vector

GREENHOUSE GAS EMISSIONS INVENTORY REPORT 2025

Introduction

This report is for the Vector Limited Group (Vector or the group). The group comprises Vector Limited and its subsidiaries. Vector Limited is NZX listed and 75.1% owned by Entrust, a private community trust. A list of all subsidiaries can be found in appendix 1.

The purpose of this report is to transparently disclose Vector's greenhouse gas (GHG) emissions: how they are quantified, how Vector is tracking towards its reduction target and steps planned to further reduce GHG emissions.

The inventory covered in this report is a complete and accurate quantification of the amount of GHG emissions that can be attributed to Vector's operations within the declared boundary and scope for the specified reporting period. Any exclusions from reporting are disclosed and justified.

This report has been prepared in accordance with the Greenhouse Gas Protocol:

- *A Corporate Accounting and Reporting Standard* [1] (GHG Protocol Standard);
- The Greenhouse Gas Protocol: *Scope 2 Guidance* [2];
- The Greenhouse Gas Protocol: *Corporate Value Chain (Scope 3) Accounting and Reporting Standard* [3] (GHG Protocol Value Chain Standard); and
- Other related technical guidance issued under the GHG Protocol Standards.

A summary of emissions can be found in both Vector's annual report 2025 and climate-related disclosures 2025.

Statement of intent

Vector reports on its GHG emissions on an annual basis and has been calculating its carbon footprint since 2017. The intended users of this report are all interested stakeholders, including shareholders, investors, regulators, communities, employees, customers and contractors. The GHG inventory has been subject to limited assurance by KPMG; see appendix 3.

Reporting period covered

This GHG inventory report covers Vector's financial year 1 July 2024 to 30 June 2025 (FY2025).

Disclaimer

This report is not earnings guidance or financial advice for investors. Rather, this report provides a summary of Vector's GHG emissions inventory. The report reflects Vector's current understanding as at 22 August 2025, in respect of the 12 months ended 30 June 2025.

GHG emissions calculations use data and methodologies that are developing. Vector acknowledges that the understanding of climate change and the inputs to assist with this understanding are constantly evolving.

This report contains forward-looking statements (including targets and assumptions) that may not evolve as predicted.

Vector (including its directors, officers and employees) does not:

- Represent that the statements, intentions and/or opinions contained in this report will not change, or will remain correct after publishing this report, or
- Promise to revise or update those statements and opinions if events or circumstances change or unanticipated events happen after publishing this report.

The GHG emissions data described in this report, and Vector's strategies to achieve its GHG emissions target, may not eventuate or may be more or less significant than anticipated. There are many factors that could cause Vector's actual results, performance or achievement of climate-related targets to differ materially from that described, including economic and technological viability, and climatic, government, consumer and market factors outside of Vector's control. Vector gives no representation, warranty or assurance that actual outcomes or performance will not materially differ from the forward-looking statements.

To the maximum extent possible under New Zealand law, Vector (including its directors, officers and employees) does not accept and expressly disclaims any liability whatsoever for any direct, indirect or consequential loss or damage occasioned from any use or inability to use the information contained in this report, whether directly or indirectly resulting from inaccuracies, defects, errors, omissions, out-of-date information or otherwise.

We recommend you seek independent advice before acting or relying on any information in this report. Vector reserves the right to revise statements made in, or its strategy or business activities described in, this report, without notice.

This disclaimer should be read along with other methodologies, assumptions and uncertainties and limitations contained in this report, as well as in Vector's climate-related disclosures for FY2025. All amounts disclosed in this report are estimates and are in New Zealand dollars, unless context otherwise requires.

This report is not an offer document and does not constitute an offer or invitation or investment recommendation to distribute or purchase securities, shares, or other interests. Nothing in this report should be interpreted as capital growth, earnings or any other legal, financial tax or other advice or guidance. For detailed information on our financial performance, please refer to our annual report, available at vector.co.nz/investors/reports.

Summary of emissions

In FY2025, Vector's greenhouse gas emissions across scopes 1, 2 and 3 amount to 794,241 tCO_2e. This is a 54% reduction from FY2020, Vector's base year.

Table 1: GHG inventory by scope and category in tCO_2e. FY2025 emissions highlighted in green indicate a reduction since the base year or the year in which emissions were first reported, whereas emissions in red show increases.

EMISSIONS CATEGORY	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Total scopes 1, 2 and 3	**1,712,423**	**1,495,052**	**1,129,872**	**1,090,392**	**985,712**	**794,241**
Scope 1	**22,933**	**18,457**	**22,193**	**18,334**	**13,850**	**10,449**
Natural gas distribution fugitive emissions	18,313	13,507	16,218	13,323	9,379	7,887
SF_6 leakage	524	1,263	2,081	1,299	924	487
Other fugitive emissions‡	131	131	118	125	49	103
Stationary combustion‡	3,342	2,755	3,099	2,838	2,733	1,325
Vehicle fleet‡	623	801	677	749	766	647
Scope 2	**33,087**	**34,353**	**39,402**	**42,774**	**26,897**	**39,476**
Electricity consumption* (market based)‡	582	731	324	184	5	39
Electricity consumption (location based)‡	730	721	808	1,117	619	644
Electricity distribution losses	32,505	33,622	39,078	42,590	26,892	39,437
Scope 3	**1,656,403**	**1,442,242**	**1,068,278**	**1,029,285**	**944,966**	**744,316**
Purchased goods and services						
Upstream-purchased natural gas§	227,569	170,442	35,026	18,797	7,024	–
Fuel used by field service providers	6,475	6,822	6,456	7,235	7,127	6,087
Upstream-purchased materials and products‡	12,884	6,709	11,254	9,873	12,308	9,435
Upstream-purchased other goods and services‡	72,568	67,390	71,094	76,760	76,239	79,224
Fuel and energy-related activities‡	1,082	979	1,110	1,114	1,065	642
Upstream transportation‖	–	–	–	–	–	
Waste generated in operations‡				62	83	53
Business travel‡	294	70	65	230	144	202
Employee commuting and working from home‡				859	657	729
Use of sold products						
Distributed natural gas Auckland – Total	772,265	760,185	711,336	735,048	706,355	647,278
Sold natural gas – Auckland§	151,603	115,578	57,149	42,322	19,193	–
Other distributed natural gas – Auckland§	620,662	644,607	654,188	692,727	687,162	647,278
Sold natural gas – non-Auckland§	562,567	381,871	231,127	178,484	133,260	–
Shipped natural gas – non-Auckland§		47,002	–	–	–	–
Investments						
Bluecurrent	700	771	809	821	703	666
Biogenic carbon	**162**	**134**	**150**	**138**	**131**	**64**

‡ Recalculated FY2020 to FY2024 to remove emissions relating to the sale of the Ongas LPG business. For details, see sections 1 and 4.

* Market-based method for electricity consumption. While location-based electricity emissions are also included in our inventory, the amounts summed in table 1 include only market-based emissions, as these form part of our emissions reduction target.

§ Recalculated FY2022 to FY2024 to remove emissions relating to the sold Natural Gas Trading contracts. As a result of the closure of the business from 1 July 2024, there are no FY2025 emissions relating to purchased, sold or shipped natural gas. For details, see sections 1 and 4.

‖ Recalculated FY2020 to FY2024 to remove emissions relating to the sale of the Ongas LPG business. For details, see sections 1 and 4. Post the Ongas sale, emissions from third-party transportation for upstream-purchased materials and products are immaterial and are therefore excluded from reporting.

Summary of emissions (continued)

Glossary of terms

Table 2: Definition and glossary of terms

TERM	DESCRIPTION
Carbon footprint	Vector's greenhouse gas emissions covered by the Kyoto Protocol, calculated in tonnes of carbon dioxide equivalent (tCO_2e)
CO_2	Carbon dioxide
CRD	Climate-related disclosures that comply with Aotearoa New Zealand Climate Standards
DEFRA	Department of Environment, Food and Rural Affairs (UK)
Emissions	Greenhouse gas emissions
EPD	Environmental product declaration
FSP	Field service provider
FY	Financial year – 1 July to 30 June
GHG	Greenhouse gas For the purposes of this report, GHGs are the seven gases listed in the Kyoto Protocol. These are currently: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).
GHG Protocol	The Greenhouse Gas Protocol, a partnership between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The GHG Protocol develops standards and guidance, such as the Corporate Standard and the Corporate Value Chain (scope 3) Standard, both used as guidance for this report.
GWP	Global warming potential, a measure of how much energy the emissions of 1 tonne of a greenhouse gas will absorb over a given period, relative to the emissions of 1 tonne of carbon dioxide (CO_2)
GXP	Grid exit point
HVAC	Heating, ventilation and air conditioning
ICP	Installation control point
IPCC (AR5)	Intergovernmental Panel on Climate Change (Fifth Assessment Report)
LPG	Liquefied petroleum gas – a mixture of hydrocarbons, consisting primarily of propane and butane. The higher density – in contrast to natural gas – allows it to be easily compressed to liquid, and is therefore largely distributed in bottles.
MfE	Ministry for the Environment (New Zealand)
NZ	New Zealand
NZU	New Zealand units
NZECS	New Zealand energy certificate scheme
NZ ETS	New Zealand emissions trading scheme
OGMP	Oil and Gas Methane Partnership
QIC	Investment vehicles managed and advised by Queensland Investment Corporation
SBTi	Science Based Targets initiative
SELMA	Street evaluation laser methane assessment
SF_6	Sulphur hexafluoride – a gas used to electrically insulate electrical assets. SF_6 has a global warming potential of 23,500 times that of CO_2.
T&D	Transmission and distribution
tCO_2e	Tonnes of carbon dioxide equivalent
TPD	Third-party damages
Vector	Vector Limited Group
WTT	Well-to-tank

1. Organisational boundaries

Description of Vector

Vector is an innovative New Zealand energy company, delivering energy and communication services to more than 630,000 residential and commercial customers across New Zealand.

