

CLIMATE TRANSITION PLAN 2025

MAHERE
WHAKAWHITI
ĀHUARANGI
2025

PGG WRIGHTSON

PGG Wrightson (PGW) is a market leading, full-service agricultural and horticultural supplies and services business, operating across the rural supply chain throughout New Zealand for more than 170 years.

We were formed in 2005 through the merger of Pyne Gould Guinness (PGG) and Wrightson. Both founding companies date back to 1851 and 1861 and were themselves the result of many amalgamations through the years. We are listed on the New Zealand Stock Exchange under the ticker PGW.

Our longstanding relationships with the rural community, technical expertise, focus on innovation, and our nationwide presence, places us in an enviable position of being one of the best-known, respected, and trusted agricultural brands in the country.

We have more than 1,800 people located in over 170 sites, offering superior specialist knowledge and expertise. With 60,000 customer accounts and approximately 28,000 products, the majority of our customers' purchases are repeat business and necessities for their success.

Our customers span the entire rural sector including family operations, large corporate customers and iwi. Many of our interactions with customers are based upon enduring relationships across multiple business units, with many relationships dating back generations.



OUR VISION AND PURPOSE

Our Vision

Tā Mātou Kaupapa

Empowered farmers and growers for generations to come.

He āwhina i ngā kaipāmu me ngā katipo kia angitu mā ngā mōhiotanga me te ngākau titkaha.

Our Purpose

Tā Mātou Tūruapō

Helping farmers and growers succeed with expert knowledge and confidence.

Kia ihumanea ngā kaipāmu me ngā kaitipu mō ngā reanga e ara mai ana.

EXECUTIVE SUMMARY

The PGW Climate Transition Plan outlines our strategic pathway to a low-emissions future while maintaining business resilience within the changing rural landscape. As a listed company, we operate under New Zealand's climate-related disclosures legislation and recognise our responsibility to mitigate climate impacts and adapt our business model.

PGW have committed to reducing operational emissions by 30% by FY30, from a FY21 baseline. This will be accomplished through vehicle fleet efficiency measures (including electric and hybrid vehicles), implementing energy efficiency measures across our property portfolio, and continuing to source renewable energy.

PGW is partnering with suppliers to reduce their emissions and bring new products to market that support sustainable farming and growing practices. As a trusted advisor to our customers, PGW has an important role to assist in enhancing their productivity and lowering greenhouse gas emissions.

Our governance frameworks establish clear accountability through board-level climate oversight and collaboration across the business. Through these actions, PGW are positioning ourselves to thrive in New Zealand's evolving regulatory landscape while empowering farmers and growers for generations to come.



CLIMATE CONTEXT



As a leading provider of agricultural and horticultural supplies, PGW are at the forefront of several critical climate transitions. PGW fundamentally depends on the land use decisions of our customers, which are increasingly influenced by:

- Physical climate impacts, affecting growing conditions and stocking levels.
- Regulatory changes incentivising emissions reductions.
- Market forces demanding lower-carbon products and sustainable practices.
- Technological innovations enabling new approaches to land management.
- Consumer preferences shifting toward sustainable food and fibre products.

New Zealand's current pastoral agricultural land has seen a number of changes in land to alternative uses, primarily horticulture and forestry based systems. These changes in land use could represent a risk to our current business model, but also a transformative opportunity if we position ourselves strategically.

