

Hot, here, now:

An annual snapshot
of industrial and
commercial heat pump
installations

OCTOBER 2026



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Introduction: a 'hidden transition' in business and industry

Under factory roofs, behind the scenes at your local pool, and in the back corridors of iconic skyscrapers, a quiet revolution is taking place. The way manufacturing businesses and commercial buildings produce heat is changing, but it's a shift most people will never see. Decades-old gas boilers and heaters are being replaced with efficient, electric heat pumps, typically powered by renewable electricity – and the pace is picking up.

While a new solar or wind farm is visible to the public, the transition within Australia's industrial and commercial sectors has been largely hidden from view. This report marks the first attempt to estimate the annual rate of industrial and commercial heat pump installations across Australia. It draws on a wide range of data from A2EP, RACE for 2030, the Australian Renewable Energy Agency (ARENA) and other government sources, as well as structured interviews conducted by A2EP in partnership with DETA Consulting between May and June 2026.

We'd like to thank the operations managers, engineers and consultants who spoke with A2EP confidentially to sketch a picture of how Australia's industry and commercial building sectors are adopting renewable heat technologies. Among those technologies, industrial and commercial heat pumps are the most economically viable near-term opportunity to cut emissions and are already saving many businesses money today, making them the logical starting point for this snapshot report. We hope it is a useful contribution to the renewable energy and decarbonisation discussion in Australia, and thank all stakeholders, members and interviewees for their generous time and expertise in preparing it.



Jarrod Leak
Chief Executive Officer,
Australian Alliance for Energy Productivity (A2EP)

Annual snapshot: the accelerating pace of heat pump installations

The Australian industry and commercial building sectors account for 52% of the nation's final energy use, and nearly half of that is process heat.^[1] At present, burning gas is the biggest source of this heat, with coal the second biggest source. To achieve decarbonisation targets on a least-cost pathway, make best use of renewable energy generation and increase energy productivity overall, Australian businesses need to begin the transition to technologies that most efficiently deliver industrial heat.

Heat pumps represent one of the best opportunities because of three key factors:

1. **They are three to five times more energy efficient than gas boilers**
2. **They can be powered by renewable energy, including on-site solar photovoltaics (PV), making zero-emissions possible**
3. **They can be coupled with thermal energy storage in the form of hot or cold water tanks**

Heat pumps can supply process heat for all kinds of industrial processes, with the type of heat pump used depending on the heat being recovered and the temperature of delivered heat required. Until recently, heat pumps were only considered viable for lower temperatures (less than 120 °C), however, that temperature range is increasing with high temperature heat pumps now being developed and tested for high-heat applications such as drying building products.

A 2023 report from A2EP and Energy Efficiency Council (EEC) found an ambitious rollout of heat pump technology could reduce emissions by 391 million tonnes in industrial processes, and 96 million tonnes in commercial buildings, between 2020 and 2050.^[2] This is greater than Australia's total emissions for a single year.^[3]

Why heat pumps?



3 to 5x more efficient than gas, major energy savings



Reduced exposure to volatile gas prices and fuel supply risks



Can be powered by renewable electricity



Enables flexible demand to balance the grid when coupled with thermal storage



Supports made-in-Australia jobs and international competitiveness

[1] *The Australian Industrial Process Heat Market*, ITP Thermal 2025

[2] Energy Efficiency Council and Australian Alliance for Energy Productivity 2023, *Harnessing heat pumps for net zero*, Energy Efficiency Council, Melbourne.

[3] Australia's annual net greenhouse gas emissions were 446.4 million tonnes of carbon dioxide equivalent (Mt CO₂-e) in the year to December 2024. [Emissions reduction](#) | Australian Bureau of Statistics