The operations of the group are electricity and gas distribution, telecommunications and new energy solutions. For further information, visit vector.co.nz.

Organisational boundaries

Vector uses the operational control approach, as defined by the GHG Protocol Standard. This approach was chosen as it allows a focus on emissions over which the group has greatest control, and thereby can influence most with emissions reduction measures.

For carbon accounting purposes, emissions are categorised into the business areas as outlined in figure 1. A detailed list of all subsidiaries and shareholdings under Vector and their relevance for carbon accounting can be found in appendix 1.

Treatment of investments

For carbon accounting purposes, Vector has set a threshold for equity investments of 20%, unless significant influence can be evidenced.

Bluecurrent (50%)

Previously fully owned by Vector as Vector Metering, Bluecurrent manages advanced electricity and gas meters across New Zealand and Australia. Vector has ceased operational control of Bluecurrent and accounts for a proportional share of Bluecurrent's scope 1 and 2 emissions under *scope 3 – category 15*. Bluecurrent is jointly owned by QIC and Vector.

Treatment of business closures

Natural Gas Trading

Vector's Natural Gas Trading business has been on a wind-down since FY2020, whereby contracts for natural gas sales were not renewed. This has led to a year-on-year reduction in gas sales-related scope 3 emissions, under *category 11 – use of sold products* and *category 1 – purchased natural gas*. On 1 July 2024, Vector completed the sale of the remaining contracts in the natural gas business, and shut down the business from then on. As the remaining contracts were sold to a third party, for FY2025 reporting, Vector's GHG inventory for FY2022 to FY2024 has been rebased to remove the emissions associated with these sold contracts. There is no impact on years before FY2022 as the earliest start date of the contracts sold was 1 July 2021.

Treatment of business/investment sales

On Gas Limited and Liquigas Limited

On 25 July 2024, Vector signed a conditional agreement for the sale of the Ongas LPG business, and the 60.25% shareholding in Liquigas Limited. The sale was completed on 31 January 2025.

Emissions created by these businesses have been removed for years FY2020 onwards.

mPrest Systems Limited (8.1%)

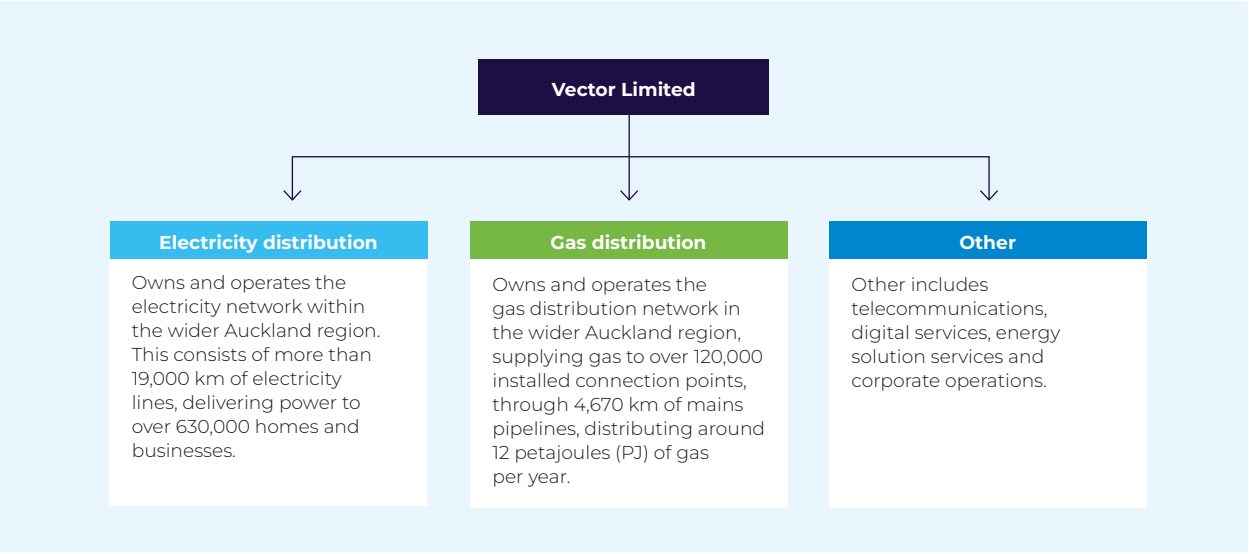
On 22 August 2024, Vector sold its 8.1% shareholding in mPrest Systems (2003) Limited.

No recalculation is required as the shareholding in mPrest was excluded from Vector's emissions inventory as it was below Vector's materiality threshold for investments.

HRV

Vector announced the sale of HRV after balance date, on 1 August 2025. No adjustment to the FY2025 GHG emissions inventory report is required as a result of this event, however the impact will be considered for future disclosures.

Figure 1: Vector Limited's businesses per organisational boundaries



2. Operational boundaries

Operational boundaries

The GHG Protocol Standard splits emissions into three categories:

Scope 1 – Emissions Vector directly controls, such as vehicle fleet fuel combustion, diesel backup generators, natural gas fugitive emissions, and SF_6 leaks.

Scope 2 – Vector's consumption of purchased electricity, and electricity distribution losses along the network.

Scope 3 – All other indirect value chain emissions, such as customer energy consumption and supply chain emissions.

The GHG Protocol Value Chain Standard splits scope 3 emissions into 15 categories. To gain a more comprehensive understanding of our emissions, in FY2020 Vector commissioned an external review of our carbon accounting methodology. This included a scope 3 screening exercise to identify applicable and material categories and activities across Vector's supply chain. A total of 14 categories were determined as being applicable to Vector (all but *category 10 – processing of sold products*), of which two were defined as material. The threshold at which a scope 3 category is considered as material is set to 1% of total scope 3 emissions.

During the screening process, emissions were calculated for 11 scope 3 categories, with emissions from the remaining three categories considered to be included in other categories of the inventory (categories 2 and 8) or to be zero (category 12). Prior to FY2023, we chose to externally report only on emissions categories that were material (categories 1 and 11) or where data was deemed robust (categories 3, 4, 6 and 15). With additional work undertaken to more accurately determine emissions from other sources, from FY2023 we also reported on emissions under categories 5 and 7 as well as emissions from all purchased products and services under category 1.

Included in other categories

Category 2 – capital goods: Included in category 1 as it was not possible to separate new infrastructure construction and other assets from maintenance of existing infrastructure.

Category 8 – upstream leased assets: Included in scope 1 and 2, as leased assets are expected to be under Vector's operational control.

Excluded scope 3 categories

Category 4 – upstream transportation: for most purchased products, transport is covered by *category 1 – upstream-purchased other goods and services* as it is included in the purchase price. Emissions from remaining transportation are expected to be immaterial.

Category 9 – downstream transportation and distribution: immaterial.

Category 12 – end-of-life treatment of sold products: expected to be zero.

Category 13 – downstream leased assets: immaterial.

Category 14 – franchises: immaterial.

GHG emissions source inclusions

Table 4 provides an overview of all emissions sources highlighted in Vector's GHG inventory, including their data sources, calculation methods and an assessment of data quality and uncertainty.

For completeness, Vector is reporting on well-to-tank (WTT) emissions for fuel used by field service providers (FSPs) under category 1, as well as reporting on emissions from gas distributed via Vector's gas network under category 11 (*other distributed natural gas*).

For the FY2020 to FY2024 period, some gas sold or shipped by Natural Gas Trading was transported via Vector's gas distribution network. These volumes were subtracted from the overall 'other distributed natural gas' amount to avoid double counting.

Exclusions from GHG inventory

Table 3 shows scope 3 emissions sources that were excluded from reporting (in addition to the excluded categories listed previously) and the reasoning behind this.