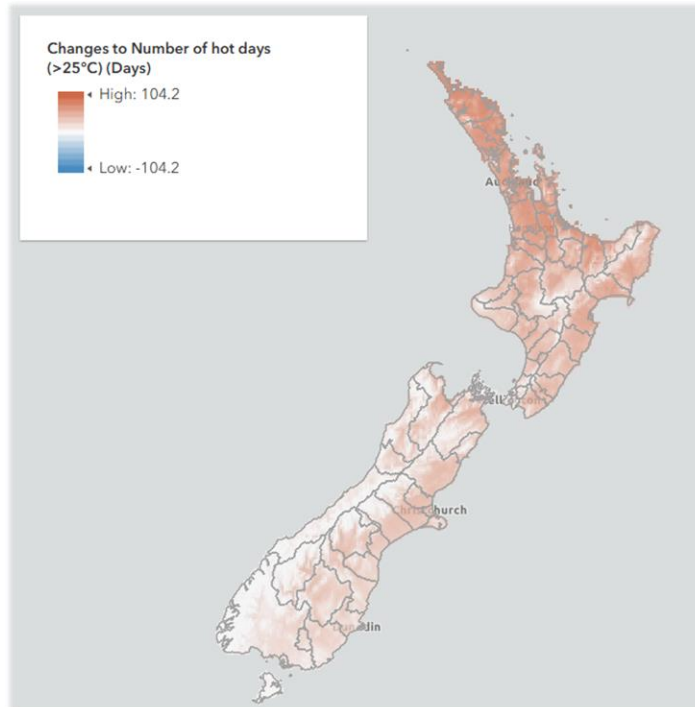
Climate impacts expected across New Zealand include an increase in annual average temperatures between 0.7°C and 5.6°C by 2090, more hot days (over 25°C) and fewer frost days (below 0°C). Rainfall patterns are expected to vary with the North Island, as well as the north and the east of the South Island expected to see less annual rainfall, while the west and south of South Island are expected to increase.

More information : [MfE Climate Projections Summary Dashboard](#)

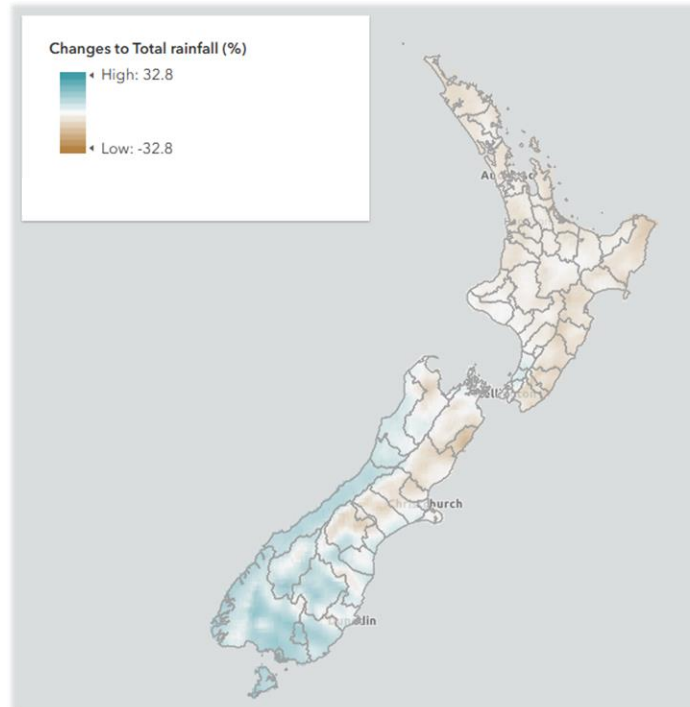
CLIMATE PROJECTIONS

The following graphs show the expected annual distribution of headline climate impacts (temperature, rainfall and wind speed) across New Zealand by the end of the century (2080-2099), based on a mid-range (SSP2-4.5) climate change scenario, from a 1995-2014 base period. More information: [MfE Climate Projections Map](#)

