MARCH 2024

CARBON IMPACT STATEMENT

FISHER & PAYKEL

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EXECUTIVE SUMMARY

PRIORITY

This Carbon Impact Statement reflects our ambition to mitigate the negative impact we have on the climate.

We believe a focus on carbon emissions reductions is urgent and is required to deliver a meaningful benefit for future generations.

GOALS

Our goals are to reduce total (Scope 1, 2 and 3) carbon emissions per-appliance-sold by 50% by 2030 and by 90% by 2050, from our 2020 baseline.

OPPORTUNITIES

The greatest contributor to our carbon emissions and therefore biggest opportunity for reduction is the use of our sold products (Scope 3, Category 11), primarily the lifetime energy use of the appliances we sell.

STRATEGY AND ROADMAP

To pursue our goals, our Carbon Impact Strategy and Roadmap is focused on 5 main pillars:

New Products
New Company Choices
New Customer Choices
New Technologies
New Ecosystems

REPORTING

We will report our progress towards our per-appliance-sold goals, and our total carbon emissions on an annual basis for transparency.

INTRODUCTION

This Carbon Impact Statement reflects our belief that dedicated carbon emissions reporting is essential to informed and targeted climate change action.

From our 2020 baseline year, our company goal is to reduce Scope 1, 2 and 3 carbon emissions per-appliance sold by 50% by 2030 and by 90% by 2050.

Having assessed our entire value chain across Greenhouse Gas Protocol Scopes 1, 2 and 3, it is clear that addressing Scope 3 is where we have the potential to make the largest measurable impact. Energy used by our appliances includes both electricity and fuel usage, with total appliance electricity usage being the largest contributor to our Scope 3 carbon emissions.

We will reduce the most carbon emissions by designing and manufacturing appliances that are significantly more energy efficient or part of home ecosystems that are powered by lower-carbon electricity.

The global net zero transition requires a shift from fossil fuels to lower-carbon energy generation. Electrification of processes that are currently reliant on fossil fuels are critical to this transition. However, as electrification significantly increases, so too will the demand for lower-carbon electricity.[1] So far, growing global electricity demand has exceeded increased lower-carbon electricity generation, which means the carbon emissions of the energy sector are still growing.[2] This highlights the importance of electricity efficiency along with storage and demand management for every home.

At Fisher & Paykel, we currently know how to reduce carbon emissions from appliances through energy efficiency gains, but not how to remove them completely.

Our improvements over time will be iterative rather than instantaneous. Progress is unlikely to be linear, but compound to deliver greater reductions over time as we develop new technologies and ecosystem services that deliver greater efficiencies through integrated energy management.

We are one company operating in different communities, cities, and countries—on one planet. We are one company in a global context of millions of companies, all focused on reducing emissions. Where we find breakthroughs, we will endeavour to share our findings with global partners, to make progress faster across our market sector. Ultimately, impact will be delivered through new relationships and collaborations that transcend the economic frameworks of industry sectors, to make change at scale possible.

This is our first Carbon Impact Statement. It outlines our 2020 baseline position, as well as our goals, strategy and the roadmap that we believe will deliver impact through reducing our carbon emissions per-appliance-sold over time. We recognise that sustainability is a broad and systemic challenge. We also believe that having a singular starting focus will drive faster results to address the urgency of the climate crisis.

AS A COMPANY, WE HAVE ALWAYS LOOKED FOR WAYS TO DESIGN MORE EFFICIENT APPLIANCES

CARBON AT A GLANCE

This Carbon Impact Statement reflects our ambition to mitigate the negative impact we have on the climate.

OUR TOTAL CARBON EMISSIONS 2020

7.7M tCO_2e

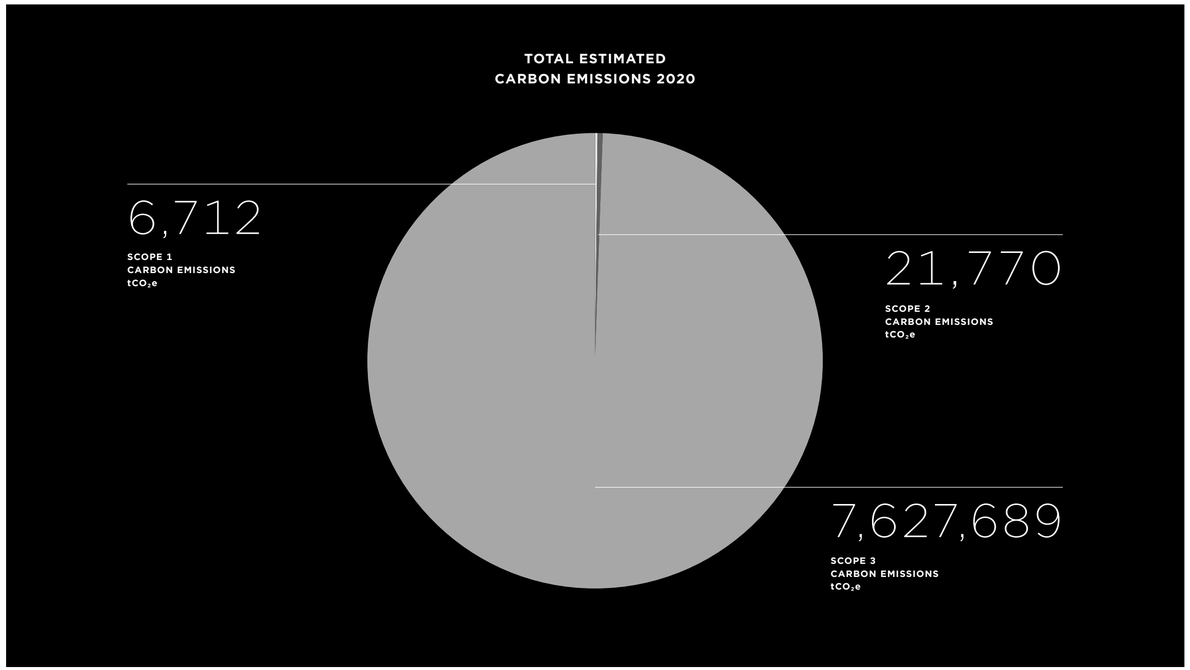
AVERAGE CARBON EMISSIONS PER-APPLIANCE SOLD 2020

5.6 tCO_2e

OUR GOALS

By 2030, reduce total (Scope 1, 2 and 3) carbon emissions per-appliance-sold by 50% of our 2020 baseline.

By 2050, reduce total (Scope 1, 2 and 3) carbon emissions per-appliance-sold by 90% of our 2020 baseline.



CARBON EMISSIONS OVERVIEW

Approximately 90% of our total carbon emissions come from the use of our appliances across their lifetime. Around 74% of our total carbon emissions come from the generation and supply of electricity to power the use of our appliances.

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Breakdown of total emissions, calculated using GHG Protocol Scopes 1, 2 and 3.

DEFINITIONS

The term ‘carbon emissions’ has become shorthand for the atmospheric greenhouse gases (GHGs) that contribute to global warming. Carbon emissions are measured in carbon dioxide equivalents (CO_2e) over a 100-year timescale. The Greenhouse Gas Protocol categorises emissions into Scopes 1, 2 and 3 — each is a mechanism for classifying the different kinds of carbon emissions a company creates.

Scope 1 — Carbon emissions from fuels and energy sources that we directly control.

Scope 2 — Indirect carbon emissions, for example, from the purchased electricity in our operations.

Scope 3 — Carbon emissions produced across our wider value chain by others, including the emissions resulting from people operating the appliances we sell.

WHY SCOPE 3 MATTERS

While many companies have made progress in Scope 1 and 2 carbon emissions reductions, we believe addressing the challenges of Scope 3 is critical to any carbon emissions reduction strategy. In 2022, a CDP survey showed that just 38% of global companies measured emissions across all scopes. However, on average, Scope 3 emissions accounted for 70% of a company’s total emissions.[3]