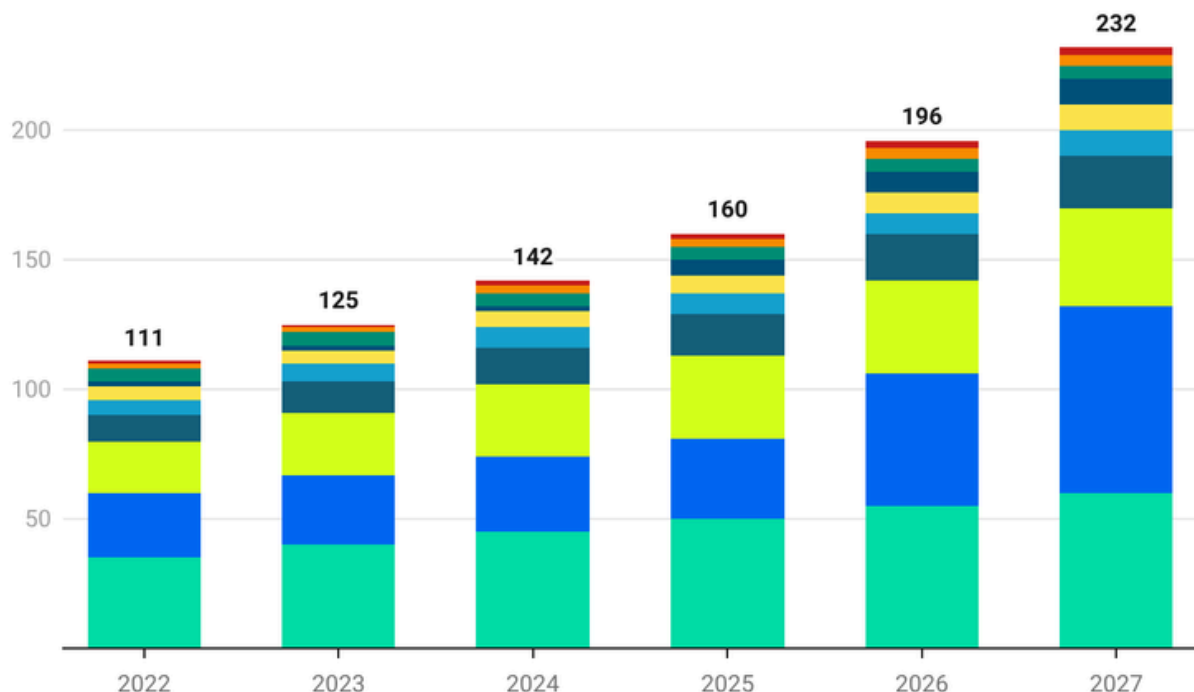
Annual snapshot: estimated major retrofit installations in existing buildings

Despite this potential, uptake within commercial and industrial sectors has started off a low base and is only now accelerating. **A2EP estimates a cumulative total of 111 industrial and commercial heat pumps were retrofitted to existing buildings between 2015 and 2022, increasing to 196 in 2026 and 232 by 2027, a 109% increase over five years (Figure 1 below).** This chart includes *major retrofit* installations only and is a conservative estimate because it excludes schools, dairy farms, craft breweries, supermarkets, horticulture and wineries. 'Major retrofits' are defined as heat pump installations over 100 kW, so excludes small domestic hot water and split system air conditioning retrofits.

Estimated major industrial and commercial heat pump retrofit installations in Australia by year

Cumulative totals, excluding small domestic hot water & small split systems.

Legend: Aged care towers, Aquatic centres, Universities, Hotels, Other manufacturing, Office, Food and Bev, Other, Shopping centres, Hospitals



Retrofits to existing buildings only. Figures for 2026 and 2027 are projected based on current trends and installation pipeline. Does not include schools, dairy farms, wine or craft breweries.

Chart: A2EP • Source: A2EP - Australian Alliance for Energy Productivity • Created with Datawrapper

Annual snapshot: estimated installations continued, including for new buildings

The significant estimated increase in heat pump installations in aquatic centres in 2026 and 2027 shows the benefits of targeted, well-designed government support through the federal Community Energy Upgrades Fund (CEUF). The same approach should now be applied to other sectors, such as aged-care facilities. While universities saw a strong retrofit program in 2023/24, progress appears to be slowing due to funding restrictions. The slowest progress appears to be within the shopping centre, hospital and hotel sectors. The current retrofit rate of existing buildings is around 1-2% for large gas users (>2,000 GJ pa).