Other emissions – biogenic CO_2

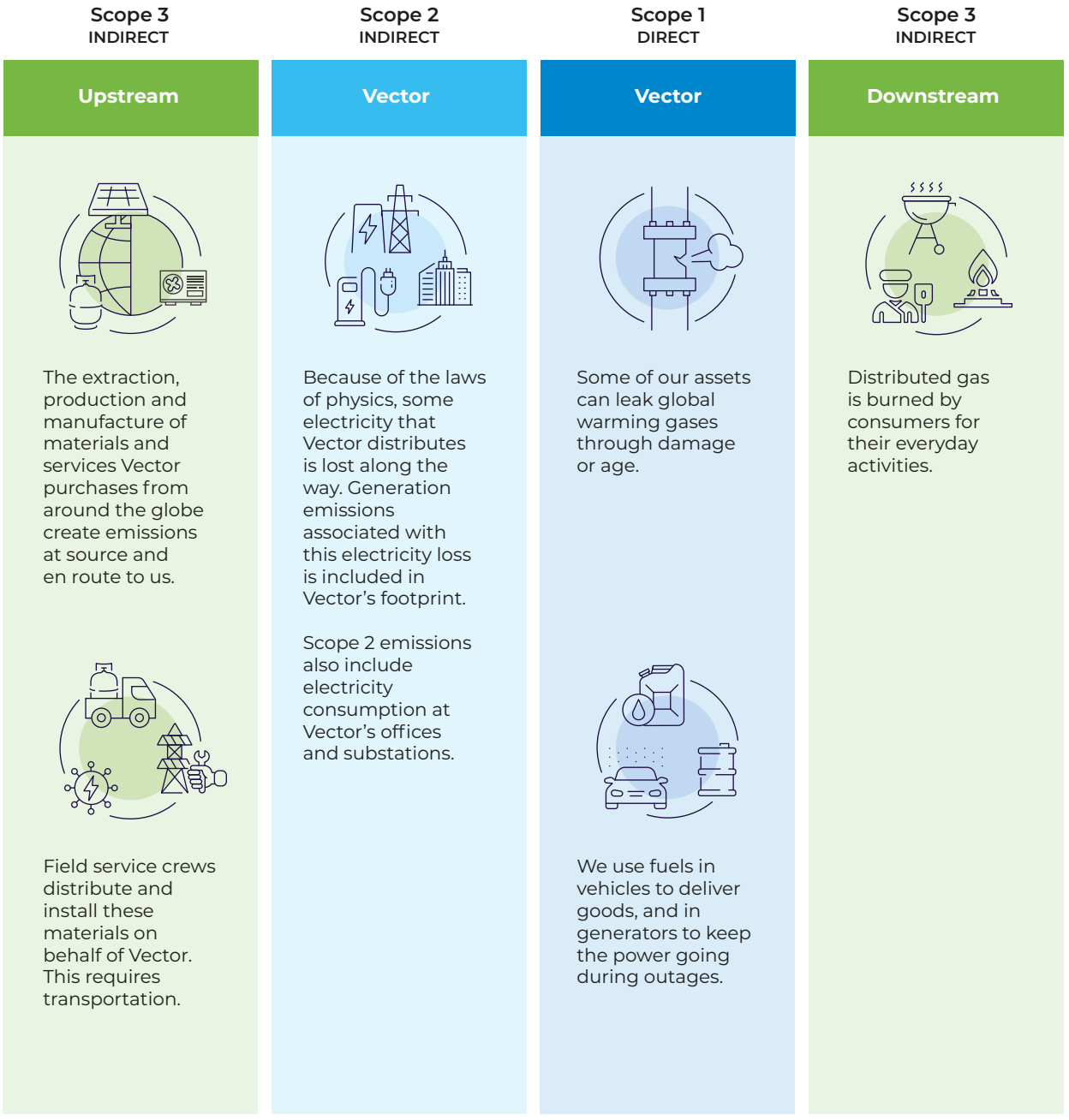
Vector uses a 5% biodiesel blend in generators used by Vector Fibre and the electricity distribution network.

Table 3: Excluded emissions sources from reporting

EXCLUDED EMISSIONS ACTIVITY	REASONS FOR EXCLUSION
Emissions from FSP fuel use where fuel amount is <1% of overall FSP fuel use (part of *category 1 – fuel used by FSPs*)	Emissions immaterial; data difficult to obtain
Use of sold HVAC units (part of *category 11 – use of sold products*)	Likely immaterial; limited data availability
Emissions from cash expense claims for air travel, hotels, employee travel in public transport and rental cars (part of *category 6 – business travel*)	Emissions immaterial; data difficult to obtain

2. Operational boundaries (continued)

Figure 2: Examples of emissions sources across Vector's value chain



2. Operational boundaries (continued)

Table 4: Emissions calculation methods, data quality and sources for FY2025 reporting. For years before FY2025, refer to previous GHG reports.

REPORTING CATEGORY	EMISSIONS ACTIVITY	CALCULATION METHOD	DATA SOURCE	GWP SOURCE	DATA QUALITY AND UNCERTAINTY
SCOPE 1					
Natural gas distribution fugitive emissions	Fugitive natural gas across Vector's distribution network	See section 3	FSP records; company records on asset database	MfE (2025) – IPCC AR5	Quality-assured data on all leaks by asset and emissions category provided by FSPs. Multiple estimates and assumptions made, as laid out in section 3, lead to medium uncertainty that Vector is continuing to improve. Vector's methodology has been reviewed by GNS Science, and assessed as OGMP 2.0 Level 3 or slightly above.
SF_6 fugitive emissions	SF_6 leaks in switchgear	Top-up method	Gas recovery records; FSP SF_6 cylinder records' log sheets; nameplate capacity amounts		Records on gas top-ups and recoveries provided by FSPs. Medium level of uncertainty that Vector is working on improving where possible.
Other fugitive emissions	HVAC leaks (offices, substations, vehicle fleet) and CO_2	Top-up and screening method for HVAC; estimates for CO_2	Service records; inventory lists		Most data on HVAC top-ups available, and when not available annual averages for each inventory item used as specified by MfE. CO_2 use estimated – de minimis. High uncertainty, but emissions <1% of scope 1 and are considered adequate.
Biodiesel stationary combustion	Biodiesel used in generators	Fuel-based method	Provider records		Records on litres of diesel used in generators supplied by lease provider monthly. Low uncertainty.
Vehicle fleet	Fuel used in vehicle fleet	Fuel-based method	Fuel records by lease providers		Records on diesel and petrol use sourced from fuel card data. Low uncertainty.
SCOPE 2					
Electricity consumption from grid (market and location based)	Electricity use at offices and substations	Location-based method and market-based method, respectively	Invoices by retailers; BraveTrace website (market-based approach)	MfE (2025) – IPCC AR5 (location based) NZECS – market based	Consumption data in kWh provided by retailers. Records on NZECS to calculate market-based approach provided on BraveTrace website. Moderate uncertainty from emission factors.
Electricity distribution losses	Electricity losses along the network	Location-based method	Transpower and distributed generators (ingoing); retailers (outgoing)	MfE (2025) – IPCC AR5	Metered data at grid exit point (GXP) provided by Transpower and distributed generators. Data at installation control points (ICP) level provided by retailers. Some estimations at year-end. Low uncertainty.

2. Operational boundaries (continued)

Table 4 (continued): Emissions calculation methods, data quality and sources for FY2025 reporting. For years before FY2025, refer to previous GHG reports.

REPORTING CATEGORY	EMISSIONS ACTIVITY	CALCULATION METHOD	DATA SOURCE	GWP SOURCE	DATA QUALITY AND UNCERTAINTY	EMISSIONS CALCULATED USING DATA PROVIDED BY VALUE CHAIN PARTNERS[1]
SCOPE 3						
C1 – fuel used by FSPs	Fuel used by FSPs on behalf of Vector, including WTT	Hybrid method	Fuel data provided by FSPs	MfE (2025) – IPCC AR5 DEFRA (2025) – IPCC AR5	Petrol and diesel use on behalf of Vector shared by each FSP for relevant business areas, in litres. Some data on regular and premium petrol combined. Low uncertainty.	100%
C1 – upstream-purchased materials and products	Key products purchased across Vector business areas	Supplier-specific and average-data method	Procurement data on quantities (by weight or length) of products purchased	EPDs – IPCC AR5	Records on quantities sourced from internal systems. Where supplier-specific data was used, uncertainty is lowest. For average-data method, some estimations were made and secondary data is used; therefore, uncertainty is relatively high. More details in section 3.	15%
C1 – upstream-purchased other goods and services	All remaining products and services purchased	Spend-based method	Procurement spend data	Eora MRIO 2022	Spend by supplier sourced from internal procurement system, emission factor was assigned based on supplier's main business activity. High uncertainty. More details in section 3.	0%
C3 – fuel- and energy-related activities	T&D, upstream and WTT emissions from the group's electricity and fuel use	Average-data method	Same invoice data as fuel and electricity use in scope 1 and 2	MfE (2025) – IPCC AR5 (T&D losses) DEFRA (2025) – IPCC AR5 (WTT fuels) DEFRA (2021) – IPCC AR4 (WTT electricity)	All data based on fuel data or location-based electricity consumption data provided for scope 1 and 2. T&D emissions not calculated for electricity consumption in Auckland, as this is covered under scope 2 losses. Moderate uncertainty from emission factors.	0%

1. Proportion of emissions calculated using calculation methods based on data specific to suppliers or other value chain partners. Remaining emissions are calculated using internal or average data.

2. Operational boundaries (continued)

Table 4 (continued): Emissions calculation methods, data quality and sources for FY2025 reporting. For years before FY2025, refer to previous GHG reports.