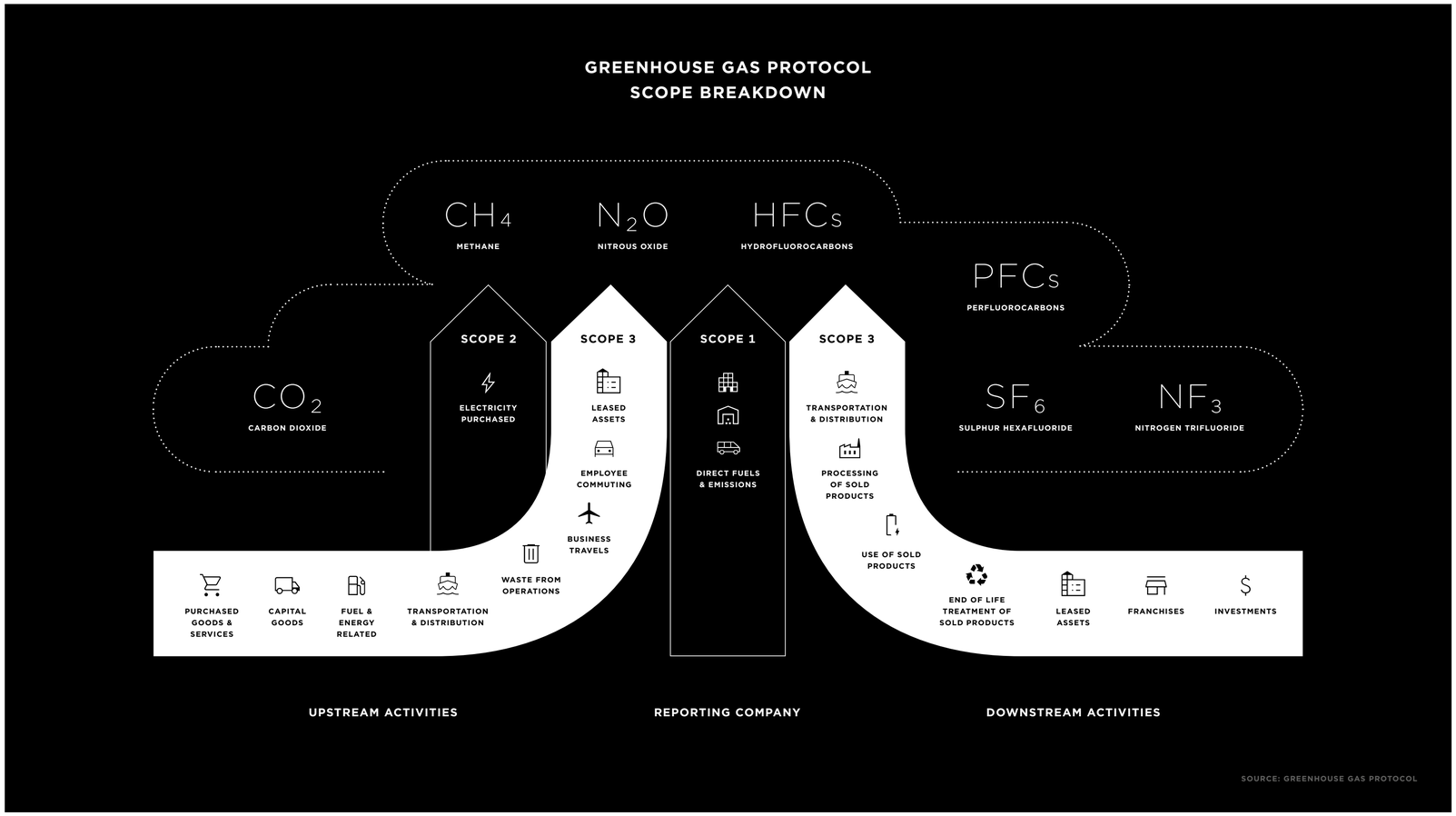
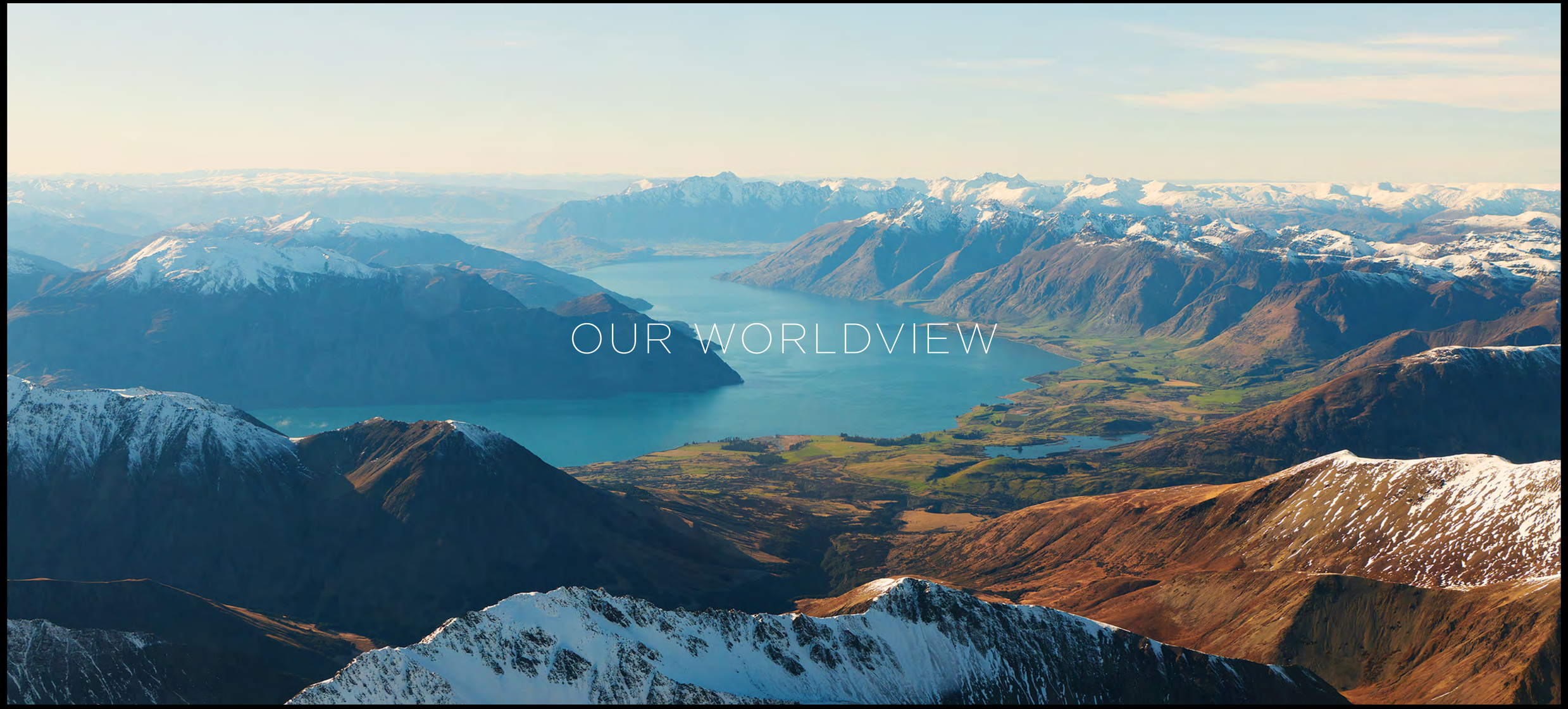


Illustration of the scopes and categories used to calculate a company’s carbon emissions inventory.



OUR WORLDVIEW

A CARBON-FIRST APPROACH

Daniel Witten-Hannah, Managing Director and CEO, and Kane Alward, VP Carbon Zero Transition and Research & Development, describe how measuring Fisher & Paykel's 2020 baseline emissions has sharpened the company's focus on carbon impact.

Let's discuss carbon, which is shorthand for the greenhouse gases affecting the climate. It's now customary for companies to fold environmental, social and governance into sustainability reporting. Why is the focus of this report very specifically carbon?

DANIEL Let's start with the hard facts. Climate change is caused by human activity and there's more carbon in the atmosphere than at any other time in human history.[4] It's also occurring faster than anticipated and we're seeing the effects of that all over the world.

As the most urgent global challenge relevant to our business purpose, we believe a critical focus and organisational alignment around carbon enables us to go faster and have a greater impact over time.

KANE To avoid the worst consequences of climate change we need to collectively limit global warming to 1.5°C above pre-industrial levels. The IPCC (United Nations Intergovernmental Panel on Climate Change) warns that we have already reached 1.1°C.[5] In response, we've committed to reducing our Scope 1, 2 and 3 carbon emissions per-appliance-sold 50% by 2030, and 90% by 2050, from a 2020 baseline.

As a company, we've always seen sustainability and innovation as walking hand in hand. Sustainability has been a key part of our thinking since we moved away from solvent-based paints 50 years ago. Since then, we've introduced successful appliance recycling initiatives, designed lighter appliances, reduced plastic packaging, eliminated ozone-depleting refrigerants and designed highly efficient washing machines. However, over time, we've also seen sustainability become a broad concept. Narrowing the focus to carbon allows us to focus our efforts into the most impactful areas of action into the future.

'Designed in Aotearoa New Zealand' and 'Design for a Changing World' are key concepts for Fisher & Paykel Appliances. How does carbon thread into these?

DANIEL For a long time, connection to the environment and our geographic location has shaped our thinking. The view from the periphery is often clearer. We see the world changing — the ways people live, work and interact, generational shifts, urbanisation trends. Carbon is inseparable from all these things; and drastically reducing carbon emissions is the movement of our time.

WE'RE PRIORITISING CARBON BECAUSE EMISSIONS REDUCTION IS A GLOBAL IMPERATIVE

DANIEL WITTEN-HANNAH
Managing Director and CEO

KANE ALWARD
VP Carbon Zero Transition and Research & Development

We know consumers are opting for brands that are serious about sustainability, and that's one of our core values. It plays out in every one of our design decisions and will drive our choices into the future. Sustainable innovation is an opportunity to develop better product solutions that create better value for the customer and better outcomes for the planet.

Let's talk about your benchmarking process and your prioritisation of Scope 3 carbon emissions. What are they — and what is the scale of the reduction challenge ahead?

KANE Scope 3 has been described as the most relevant and least measured category.[6] Working with thinkstep-anz and Sphera to define our baseline, we found that around 99% of our carbon emissions are in Scope 3.

Of those, the majority result from the energy used to operate our appliances, which makes them Scope 3, Category 11, as defined by the Greenhouse Gas Protocol.

The benchmarking shows some of the contradictions and complications of operating globally. For example, induction cooktops can potentially produce fewer emissions during use than gas cooktops. They do in New Zealand where the electricity grid is 87% renewable,[7] but that figure isn't matched in Australia, where there is more fossil-fuel energy generation. Is it just about waiting for so-called 'dirty grids' to become more renewable?

KANE Electricity grids will transition over time, but that will happen concurrently with a doubling or even tripling of lower-carbon energy demand for homes, transportation and process heat in industry.[8] The efficiency of our appliances is essential to reducing future energy demand. By prioritising carbon emissions reduction, we're supporting the rate and scale of change needed.

Is that the motivation behind Fisher & Paykel Home Solutions? Simplifying the process for household energy consumption to become carbon net zero?

DANIEL Residential and commercial buildings account for almost 40% of all energy-related carbon emissions globally.[9] The global path to carbon net zero requires the transformation of home energy.

Global grid transformation is central to this, as much as individual home energy use, but rethinking each home as an optimised system with minimal grid drawdown requirements is fundamental. Home Solutions is about giving customers opportunities to choose integrated home-energy systems that help deliver warmer, drier, cooler and more energy efficient homes. It encompasses different customer goals, from better energy efficiency to fully carbon net zero homes.

KANE In some modelling, wind and solar are projected to meet 50-60% of global electricity demand by 2050,[10] however wind and solar are inherently intermittent, which makes the ability to load-shift,

to change the times when energy is used and store energy for later use, a key requirement for stable, lower-carbon electricity supply. Combining lower-carbon home-energy generation and storage is a way to contribute to more resilient energy grids, with lower energy peaks when power can be more expensive and more carbon intensive.

CONNECTED APPLIANCES ENABLE LOWER CARBON ENERGY CHOICES

What about the role of government? Europe has adopted new rules for importers of products to account for the different carbon costs in different geographical regions. New York has banned natural gas stoves and furnaces in most new buildings. Australian Capital Territory wants homes to transition to 100% electricity and disconnect gas by 2045.

DANIEL Yes, governments certainly have an important role to play, but so do businesses and individuals. To reduce carbon emissions at pace, we need to transform economies, decarbonise energy systems and develop and deploy technologies that are scalable. We want to be a leader in the lower-carbon transformation. And we want to create future value for our business, partners, customers and people.

KANE We established the Carbon Zero SmartHome R&D Institute to accelerate disruptive product innovation. Appliance development typically generates less than 25% energy efficiency gains per decade.[11] That's not enough to shift the needle on emissions reduction to where we need to be by 2050.

Our ability to accelerate emissions reductions is multiplied if we can significantly reduce the cost of efficiency and technology. The R&D institute combines the expertise of our design and innovation teams with the Haier SmartHome Group and other science and tech partners. Our research challenges provide the funding and timelines required for step-change innovation across appliances, platforms and whole-home solutions.

Finally, what are the key things that will get Fisher & Paykel to its 2050 emissions goal?

DANIEL All carbon emissions contribute to global warming; it makes no difference whether they are counted in Scope 1, 2, or 3. Our strategy is to focus on the areas of highest leverage, meaning the biggest savings of carbon emissions per unit investment or effort. We've developed an approach that connects what we are doing now with what we prioritise next, and the solutions that will deliver significant impact in the decades to come.

