October 2025

Products insights report - summary

Regulated residential product insights

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ENERGY EFFICIENCY & CONSERVATION AUTHORITY

Executive summary

This report summarises the key insights from the EECA (Energy Efficiency and Conservation Authority) *Residential Products Insights Report 2025*. The full report provides in-depth data and insights on the suite of residential products that EECA regulates and is available on the EECA website.

Since 2002, EECA has been responsible for regulating the energy performance of certain key residential and commercial products. Every year, we collect sales data for these regulated products, which we combine with product performance data to understand the benefits of the regulations and to spot market trends.

Over the years, sales of regulated products have changed dramatically, as have their energy performance properties. New products have been added to the list of regulated items, and in some cases, the regulatory tools have been updated.

In early 2025, EECA commissioned two reports to look at the data we have collected over time: one for residential and one for commercial regulated products. We wanted to provide insights into how energy efficiency technology and market trends are changing – information that can help both consumers and product suppliers.

The products

This report looks at the most common categories of regulated residential products, both in terms of how many are sold overall and the variety of makes and models available. These include:

- washing machines
- clothes dryers
- dishwashers
- household refrigerating appliances
- electric storage water heaters
- gas water heaters
- computer monitors
- televisions
- heat pumps/air conditioners up to 20kW (see the Commercial Products Insights Report 2025 and its associated summary for larger systems).

Note that throughout this report, all analysis and figures are based on a sales-weighted average – the figures are weighted by the number of different models of products sold, to take into account the popularity of models.

The regulatory regime

Under the Energy Efficiency (Energy Using Products) Regulations 2002 sales of certain products may be subject to energy performance requirements.

- **Minimum energy performance standard** – some products are required to meet a specified minimum energy performance standard (known as MEPS). Products that don't meet the standard, because they use too much energy or perform poorly, can't be sold any more. Over time, the standard has been raised for certain products – like fridges and heat pumps – as technology has improved. This has led to even more efficient products and greater energy savings for consumers.
- **Mandatory energy performance label** – some products must display a mandatory energy performance label (known as a MEPL) when they're sold. The label helps consumers compare how much energy different products use and what their running costs might be over their lifetimes. As products have become more energy efficient, we've updated how some of these labels are graded. For example, the grading for fridge, heat pump and dishwasher labels has changed over time to keep up with improvements in the energy performance of these products.

Every year, businesses submit sales data for regulated products to EECA for the previous year. Data is submitted for the period from 1 April to 31 March in the following year (not the calendar year).

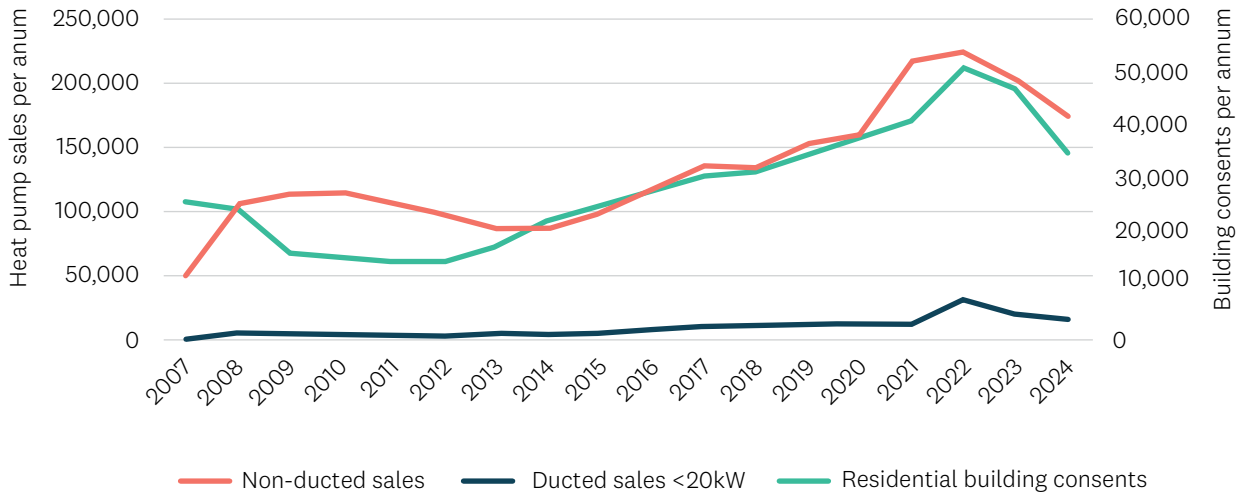
EECA takes the protection of sales data seriously, in line with its obligations under the Energy Efficiency and Conservation Act 2000. Data is provided to EECA in confidence, as it can be commercially sensitive, and is only published in a way that prevents identification of or potential commercial disadvantage for businesses.