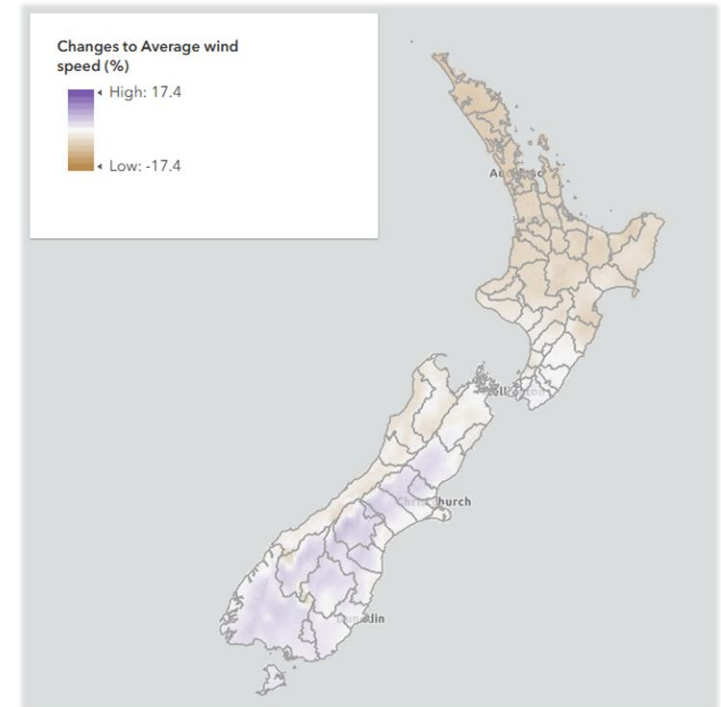
Temperature



Rainfall



Wind Speed



MACROECONOMIC CONTEXT

New Zealand’s agricultural and horticultural sectors are the two largest sectors of the tradeable economy, with 2025 export revenue forecast to be \$37B and \$8B respectively.

The Ministry for Primary Industries (MPI) Action Plan was launched in 2025 and focuses of 4 goals:

1. Doubling the value of exports by 2034.
2. Delivering solutions for New Zealand farmers to reduce GHGs by 2030.
3. Protecting New Zealand from harmful pests and diseases.
4. Backing the primary sector to win.

At the same time, the agricultural and horticultural sectors are navigating through significant transition, facing unprecedented environmental, economic, and social challenges driven by climate change.

- The agriculture sector is significant contributor to New Zealand’s greenhouse gas emissions profile, while simultaneously being vulnerable to climate-related disruptions including changing weather patterns, pests and diseases and weather-related animal welfare considerations.
- The horticulture sector represents a smaller contributor to the balance of New Zealand’s greenhouse gas emissions. While the sector has found itself the benefactor to recent land use change trends, it is equally as vulnerable to climate-related impacts such as weather events and emerging trends around pests and diseases.

	Historical Landscape	Emerging Transformation Drivers
Agriculture	<ul style="list-style-type: none"> • Traditional pasture-based farming model and extensive land use • Relatively stable climatic conditions supporting predictable agricultural practices • Dominance of sheep and beef production, shifting towards dairy from the late 1980s onwards 	<ul style="list-style-type: none"> • Accelerating climate-related impacts disrupting traditional growing patterns • Increasing sustainability expectations from global export markets • Technological disruption including precision farming, sensors and data analytics • Evolving regulatory frameworks
Horticulture	<ul style="list-style-type: none"> • Favourable climate enabling diverse production and counter-seasonal exports to the Northern Hemisphere • Export focus driven by geographic isolation and small domestic market • Development of IP-protected varieties creating premium positioning globally 	<ul style="list-style-type: none"> • Climate change altering growing zones and water management challenges • Labour shortages driving automation and technology adoption • Consumer shift toward sustainability, provenance, and functional foods • Market diversification beyond traditional exports, especially into Asian markets

REGULATORY AND TRADE CONTEXT

The regulatory and trade landscape for New Zealand's agricultural and horticultural sector is undergoing significant transformation. Key drivers of this change include the push towards reducing greenhouse gas emissions and enhancing climate reporting standards.

The New Zealand government has released its second emissions budget and emissions reduction plan. The budget and plan signal the intention to align the sector with national climate goals and foster a more resilient primary industry. These changes reflect a strengthening of climate ambitions and will impact how businesses such as PGW operate and plan for the future.

New Zealand Regulatory Frameworks

- Climate Change Response Act 2002
- Climate-related Disclosures (Financial Markets Conduct Act 2013)
- New Zealand Emissions Trading Scheme (NZ ETS)
- Climate Change Commission strategic recommendations
- National Policy Statement for Freshwater Management
- Resource Management Act 1991

International Commitments

- Paris Agreement obligations (1.5 degree warming)
- United Nations Sustainable Development Goals
- Global methane reduction pledges

As a trade dependent economy, New Zealand supports free and open trade. Over the last decade a number of New Zealand international trade agreements contain aspects related to climate change and emissions reductions, including:

- The **New Zealand-EU Free Trade Agreement** contains strong enforceable environmental provisions and explicitly references the Paris Agreement commitments.
- **New Zealand-UK Free Trade Agreement** contains a dedicated environmental chapter with climate change commitments.
- **Regional Comprehensive Economic Partnership (RCEP)** contains sustainable development provisions that reference climate action.
- The **New Zealand-China Free Trade Agreement 2019 Upgrade** inserted environmental provisions into the original agreement that includes cooperation on climate change and emissions reductions.
- The **New Zealand-Singapore Enhanced Partnership 2019 Upgrade** contains specific climate change and emission reduction cooperation provisions.
- **Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP)** contains an environment chapter including climate change cooperation.
- The **New Zealand-Korea Free Trade Agreement** includes an environment chapter which recognises climate change as a global concern and promotes cooperation on climate change and emissions reduction.

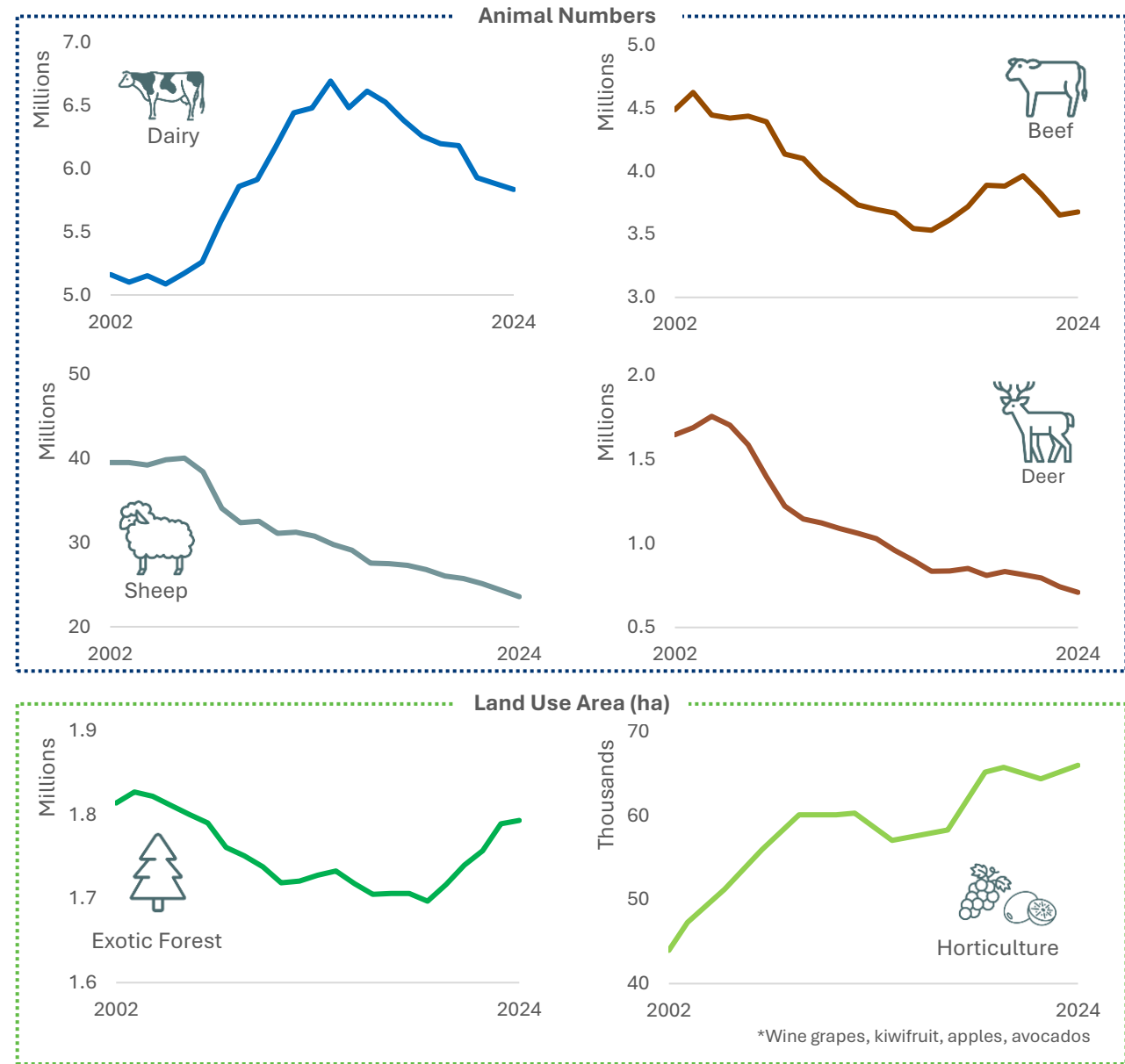
LAND USE CONTEXT

New Zealand's rural sector is undergoing significant transformation, driven by evolving market demands and climate change pressures.