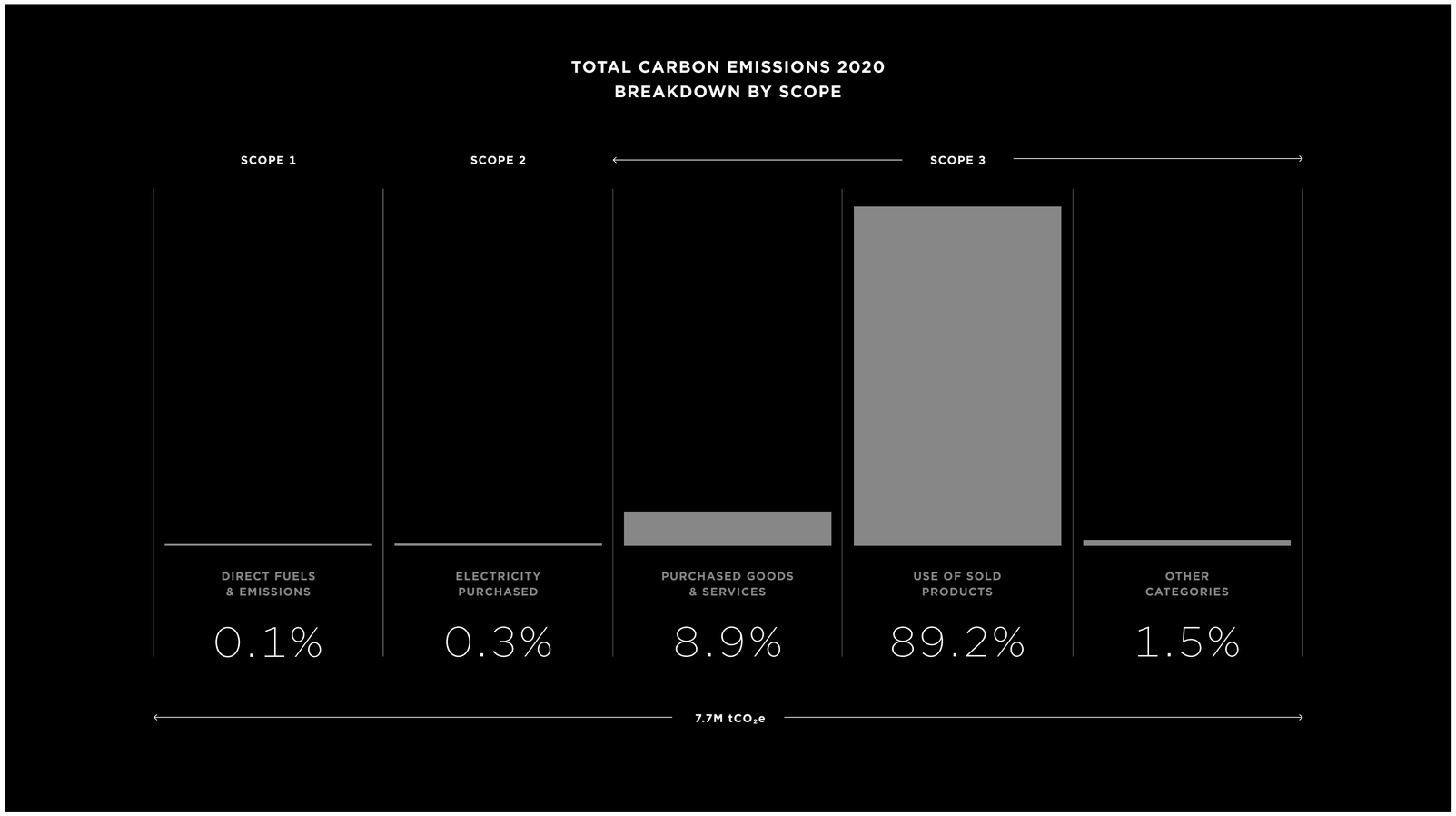
The first opportunity is to make carbon a lens for company choices at a facilities, fleet and supply chain level. Our carbon focus has been central to developing an approach that welcomes contributions from individuals and teams right across our company. Secondly, we have a pipeline of new, more energy-efficient appliances being delivered, as well as pioneering new technology platforms and connected ecosystems that will deliver greater efficiencies through integrated energy generation, storage and management.

We describe ourselves as the world's most human-centred appliance company. With that comes an obligation to support customers with information that makes carbon emissions part of purchase thinking, and to equip them with insights that will help maximise the energy efficiency of their appliances. In the end, impact at speed and scale requires a collective response in multiple areas.

OUR POSITION

2020 CARBON EMISSIONS ANALYSIS

Our approach to carbon emissions reduction is data and insight driven. We have worked with environmental consultants and sustainability experts thinkstep-anz and Sphera to produce a 2020 Greenhouse Gas Inventory Report aligned with the Greenhouse Gas Protocol and ISO 14064-1: 2018.[12]



Of our emissions, 99% are Scope 3. Most result from the household use of our appliances.

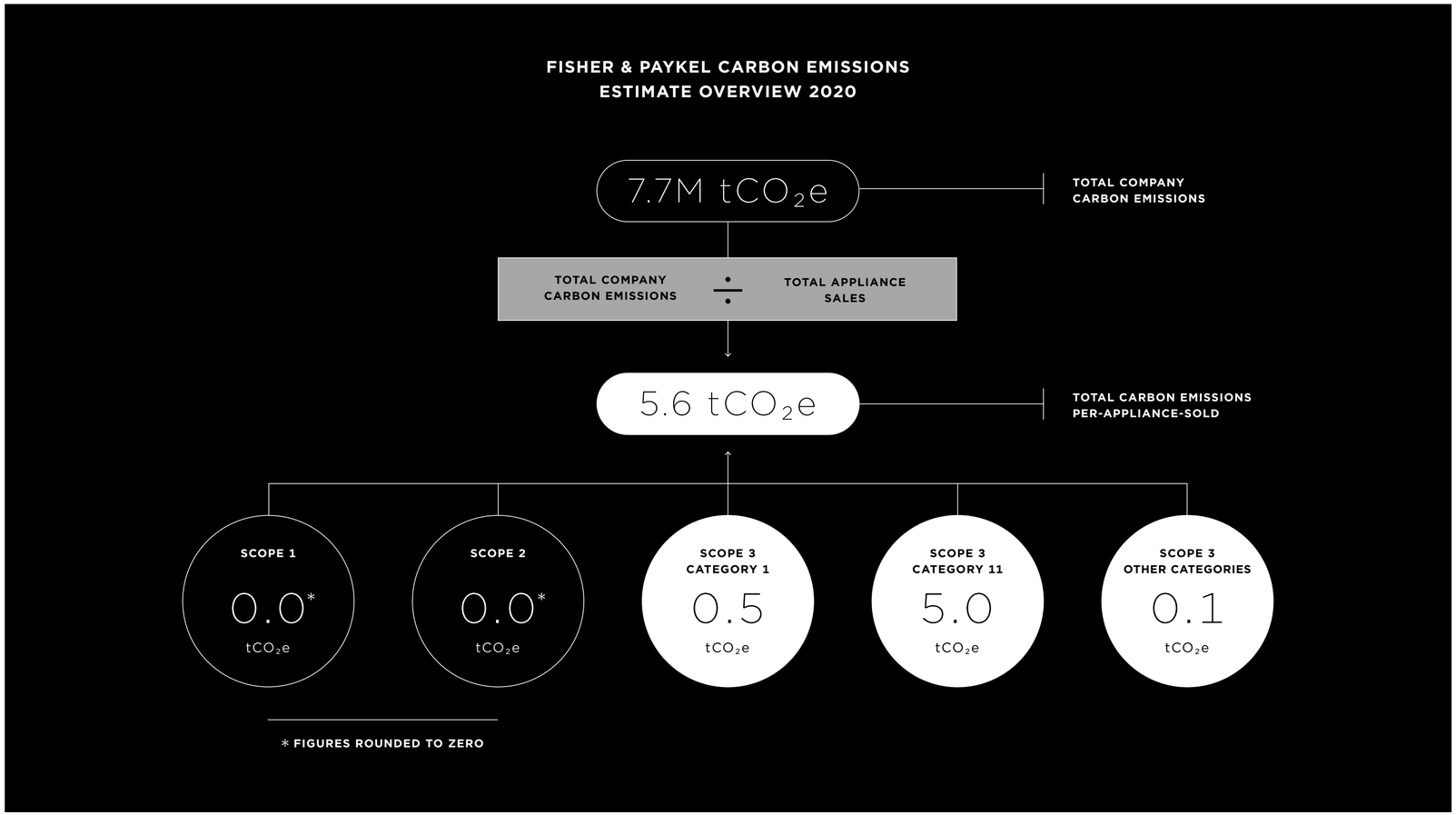
PER-APPLIANCE-SOLD METRICS

We have chosen to set our carbon goals using a per-appliance-sold metric. This is calculated by dividing our total carbon emissions by the number of appliances we sell in each reporting year.

By dividing our total carbon emissions by annual sales, we are able to track progress for each appliance we sell without potential distortion when changes in annual sales affect our total carbon emissions.

We have articulated our goals to encompass all three scopes of carbon emissions. We focus on the areas of highest leverage across all three scopes, meaning the biggest impact on carbon emissions per unit investment or effort. The per-appliance-sold metric will show our progress on the critical factors that we can control for emissions reduction, such as the energy efficiency of our products, and how we influence our customer's purchasing and usage choices.

While we have set our goals, and will assess our progress towards them using a per-appliance-sold metric, we will also continue to measure and report our total company carbon emissions for transparency. It is important to note that as we grow as a company, for example as we expand our product and service offerings and market share, it is possible that our total carbon emissions could increase.



Mapping the relationship between total emissions and per-appliance-sold emissions. Scope 1 and 2 emissions (0.005 and 0.016 tCO_2e respectively) round to 0.0.

A FULLY SCOPED INVENTORY

The baseline addresses Scope 1, Scope 2 and all 15 Scope 3 reporting categories of the Greenhouse Gas Protocol, as well as some optional reporting categories.

SCOPE 1 — 0.1% OF OUR 2020 BASELINE

The primary source of these carbon emissions was the fuel used by our company fleet, the LPG used for manufacturing, and refrigerant losses (R410A and R134A) in our factories.

SCOPE 2 — 0.3% OF OUR 2020 BASELINE

The majority of these carbon emissions were the result of the electricity consumed by our Thailand factory.