REPORTING CATEGORY	EMISSIONS ACTIVITY	CALCULATION METHOD	DATA SOURCE	GWP SOURCE	DATA QUALITY AND UNCERTAINTY	EMISSIONS CALCULATED USING DATA PROVIDED BY VALUE CHAIN PARTNERS[1]
SCOPE 3						
C5 – waste generated in operations	Waste sent to landfill from Vector's offices	Waste-type specific method	Waste contractor records	MfE (2025) – IPCC AR5	Weight per waste category by location provided by waste contractors. Some measurements use averages. Based on information provided by Vector's waste contractors, it is assumed that all waste goes to landfills with gas recovery. Medium uncertainty that is considered adequate as <1% of scope 3.	0%
C6 – business travel	Air travel, hotels, rental cars, mileage claims, and taxis	Distance-based method	Records provided by booking agents or internal expense management platform	MfE (2025) – IPCC AR5 (flights excluding radiative forcing)	Monthly travel details provided by booking agents on km flown by class of travel, hotel nights by country, km travelled by size of rental car, km travelled by taxi. Employee mileage emissions based on km, average petrol vehicle, and some spend base for taxis. Medium uncertainty that is considered adequate as <1% of scope 3.	0%
C7 – employee commuting and working from home (WFH)	Emissions from staff commutes to work and WFH	Distance-based method	Results from staff survey on commuting habits	MfE (2025) – IPCC AR5	Data gathered on travel modes, distance to work, and days in office via staff survey. Extrapolated for the full year assuming that travel habits are stable across the year. Some estimations and assumptions that lead to high uncertainty. Considered adequate as <1% of scope 3.	0%
C11 – distributed natural gas – Auckland	Gas distributed via Auckland network	Direct use-phase method – fuel	Firstgas OATIS system	MfE (2025) – IPCC AR5	Quantities of gas distributed via Auckland network. Calculation assumes all gas is converted to CO_2 via either combustion or chemical process by consumers. Low uncertainty.	100%
C15 – Bluecurrent	50% of scope 1 and 2 emissions from Bluecurrent	Investment-specific method	Invoice-and-FSP-based records provided by Bluecurrent	MfE (2025) – IPCC AR5	Actual energy consumption provided by Bluecurrent. Gas metering fugitive emissions based on multiple assumptions and estimates, which leads to medium uncertainty. Considered adequate.	100%

1. Proportion of emissions calculated using calculation methods based on data specific to suppliers or other value chain partners. Remaining emissions are calculated using internal or average data.

3. Data collection and quantification

Information management procedures

Vector uses an internal process guideline for GHG emissions accounting to ensure consistency in the preparation of our GHG inventory. This was developed following a screening of Vector's full value chain emissions and setting the base year to FY2020. The document outlines responsibilities, and defines thresholds, calculation methods and recalculation policy, among other details that ensure conformance with the GHG Protocol Standards over time.

Vector uses the software solution BraveGen to collect data and calculate our carbon footprint. Activity data is gathered and uploaded either by Vector's staff across all business areas, or directly by suppliers. All data is reviewed by the GHG accounting team before final upload onto the system. Emissions are calculated automatically within BraveGen by multiplying the provided activity data with each applicable emission factor. These factors are updated every year as required by our GHG accounting team.

Some material changes, such as the change in the GWP of methane from 25 to 28 in FY2024, are overseen by Vector's board audit committee as a key judgment.

Prior to KPMG's assurance of the GHG inventory, the inventory is analysed by our GHG accounting team for trends and missing data. Upon completed assurance, Vector's executive team and board are informed of changes in emissions over time. Both the internal GHG emissions accounting guide as well as our emissions reduction strategy are reviewed and updated frequently.

Methodologies

Most of Vector's GHG emissions are calculated by multiplying activity data with appropriate emission factors. Examples of activity data include kilowatt-hour (kWh) of electricity used, volume of fuel used, or gigajoules (GJ) of gas distributed. Most activity data is based on consumption data sourced from invoices provided by suppliers, or internal reports.

An overview of sources used per category is included in table 4.

Most emission factors used are sourced from the latest publications (at financial year end) by New Zealand's Ministry for the Environment (MfE) [4] and the UK's Department of Environment, Food and Rural Affairs (DEFRA) [5]. Exceptions are outlined below:

- From March 2023, the majority of Vector group's consumed electricity is purchased from Ecotricity, a Toitū climate-positive certified electricity retailer. Electricity consumed via installation control points (ICPs) included on the Ecotricity contract can be calculated as zero under market-based reporting.
- Emissions from FY2025 electricity use not purchased from Ecotricity are calculated using the Residual Supply Mix emission factor as disclosed by the New Zealand Energy Certificate System [6]. The residual factor is based on the production year period April to March.

Emission factor sources and the underlying assessment report for each scope and category are listed in table 4. The GWP time horizon in all cases is 100 years.

Fugitive emissions from gas distribution (scope 1) as well as emissions from 'upstream-purchased materials and products' and 'upstream-purchased other goods and services' *(scope 3 – category 1)* are subject to more complex calculations that are described in the following two subsections.

Gas distribution fugitive emissions

Methods for calculating gas distribution fugitive emissions (methane leaks) are unique to gas distribution pipeline companies and will be briefly described here for completeness.

In FY2021, Vector undertook a comprehensive study to model methane leaks on our gas network. The model created a fluid-dynamics based, quasi-digital twin of the network, which enabled us to identify and quantify methane leaks.

Vector is aligned to the guidelines of the Technical Association of the European Gas Industry (Marcogaz [7]), and the Oil and Gas Methane Partnership methodology (OGMP 2.0 [8]), which are found to be the most comprehensive and applicable to Vector's gas network. Marcogaz is currently in the process of integrating these guidelines into the CEN/ TC 234 European Technical Standard for Gas Infrastructure.

This quantification method requires Vector to split the gas network into groups of assets and corresponding categories of emissions that can be expected from these groups.

The emissions categories can be defined as:

Pipe permeation: Permeation of gas through the membrane material of the polyethylene pipes

Leaks detected by systematic surveys: Found using street evaluation laser methane assessment (SELMA), which are conducted on a three-monthly basis for intermediate pressure (IP) systems and six-monthly for all other sections of the pipeline

District regulator stations: Operational emissions approximated using the American Petroleum Institute Compendium of Greenhouse Gas Emissions [9]

Third-party damages (TPD): Leaks when gas pipelines are damaged by third parties

Operational/maintenance emissions: Vented natural gas during commissioning, decommissioning, and asset maintenance

Public-reported escapes: Leaks detected by members of the public

Valves and fittings: Additional leaks from seal failures of valves and fittings.

3. Data collection and quantification (continued)

Table 5: Breakdown of gas distribution fugitive emissions by category in tCO_2e

EMISSIONS SOURCE	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025
Total	**18,313**	**13,507**	**16,218**	**13,323**	**9,379**	**7,887**
Pipe permeation	54	54	55	55	38	46
Leaks detected in systematic surveys	11,981	6,739	8,446	7,491	3,931	2,914
Operational/maintenance emissions	12	15	10	5	5	2
Third-party damages	4,698	5,242	6,245	4,353	3,958	3,325
Public-reported escapes	23	17	21	21	19	151
District regulator stations (DRS) (maintenance and operation)	847	742	737	688	708	718
Valves and fittings	698	698	704	710	720	730

As it is not feasible to measure every variable, key assumptions are made. The following assumptions have a material impact on the overall data:

- Duration of leak detected during systematic surveys: When a leak is found on a routine survey, there is no knowledge of when the leak started. However, we do know when the pipe was last surveyed, and, assuming a normal distribution, can assume that on average the duration of a leak is half the time since the last survey. For example, Vector runs routine surveys for most sections of the pipeline every six months. We can therefore approximate that the average leak duration is three months. This is in alignment with Marcogaz guidelines.
- Average size of leak found on systematic surveys: Most of the historical records of the detected leaks have been a result of loose fittings. Vector has conducted several review sessions internally and across the industry and found that the most applicable assumption is in the RR630-HSE, UK standard. Within that, we take a conservative estimate of a hole size of 2 mm^2.
- Average size of leaks found from third-party damages: Normalised across all third-party damages to 30 mm, based on measured samples.
- Permeability of the ground: 7,000 km of pipes run through various ground and geological formations. An estimation of soil permeability is made according to ISBN 0-486- 65675-6, and based on the New Zealand soil map. We have conducted actual field measurements to verify these assumptions. This testing further improves our current reporting level relative to the Marcogaz criteria and the OGMP 2.0 guidelines.

In FY2023, GNS Science conducted an independent review of this methodology. This included a review of the Marcogaz methodology that Vector is following in assessing emissions; a review of Vector's implementation of this methodology; an assessment of Vector's current level of reporting relative to the Marcogaz criteria and the underlying standards; as well as recommendations for future work that would improve Vector's emissions reporting and move Vector to a higher reporting level.

The key improvement opportunity identified is to obtain more specific, local emission factors, with GNS Science's overall finding that Vector is currently operating at OGMP 2.0 Level 3 or slightly above. Level 5 is the highest possible level that also requires the use of site-level measurement to reconcile source and site-level emission estimates.

Upstream-purchased materials and products

Methodologies to quantify emissions from purchased goods and services vary depending on data availability from suppliers. Those identified as key suppliers for a specific business unit, either based on spend or the type and quantities of products purchased, were contacted to request supplier-specific emissions data.