Statistics New Zealand's agricultural production statistics give an insight into rural land use across New Zealand. Showing the conversion of traditional sheep and beef to dairy operations as global dairy prices have increased. Dairy cattle have increased by 30% from 2002 to 2014, though have declined 13% from 2014 to 2024. Sheep numbers have decreased over 40% over the period from 2002 to 2024. Beef cattle number decreased significantly from 2002 to 2016, but have increased 4% from 2016 and broadly stabilised.

The horticulture sector has shown compound annual growth over the past two decades, with notable expansion in wine grapes, kiwifruit and avocados. With New Zealand horticultural exports commanding high prices in international markets, as the counter-seasonal advantage allows the supply of fresh produce into the Northern Hemisphere during their off-season.

Exotic forestry trends are more nuanced, with an overall decrease of 6% observed over the period from 2002 to 2019, driven by dairy conversions and that many forests planted in the 1990s have not been replanted after harvesting. More recent data around exotic forestry shows 6% increase from 2019 to 2024, primarily attributed to carbon pricing, foreign investment and broader government policy initiatives. This rapid increase in exotic has raised farm conversion concerns from agriculture sector groups.



LAND USE CHANGE FORECASTS



Looking ahead to 2050, climate modelling suggests that warming temperatures will push traditional horticultural and arable growing regions southward, creating new opportunities in regions previously unsuitable for certain crops.

This expansion of higher value land use opportunities may come at the expense of agricultural land use applications. This shift will drive demand for new categories of horticultural and arable supplies – particularly specialised products, precision irrigation systems and pest control.

Regulatory and market trends towards low carbon products will drive demand for new categories of agricultural supplies – particularly methane reduction solutions, complementary products to lower fertiliser use, nitrification inhibitors, soil enhancers for carbon sequestration and other on-farm energy solutions.

Climate change adaptation will also drive demand for new product categories - rising temperatures and changing rainfall patterns are expected to increase demand for drought-resistant seed varieties, water-efficient irrigation systems, and climate-smart farming technologies.

For PGW, success in this changing landscape will require both new products and new service models. As farming becomes more technical and data-driven, PGW must continue to position itself as a knowledge partner.

CLIMATE-RELATED RISKS AND OPPORTUNITIES

Given the climate, macroeconomic, regulatory and land use change contexts it is vital PGW understand the application to its existing business operations. PGW has identified the most material climate-related risks and opportunities to the business.

To do this, PGW undertook a comprehensive climate scenario analysis, involving a series of detailed workshops with each business unit to identify localised risk and opportunities, which were then screened for impact and materiality.

ORDERLY

Tū-ā-pae

Orderly represents a world defined by smooth transition to net zero emissions by 2050. Global warming is limited to 1.5°C through stringent climate policies and innovation.

DISORDERLY

Tū-ā-hopo

Disorderly represents a world with little policy action until after 2030 after which strong, rapid action is implemented to limit warming to 2°C. Not all countries take equal action and this represents a costly and disruptive transition

HOT HOUSE

Tū-ā-tapepe

Hot house describes a scenario where global emissions continue to rise unabated as no additional climate policies are introduced. Warming is expected to reach 3°C by 2080 and adapting to climate change has become the priority.

CLIMATE-RELATED IMPACTS (CURRENT)

- Land-Use Change (to Horticulture)
- Land-Use Change (to Forestry)
- Weather Impacts

CLIMATE-RELATED RISKS

- Land-Use Change (to Forestry)
- Supply Chain Impacts
- Staff Recruitment and Retention
- Pests and Diseases
- Water Scarcity
- Primary Sector Emissions Efficiency

CLIMATE-RELATED OPPORTUNITIES

- Land-Use Change (to Horticulture)
- Pest and Disease Control
- Primary Sector Emissions Solutions

Adapted from the Agriculture Sector Climate Change Scenarios (Aotearoa Circle, 2023).