SCOPE 3 — 99.6% OF OUR 2020 BASELINE

The majority of Scope 3 carbon emissions — 89.2% — come from the Use of Sold Products (Scope 3, Category 11). This covers the energy usage of our appliances, refrigerant loss and indirect use-phase emissions including consumables, water usage and wastewater processing and servicing. While indirect use-phase carbon emissions are voluntarily reported under the Greenhouse Gas Protocol, we have included them as we are able to influence emissions reductions in these areas. Gaining a deeper understanding of emissions in these areas also highlights opportunities for carbon reductions.

TOTAL CARBON EMISSIONS 2020 REPORTING TABLE

		PER APPLIANCE SOLD tCO_2e	EMISSIONS tCO_2e	EMISSIONS %
SCOPE 1	DIRECT FUELS & EMISSIONS	0.0	6,712	0.1%
SCOPE 2	ELECTRICITY PURCHASED	0.0	21,770	0.3%
SCOPE 3	CATEGORY 1 PURCHASED GOODS & SERVICES	0.5	682,895	8.9%
	CATEGORY 11 USE OF SOLD PRODUCTS	5.0	6,828,252	89.2%
	OTHER CATEGORIES	0.1	116,542	1.5%
TOTAL EMISSIONS		5.6	7,656,171	100%

←

Baseline figures to be updated as new data is accounted for.

SCOPE 3 — CONTINUED

Purchased Goods and Services (Scope 3, Category 1) carbon emissions account for 8.9% of our 2020 baseline. The main sources of emissions in this category are the 'cradle-to-gate' emissions of appliances that we manufacture in our own factories or that we purchase as finished goods from third parties. 'Cradle-to-gate' covers the carbon emissions from raw material extraction up until when an appliance leaves the factory.

The balance of our Scope 3 carbon emissions are the result of capital expenditure, upstream energy and fuel emissions, freight, operational waste, business travel, commuting and appliance end-of-life processing. Combined, these account for 0.1% of our carbon emissions.

Upstream Leased Assets (Scope 3, Category 8), Processing of Sold Products (Scope 3, Category 10), Downstream Leased Assets (Scope 3, Category 13), Franchises (Scope 3, Category 14) and Investments (Scope 3, Category 15) were not applicable.

OUR BASELINE DATA CLEARLY IDENTIFIES OPPORTUNITIES FOR THE GREATEST IMPACT

OUR APPROACH TO MEASUREMENT

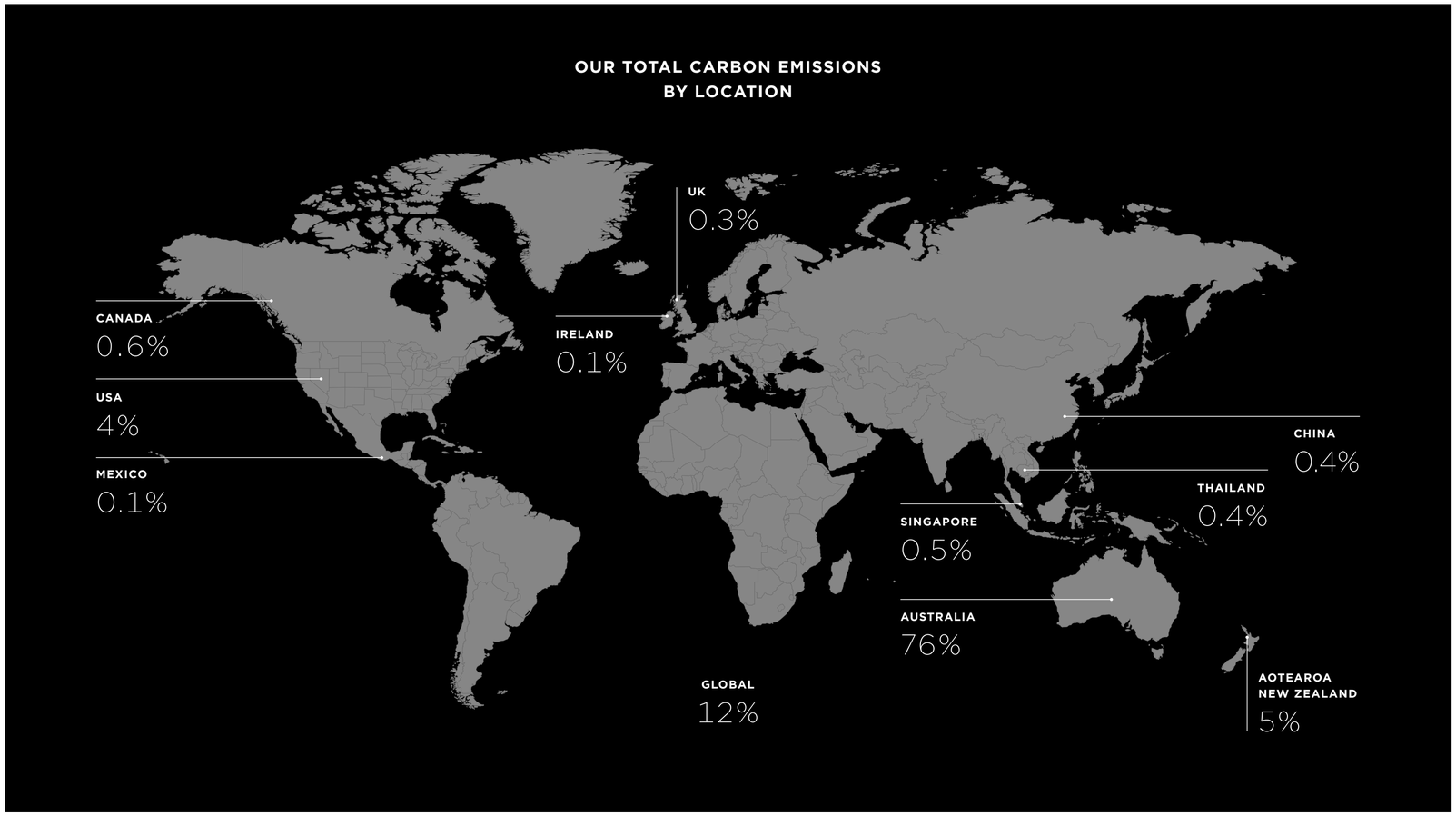
Carbon emissions accounting is challenging, particularly for Scope 3 categories that measure activity outside of our direct operations. Due to limited activity data, we currently rely heavily on secondary sources, assumptions, estimates or proxies in our carbon accounting. We were guided by our consultants, thinkstep-anz and Sphera, in this approach. Over time, we will continue to improve the accuracy of this data.

We have used activity data in our carbon emissions calculations where it is available. See the Important Information page at the end of this report for a detailed summary of assumptions and limitations.

While we continue to address all scopes of emissions, focusing on Scope 3 across short, medium and long term horizons gives us the most significant opportunity to reduce our carbon impact.

MAPPING IMPACT

We are a global company operating in multiple markets. Breaking down our carbon emissions by location shows the influence of three main factors that significantly affect our total emissions: sales quantity and the mix of appliances that our customers purchase in each of our markets, the efficiency of our appliances, and the carbon emissions intensity of the electricity grids in each market.[13]



In Australia, there are high carbon emissions associated with electricity production. This is taken into account in our carbon measurement of that market.

KEY CHALLENGES

1 REDUCING APPLIANCE-IN-USE EMISSIONS AT SPEED AND SCALE

After assessing our 2020 carbon emissions and identifying Scope 3's largest target areas, our challenge is to establish what can be achieved in a short-term timeframe.

Our teams are working to accelerate carbon emissions reductions within current technological and economic systems by developing more efficient appliances and influencing consumer preferences towards these solutions.

However, we believe more significant and disruptive innovation is required to achieve our goals. Achieving this requires leaps rather than steps — new appliances, new platforms and new ecosystems.

2 ACHIEVING CARBON EMISSIONS REDUCTIONS AND COMPANY GROWTH

In the future economy, environmental, social and commercial goals must exist in alignment, not in conflict.

Our aim is to be a leader in the transformation to a lower-carbon economy and to create increasing future value for our business, partners, customers and people.

To align these goals, we have set per-appliance-sold carbon emissions reduction goals. We believe our Carbon Impact Strategy will deliver better solutions to evolving customer needs, helping us win business from competitors, scaling up our positive impact.

3 HELPING CUSTOMERS REDUCE APPLIANCE IN-USE EMISSIONS

Customers often lack information about an appliance's operational carbon emissions. Providing easily accessible in-use energy carbon emissions estimates informs a customer's purchasing decisions to right size a solution-set to their needs.[14]

By harnessing performance data through Connected Appliances, we could help customers make lower-carbon choices in the day-to- day operation of such appliances. The potential of Connected Appliances is to illustrate relationships between daily choices — cycle, load size, time of operation — and carbon emissions. Over time, this will help us fully support the customer journey from purchase to daily use.

4 ACCELERATING THE TRANSITION TO LOWER-CARBON GLOBAL ENERGY

Fossil-fuel-based electricity generation currently accounts for just more than 60% of global generation.[15] Replacing carbon-intensive energy generation with lower-carbon sources will have the greatest impact on our emissions in relation to our Scope 3, 2020 baseline.

However, the global transition to a lower-carbon energy supply will take time, and we have limited influence over its speed. Our role in the transition is at an appliance and ecosystem level.

At an appliance level, optimising appliance efficiency will help lower emissions where energy is not yet lower-carbon, helping to address the potential overdemand on energy systems as fossil fuels are phased out.

At an ecosystem level, our Home Solutions energy generation and management options will help decarbonisation of homes by providing customers with lower-carbon electricity independence and optimisation.

5 COLLABORATING WITH GLOBAL PARTNERS ON NEW SOLUTIONS

Reducing appliance-in-use energy emissions will require the understanding and collaboration of our global network of suppliers.

We believe greater appliance-in-use carbon emissions reductions will be the result of collective effort, rather than the endeavour of any single company.

While we operate in competitive global markets, delivering emissions reductions at speed and scale will require the sharing of key insights with cross-sector partners who can contribute to fast-tracking impact and creating more opportunities for significant global carbon emissions reductions.

OUR STRATEGY

OVERVIEW

Our Carbon Impact Strategy is a lens that guides how we operate, how we create and how we collaborate to reach our carbon goals.

Our strategy is built on insights from our 2020 baseline; specifically, the significance of emissions sources and where we can most effectively make carbon reductions.

We can reduce our carbon emissions per-appliance-sold by taking action across our entire value chain, from the suppliers producing the raw materials we use to make our appliances, right through to the people using our appliances at home to preserve their food, cook delicious meals and care for cherished garments.

WE'RE PRIORITISING DECARBONISATION UPSTREAM AND DOWN

To address appliance-in-use carbon emissions, we have a role to play both in the design of more energy efficient appliances and the education of customers about their operational carbon emissions, at the time of purchase, and ways they can maximise an appliance's energy efficiency across its lifetime of use in the home.