Preference was given to data published in environmental product declarations (EPDs), from which we extracted the GWP for the manufacturing/production phase (A1 – A3; total GWP where a breakdown was provided). Where supplier-specific EPDs were not available, secondary emission factors from EPDs for comparable products or underlying raw materials have been used as proxy data.

Upstream-purchased other goods and services

Emissions from all remaining purchases were quantified using the spend-based method. For FY2025, this calculation covers around 32% (FY2024: 28%) of Vector's annual spend and more than 700 suppliers. It uses environmentally-extended input output (EEIO) emission factors, which estimate GHG emissions resulting from the production and upstream supply chain activities of different products in an economy. For FY2025, we used Eora MRIO 2022 scope 3 multipliers for New Zealand [10, 11] and adjusted them for inflation to the midpoint of the financial year. Emission factors were assigned based on a supplier's main business activity.

As more specific data becomes available, such as through supplier release of EPDs, the emissions data for upstream-purchased materials and products can be refined, therefore reducing the percentage of emissions calculated using the spend-based approach.

The approach we used for both sub-categories built on previous work completed in FY2023 with the support of thinkstep-anz, a trans-Tasman firm offering strategic advice on sustainability.

Note that emissions from fuel used by FSPs have been calculated using supplier-specific data since FY2020 and have been reported under *scope 3 – category 1* in Vector's GHG emissions inventory since then.

4. GHG emissions calculation and results

Base year

Vector's base year for emissions reporting is FY2020, 1 July 2019 to 30 June 2020. This was the first year that the GHG inventory included most material scope 3 emissions and forms the base year for Vector's emissions reduction target.

Changes to historic years

Vector recalculates emissions of historic years if the inventory is affected by changes that in aggregate total 5% of our carbon footprint. These changes can be structural (for example acquisitions or divestments), changes in the way the inventory is calculated, or discovery of omissions or errors. Vector might decide to update historic years for changes below the threshold for other reasons, such as consistency or clarity.

Recalculations were required this year as follows:

- Because of the sale of the Ongas LPG business and shares in Liquigas Limited, emissions created by these businesses have been removed for all years from FY2020.
- Emissions relating to the sold Natural Gas Trading contracts have been removed from scope 3 for FY2022 to FY2024. There is no impact on the base year given the earliest start date of the sold contracts was 1 July 2021.

For an overview of all recalculations, including those from previous years, see appendix 2.

FY2025 results

In FY2025, total GHG emissions for Vector came to 794,241 tCO_2e. This is a reduction of 54% from our base year in FY2020.

Scope 1

Vector's direct emissions in FY2025 amount to 10,449 tCO_2e, a reduction from our base year by 54%. Explanations on the most notable changes in emissions across scope 1 are outlined below.

Natural gas distribution fugitive emissions

Natural gas fugitive emissions have decreased by 57% between FY2020 and FY2025. A large contributor to this reduction is proactive pipeline surveying and other gas network operational initiatives such as reducing response time.

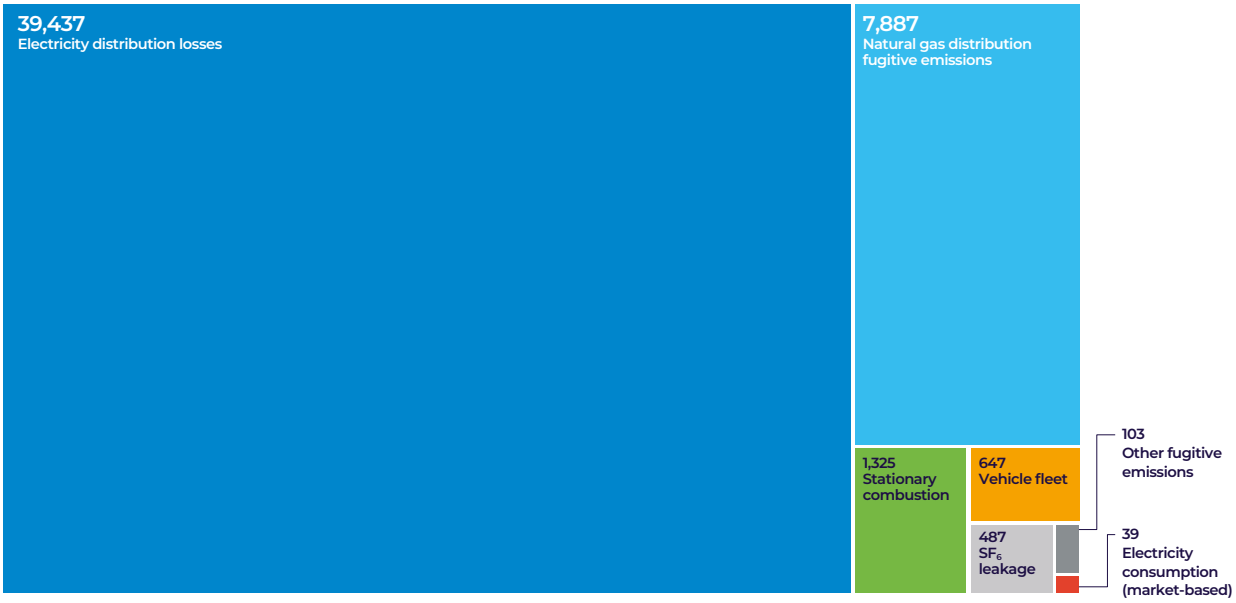
Diesel use in generators

Stationary combustion decreased by 60% between FY2020 and FY2025, largely driven by the switch from diesel generators to mobile transformers on planned asset replacements.

SF_6 emissions

SF_6 emissions have decreased by 7% from the FY2020 base year.

Figure 3: Vector's GHG emissions inventory FY2025, scope 1 and 2 only



4. GHG emissions calculation and results (continued)

Scope 2

Scope 2 emissions are split into emissions from Vector's own consumption of electricity from the grid, and emissions from distribution losses across Vector's network.

Vector's 21% increase in electricity distribution losses in FY2025 compared to FY2020 can be attributed to several factors, including load profiles and distance to load. However, year-on-year fluctuations in distributed losses are materially influenced by the national electricity emission factor [4]. For example, the emission factor used to calculate electricity distribution losses rose by 38% between FY2024 and FY2025 owing to an increase in the proportion of fossil-based generation.

Scope 3

Value chain emissions have decreased 55% relative to the FY2020 base year. The material category is the use of sold products, which decreased 52% since FY2020, driven by the wind-down and subsequent closure of Vector's Natural Gas Trading business. Further to this, there was a 16% reduction in gas distribution emissions because of lower gas consumption in Auckland.

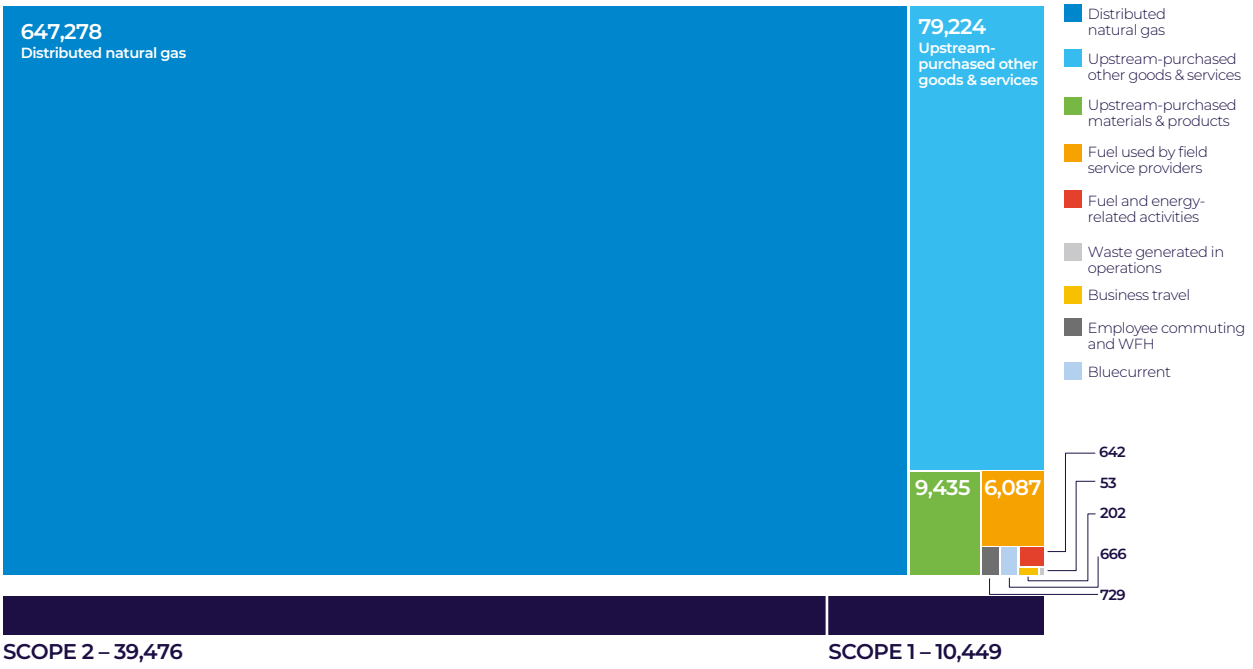
Table 6: Scope 1 and scope 2 FY2025 GHG emissions by greenhouse gas. PFCs and NF_3 are not listed here as they are not relevant to Vector's activities. GWP conversion factors are from the latest MfE guidance documents.