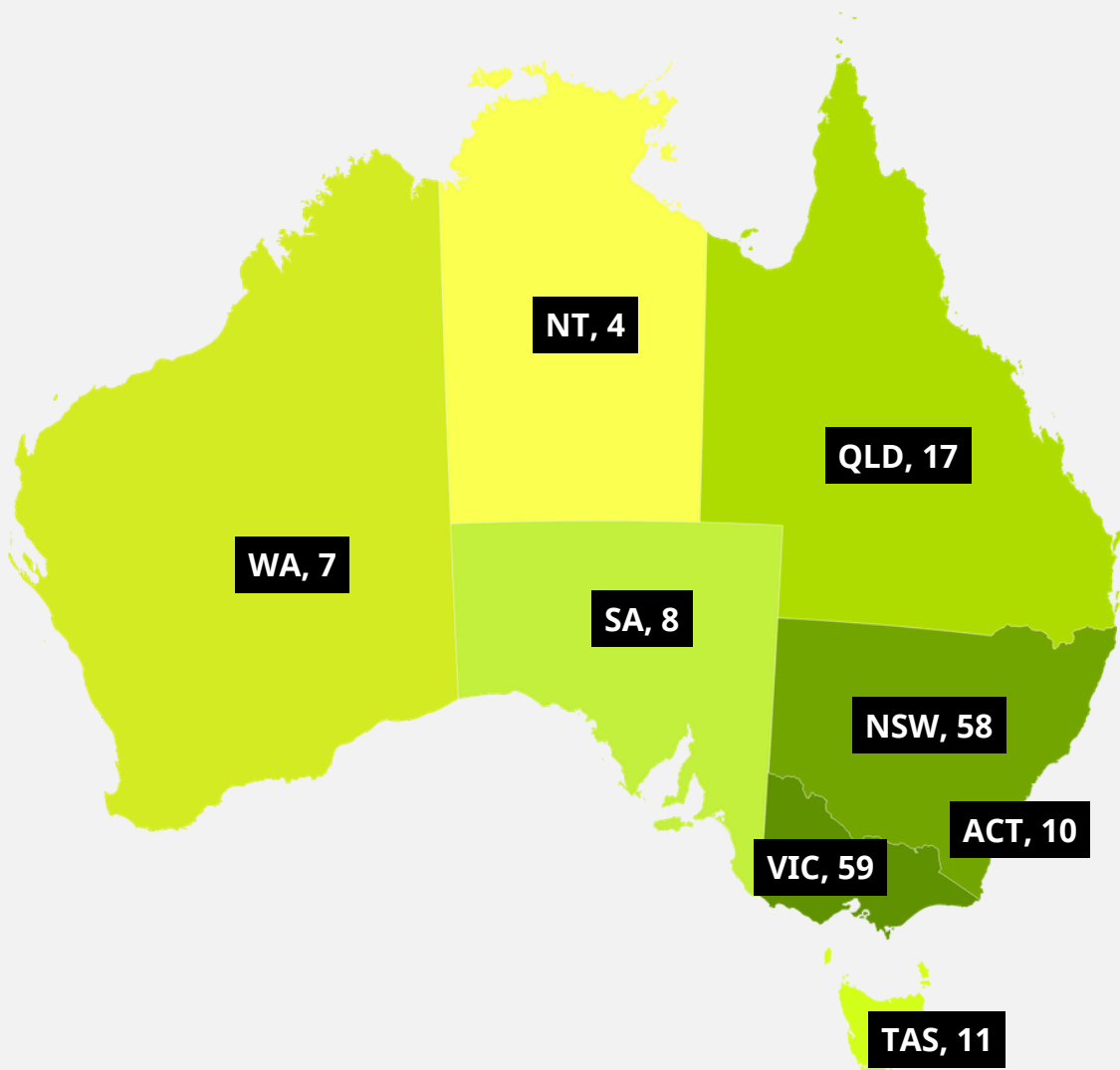
The estimates for food and beverage and manufacturing are derived from A2EP’s tracking database and confidential conversations with members and industry stakeholders. The food and beverage figures exclude dairy farms, wine and craft breweries due to lack of data in those subsectors.

In addition to the retrofit data on the previous page, we estimate that more than 80% of large new buildings are fully electrified. Range, confidence levels and key assumptions for estimates of installations in new buildings are shown in the table below. The result is an estimated 122 major heat pump installations in new buildings per year.

Range and confidence levels for estimations of heat pump installations in new buildings				
Building type	Est. new per year	Range	Confidence	Key data anchor
Aged care facilities	50	35-70	Medium	2,617 services; net loss of 49 homes in 2022-23; partial rebuild underway
Hotels	30	20-45	Low	4,870+ rooms under construction Q1 2024; ~160 rooms avg per new hotel
Hospitals	6	3-10	Medium	704 public hospitals; net +4/yr; private additions ~2-4/yr
Universities	20	10-30	High	~40 universities; major new buildings per campus ~0.5/yr average
Office towers	10	5-15	High	CBD pipeline data; "major tower" = >10 storeys or >10,000m2
Aquatic centres	6	4-10	High	~560 heated public pools nationally; ~1% replacement rate
Total	122	77-180		

Created with Datawrapper

Map: major installations across Australia by state and territory



The map above shows *confirmed* major installations across Australia. While the vast majority (more than 100) are heat pump installations, the data also includes other renewable heat technologies such as electric boilers, electro-thermal energy storage (ETES) and mechanical vapour recompression (MVR). The sectors include food & beverage, agriculture, manufacturing, aquatic centres, office buildings, pharmaceutical, hospitals, universities, laundries, airports and student accommodation.