Through investment in research and development, we will unlock step-change technological innovations, while the growth of our Home Solutions enterprise will make lower-carbon energy generation more accessible across Australasia. We will also work with our wider supply chain to make lower-carbon sourcing decisions.

While we have greater control over our operational carbon emissions compared to the rest of the value chain, our strategy reflects our commitment to look for the highest impact opportunities across Scopes 1, 2 and 3. Globally, electricity suppliers also have a role to play in providing lower-carbon energy generation, reducing the amount of carbon per kilowatt-hour in our markets.

With all other suppliers, who contribute around 9% of our 2020 baseline carbon emissions, we are seeking opportunities to source lower-carbon parts and raw materials while introducing new technologies that can reduce embodied carbon in our appliances and organisation.

BASELINE CARBON EMISSIONS 2020
SOURCE CONTRIBUTION

WHO CAN INFLUENCE REDUCTIONS OF THESE CARBON EMISSIONS?

	DIRECT FUELS & EMISSIONS	ELECTRICITY PURCHASED	PURCHASED GOODS & SERVICES	USE OF SOLD PRODUCTS	OTHER CATEGORIES
FISHER & PAYKEL APPLIANCES	●	●	●	●	●
OUR CUSTOMERS & USERS				●	
ELECTRICITY SUPPLIERS		●		●	
OTHER SUPPLIERS & PARTNERS	●		●	●	●

OUR CARBON IMPACT STRATEGY

1 NEW COMPANY CHOICES

Reducing carbon emissions in impactful ways across facilities, fleet and supply chain in all three scopes, including:

Transitioning to lower-carbon energy on company-owned sites.

Improving energy efficiency and reducing waste in all operations.

Sourcing lower-carbon raw materials for our appliances.

2 NEW PRODUCTS

Introducing appliances that are significantly more energy efficient, including:

Upgrading current appliance platforms and designing new appliances with significantly enhanced energy efficiency and lower lifetime carbon emissions.

Designing new appliance cycles that give consumers more opportunities to reduce energy consumption.

3 NEW CUSTOMER CHOICES

Developing solutions that maximise the energy efficiency of our current appliance portfolio, including:

Improving our product range with strategies to progressively eliminate the most carbon intensive appliances.

Influencing purchasing behaviour by helping customers understand the carbon emissions of different appliance choices.

Informing customers about optimising appliance use to minimise energy-related carbon emissions. Also providing insights into how our appliances can help customers avoid carbon emissions, e.g. by reducing food waste or fabric wear and tear.

4 NEW TECHNOLOGIES

Investing in research, development and disruptive innovation to fast-track home energy use decarbonisation.

Establishing the Fisher & Paykel Carbon Zero SmartHome R&D Institute, we've begun investing in performance innovation across appliances, platforms and whole-of-home solutions, providing opportunities to:

Accelerate carbon emissions reductions at scale through significant energy efficiency and technology cost reductions.

Combine our design, manufacturing and innovation expertise with the Haier SmartHome Group and other expert partners, globally.

5 NEW ECOSYSTEMS

Contributing to the creation of carbon net zero homes through integrated energy generation and management, and data-driven ecosystems.

Evolving connected appliance ecosystems to support carbon emissions reduction through load-shifting and releasing new software updates that deliver additional energy-efficiency benefits.

ABOUT OUR CARBON IMPACT ROADMAP

Our roadmap reflects the best of our current knowledge on how we will achieve our 2030 and 2050 goals. Naturally, we are clearer on the near-term actions we can take to achieve our 2030 goals, as we work to increase the trajectory of energy and carbon emissions reduction we will need to maintain through 2050.

We will gain more clarity on the longer-term breakthroughs we need to achieve our 2050 goals in the coming years, both through the step-change technologies from our own R&D Institute and the benefits from wider industry and government as they tackle variables such as national grid decarbonisation and the development of lower carbon technologies. We will monitor and share our progress and update our roadmap to reflect our strategy over time.

OUR CARBON IMPACT ROADMAP 2024

	STRATEGY	CURRENT TARGETS	ADDITIONAL FUTURE OPPORTUNITIES
1	NEW COMPANY CHOICES	Transition sites and vehicles from fossil fuels to renewable energy Work with key suppliers to reduce carbon emissions for parts and materials	Choose lower-carbon manufacturing, logistics and travel
2	NEW PRODUCTS	New appliances prioritise class-leading energy performance Eliminate refrigerants with high global warming potential	Breakthrough technologies enable new appliance platforms
3	NEW CUSTOMER CHOICES	Marketing to influence consumer demand towards our most efficient appliances User guidance on energy consumption and carbon emissions in real use	Lower-carbon business models
4	NEW TECHNOLOGIES	Develop breakthrough technologies with Carbon Zero SmartHome R&D Institute	Lower-carbon technologies
5	NEW ECOSYSTEMS	Fisher & Paykel Home Solutions Business as the leading Whole Home Energy Solution provider in Australasia	Lower-carbon partnerships
	CARBON GOAL Reduce carbon emissions per-appliance-sold from our 2020 baseline	↓ 50% BY 2030	↓ 90% BY 2050

Our roadmap aligns with the five key areas of our Carbon Impact Strategy.

OUR PROGRESS

CASE STUDIES

From new company choices to the creation of new ecosystems, the following select case studies show how we are bringing our Carbon Impact Strategy to life across Scopes 1, 2 and 3. We will update our case studies annually to share our progress.

NEW COMPANY CHOICES

Four company-level actions contributing to carbon emissions reduction and energy efficiency improvements across facilities, fleet and supply chain.

1 IMPROVING ENERGY EFFICIENCY IN OUR AUSTRALIAN DISTRIBUTION CENTRES

Investing in renewable energy generation across our Australian operations.

Our Australian operations are aiming for all new distribution centre builds to achieve 6 Green Star ratings from the Green Building Council of Australia.

Solar panels have been installed in our new Brisbane and Perth distribution centres, reducing our electricity carbon emissions and reliance on local electricity grids. We estimate the annual carbon emissions savings of these panels to be 195 tCO_2e, or 0.1 $kgCO_2e$ per-appliance-sold.[16] Our new Sydney and Melbourne distribution centres are due for completion in 2025 and are being scoped for maximum solar generation capacity.

Additionally, all new Australian distribution centre builds have been fitted with 100% LED lighting, with work underway to retrofit existing distribution centres with motion-controlled LED lighting systems.

OUR AUSTRALIAN OPERATIONS HAVE TRANSITIONED TO 100% ELECTRIC FORKLIFTS

2 REDUCING EMISSIONS WITH MORE EFFICIENT SHIPPING PRACTICES

Optimising shipping container occupancy to reduce our supply chain's carbon emissions.

In 2021, with shipping container occupancy sitting at 69%, we investigated new ways to improve the spatial configuration of appliances within containers, including occupying unused space by top stowing HRF450 refrigerator models shipped from China. This equates to the removal of roughly 40 high cube containers from our China to Australia/New Zealand route per month in 2023, saving an estimated 266 tCO_2e per year or 0.2 $kgCO_2e$ per-appliance-sold.[17]

3 REDUCING POWER CONSUMPTION WITH A VARIABLE SPEED DRIVE

A technology upgrade to increase the energy efficiency of our Thailand factory.

Installing a Variable Speed Drive (VSD) to our Thailand factory's air compressor is contributing to reduced Scope 2 emissions. Rather than running the compressor at a constant speed, the VSD adjusts the speed and power of the compressor to match system demands, resulting in an estimated annual emissions savings of 755 tCO_2e or 0.6 $kgCO_2e$ per-appliance-sold.[18]

4 TRANSITIONING TO A LOWER CARBON SERVICE FLEET

Transitioning to a full electric and hybrid delivery, installation, distribution and logistics vehicles.

We have begun to transition our global vehicle fleet to electric and hybrid alternatives. Our Singapore operations have transitioned to a 100% electric service fleet, while our Australian operations have purchased eight hybrid delivery and installation trucks and 20 hybrid cars. We estimate these replacement vehicles will save approximately 79tCO_2e per year or 0.1 $kgCO_2e$ per-appliance-sold.[19]

NEW PRODUCTS

Refrigeration that goes beyond significant energy efficiency gains to lift food preservation to new levels and help avoid food waste. And next generation washing machines and dishwashers with significantly improved energy efficiency.

1 RS60 REFRIGERATOR FOOD CARE AND ENERGY

A more efficient refrigeration solution designed to help preserve food freshness and avoid food waste.

We have combined decades of refrigeration expertise with the thermal insulation properties of Vacuum Insulated Panels (VIPs) to develop a new refrigeration platform. It offers significant energy-efficiency gains compared to the same model configured with no VIPs.

ESTIMATED IN-USE ENERGY CARBON EMISSIONS REDUCTIONS OF RS60 REFRIGERATORS WITH VACUUM INSULATED PANELS COMPARED TO THE SAME MODEL WITH NO VIPS [20]

APPLIANCE	MODEL	ESTIMATED IN-USE ENERGY CARBON REDUCTIONS
Integrated Dual-Zone Refrigerator	RS6019S	20%
Integrated Dual-Zone Freezer	RS6019F	20%
Integrated Refrigerator Freezer	RS6019BU	18%

While food waste is out of scope in our carbon emissions measurement, food waste is responsible for roughly 8% of the world's carbon emissions.[21]

Addressing food waste helps to avoid the carbon emissions associated with the food chain inputs upstream of the consumer, including production, processing and transportation of food. Our Variable Temperature Zone (VTZ) technology helps keeps food fresher for longer to help customers to avoid food waste.

VARIABLE TEMPERATURE ZONES ARE AN EXAMPLE OF HOW WE ARE WORKING TO COMBAT FOOD WASTE

VTZ technology is a more nuanced evolution to household food preservation beyond the 'fridge and freezer'. VTZs were created around the insight that not all food items should be stored in the same way and at the same temperature. Every food has an ideal climate for optimal preservation and even subtle changes in temperature and humidity can compromise shelf life.

In the RS60 and other appliances equipped with temperature zones, each climate zone can be optimised to specifically suit a food type, based on degree of ripeness and anticipated time of preparation, keeping food fresher for longer to help avoid food wastage. Zones are powered by ActiveSmart™ technology, which combines a microprocessor, interior sensors, independently controlled variable-speed fans and multiple air-ducts to ensure consistent temperatures and relative humidity levels.

2 WASHING MACHINE EFFICIENCY IMPROVEMENTS

For decades, we have been continuously improving the energy and water efficiencies of our front loading and top loading washing machines.