Key insights for all products

- **Energy efficiency is improving.** Overall, products are using less energy for their size. For example, TVs use less energy per inch of screen size, and fridges use less energy per litre of capacity. These efficiency improvements are being partly offset by the fact that many home appliances are getting bigger. For instance, the average TV screen size has increased from 37 inches to 50 inches over the past decade.
- **There is an increasing number of brands and choices.** Across all product categories, there has been strong growth in the range of companies, brands and models available in New Zealand, giving consumers a much wider range of options to choose from.
- **Where products are made is changing.** In the past, many of the appliances sold in New Zealand were made locally. Today, most products EECA regulates are imported. The exception is electric storage water heaters, which are still mainly made here. The most common source of imported products is China, followed by Thailand.
- **The construction boom had an impact.** The surge in building activity between 2021 and 2023 drove up demand for home appliances. For example, there was a correlation between the number of building consents and sales of heat pumps over this time, especially for single-split systems, which are the most common type; see Figure 1.

Another potential reason for the rise in heat pumps sales in the past five years may be the introduction of the healthy homes standards in 2019. The standards took full effect in July 2025 and requires landlords to install a suitable fixed heater in the main living room of rental properties, or face significant penalties.

Figure 1. Relationship between heat pump sales and building consent numbers

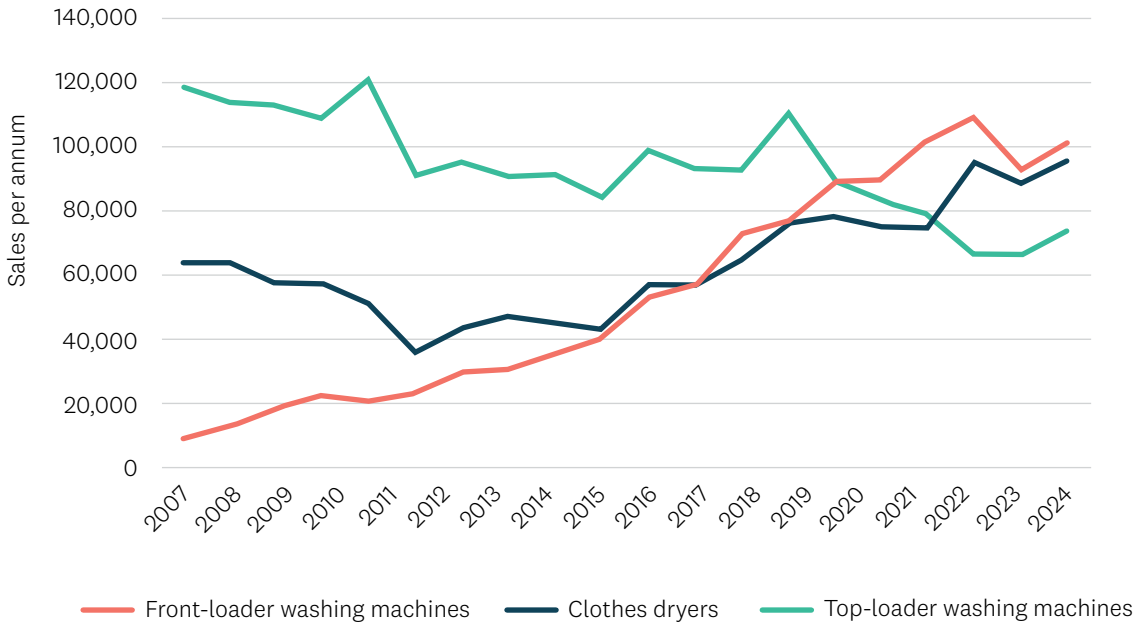


Key insights by product

Front-loader washing machines and clothes dryers

Since 2010, there has been a strong link between the sales of front-loader washing machines and clothes dryers, as shown in Figure 2. This indicates people are buying these appliances together, potentially so they can be stacked to save space.

Figure 2. Correlation between sales of front-loader washing machines and clothes dryers



- **Growth in appliance size.** Washing machines and clothes dryers have become bigger over time, with their average capacity growing by 14% and 36%, respectively, over the past decade. However, many people don't use the full capacity of these appliances. Most loads are around 3.5kg and it would be a struggle to shut the door of many washing machines if they were filled to capacity.[1]