TOTAL FY2025	t	GWP	tCO_2e
Scope 1			**10,449**
CO_2	1,933	1	1,933
CH_4	282	28	7,893
N_2O	0.12	265	33
HFCS*	0.05	677 – 1,924	103
SF_6	0.02	23,500	487
Scope 2**			**39,476**
CO_2	38,337	1	38,337
CH_4	38	28	1,065
N_2O	0.28	265	74
Total tCO_2e			**49,925**

* HFCs relate to a family of gases used in applications such as refrigeration and air conditioning. Different applications use different HFCs so we display a range here.

** Market-based method for electricity consumption. While location-based electricity emissions are also included in our inventory, the amounts in table 6 include only market-based emissions, as these form part of our emissions reduction target.

Figure 4: Vector's GHG emissions inventory FY2025, scopes 1, 2 and 3



5. GHG emissions reductions

Emissions reduction target

In FY2021, Vector set an absolute emissions reduction target. That target is for Vector to reduce our scope 1 and 2 emissions (excluding electricity distribution losses) by 53.5% by FY2030 from a FY2020 baseline. The target was developed by thinkstep-anz in 2021, based on a methodology published by the Science Based Target Initiative (SBTi) and the SBTi's then applicable guidance on reductions required to be consistent with keeping global warming to 1.5°C.

Our target has not been validated by SBTi because SBTi's methodology provided for the inclusion of emissions related to electricity distribution losses, which we have excluded. Further detail regarding this exclusion is set out below.

The emissions reduction target does not rely on any offsets. Vector does not have any interim targets.

In FY2025 we achieved our emissions reduction target, five years ahead of the original FY2030 target date, with a reduction in our scope 1 and 2 emissions (excluding distribution losses) of 55% compared to the FY2020 base year. This was largely because of a reduction in natural gas fugitive emissions, along with a reduction in diesel-generation-related emissions.

Meeting the target in FY2025 does not guarantee that the emissions reductions can be maintained in subsequent years. There are key risks highlighted in table 7 that could result in Vector missing our target in any given year.

Exclusion of electricity distribution losses from our target

Electricity distribution losses are not like a water or gas leak; they are an inherent characteristic of electricity distribution networks. Although we can measure these losses, and report their associated emissions based on New Zealand's published electricity generation emissions factor, we can never fully remove them. As distribution losses are largely an inevitable by-product of electrical conduction, Vector has elected to exclude emissions associated with such losses from our emissions reduction target. This allows our target to focus on emissions that we can more readily manage.

Additional information

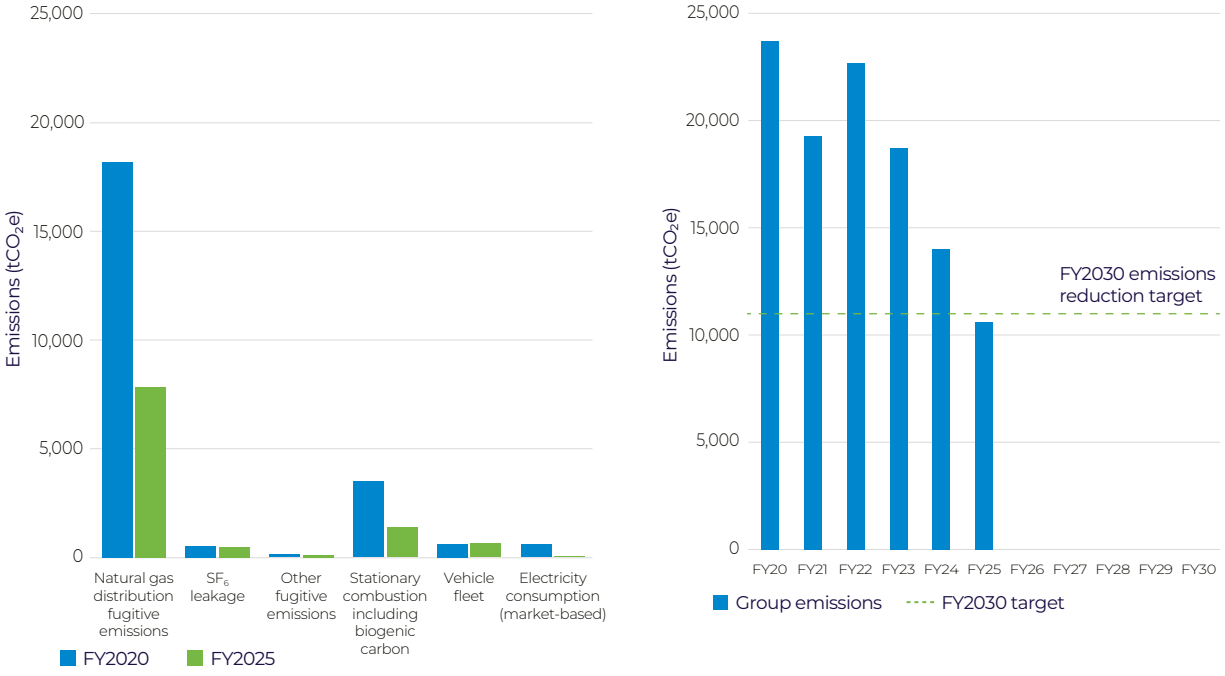
Under the New Zealand Emissions Trading Scheme (NZ ETS), Vector is obligated to surrender New Zealand Units (NZUs) for emissions related to fugitive SF_6.

NZ ETS reporting is by calendar year, while Vector's GHG emissions reporting is by financial year (1 July to 30 June). For the 2024 calendar year, Vector surrendered NZUs to the value of 422 tCO_2e related to fugitive SF_6 gases.

Assurance

Information subject to assurance by KPMG includes the summary of emissions and sections 1 to 4. KPMG does not provide assurance of this section of the GHG report.

Figure 5: (left) Emissions included in Vector's emissions reduction target – scope 1 and 2 excluding distribution losses and their comparison to the FY2020 base year. (right) Vector's yearly scope 1 and 2 emissions excluding distribution losses since FY2020. Emissions are in tCO_2e.



5. GHG emissions reductions (continued)

Marginal carbon abatement cost curve

In FY2022, Vector developed a carbon abatement cost curve to help measure and understand our emissions reduction target (scope 1 and 2 excluding electricity distribution losses) and actions available to us to contribute to reaching that target.

This work identifies the financial impact of potential carbon reduction activity across scope 1 and 2 emissions, using an internal carbon cost of $140 per tCO_2e. This amount was chosen as it aligns with the Climate Change Commission's 2021 recommendations to government to meet its 2050 targets [12] and is consistent with our internal carbon cost since FY2022. We consider this internal carbon cost to still be appropriate.

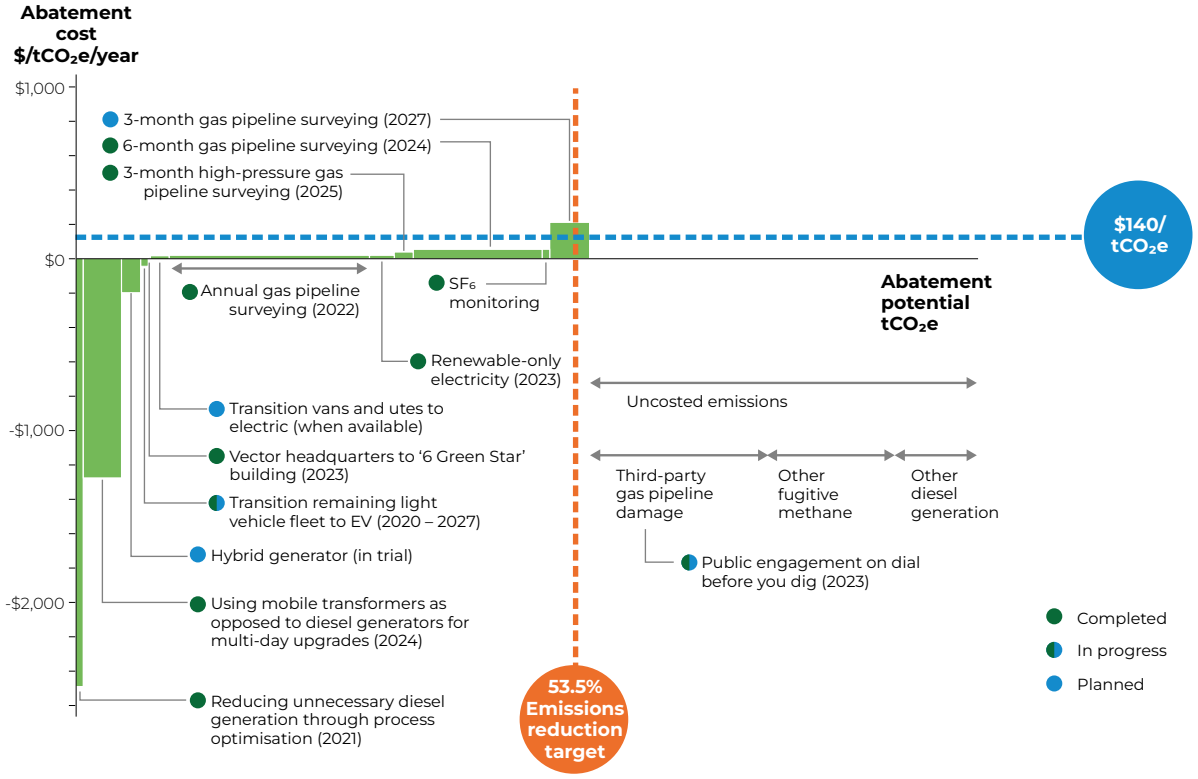
Through this work, we identified emissions that could be reduced while achieving cost savings for the group (those with negative abatement cost), and others that were close to cost neutral (those with bars close to $0/$tCO_2e$/year), with the balance assessed as being more complex to abate given the availability of current alternatives. While the data in the cost curve is updated based on the latest information, it presents forward-looking estimates of emissions reduction potential, as opposed to actual emissions results. The estimates are also conservative, which explains how we have already met our emissions reduction target, even though we have not yet completed all the actions on the curve.