In 2020, our most popular top loading washing machine was an 8.5 kg capacity appliance with a 2.5-star energy rating in Australasia. With subsequent improvements, the energy efficiency of our new Australasian models has risen to an impressive 4.5-star energy rating. Our new 9 kg capacity top loader, which has a 4.5-star energy rating, estimated to reduce annual energy consumption and in-use energy carbon emissions by 50% — while washing an extra half-kilo — compared to the 2020, 8.5 kg appliance.[22]

By virtue of their design, front loading washing machines are more resource efficient than top loading, and we've also continued to improve their energy efficiency. The most popular front loading washing machine sold in 2020 was an 8 kg capacity washer with a 4-star energy rating in Australasia. Several new front loaders were released to market at the end of 2020, all with 4.5-star energy ratings. This half-star increase in energy efficiency is estimated to reduce the annual energy, and annual in-use energy carbon emissions, of the 8 kg washer by 20%.[23]

WASHING MACHINE IN-USE ENERGY CARBON EMISSIONS REDUCTION [24]

APPLIANCE	MODEL 2020	MODEL 2023	ESTIMATED IN-USE ENERGY CARBON EMISSIONS REDUCTIONS
Top Loader	WA8560G1	WL9058G1	50%
Front Loader	WH8060J3	WH8060P3	20%

3 NEXT GENERATION DISHWASHERS ECO CYCLE ENERGY EFFICIENCY

Designing dishwashing solutions for better performance and greater energy efficiency.

Analysing a dishwasher's in-use emissions, water heating via electricity is the single-biggest contributing factor. Understanding this, our product development focus has been on reducing wash temperatures across our range of new appliances, without loss of performance.

In 2023, we updated our drop-door dishwasher appliance portfolio with a series of more energy efficient models. Designed with new drying technology, they operate at lower temperatures across Eco and other cycles. When dishes are washed using the Eco Cycle, the energy requirements between the 2020 model and the newer model are approximately 15% lower, resulting in a proportionate estimated reduction in in-use energy carbon emissions in the Australasian market.

DISHWASHER IN-USE ENERGY CARBON EMISSIONS REDUCTION [25]

APPLIANCE	MODEL 2020	MODEL 2023	ESTIMATED IN-USE ENERGY CARBON EMISSIONS REDUCTIONS
Series 5 Dishwasher	DW60FC2X1	DW60FC2X2	14%
Series 7 Dishwasher	DW60FC6X1	DW60FC24X2	16%

4 HEAT PUMP HOT WATER SYSTEMS

Our highly efficient, lower-carbon water heating units are designed using refrigerants with a very low Global Warming Potential.

Water heating accounts for approximately 25% of home energy use in Australia and is typically the second largest energy expense after space heating and cooling at approximately 40%.[26]

Highly efficient, and developed with household energy savings in mind, our heat pump hot water heaters require less electricity than conventional hot water heating systems.[27]

They use R290 refrigerant with the low Global Warming Potential (GWP) rating of 3 (the lower the number the better). GWP measures the ability of a greenhouse gas to trap heat in the atmosphere over time relative to carbon dioxide. This indicates how much each greenhouse gas contributes to climate change.[28]

Unlike a traditional water heater, heat pumps work like a refrigerator in reverse, pulling heat from the surrounding air and transferring it at a higher temperature to heat water in a storage tank, reducing energy consumption.

Our heat pump hot water systems are smart — they can be set to preheat water at specific times, making the most of solar energy or leveraging off-peak grid power. Through integration with photovoltaic arrays, they allow surplus solar energy to be stored by heating water above the normal temperature.

LESS ENERGY USED EQUATES TO LOWER IN-USE CARBON EMISSIONS

NEW CUSTOMER CHOICES

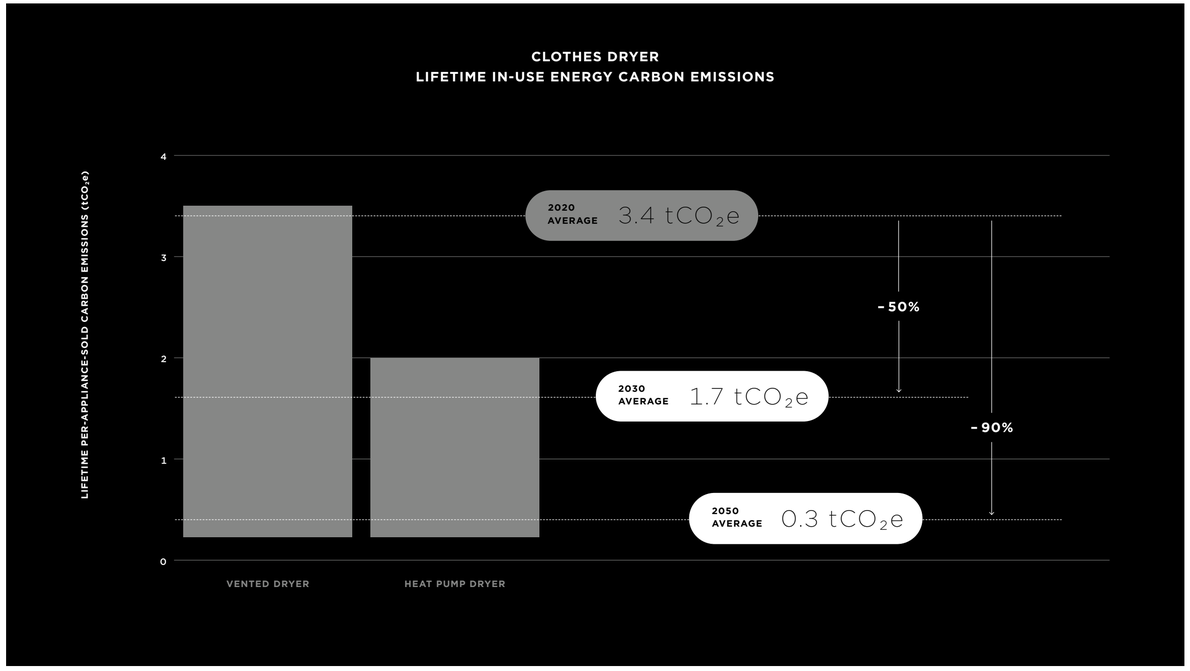
Influencing purchasing behaviour towards the most energy efficient appliance solutions within our existing product portfolio.

1 LOWER CARBON HEAT PUMP DRYERS

Driving customer preference towards more energy efficient appliances.

Compared with heater-element clothes dryers, heat pump clothes dryers typically use around 50% of the energy for the same-sized garment load. They also operate at lower temperatures, reducing garment stress.

In Australia, we've focused on increasing heat pump dryers sales through the introduction of improved models and targeted marketing. Our heat pump dryer unit share has increased from 9% of our total sales in 2020 to 26% in 2022. In 2022, consumer preference for heat pump rather than heater-element dryers avoided an estimated 50,000 tCO_2e of emissions, or 35 $kgCO_2e$ per-appliance-sold.[29]



Projecting carbon emissions reductions per appliance in the clothes dryer category.[30]

NEW TECHNOLOGIES

Because the incremental energy efficiency gains of traditional product development cycles are not enough to shift the needle on carbon emissions by 2050, we're investing in research and innovation with the potential to fast-track home energy decarbonisation.

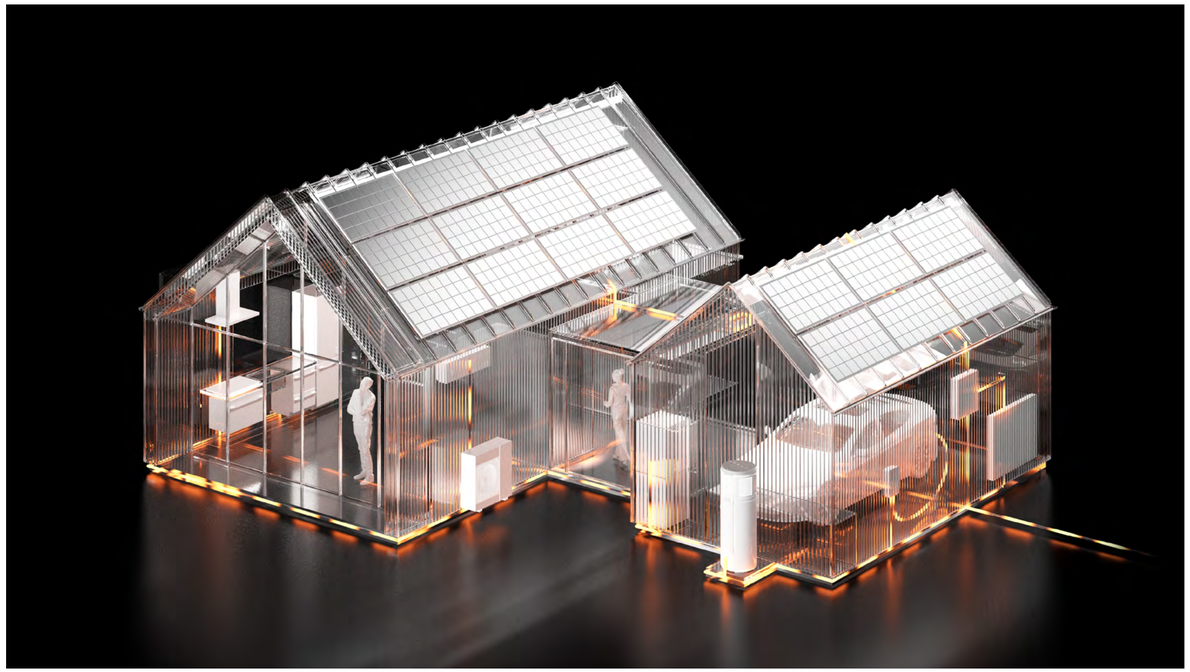
1 CARBON ZERO SMARTHOME R&D INSTITUTE

In 2022, we established the Carbon Zero SmartHome R&D Institute, an enterprise with a mandate to create and invest in global partnerships that can meaningfully contribute to home decarbonisation.

Two insights underpin the institute's founding. Firstly, the decarbonisation of national electricity grids will be challenged by increasing demand, as transport and process-energy is electrified. Secondly, the carbon gap is too large to close with incremental improvement in construction technology, home appliance technology and energy efficiency.

THE R&D INSTITUTE IDENTIFIES AREAS WITH POTENTIAL FOR SIGNIFICANT CARBON REDUCTION

Our R&D institute is set up to consider the whole-of-home ecosystem — home appliance design, home energy generation, storage and management, and home design and construction. It will invest in long-term innovation, establishing systems, processes and teams to explore new science and technologies, and look for opportunities to amplify innovation through the global expertise of the Haier SmartHome Group and cross-sector partners.



In 2022, the R&D Institute and the New Zealand Product Accelerator launched a first research challenge into thermal insulation performance: how reducing heat-transfer in temperature-controlled appliances can significantly reduce energy consumption. The resulting project, led by GNS Science with Fisher & Paykel contributing application knowledge and business context, has confirmed funding and work streams underway.

