mandatory and material GHG emissions sources in section 3.3.2) and as data, information and methodologies become available, in line with the Aotearoa New Zealand Climate Standards (External Reporting Board, 2022a, b & c) which have been developed based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)[17].

Waste audit methodology

Tools are available to help you gather some of the data you might need for your inventory. For example, the Ministry for the Environment has a waste audit procedure and measurement template that you can use to estimate your organisation's waste to landfill. This is available in the resources section of the CNGP webpage. The Ministry for the Environment also provides some guidance on implementing recycling systems in multi-tenanted office buildings.

Accounting for land use, land-use change and forestry

Harvesting forests and deforestation emit GHGs to the atmosphere, and vegetation growth removes GHGs from the atmosphere.

Land use, land-use change and forestry (LULUCF) for CNGP participants include forest growth, and forest harvest and deforestation.

If your organisation owns forest land within your GHG inventory boundary,[18] or owns land that has been deforested during the measurement period, consider whether you should include LULUCF

[17] The TCFD is the global standard for reporting climate-related risks. It has a section on metrics and targets that provides specific advice to different types of institution.

[18] This is only applicable for forestry not under a verified carbon standard or the Emissions Trading Scheme, to avoid any risk of double counting.

emissions in your inventory. The same is true for sequestration due to land-use change (removals by biomass following afforestation or reforestation).[19]

For more information on the definition of a forest, see Measuring forest carbon, on the Ministry for the Environment's website. The Ministry for Primary Industries' carbon look-up tables for forestry in the Emissions Trading Scheme include guidance related to information you will need to determine your forestry stock, as well as carbon look-up tables to estimate forest carbon stocks for a given year.

Accounting for agricultural emissions

Agricultural emissions from your owned and managed livestock are reported under direct emissions (scope 1).

Enteric fermentation is the process by which ruminant animals produce methane through digesting feed. Manure management refers to the process of managing the excretion from livestock, particularly when they are not on paddocks. Agricultural soils emit N_2O due to the addition of nitrogen to soils through manure, dung and urine. To calculate estimated emissions from livestock, multiply the number of animals (per head per livestock type) with the appropriate emission factor from the measuring emissions guide (Ministry for the Environment, 2024).

The measuring emissions guide recommends collecting data on the number and type of livestock at 30 June during the measurement period, to calculate emissions from enteric fermentation. This is regardless of whether the measurement period is based on a financial or a calendar year.

[19] Note that emissions sinks (ie, removal of emissions) are not to be included in target setting, because the targets are for gross emissions reductions.

Glossary

Term	Definition
Baseline	A hypothetical scenario for what GHG emissions, removals or storage would have been in the absence of the GHG project or project activity.[1]
Base year	Specific, historical period identified for the purpose of comparing annual GHG emissions or GHG removals or other GHG-related information over time.[2]
Base year emissions	GHG emissions in the base year.[1]
Biogenic emissions	GHG emissions from a biological origin, excluding material embedded in geological formations and material transformed to fossilised material.[1]
Carbon dioxide equivalent (CO_2e)	The universal unit of measurement to indicate the global warming potential (GWP) of each GHG, expressed in terms of the GWP of one unit of CO_2. It is used to evaluate releasing (or avoiding releasing) different GHGs against a common basis.[1]
Carbon intensity	The amount of GHGs emitted per unit of activity.
Consolidation	Combination of GHG emissions data from separate operations that form part of one organisation or group of organisations.[1] The two consolidation approaches are control (operational or financial) and equity share.[2]
Control	The ability of an organisation to direct the policies of another operation. More specifically, it is defined as either operational control (the organisation or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation) or financial control (the organisation has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities).[1]
Direct GHG emissions	GHG emissions from sources that are owned or controlled by the reporting company.[1]
Double counting	Two or more reporting organisations taking ownership of the same emissions or reductions.[1]
Embodied emissions	The quantity of GHG emissions – accounting for all stages of production, including upstream processing and extraction of fuels and feedstocks – emitted to the atmosphere associated with a material or end product. For construction materials or products, this is the amount of GHG emissions released throughout their supply chains, including raw material extraction and transportation; manufacturing processes; construction site activities; and material losses, repair, maintenance and replacement; as well as the end-of-life processing. For a building, the embodied GHG emissions are the sum of the embodied emissions of all the constituent materials or products within the building.[4]
Emission factor	A factor allowing GHG emissions to be estimated from a unit of available activity data (eg, tonnes of fuel consumed, tonnes of product produced) and absolute GHG emissions.[1]
Emissions profile	The distinctive composition or breakdown of an organisation or other entity's GHG emissions inventory sorted by sector, emissions source or gas type.
Emissions sink	Any physical unit or process that stores GHGs – usually refers to forests and underground/deep sea reservoirs of CO_2.[1]
Emissions source	Any physical unit or process that releases GHGs into the atmosphere.[1]