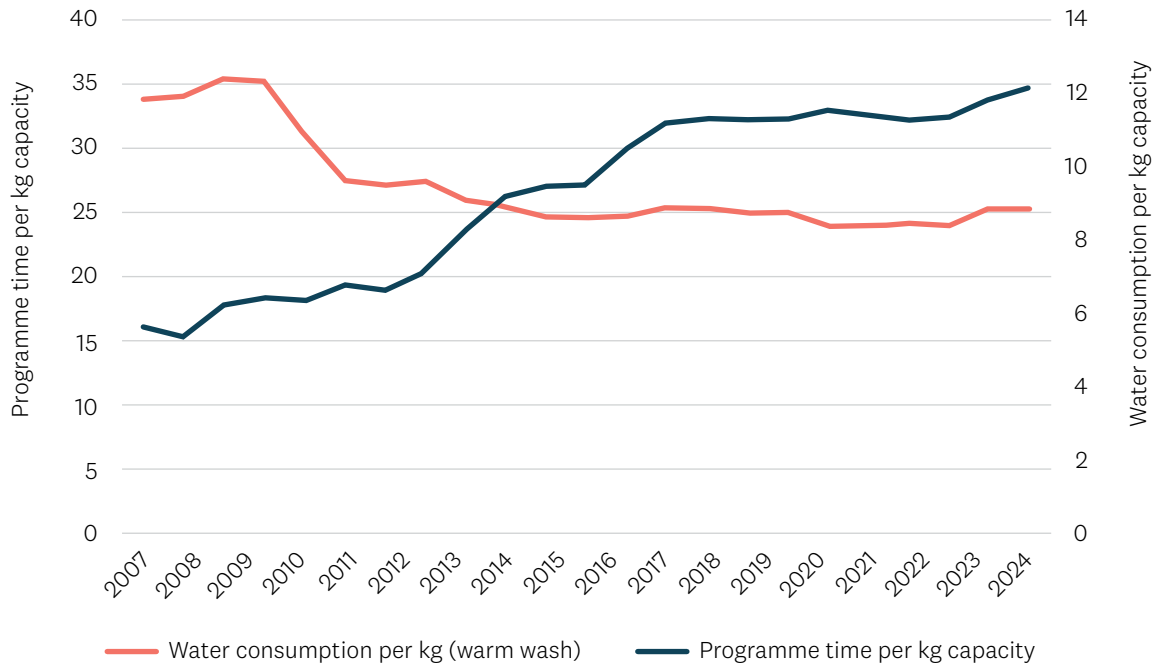
  By comparison, dishwashers have stayed about the same size over this period, probably because their dimensions are limited by the space available in most kitchens.

- **Rising popularity of heat pump clothes dryers.** Heat pump clothes dryers are becoming more popular because they use about half as much energy as vented or condenser dryers, which in turn means lower running costs. They also dry more gently, helping clothes last longer. In 2024, heat pump dryers made up 46% of new dryer sales in New Zealand, up from just 10% in 2018.

[1] *Choice*, May 2025, page 53.

- **Smart features in washing machines.** Many modern washing machines now come with smart features, so users can monitor and control wash cycles from their smartphone. These technologies also optimise energy usage by adjusting wash settings based on load size and fabric type
- **Longer cleaning cycles.** Four key factors affect how well clothes are cleaned by a washing machine: chemistry, mechanics, temperature and time. If one factor changes, the others need adjusting to get the same results. Since 2002, washing machine cycle times have steadily increased, while the amount of water used per kg of laundry has decreased, as shown in Figure 3.

Figure 3. Relationship between washing machine programme time and water use per kg of capacity



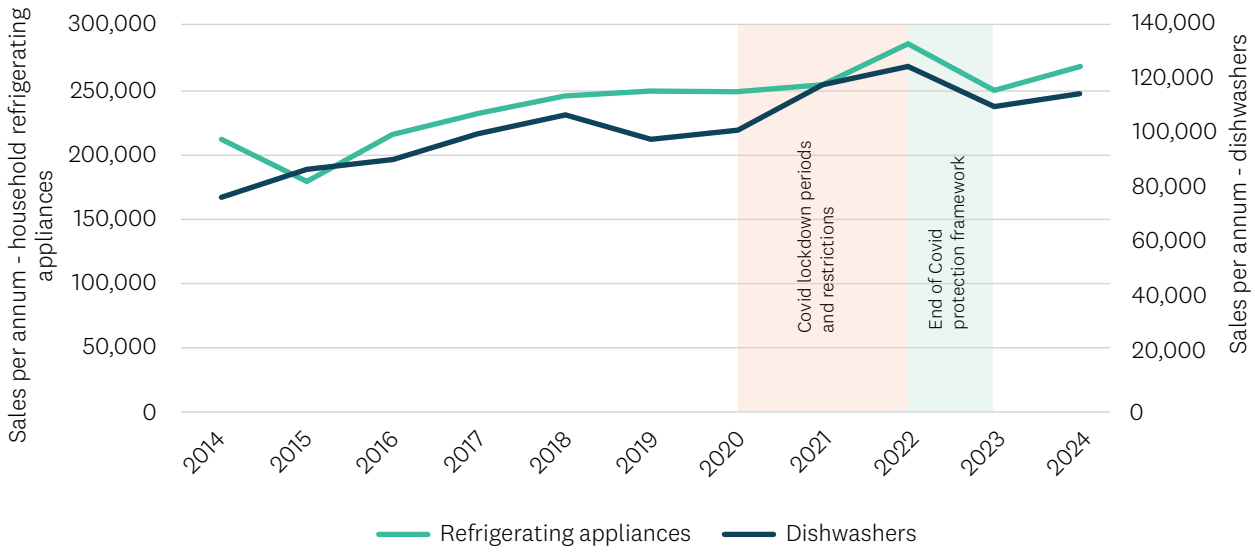
The washing cycles that suppliers use when testing machines for energy rating labels have also become much longer over time. For example, the average test cycle for a front loading washing machine is now five hours. However, it's unlikely most households actually use these long cycles for their day to day washing.