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PGW then analysed the individual risks and opportunities registers, identifying common themes and interactive effects. Ultimately screening for impact and materiality. The final output of this process is a list of current impacts, future opportunities and risks as shown on the right.

PGW will continue to revisit this list on an annual basis to ensure it remains relevant to the current business context.

CLIMATE-RELATED IMPACTS



Land-Use Change



Weather Impacts

CLIMATE-RELATED OPPORTUNITIES



Land-Use Change (To Horticulture)



Pest and Disease Control



Primary Sector Emissions Solutions

CLIMATE-RELATED RISKS



Land-Use Change (To Forestry)



Supply Chain Impacts



Staff Recruitment and Retention



Pests and Diseases



Water Scarcity



Primary Sector Emissions Efficiency

EMERGING INNOVATION OPPORTUNITIES

As climate impacts become more pronounced, there is an opportunity for PGW to assist our customers with the implementation of innovative solutions that promise both sustainability impact and economic growth in the years ahead.

The opportunities are shown below and represent pathways to improve PGW operational efficiency, but also assist customers to enhance their productivity and lower greenhouse gas emissions.

Livestock Methane Reduction Solutions

- Methane-reducing feed additives.
- Methane inhibiting boluses.
- Methanogen-targeting livestock vaccines.
- Seed trait expression improving livestock efficiency and methane reductions.
- Genetic selection tools for lower emissions breeding values in livestock.

Digital Transformation

- Drone and satellite-based monitoring services – increasing remote capability for farmers and growers and improving efficiency.
- Artificial intelligence and image processing – enabling on-farm livestock health assessments (body condition scoring, lameness) or harvest readiness.
- Low cost in-ground sensors – allowing for precision fertiliser and water applications.

Product and Supply Chain Evolution

- Low carbon product lines and carbon neutral product certifications.
- Prioritisation of biological solutions – integrating with existing farming practices.
- Sustainable packaging solutions and end-of-life considerations.
- Efficient supply network– improving product delivery timelines, stock management and resilience.
- Continued expansion of product stewardship solutions for waste.

OPERATIONAL GREENHOUSE GAS EMISSIONS

PGW prepares an annual GHG inventory in alignment with the GHG Protocol. PGW adopts operational control assessments as the primary consolidation approach for determining activities within the reporting boundaries. Emissions factors and global warming potentials (GWPs) are sourced from New Zealand Ministry for the Environment's Measuring Emissions guides where available, if alternative sources are used these are referenced.

The PGW GHG Disclosure Reports are disclosed publicly and available on the PGW website.

The primary sources of operational GHG emissions are:

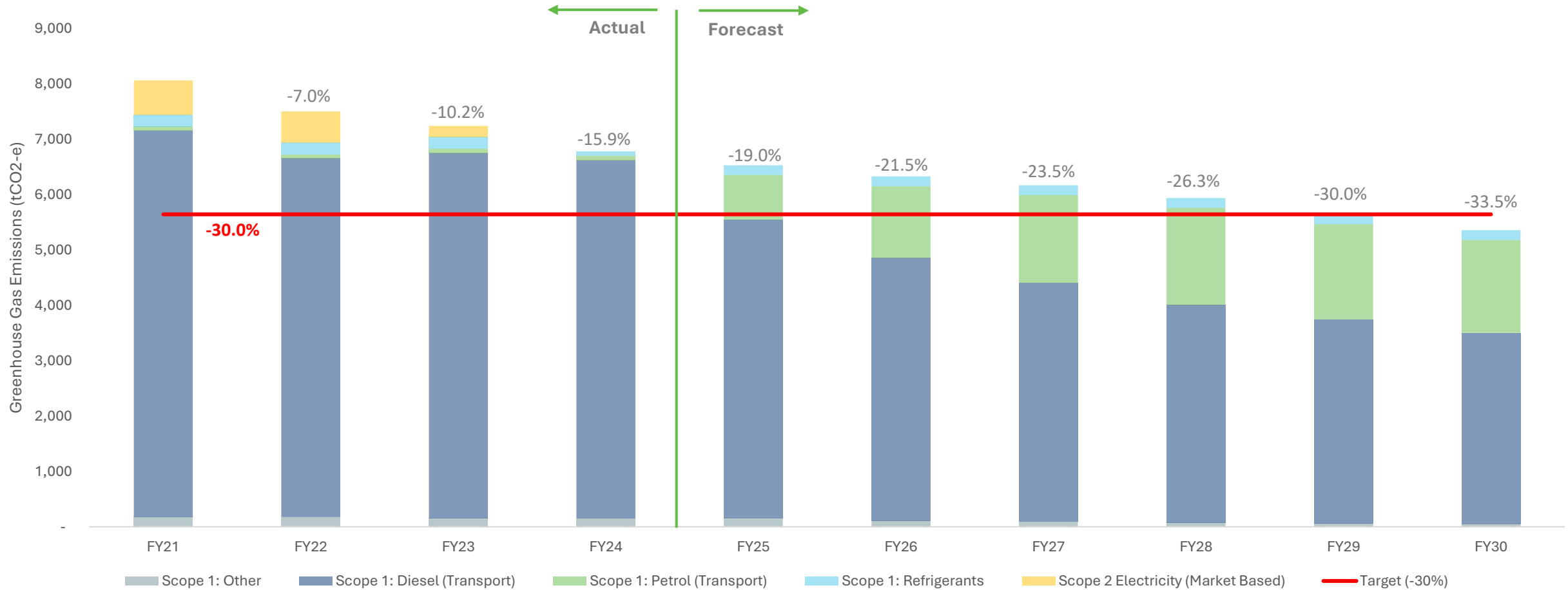
1. Fleet vehicles
2. Electricity consumption across the PGW building portfolio
3. Use of refrigerants in air-conditioning and refrigeration systems

PGW has committed to reduce its operational (scope 1 & 2) market-based GHG emissions profile by 30% by FY30, based on a FY21 baseline.

PGW's emission target was developed internally, it allows for the use of offsets only in the application of market-based emissions for electricity consumption, utilising the New Zealand Energy Certificate System (NZECS) run by BraveTrace.



OPERATIONAL GREENHOUSE GAS EMISSIONS



ACTIONS - SCOPE 1 & 2 GHG EMISSIONS

Action	Detail	Timing	Estimated Emissions Impact (Annually)
Vehicle Fleet Efficiency	Shift all non-utility vehicles from diesel to petrol hybrid options.	In place, rolling out from FY24 through to FY27	-898 tCO ₂ -e
	Provide a full electric vehicle added to fleet on an 'opt in' basis.	FY26 (subject to 'fit for purpose' options)	-312 tCO ₂ -e
	Investigate changes to product delivery model, which may reduce the number of staff deliveries.	FY27	-327 tCO ₂ -e
	Investigate tightening restrictions around 'full private use' of fleet vehicles.	FY27	-113 tCO ₂ -e
Property Portfolio Electrification	Replacement of fossil-fuel based stationary assets with electric equivalents (primarily converting space heating from diesel, natural gas or LPG to heat pumps).	FY27	-45 tCO ₂ -e
Mobile Plant Electrification	Replace diesel and LPG based forklifts and fork trucks with electric equivalents at end-of-life.	Ongoing	-124 tCO ₂ -e
Renewable Energy Contracting	Ensure renewable energy purchasing continues, is credible and meets best practice carbon accounting standards.	In place, but to be maintained	- 600 tCO ₂ -e (maintained)
Property Portfolio Energy Efficiency	Prioritise energy efficiency and long term costs in property-based decisions and asset selection.	Ongoing	Lower electricity costs
	Installation of rooftop solar PV on strategic long-term sites.	Ongoing	Lower electricity costs
	Development of design and architectural standards to focus on energy efficient outcomes.	Ongoing	Lower electricity costs
Supply Chain	Investigate improvements to stock management and freight efficiency.	TBD	TBD

The logo graphic consists of two curved lines above the text. The top line is white and the bottom line is green, both curving from left to right.

PGG Wrightson

Helping grow the country