Term	Definition
Equity share	The equity share reflects economic interest, which is the extent of rights a company has to the risks and rewards flowing from an operation. Typically, the share of economic risks and rewards in an operation is aligned with the company's percentage ownership of that operation, and equity share will normally be the same as the ownership percentage.[1]
Greenhouse gases (GHGs)	Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of infrared radiation emitted by Earth's surface, the atmosphere and clouds.[2] For the purposes of emissions inventory reporting, GHGs are: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), nitrogen trifluoride (NF_3), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6).
GHG emission	Release of a GHG into the atmosphere.[2]
GHG inventory	A list of an organisation's GHG sources and GHG sinks and their quantified GHG emissions and GHG removals.[2]
GHG removal	Withdrawal of a GHG from the atmosphere by emissions sinks.[2]
Gross emissions	GHG emissions to the atmosphere. Total gross GHG emissions for an organisation or entity will exclude any GHG removals.
Indirect GHG emissions	GHG emissions that are a consequence of the operations of the reporting organisation but occur at sources owned or controlled by another organisation.[1]
Inventory boundary	An imaginary line that encompasses the direct and indirect emissions that are included in the GHG inventory. It results from the chosen consolidation approach to defining an organisation's boundary for emissions measurement and management purposes.[1]
Material GHG emissions	Those indirect GHG emissions sources that an organisation identifies via its chosen approach to consolidation and determines should be included in its GHG emissions inventory by assessing them against significance criteria (see table 7 in section 3.3).
Net emissions	Total GHG emissions to the atmosphere for a given entity, including both gross emissions and any GHG removals. Net emissions are negative when the quantity of removals exceeds gross emissions.
Offsetting emissions	Emission offsets are discrete GHG reductions or removals used to compensate for GHG emissions elsewhere – for example, to meet a voluntary or mandatory GHG target or cap. Offsets are calculated relative to a baseline that represents a hypothetical scenario for what emissions would have been in the absence of the mitigation project that generates the offsets. To avoid double counting, the reduction giving rise to the offset must occur at sources or sinks not included in the target or cap for which it is used.[1]
Operation	A generic term used to denote any kind of business or activity, irrespective of its organisational, governance or legal structures. An operation can be a facility, subsidiary, affiliated company or other form of joint venture.[1]
Organisation	Person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives.[2]
Radiative forcing multiplier	A multiplication coefficient used to account for the extra global heating resulting from GHG emissions that occur in certain circumstances. These circumstances include the production of water vapour, contrails and nitrogen oxides by aircraft at high altitude.[3]
Scope 1	A reporting organisation's direct GHG emissions.[1]

Term	Definition
Scope 2	A reporting organisation's emissions associated with the generation of electricity, heating/cooling or steam purchased for own consumption.[1]
Scope 3	A reporting organisation's indirect emissions other than those covered in scope 2.[1]
Verification	A data-check process used when reviewing non-financial data and collection processes compared against predefined criteria, which must be performed by an accredited auditor.[2]

Note:

[1] World Resources Institute and World Business Council for Sustainable Development. 2004. *A Corporate Accounting and Reporting Standard, revised edition*. Washington, DC and Geneva: World Resources Institute and World Business Council for Sustainable Development. Retrieved 12 April 2023.

[2] International Organization for Standardization. 2018. *ISO 14064-1:2018 Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*. Geneva: International Organization for Standardization. Retrieved 12 April 2023.

[3] Ministry for the Environment. 2022. *Measuring Emissions: A guide for organisations: 2022 detailed guide*. Wellington: Ministry for the Environment. Retrieved 12 April 2023.

[4] MBIE (Ministry of Business, Innovation and Employment). 2020. *Whole-of-Life Embodied Carbon Emissions Reduction Framework.* Wellington: Ministry of Business, Innovation and Employment. Retrieved 12 April 2023.

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