- **Shift to front-loading machines.** Front-loading washing machines have become much more popular, rising from just 7% of sales in 2005 to 58% in 2024.
- **Changes where products are made.** In 2005, most washing machines and clothes dryers sold in New Zealand were made locally or in Australia. In 2012, most came from Thailand. Today this has switched again, with China now being the dominant supplier of these appliances across the market.

Fridges, freezers and dishwashers

Sales of refrigerating appliances and dishwashers rose between 2020 to 2022. This coincided with Covid lockdowns, and anecdotal reports of households spending money on upgrading their kitchens as an alternative to overseas travel, as shown in Figure 4.

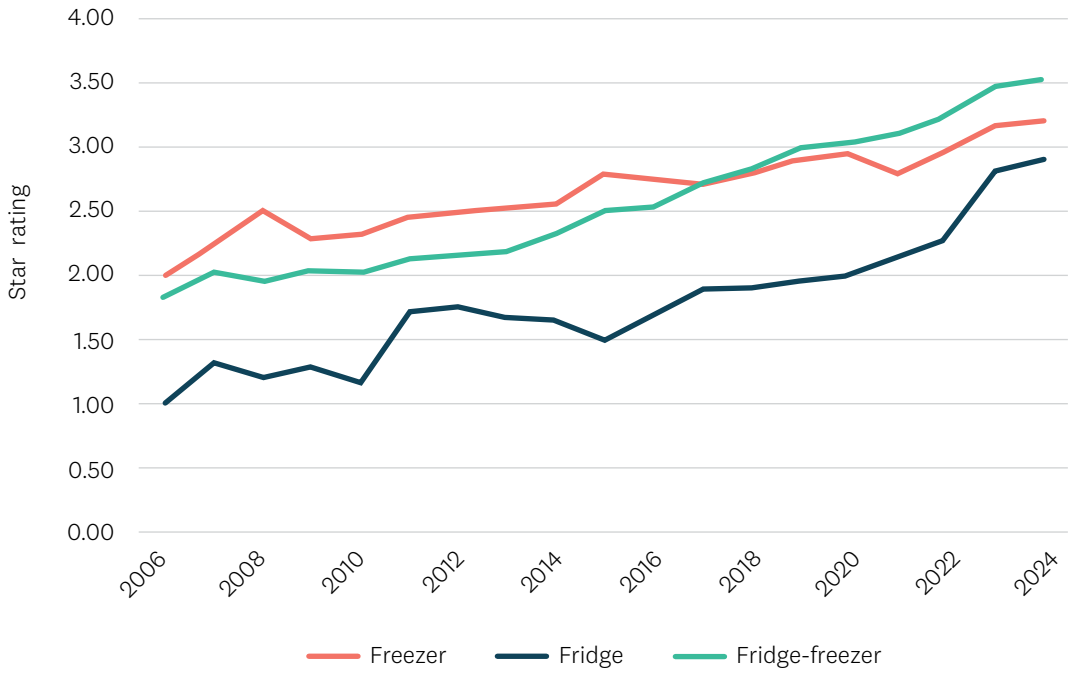
Figure 4. Relationship between sales of household refrigerating appliances and dishwashers and Covid restrictions.



- **Better energy ratings and lower running costs.** More people are buying refrigerators and freezers with higher energy star ratings, showing a clear shift toward energy-efficient choices; see Figure 5. However, how star ratings are calculated has also changed, with a three star rating today representing a higher level of efficiency than it did in the past.

Energy use by fridges and freezers has steadily decreased over time. In 2024, the average fridge used 46% less energy than in 2003, while fridge-freezers and freezers use 41% and 33% less energy, respectively.