NEW ECOSYSTEMS

Contributing to the creation of carbon net zero homes through integrated energy generation and management systems, and to the overall energy efficiency of the home through data-driven ecosystems.

1 FISHER & PAYKEL HOME SOLUTIONS IN AUSTRALASIA

Thinking outside the grid to help create homes that are carbon net zero energy micro-grids.

Conventional houses are typically exclusively grid-reliant for their electricity needs. However, as we transition to a 100% electric future, our homes will use an estimated three times the amount of electricity they have required in the past.[31]

Rethinking each home as an optimised system with minimal grid draw-down requirements is a way to contribute to more resilient national electricity networks and contribute to achieving the world's decarbonisation targets.[32]

Fisher & Paykel Home Solutions addresses Scope 3 carbon emissions through a systems based approach to home energy generation and management. The new enterprise combines design options around size and requirements, based on location, dimension, and the electricity usage of the home, with integrated energy and comfort systems that include solar generation, an optimised mix of appliances, smart metering and the Internet of Things.

Our objective is 100% electric homes specified to the carbon goals of the homeowner — whether that is simply greater energy efficiency, with flexibility for scaling over time, or full carbon net zero energy living.

Ultimately, the combination of home energy generation and storage will contribute to the resilience of our future electricity grids, with fewer high-energy peaks when power is expensive or more carbon intensive.

WE'RE APPROACHING HOME ENERGY AS AN INTEGRATED SYSTEM

SUMMARY

SUMMARY

For 90 years, Fisher & Paykel Appliances has designed the future. We're at the beginning of our decarbonisation journey but have a long history of sustainability focused decision making.

Our goal is to reduce carbon emissions per-appliance-sold by 50% by 2030 and by 90% by 2050 from a 2020 baseline, while also achieving company growth.

For our business, Scope 3 is where our greatest emissions lie and where we will have the greatest impact. Reimagining our appliances is fundamental to achieving our goals because emissions reduction combined with increased market share creates a compounding effect.

To counter this, we need to radically rethink the way we design appliances and technology platforms, and how they operate in larger energy ecosystems within the homes of our customers. Some improvements will be iterative, but the most significant improvements will be the result of step-change innovations. At this stage we don't have all the answers or technologies to deliver the transformational change required to achieve our commitments. What we do know today is reflected in our Carbon Impact Strategy and Roadmap.

WE'RE A LEGACY BUSINESS WITH A CLEAR VIEW OF THE CHANGES REQUIRED TO MAKE A POSITIVE IMPACT

Our carbon goals are an opportunity to inspire our teams to design and deliver better appliances—appliances that will deliver better customer outcomes and experiences, and better environmental and climate outcomes.

If we can approach this challenge with relentless optimism, harnessing the pioneering spirit that Fisher & Paykel was founded on, we will make a meaningful contribution to per-appliance-sold carbon emissions reduction for our company, our customers and our collective future.

APPENDIX

IMPORTANT INFORMATION

We voluntarily report our carbon emissions as context for our Carbon Impact Statement.

This summary outlines the boundaries, scope of measurement and key limitations of our carbon emissions inventory.

1 2020 INVENTORY

thinkstep-anz prepared our 2020 baseline carbon emissions inventory in accordance with:

Standards:
- ISO 14064-1:2018 — Greenhouse Gases Part 1
- Greenhouse Gas Protocol — a Corporate Accounting and Reporting Standard
- Greenhouse Gas Protocol — a Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Guidance:
- Greenhouse Gas Protocol — Scope 2 Guidance
- Greenhouse Gas Protocol — Scope 3 Calculation Guidance

Our inventory was reviewed by Sphera, a provider of Environmental, Social and Governance (ESG) performance and risk management software, data and consulting services.

The inventory covers 1 January 2020 to 31 December 2020.

Our 2020 GHG Inventory has been independently audited by Toitū Envirocare against the following audit criteria:

- ISO 14064-1:2018
- ISO 14064-3:2019
- Audit & Certification Technical Requirements 3.0

Reasonable assurance was carried out to verify Categories 1, 2, 3 (Staff Commuting) and 4 (Waste).

Limited assurance was carried out to verify Categories 3 (excluding Staff Commuting), 4 (excluding Waste). Limited assurance was carried out to validate Category 5.

2 ORGANISATIONAL BOUNDARIES

We use the operational control approach under the Greenhouse Gas Protocol to define our organisational boundaries for carbon accounting.

The inventory covers the activities of Fisher & Paykel Appliances Limited and all of its subsidiaries, with the following exceptions:

- Any activities Fisher & Paykel Appliances Limited and its subsidiaries carry out relating to the Fisher & Paykel Technologies business
- Any activities occurring in Fisher & Paykel Appliances' Italian factory, which has been sold after 2020.

3 SCOPE OF MEASUREMENT

Measurement covers the Scope 1, Scope 2 and all 15 Scope 3 Categories under the Greenhouse Gas Protocol.

Some optional carbon emissions sources are also included in measurement and the totals in our Carbon Impact Statement.

SCOPE	CATEGORY		INCLUSION AND/OR APPLICABILITY FOR FPA	OPTIONAL CARBON EMISSIONS INCLUDED IN SOURCE AND CATEGORY
1			Included	Direct emissions from R22 refrigerant losses
2			Included	–
3	1	Purchased goods and services	Included	–
	2	Capital goods	Included	–
	3	Fuel and energy related activities	Included	–
	4	Upstream transportation and distribution	Included	–
	5	Waste generated in operations	Included	–
	6	Business Travel	Included	Hotel stays
	7	Employee commuting	Included	Employee remote working
	8	Upstream leased assets	N/A — Carbon emissions from upstream leased assets are included in Scope 1&2	–
	9	Downstream transportation and distribution	Included	–
	10	Processing of sold products	N/A — Our appliances are sold as finished goods	–
	11	Use of sold products	Included	Indirect use phase activities from water usage and wastewater processing, consumables and servicing
	12	End-of life treatment of sold products	Included	Transportation of appliances to a landfill or recycling facility
	13	Downstream leased assets	N/A — We are not a lessor	–
	14	Franchises	N/A — We do not operate franchises	–
	15	Investments	N/A — Scope 1&2 carbon emissions of any subsidiaries that are invested in by other subsidiaries within Fisher & Paykel Limited have already been accounted for under Scope 1&2	–

4 KEY ASSUMPTIONS AND LIMITATIONS

Carbon emissions accounting is inherently challenging, particularly for Scope 3 Categories that measure activity outside of our direct operations.

Where necessary due to a lack of activity data, we rely on secondary sources, assumptions, estimates or proxies in our carbon emissions accounting. We were guided by our consultants, thinkstep-anz and Sphera, in this approach.

Key limitations and assumptions relating to our two most significant carbon emissions categories are summarised below:

i. Purchased Goods and Services (Scope 3, Category 1) assumptions and limitations

Purchased goods and services covers:

a. Production-related goods and services:

- Where necessary due to a lack of data, production-related goods and services carbon emissions are spend-based estimates using China Eora (2015) factors adjusted for 2020 inflation.

b. Non-production related goods and services:

- Where necessary due to a lack of data, Purchased Finished Goods (appliances that are manufactured on our behalf) are proxied based on the average raw material production emissions of an appliance produced in a Fisher & Paykel factory. Note: While Finished Goods are technically non-production related goods under the Greenhouse Gas Protocol, we have chosen to report these under 'Appliance Production' in our Carbon Impact reporting for simplicity and to align with our internal strategy.
- Where necessary, all other non-production related goods and services carbon emissions are spend-based estimates using New Zealand Eora (2015) factors adjusted for 2020 inflation.

Limitations of the spend-based method

- 'Spend-based' estimates are widely used in carbon accounting however they do have limitations. For example, they assume a linear correlation between emissions and spend and lack specificity of actual manufacturing and production processes. While we are using China Eora factors for production-related spend, we understand that our suppliers will manufacture in other countries. While we are using New Zealand Eora factors for non-production related spend, we do have spend in markets outside of New Zealand.

ii. Use of Sold Products (Scope 3, Category 11) assumptions and limitations

- Use of sold products estimates the lifetime in-use energy carbon emissions of Fisher & Paykel branded appliances, Haier branded appliances and DCS branded appliances sold in a year. Spare parts and accessories that do not require energy to operate are excluded from measurement.
- For the purposes of our carbon emissions accounting, a lifetime of 20 years is assumed for all appliances.
- Lifetime carbon emissions covers:

a. Energy (fuel and/or electricity use of an appliance)

- Appliance energy usage is estimated based on the energy consumption data set out on the country/region-specific regulated energy standards label. These Energy Labels state how much energy an appliance uses during its operation in specific test conditions. Appliances with no energy label are proxied based on a comparative appliance's energy label where possible or an appliance category average value where necessary. These were extrapolated out to a lifetime energy usage using annual usage factors in the relevant market's standards methodology.
- For select appliances that belong to appliance categories that do not have mandated energy labels in any of our markets, we estimated lifetime energy usage based on internal data. These appliances represent a very small proportion of 2020 sales.
- A country-specific electricity emissions factor was used based on the market the appliance is sold into. Due to data availability in 2020, the UK emissions factor was used for appliances sold into the European Union, the Singapore emissions factor was used for appliances sold into South East Asia and the New Zealand emissions factor was used for appliances sold into the Pacific. To be conservative, all gas fuelled cookware was modelled with LPG rather than propane.

b. Refrigerant Losses

- Where applicable, refrigerant loss over the appliance's lifetime is estimated to be 50% of the total amount of refrigerant charged during manufacture. Emissions factors for refrigerant gases are sourced from the New Zealand Ministry of the Environment.

c. Consumables usage where applicable

- Consumable dosage rates are based on internal data. Consumables are assumed to be dosed once per day over an appliance's lifetime. Emission factors for consumables were modelled by thinkstep-anz using Sphera's GaBi database (2021).

d. Water usage and wastewater treatment where applicable

- Appliance water usage is estimated based on the water usage data set out on the country-specific regulated water standards label. These water labels state how much water an appliance uses during its operation in specific test conditions. Appliances with no water label are proxied based on a comparative appliance's water label where possible or an appliance category average value where necessary. These were extrapolated out to a lifetime water usage using annual usage factors in the relevant market's standards methodology.
- Where necessary due to a lack of a country specific water and wastewater emissions factor, country-

specific emission factors were modelled by thinkstep-anz using Sphera's GaBi database (2021).

e. Servicing of appliances

- DCS appliances were assumed to not require servicing as they are primarily outdoor cooking appliances.
- Servicing carbon emissions for Haier branded and Fisher & Paykel branded appliances covers:

- **Production of replacement parts**
  - Estimated by scaling the average production carbon emissions of an appliance manufactured in a Fisher & Paykel factory down using the weight difference between an average appliance and an average spare part. Total spare parts is based on internal data showing the estimated percentage of appliances sold requiring replacement parts over lifetime.