The cost curve was updated in FY2025 to include the sale of the Ongas business – this removed any emissions reduction activities associated with Ongas, along with a removal of corresponding historic emissions.

A summary of key risks that may form a barrier to Vector achieving its emissions reduction target is highlighted in table 7.

Changes in technology, project prices, emissions cost modelling, new business innovation and a range of other factors may alter the marginal carbon abatement cost curve in our future disclosures.

Figure 6: Vector's marginal carbon cost abatement curve. The horizontal axis corresponds to Vector's total FY2020 scope 1 and 2 emissions excluding electricity distribution losses. Each bar relates to a potential emissions reduction initiative where the thickness of the bar details the amount of emissions reductions estimated to be possible as a result of the initiatives. The vertical axis represents the estimated cost, with negative values indicating estimated cost savings. Initiatives are ordered left to right, from the most cost-saving to the most expensive.



5. GHG emissions reductions (continued)

Table 7: Key risks that may form a barrier to Vector achieving our emissions reduction target

CARBON ABATEMENT RISK	DESCRIPTION
Damage to high-pressure pipelines	Damage to Vector's high-pressure gas pipelines can release significant quantities of CO_2e. For example, two leaks detected in FY2022 were responsible for the release of over 3,000 tCO_2e. While we can reduce emissions over time on average, these high-volatility events can cause a sudden spike in emissions for that reporting year. In addition, there is a risk that emissions from third-party damages (such as a contractor digging into the pipe) remain high or increase, with limited influence from Vector's side.
Long-term SF_6 assets on Vector's network	Many of Vector's SF_6 assets have a lifetime beyond 2030. It is challenging to replace all these assets before FY2030, and leaks can be largely unpredictable. Although we have installed some monitoring devices that alert us of leaks quickly, there is still a risk that leaks could increase and keep occurring. SF_6 has an emission factor 23,500 times that of CO_2; therefore, even small leaks of SF_6 can have material impacts on our emissions inventory.

References

1	World Resources Institute and World Business Council for Sustainable Development. 2004. *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard,* USA.
2	World Resources Institute and World Business Council for Sustainable Development. 2015. *GHG Protocol Scope 2 guidance: An amendment to the GHG Protocol Corporate Standard,* USA.
3	World Resources Institute and World Business Council for Sustainable Development. 2011. *Corporate Value Chain (Scope 3) Accounting and Reporting Standard,* USA.
4	New Zealand Government – Ministry for the Environment. 2025. *Measuring emissions guide: 2025,* Wellington: Ministry for the Environment.
5	UK Government – Department of Environment, Food and Rural Affairs. 2025. *Greenhouse gas reporting: conversion factors 2025.* Accessed 21 July 2025 gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2025
6	BraveTrace – New Zealand Energy Certificate System. Accessed 24 July 2025 bravetrace.co.nz/residual-supply-mix/
7	Technical Association of the European Natural Gas Industry (Marcogaz). 2019. *Assessment of methane emissions for gas Transmission and Distribution system operators.*
8	The Oil & Gas Methane Partnership 2.0. Accessed 21 July 2025 ogmpartnership.org/resources
9	American Petroleum Institute. 2009. *Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Natural Gas Industry.*
10	Lenzen M, Kanemoto K, Moran D and Geschke A. 2012. *Mapping the structure of the world economy.* Environmental Science & Technology 46(15), pp 8374–8381.
11	Lenzen M, Kanemoto K, Moran D and Geschke A. 2013. *Building Eora: A Global Multi-regional Input-Output Database at High Country and Sector Resolution.* Economic Systems Research 25:1, pp 20-49.
12	New Zealand Government – Climate Change Commission. 2021. *Ināia tonu nei: a low emissions future for Aotearoa.*

Appendix

Appendix 1: Vector's subsidiaries as at 30 June 2025

WHOLLY OWNED AND JOINT OPERATIONS	CARBON FOOTPRINT RELEVANT	FURTHER INFO ON CARBON FOOTPRINT RELEVANCE	ECONOMIC INTEREST HELD	PRINCIPAL ACTIVITY	VECTOR ORG STRUCTURE NAME	HOLDING COMPANY NAME
Vector Limited	**yes**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Parent company	Vector Limited	N/A
Vector Investment Holdings Limited	**no**	No emissions from operations	100%	Holding company	N/A – Holding company	Vector Limited
Vector Gas Trading Limited	**yes – until 1 July 2024**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Holding company	N/A - Holding company	Vector Investment Holdings Limited
Vector Advanced Metering Assets (Australia) Limited	**no**	No emissions from operations	100%	Investment company	N/A	Vector Investment Holdings Limited
Vector MeterCo Limited	**no**	No emissions from operations	100%	Holding company	N/A – Holding company	Vector Investment Holdings Limited
Bluecurrent Holdings NZ Limited	**yes**	No operational control. Proportional (50%) scope 1 and 2 emissions accounted for under *scope 3, category 15*	50%	Metering services	N/A	Vector MeterCo Limited
Bluecurrent Holdings (Australia) Pty Limited	**yes**	No operational control. Proportional (50%) scope 1 and 2 emissions accounted for under *scope 3, category 15*	50%	Metering services	N/A	Vector MeterCo Limited
Vector SPV No.1 Limited (formerly On Gas Limited)	**no**	No emissions from operations	100%	Holding company	N/A - Holding company	Vector Investment Holdings Ltd
Vector Communications Limited	**yes**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Tele-communications	Vector Fibre	Vector Limited
Vector Energy Solutions Limited	**no**	No emissions from operations	100%	Holding company	N/A – Holding company	Vector Limited
Vector Energy Solutions (Australia) Pty Limited	**no**	No emissions from operations	100%	Energy solutions services	N/A	Vector Energy Solutions Limited
Vector SPV No.2 Limited (formerly Powersmart NZ Limited)	**yes – until 30 December 2023***	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Holding company	N/A - Holding company	Vector Energy Solutions Limited
E-Co Products Group Limited	**no**	No emissions from operations	100%	Holding company	N/A – Holding company	Vector Energy Solutions Limited

* Emissions from operations before the business closure are captured in Vector's carbon footprint.

Appendix 1 (continued): Vector's subsidiaries as at 30 June 2025

WHOLLY OWNED AND JOINT OPERATIONS	CARBON FOOTPRINT RELEVANT	FURTHER INFO ON CARBON FOOTPRINT RELEVANCE	ECONOMIC INTEREST HELD	PRINCIPAL ACTIVITY	VECTOR ORG STRUCTURE NAME	HOLDING COMPANY NAME
Cristal Air International Limited (HRV)	**yes**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Ventilation, heating and water systems sales and assembly	HRV	E-Co Products Group Limited
Vector Technology Solutions Limited	**yes**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Technology services	Vector Technology Solutions	Vector Limited
Vector Technology Solutions Holdings USA LLC	**no**	No emissions from operations	100%	Holding company	N/A – Holding company	Vector Technology Solutions Limited
VTS USA LLC	**no**	No emissions from operations	100%	Technology services	N/A	Vector Technology Solutions Holdings USA LLC
Equalise Cyber Security Limited	**yes**	Operational control approach (100% for Vector's scopes 1,2,3)	100%	Cyber security solutions	Cyber security solutions	Vector Limited
Vector ESPS Trustee Limited	**no**	No emissions from operations	100%	Trustee company	N/A – Trustee company	Vector Limited
Vector Auckland Property Limited	**no**	No emissions from operations	100%	Assets holding company	N/A – Holding company	Vector Limited
Vector Northern Property Limited	**no**	No emissions from operations	100%	Assets holding company	N/A – Holding company	Vector Limited