Figure 5. Trends in energy star ratings for fridges and freezers



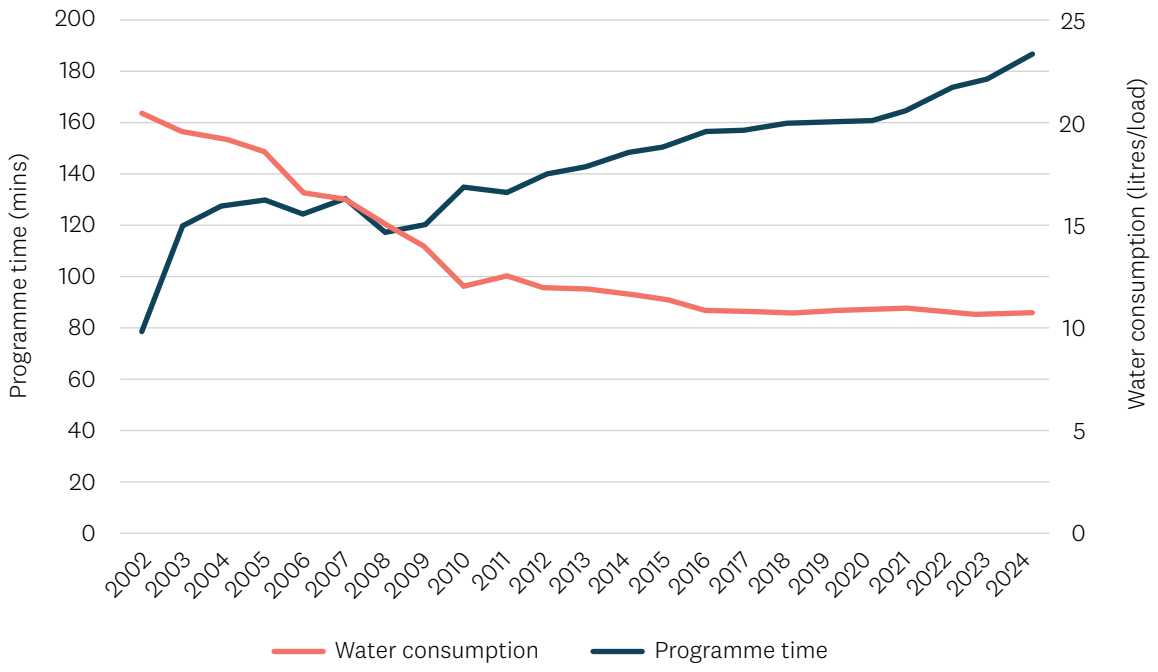
- **Preference for combined fridge-freezers.** Combined fridge-freezers now make up 62% of all sales, while standalone refrigerators have dropped to just 14% of sales. Fridge-freezers are also much larger, with an average capacity of 376 litres (compared to the average capacities of 148 litres for a standalone fridge and 243 litres for a standalone freezer), since they provide both functions in one appliance.

  On top of that, combined fridge-freezers are more energy efficient than running a separate fridge and freezer.

- **Changing dishwasher preferences and longer cycle times.** Over the past 20 years, freestanding or benchtop dishwashers have become far more popular, rising from 18% of the market in 2004 to 69% in 2024. At the same time, built-in dishwashers have dropped from 80% to just 29% of the market. Dishwasher cycle times have also become longer, reflecting changes in technology and cleaning processes.

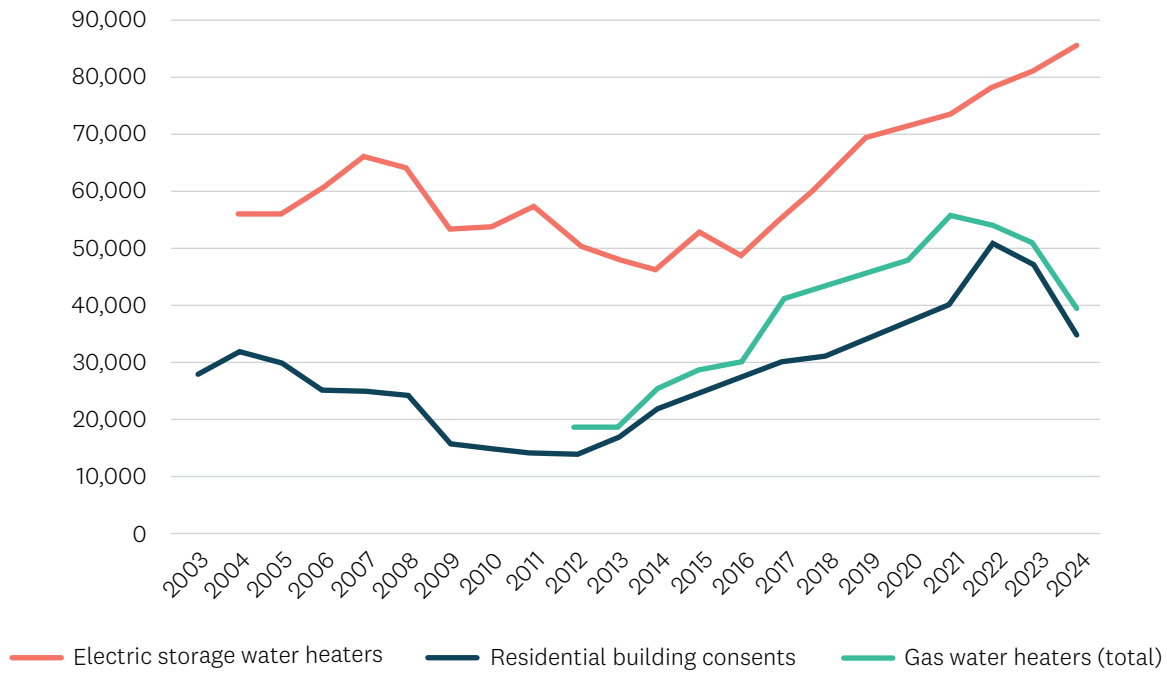
- **Improved water savings.** Water use per dishwasher load has steadily declined over the past 20 years; dishwashers now typically use half the water per load that they did in 2002. Freestanding models use the most water at 11.5 litres/load, followed by built-in models at 9 litres/load. See Figure 6 for a comparison of how dishwasher programme times and water usage has changed over time.