- **Mileage of service callouts**
  - Estimated using an assumed 30km round trip by a diesel vehicle >3000cc and internal data estimating the percentage of service callouts carried out by external contractors over the lifetime of the appliance (internal contractor emissions are already covered under Scope 1). The carbon emissions factor for the diesel vehicle per km is from the New Zealand Ministry for the Environment emissions factors.

Key limitations of in-use assumptions

- Accounting for the lifetime emissions of electronic appliances is low in certainty. Our estimates and assumptions will differ from actual use.
- Actual consumer energy consumption and/or water usage will differ to the regulatory test conditions that we base our estimates due to variables such as cycle choice, temperature selection, load size and soilage of dishes or clothes.
- Actual consumables usage and dosage patterns and servicing requirements will also differ to our assumptions and estimates.
- We account for an appliance's assumed 20-year lifetime from the year it is sold, assuming a constant emissions factor for all 20 years. Over time, it's expected that the emissions factor will change as the carbon intensity of electricity grids change.
- Electricity emissions factors are typically average for a country or region and a calendar year. The actual emissions for an electricity source will vary depending on the location, season, time of day and energy source.

5 LIMITATIONS OF FORWARD-LOOKING STATEMENTS

Any forward-looking statements reflect our future intentions and expectations as at date of publication. These statements are not guarantees of future outcomes and are subject to risks and uncertainties which may result in outcomes being different from those stated in this Carbon Impact Statement.

We have relied on guidance, data or other information from third parties in forming our strategy which is also subject to risks and uncertainties and may change.

This Carbon Impact Statement is prepared in good faith and with the best of our current knowledge to date, however we reserve the right to change our approach in the future.

ENDNOTES

[1] Josh Gabbatiss, “Record clean-power growth in 2023 to spark ‘new era’ of fossil fuel decline,” World Economic Forum, Apr 17, 2023, https://www.weforum.org/agenda/2023/04/record-clean-power-growth-in-2023-to-spark-new-era-of-fossil-fuel-decline

[2] Gabbatiss, “Record clean-power growth”.

[3] CDP Technical Note: Relevance of Scope 3 Categories by Sector, revised versions, 25 Jan, 2023, p.6, https://cdn.cdp.net/cdp-production/cms/guidance_docs/pdfs/000/003/504/original/CDP-technical-note-scope-3-relevance-by-sector.pdf?1649687608

[4] National Oceanic and Atmospheric Administration (NOAA), “Climate Change: Atmospheric Carbon Dioxide”, 12 May, 2023, https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide

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[6] Economist Impact, “No business decarbonisation without supply-chain buy-in”, https://impact.economist.com/sustainability/net-zero-and-energy/no-business-decarbonisation-without-supply-chain-buy-in

[7] Ministry of Business, Innovation and Employment, 17 August, 2023, “Energy in New Zealand 2023 shows renewable electricity generation increased to 87%”, https://www.mbie.govt.nz/about/news/energy-in-new-zealand-2023-shows-renewable-electricity-generation-increased-to-87-percent

[8] Ember, “Tracking national ambition towards a global tripling of renewables”, accessed 29 Nov, 2023, https://ember-climate.org/insights/research/tracking-national-ambition-towards-a-global-tripling-of-renewables

[9] Architecture 2030, “Why the Built Environment?”, accessed 29 Nov, 2023, https://www.architecture2030.org/why-the-built-environment

[10] IEA, “Solar PV and wind supply about 40% of building electricity use by 2030”, September 2022, https://www.iea.org/reports/solar-pv-and-wind-supply-about-40-of-building-electricity-use-by-2030

[11] Dr Sam Brooks and Professor Rajkumar Roy, “Fridge 2050”, p.4, https://www.city.ac.uk/__data/assets/pdf_file/0006/674709/Fridge-2050-The-Future-of-Large-Domestic-Appliances.pdf

[12] Thinkstep-anz, Greenhouse Gas Inventory Report on behalf of Fisher & Paykel Appliances, Nov 2023.

[13] Carbon grid intensity or grid emission factor: refers to the CO_2 emission factor (tCO_2/MWh) associated with each unit of electricity provided by an electricity system.

[14] Our in-use energy carbon emissions estimates are calculated as follows. Energy Consumption Data (kWh) x Emissions Factor ($kgCO_2e/kWh$) = In-Use Energy Carbon Emissions Estimate ($kgCO_2e$). The energy consumption data is set out on the product’s energy label, stating how much energy a product uses during operation in specific testing conditions. Energy labels are only available for some products in some markets and will differ from real use scenarios. We use the International Energy Agency (IEA)’s emission factors to calculate the $kgCO_2e/kWh$. These are typically averaged over a year at a country level and will differ from real use scenarios.

[15] IEA, “Electricity”, accessed 29 Nov, 2023, https://www.iea.org/energy-system/electricity

[16] Estimated carbon emissions savings based on the difference between carbon emissions produced from 150,000 kWh electricity for Brisbane and Perth respectively from solar and the Australian grid. 150,000 kWh is an estimate of annual electricity generated from a 100 kW panel, based on https://www.solarrun.com.au/100kw-solar-system. Carbon emissions from solar generation ‘behind the meter’ are treated as zero emissions following Climate Active, Electricity Accounting, Aug, 2023. https://www.climateactive.org.au/sites/default/files/2023-08/Climate-Active-Electricity-Accounting%20-%20PDF.pdf. The carbon emissions factor used for Australian grid electricity is *Australia (CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor), IEA (2023), Emission Factors.*

[17] Estimated carbon emissions savings based on 480 40 ft High Cube (HC) empty containers travelling from Qingdao Port to Fisher & Paykel Australasian Ports by sea freight. Port-to-port distance estimated as 8,876 km, based on the average distance from Qingdao Port to each Fisher & Paykel Australasian port, weighted by the frequency of shipments on each route in 2022. Total weight avoided from shipping 480 40 ft HC containers estimated at 1,872 t, based on the tare weight of a 40 ft HC container as 3900 kg, https://www.bws.net/toolbox/container-specifications/40-foot-dry-high-cube. The carbon emissions factor used for sea freight is *International Shipping, Container Ship, Average per tkm, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.*

[18] Estimated carbon savings based on electricity savings of 1,603,700 kWh per year, comparing our Thailand factory’s air compressor’s electricity requirements with and without a VSD compressor installed. The carbon emissions factor used for Thailand grid electricity is *Thailand (CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor), IEA (2023), Emission Factors.*

[19] Estimated carbon emissions savings based on a comparison between 4 EV trucks and 4 diesel trucks travelling 83,200 km per year (combined for 4 vans). Estimated mileage is based on an odometer reading from a Singapore Service Van. Electricity consumed to charge the 4 EV trucks is estimated at 13,949.9 kWh/yr based on BYD T3 brochure specifications of 50.3 kWh consumed per 300km. The carbon emissions factor used for Singapore grid electricity is *Singapore (CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor), IEA (2023), Emission Factors.*

The carbon emissions factor used for diesel vans is *Road freight, Default light commercial vehicle, Diesel per km, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.*

Estimated carbon emissions savings for 20 Australian hybrid cars based on the comparison of emissions between a petrol and petrol hybrid car, each travelling an assumed 20,000 km per year. The carbon emissions factor used for the petrol car is *Default private car emissions factors, Petrol per km, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.* The carbon emissions factor used for the petrol hybrid car is *Default private car emissions factors, Petrol hybrid per km, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.*

Estimated carbon emissions savings for the 8 hybrid D&I trucks based on the comparison of emissions between a diesel and hybrid diesel truck, travelling an assumed 60,000 km per year. The carbon emissions factor used for the diesel truck is *Road freight: Default emissions factors for heavy goods vehicles, HGV diesel per km, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.* The carbon emissions factor used for the diesel hybrid trucks is *Road freight: Default emissions factors for heavy goods vehicles, HGV hybrid diesel per km, 2023 Summary of Emissions Factors, New Zealand Ministry for the Environment.*

[20] Fisher & Paykel internal testing and calculations to estimate kWh/yr savings. Estimated percentage of in-use energy carbon emissions saved is based on the percentage of kWh/yr savings, assuming the models being compared are powered by electricity with the same carbon emissions factor. These testing conditions, and therefore kWh/yr savings, will differ from real use. See Important Information, ‘Key limitations of in-use assumptions’, p.38 for more.

[21] Project Drawdown, “Reduced Food Waste”, https://drawdown.org/solutions/reduced-food-waste

[22] Estimated carbon emissions savings based on the comparison of the Australia and New Zealand Energy Label kWh/yr for the stated models, multiplied by the country-specific electricity emissions factor. https://reg.energyrating.gov.au/comparator/product_types. These testing conditions, and therefore kWh/yr savings, will differ from real use. See Important Information, ‘Key limitations of in-use assumptions’, p.38 for more.

The carbon emissions factor used for Australian grid electricity is *Australia (CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor, IEA (2023), Emission Factors.* The carbon emissions factor used for New Zealand grid electricity is New Zealand *(CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor, IEA (2023), Emission Factors.*

[23] Refer to endnote 22

[24] Refer to endnote 22

[25] Refer to endnote 22

[26] Australian Government, Department of Climate Change, Energy, the Environment and Water, “Hot water systems”, accessed 29 Nov, 2023, https://www.energy.gov.au/households/hot-water-systems

[27] Fisher & Paykel Home Solutions, “Hot Water”, https://www.fisherpaykelhomesolutions.com/nz/hot-water

[28] Alice Rocha, M.S., “GWP—a better way of measuring methane and how it impacts global temperatures”, Clear Center, May 18, 2022, https://clear.ucdavis.edu/explainers/gwp-star-better-way-measuring-methane-and-how-it-impacts-global-temperatures

[29] Carbon emissions savings estimated based on the difference between a 9% and 26% mix of heat pump dryers versus vented dryers based on 2022 sales volumes, a per-appliance weighted average lifetime electricity carbon emissions for heat pump and vented dryers. The carbon emissions factor used for Australian grid electricity is *Australia (CO_2kWh ELE + trade adjustment + CH_4 factor + N_2O factor), IEA (2023), Emission Factors.*

[30] Shifting customer choices towards to 100% heat pump dryer sales within our dryer category, can help us achieve our 2030 per-appliance-sold goal. The vertical grey bars illustrate our average vented and heat pump category per-appliance-sold emissions. The horizontal grey line at the top shows our overall average dryer per-appliance-sold emissions in 2020. The horizontal white lines show the average dryer per-appliance-sold carbon emissions we are aiming for in 2030 and 2050 to meet our carbon emissions goals.

[31] Saul Griffith, Electrify, *An Optimist’s Playbook for our Clean Energy Future*, MIT Press, p.88.

[32] Project Drawdown, “Microgrids”, https://drawdown.org/solutions/microgrids

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