Appendix 2: Summary of GHG emissions inventory recalculations across years

RECALCULATION DESCRIPTION	RESULTING CHANGE IN INVENTORY	YEAR OF REPORTED CHANGE	SCOPE(S) AND YEAR(S) AFFECTED
Structural change: Divestment of Treescape shares	Recalculation of *scope 3 – category 15*. Voluntary recalculation for clarity	FY2022	**Scope 3 – category 15** FY2020: -3,069 tCO_2e FY2021: -2,956 tCO_2e
Structural change: Sale of a 50% interest in Bluecurrent, with loss of operational control	Removing Bluecurrent emissions from scope 1, 2 and 3, and adding proportional scope 1 and 2 emissions in relation to the investment to *scope 3 – category 15*	FY2023	**Removal of Bluecurrent emissions across scopes 1, 2 and 3** FY2020: -5,017 tCO_2e FY2021: -5,099 tCO_2e FY2022: -4,824 tCO_2e **50% of Bluecurrent's scope 1 and 2 moved to scope 3 – category 15** FY2020: +700 tCO_2e FY2021: +771 tCO_2e FY2022: +809 tCO_2e
Improvement of data quality and data availability for material emissions source	Inclusion of additional purchased goods and services emissions to *scope 3 – category 1*	FY2023	**Scope 3 – category 1** FY2020: +91,205 tCO_2e FY2021: +83,199 tCO_2e FY2022: +88,953 tCO_2e
Quantification of leaks identified subsequent to year-end	Update to gas fugitive emissions to include data quantified after financial year-end FY2022	FY2023	**Scope 1** FY2022: +3,040 tCO_2e
Improvement in the accuracy of emission factors	Increase in scope 1 emissions resulting from the change in GWP for CH_4 between AR4 and AR5	FY2024	**Scope 1** FY2020: +1,945 tCO_2e FY2021: +1,433 tCO_2e FY2022: +1,724 tCO_2e FY2023: +1,415 tCO_2e
Improvement in the accuracy of emission factors and changes to calculation methodology	Increase in scope 1 emissions because of the change in GWP for SF_6 between AR4 and AR5 as well as update to SF_6 emissions to change from calendar year data to financial year data	FY2024	**Scope 1** FY2020: +99 tCO_2e FY2021: +671 tCO_2e FY2022: +223 tCO_2e FY2023: -880 tCO_2e
Structural change: Sale of remaining Natural Gas Trading contracts	Removing Natural Gas Trading emissions from contracts that were sold (as opposed to terminated at the end of the contract) from scope 3 under *category 1 (purchased natural gas)* and *category 11 (use of sold products*)	FY2025	**Scope 3** FY2022: -285,409 tCO_2e FY2023: -338,869 tCO_2e FY2024: -347,082 tCO_2e
Structural change: Sale of the Ongas LPG business and shares in Liquigas Limited	Removing Ongas emissions from scopes 1, 2 and 3, and removing Liquigas emissions from *scope 3 – category 15*	FY2025	**Scopes 1, 2 and 3** FY2020: -188,419 tCO_2e FY2021: -187,594 tCO_2e FY2022: -187,674 tCO_2e FY2023: -191,594 tCO_2e FY2024: -197,927 tCO_2e

Independent Limited Assurance Report to Vector Limited

Conclusion

Our limited assurance conclusion has been formed on the basis of the matters outlined in this report.

Based on our limited assurance engagement, which is not a reasonable assurance engagement or an audit, nothing has come to our attention that would lead us to believe that, in all material respects, the Summary of emissions and Sections 1 to 4 of the Greenhouse Gas Emissions Inventory Report on pages 3 to 14 (**GHG Statement**), have not been prepared in accordance with the Greenhouse Gas Protocol (the criteria) for the period 1 July 2024 to 30 June 2025.

Information subject to assurance

We have performed an engagement to provide limited assurance in relation to Vector Limited's GHG Statement for the period 1 July 2024 to 30 June 2025. The information subject to assurance includes:

- Summary of emissions
- Section 1: Organisational boundaries;
- Section 2: Operational boundaries;
- Section 3: Data collection and quantification; and
- Section 4: GHG emissions calculation and results.

Our assurance engagement does not extend to:

- Section 5: GHG emissions reductions; and
- to other information that accompanies or contains the GHG Statement and our report.

We have not performed any procedures with respect to the information excluded from our engagement and, therefore, no conclusion is expressed on it.

Criteria

The criteria used as the basis of reporting include the World Resources Institute and World Business Council for Sustainable Development's Greenhouse Gas Protocol standards and guidance (collectively, the GHG Protocol):

- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (revised edition);
- Scope 2 emissions have been prepared in accordance with The Greenhouse Gas Protocol: GHG Protocol Scope 2 Guidance: An amendment to the GHG Protocol Corporate Standard;
- Scope 3 emissions have been prepared in accordance with The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

As a result, this report may not be suitable for another purpose.

KPMG

Standards we followed

We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements (New Zealand) 3410 Assurance Engagements on Greenhouse Gas Statements (**ISAE (NZ) 3410**) issued by the New Zealand Auditing and Assurance Standards Board (**Standard**). We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Our responsibilities under the Standard are further described in the 'Our responsibility' section of our report.

Other Matter – Comparative information

We previously expressed a conclusion over the Greenhouse Gas inventory for the periods ending 30 June 2022, 30 June 2023 and 30 June 2024 (2022 – 2024 periods) prior to the revisions described in section 4 of GHG disclosures, and our reports dated 25 August 2022, 24th August 2023 and 26th August 2024 included an unmodified opinion. We were not engaged to express a conclusion, or apply any procedures on the revision of these periods triggered by the sale of the Natural Gas Trading business and Ongas divestment for the 2022 – 2024 periods and, accordingly, we do not express an opinion or any other form of assurance about whether such revisions are appropriate and have been properly applied.

Our conclusion is not modified in respect of these matters.

How to interpret limited assurance and material misstatement

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Misstatements, including omissions, within the GHG Statement are considered material if, individually or in the aggregate, they could reasonably be expected to influence the relevant decisions of the intended users taken on the basis of the GHG Statement.

Inherent limitations

As noted on page 2 of GHG disclosures Statement, GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emission factors and the values needed to combine emissions of different gases.

Use of this assurance report

Our report is made solely for Vector Limited. Our assurance work has been undertaken so that we might state to Vector Limited those matters we are required to state to them in the assurance report and for no other purpose.

Our report should not be regarded as suitable to be used or relied on by anyone other than Vector Limited for any purpose or in any context. Any other person who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk.

To the fullest extent permitted by law, none of KPMG, any entities directly or indirectly controlled by KPMG, or any of their respective members or employees accept or assume any responsibility and deny all liability to anyone other than Vector Limited for our work, for this independent assurance report, and/or for the opinions or conclusions we have reached.

Our conclusion is not modified in respect of this matter.

KPMG

Vector Limited's responsibility for the GHG Statement

The Management of Vector Limited are responsible for the preparation of the GHG Statement in accordance with the criteria. This responsibility includes the design, implementation and maintenance of such internal control as Management determine is relevant to enable the preparation of the GHG Statement that is free from material misstatement whether due to fraud or error.

The Management of Vector Limited are also responsible for selecting or developing suitable criteria for preparing the GHG Statement and appropriately referring to or describing the criteria used.

Our responsibility

We have responsibility for:

- planning and performing the engagement to obtain limited assurance about whether the GHG Statement is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to Vector Limited.

Summary of the work we performed as the basis for our conclusion

A limited assurance engagement performed in accordance with the Standard involves assessing the suitability in the circumstances of Vector Limited's use of the criteria as the basis for the preparation of the GHG Statement, assessing the risks of material misstatement of the GHG Statement whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG Statement.

We exercised professional judgment and maintained professional scepticism throughout the engagement. We designed and performed our procedures to obtain evidence about the GHG Statement that is sufficient and appropriate to provide a basis for our conclusion.

Our procedures selected depended on the understanding of the GHG Statement that is sufficient and appropriate to provide a basis for our conclusion. The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

In undertaking limited assurance on the GHG Statement, the procedures we primarily performed were:

- Obtaining, through inquiry, an understanding of Vector's control environment, processes and information systems relevant to the GHG inventory. We did not evaluate the design of particular control activities, or obtain evidence about their implementation;
- Evaluating whether the methods for developing estimates were appropriate and had been consistently applied. Our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Vector's estimates;
- Evaluating organisational and operational boundaries to assess the completeness of the inventory
- Performing analytical procedures on particular emission categories by comparing the expected Scope 3 GHG emissions to reported Scope 3 GHG emissions and made inquiries of management to obtain explanations for any significant differences we identified;
- Agreeing a selection of emissions data to relevant underlying source documents and re-performing emission factor calculations for a limited number of items;

- Considering the presentation and disclosures of the GHG inventory and explanatory notes against the requirements of the criteria.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Our independence and quality management

We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 *International Code of Ethics for Assurance Practitioners (including International Independence Standards*) (New Zealand) (**PES 1**) issued by the New Zealand Auditing and Assurance Standards Board, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements* (**PES 3**), which requires the firm to design, implement and operate a system of quality control including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our firm has also provided other assurance services that are related to our role as Vector Limited's auditor, including financial statement audit services, regulatory assurance services and assurance over climate-related disclosures. Subject to certain restrictions, partners and employees of our firm may also deal with Vector Limited on normal terms within the ordinary course of trading activities of the business of Vector Limited. These matters have not impaired our independence as assurance providers of Vector Limited for this engagement. The firm has no other relationship with, or interest in, Vector Limited.

KPMG

Auckland

22 August 2025