Figure 6. Relationship between dishwasher programme time and water use per load



- **Changing sales of gas water heaters.** Instantaneous systems have dominated the gas water heater market for many years, outstripping gas storage systems. Sales of instantaneous gas water heating systems grew steadily from 2013 until about 2021, but dropped by 30% between 2021 and 2024. This is despite an increase in home building during that period, and may be due to concerns about potential gas shortages and price increases in the future, plus a general move away from using fossil fuels and towards electricity.
- **Growth in electric storage water heaters.** Sales of electric storage water heaters grew between 2016 and 2024. This was partly driven by growth in home building from 2021 to 2023, but also by a drop in interest in buying gas water heaters. See Figure 7 for a comparison between the types of water heaters sold (gas and electric) and building consent numbers.

Figure 7. Relationship between sales of different water heating systems and building consent numbers



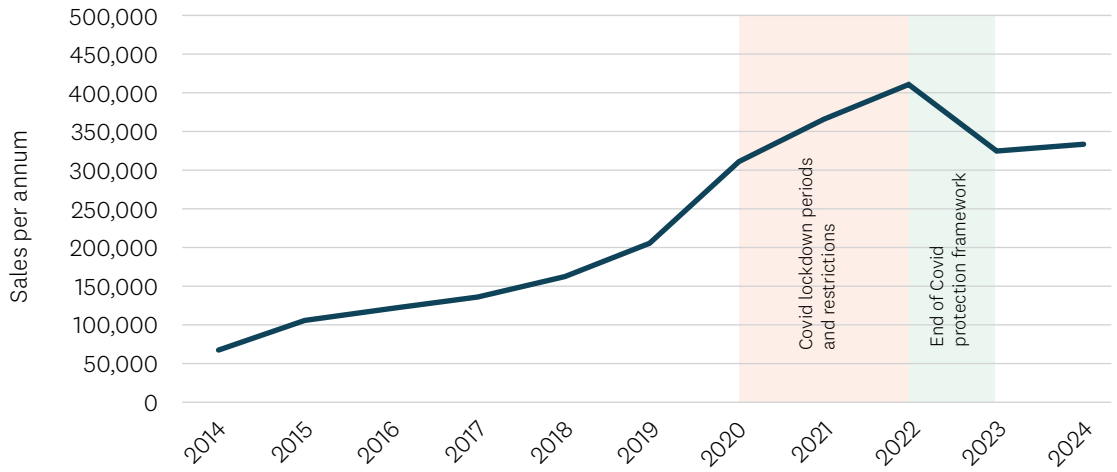
- **Shift to mains-pressure electric storage water heaters.** Consumers are increasingly choosing mains-pressure electric storage water heaters. Over the past five years, sales of low-pressure systems have fallen by 50%, while sales of mains-pressure systems have grown by more than 50%.
- **Water heater sizes remain unchanged.** The average storage sizes for electric storage water heaters have stayed the same for the past 15 years.
- **Minimal changes in energy efficiency.** The energy efficiency of gas storage systems has stayed the same since 2013, at around 88.5%. However, the efficiency of gas instantaneous systems has improved slowly, with a current average efficiency of 81.1%. Less efficient systems (below 80%) have largely disappeared, while more efficient models (85–90%) are now more common. For electric storage water heaters, there hasn't been much change in energy losses or energy use over time.
- **Electric storage water heaters are still mostly made in New Zealand.** Unlike other appliances that EECA regulates, most electric water storage heaters are still made in New Zealand. The numbers are falling though, with China and Australia now supplying an increasing proportion of the electric water storage heaters sold today.

  In contrast, most gas water heaters sold in New Zealand come from Japan, followed by China; Japanese-made products have long dominated the New Zealand market.

Computer monitors

- **Rising sales of computer monitors.** Sales of computer monitors have grown significantly, from 73,000 in 2014 to 384,000 2024. The biggest jump happened between 2020 to 2022, coinciding with Covid lockdowns and a shift towards working from home, as shown in Figure 8.

Figure 8. Relationship between sales of computer monitors and Covid restrictions



- **More choice in the market.** The number of models of computer monitors available in the market has steadily risen over the past 10 years, and consumers now have 395 different models to choose from.
- **Average screen size is increasing.** While the most popular monitor screen size is now 24 inches (representing 61% of sales in 2024), the average size is now over 25 inches, up from 22 inches in 2014.
- **High-resolution screens are gaining popularity.** Medium-resolution screens still dominate the market, making up 84% of sales, but high-resolution screens have grown from 6% to 16% of the market over the past 10 years. These higher resolution monitors use more power and are usually larger.
- **Improved energy ratings.** Sales of monitors with a star rating of 7 or more have jumped from 0.1% of sales in 2014 to 29% of sales in 2024. At the same time, monitors with a star rating less than 5 fell from 65% to 17% of the market.
- **Overall energy use remains flat.** Although monitors have become more efficient for their size (using fewer watts per square inch) and star ratings have improved, monitors have also increased in size and more people are buying high-resolution models that use more energy. As a result, the average energy use of monitors is the same today as it was in 2015.

- **High-resolution monitors cost more to run.** High-resolution monitors use more energy, which makes them more expensive to operate. The average cost is about $37 per year, which is 76% more than a medium resolution monitor.
- **Most products are made in China.** Chinese-made computer monitors have made up 80% to 90% of the New Zealand market over the past decade.

Televisions

- **Average size of TVs has grown.** From 2013 to 2022, the average TV screen size increased by 33%, reaching 50 inches. Since 2022, average sizes have remained flat, suggesting that many households have reached the limit of what they can accommodate in their living room without overly dominating the space.
- **Shift to 4K screens and higher energy use.** There's been a big move toward higher resolution TVs, with 4K models now making up 67% of sales. On a per-square-inch basis, 4K TVs use 81% more energy than HD TVs. Because 4K TVs are also generally larger, their overall energy use is more than three times that of HD TVs.

Heat pumps/air conditioners

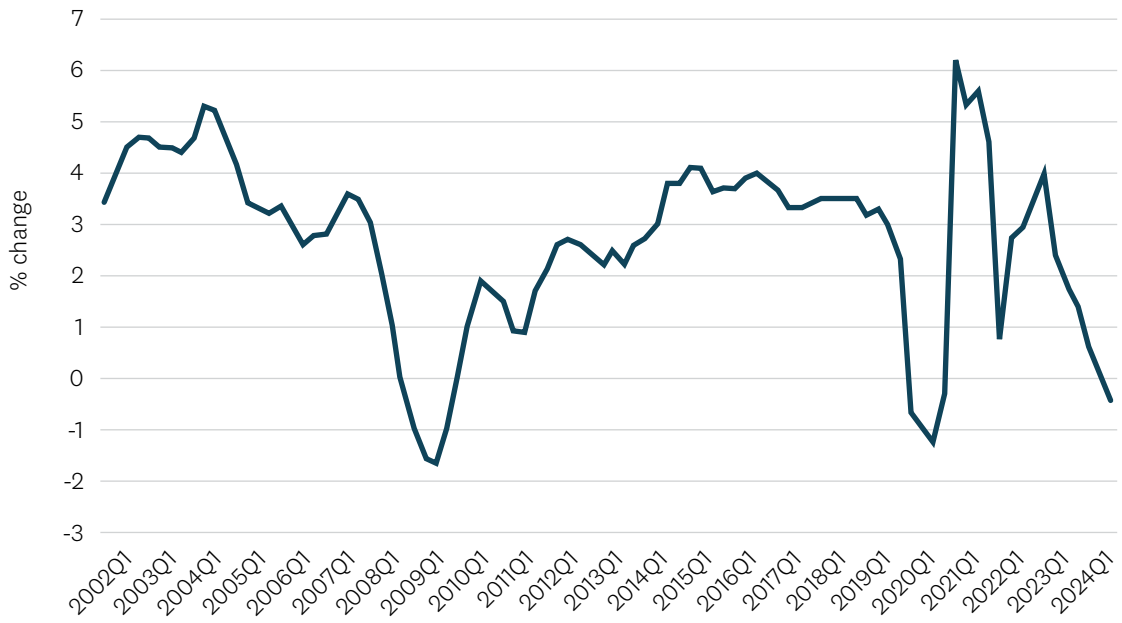
- **Strong growth in heat pump sales.** Heat pump sales have grown enormously over the past 15 to 20 years. Because the average economic lifetime of a heat pump is around 10 to 15 years, some of today's sales, and future ones, are likely to be replacing older units.
- **Heat pumps are chosen for convenience and efficiency.** Many households are choosing to use heat pumps for heating, because they're convenient and more energy efficient than wood burners and electric resistance heaters. In rental properties, sales have been boosted by the healthy homes standards, which require a suitable fixed heating solution to be installed in the main living room. In many rentals, this meant installing a heat pump, with the standard becoming fully mandatory on 1 July 2025.
- **More choice and bigger systems.** There's a much wider range of makes, models and system sizes of heat pumps available now. More homeowners are choosing larger systems and ducted heat pumps, aiming for whole-home heating solutions, rather than single-room units.
- **Shift to low-impact refrigerants.** Heat pumps are increasingly using refrigerants with lower environmental impact. Almost all single split and ducted systems now use R32 refrigerant, which has a global warming potential (GWP) of 675. This marks a rapid shift away from R410A, which has a much higher GWP of 2,088.

Macro-economic and market factors

Our analysis also identifies and takes into account the main external factors that might influence how consumers choose and buy products.

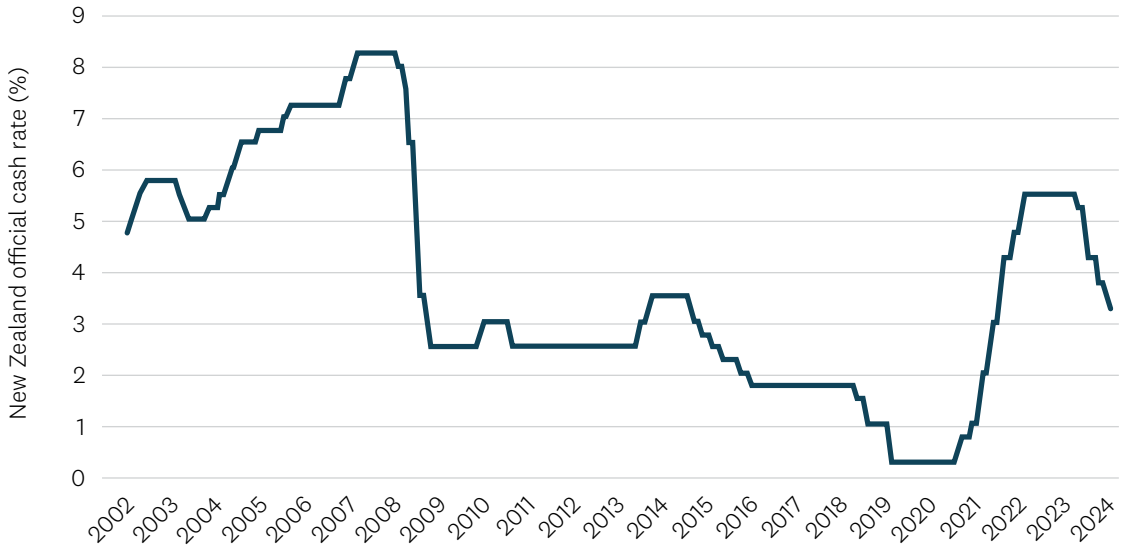
- **Moderate GDP growth.** Between 2013 and 2019, New Zealand experienced consistent GDP growth (averaging around 2.5–3% annually), supporting increased consumer spending on appliances; see Figure 9.
- **Impact of Covid.** More time spent at home during COVID-19 increased demand for home improvements and better entertainment, such as larger TVs and computer monitors. With overseas travel off the table, some households chose to spend money on new appliances instead. However, supply chain disruptions caused delays, price increases and stock shortages for many appliances.
- **Post-COVID rebound.** After a sharp contraction in 2020 due to the pandemic (when GDP fell by around 2.1%), growth rebounded in 2021, partly fuelled by pent-up demand and government stimulus; see Figure 9.
- **Recent stagnation and mild recession.** During 2023 and 2024, GDP growth slowed significantly due to inflation, higher interest rates and global economic uncertainty, reducing discretionary consumer spending; see Figure 9.

Figure 9. New Zealand quarterly changes in GDP



- **Influence of the official cash rate (OCR).** The OCR is the interest rate set by the Reserve Bank of New Zealand to help manage inflation and maintain price stability. The OCR affects the interest rates that banks offer on loans and savings, and hence influence consumer spending. The OCR was relatively steady between 2009 and 2019, but from early 2020 to October 2021 (coinciding with the start of the Covid-19 pandemic) it plummeted to 0.25%. It was then increased rapidly until mid-2024 in a bid to control inflation, before rates were reduced to 3.25% in May 2025; as shown in Figure 10.

Figure 10. New Zealand official cash rate trends



- **Cost of living and inflation.** Post-Covid there has been a greater consumer focus on affordability, durability and energy efficiency, with more interest in mid-range rather than premium appliances, unless the latter are heavily discounted or financed. There are several reasons for this:
  - high inflation post-2021 – inflation peaked at 7.3% in 2022, driven by global supply chain issues, fuel costs and housing pressures
  - real wages stagnated – despite wage growth, high inflation has reduced people's buying power
  - energy costs increased – growing awareness of electricity costs has encouraged purchases of energy efficient appliances.

- **Housing and construction market.** There was a boom in housing between 2016 and 2021, driving strong demand for appliances in both owner-occupied and rental properties. However, due to higher interest rates and increased construction costs, new-build activity declined from late-2022 onwards.
- **Demographic and lifestyle changes.** There is greater segmentation of the market today, possibly due to appliances offering premium smart features appealing to younger buyers, and those offering practical value appealing to older homeowners and landlords. Other factors include:
    - smaller households and more renters – increased apartment and townhouse living (especially in Auckland and Wellington), which favours compact or stackable appliances
    - ageing population – older consumers prioritise reliability, ease of use and lower maintenance appliances
    - younger, tech-savvy buyers – more inclined to buy smart appliances and larger 4K/8K TVs.

For more information

To find out more, see the full version of the Residential Products Insights Report 2025.

There is also an equivalent Commercial Products Insights Report 2025, providing data and insights on the commercial products that EECA regulates.

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