Sector spotlight: industrial and manufacturing opportunities

A2EP's Boiler Mapping Study, conducted between 2023 and 2024, profiled the age of industrial boilers and burners at sites across Australia. Nearly 40% of mapped boilers and burners were manufactured before 2000. Replacing these boilers and burners is happening now, and in the coming five to 10 years. If policy does not provide a clear signal before replacement decisions are made, then the purchase of new boilers or burners risks locking in fossil fuels for another 20 years.

Based on this boiler mapping study, publicly available reports and direct interviews with Australian industrial manufacturers conducted under strict confidentiality, we have identified the sectors in the boxes at right as being the strongest next near-term opportunities for decarbonisation with industrial heat pumps.



Brewing and malting

Process temp: 50°C free drying to 80°C.

Abatement cost: heat pumps -\$50 to -\$20/t.

The free drying phase (~70% of kiln energy) is within commercial heat pump range. The investment case is marginal at current electricity prices, but positive with modest support. This sector could be in the completed column within five years.



Carpets and textiles

Key temp: 98°C steam; 140°C to 170°C curing.

Abatement cost: heat pumps -\$50 to -\$20/t.

Heat pumps are near or at economic viability for this sector for low temperature needs. Import competition and risk aversion are barriers to change. Targeted feasibility support to get this sector from options studies to Front-End Engineering Design (FEED) would have a high conversion rate as would targeted grant schemes.

Sector spotlight: commercial building opportunities

Commercial buildings account for approximately 39.9 PJ of gas use nationally. Space heating (~80%) and hot water (~15%) at temperatures below 80°C are ideally suited to heat pump electrification. The abatement cost is negative to marginally positive. There is no technology barrier. One remaining hurdle to installation is design methodology (reducing demand temperatures first), which A2EP has addressed in a [recent commercial retrofit guide](#).^[4] The others are upfront capital, return on investment and installer capability – and these can be addressed by near-term policy.

Commercial sectors with near-term potential are featured in the boxes at right.

Of the remaining commercial building sectors, **hospitals** present a more complex electrification challenge due to some small steam requirements and 24/7 reliability obligations, but the majority of gas use is at temperatures within heat pump range. State ownership creates a fleet procurement pathway.

Social housing electrification combines near-term economic viability with a strong equity argument: gas costs disproportionately burden lower-income households.

Commercial laundries remain a data gap – no national baseline exists and no policy has been directed at the sector.

[4] Leak, J, Vos, B, Snow, M. (2024). RACE for 2030. *Retrofitting commercial buildings with heat pumps: a how to guide*. [Commercial building electrification](#). | A2EP - Australian Alliance for Energy Productivity.



Aquatic centres: proof of concept

Government funding through the federal Community Energy Upgrades Fund (CEUF) has already funded heat pump upgrades at more than 46 aquatic centres across Australia. The scale of this program has created a self-sustaining installer market. Before CEUF, every project was a custom technology selection exercise; after CEUF, heat pumps are a standard specification. This is what near-term oriented policy achieves when it picks the right target. The same principles could be applied to other sectors, such as aged care.



Aged care: the next near-term win

Gas represents 34% of aged care energy use – more than double the commercial average. The technology to replace gas is proven. The abatement cost is negative to marginally positive. A2EP's proposed \$100 million Powering Better Care Program would fund 100-200 facilities at 50% co-investment, generating approximately \$15 to \$20 million per year in gas cost savings.



"We are looking at a payback **sooner than five years.**"

Mayur Dangar,
KILCOY GLOBAL FOODS

CASE STUDY

Food and beverage: Kilcoy Global Foods

When Kilcoy Global Foods installed an industrial heat pump at Hardwick Meatworks, a meat-processing site in Kyneton, Victoria, they found an unexpected benefit from the upgrade: operational stability.

"The first and foremost benefit of the heat pump was it stabilised our operation straight away," says Mayur Dangar, Head of Compliance at Kilcoy Global Foods. "Now we have a structured approach to thermal energy rather than just relying on one single source."

The site had previously relied on a 2 MW gas boiler to heat water used for sterilising, cleaning and washing down equipment.

But heat pumps are significantly more efficient than gas and can also harness 'waste heat' from other parts of the manufacturing process. The new system features a 1 MW ammonia heat pump, which brings the water temperature up to 75 degrees Celsius for storage in hot water tanks totalling 150,000 litres. Gas is used only for the final temperature boost to 85 degrees.

The new system is expected to reduce gas consumption by 33,000 gigajoules and cut emissions by 883 tonnes. The financial case is also strong. "We are looking at a payback sooner than five years," Dangar adds.



"We're moving from burning gas to **generating heat using renewable electricity** and recovered waste heat."

Sally Townsend,
BLACKMORES GROUP

CASE STUDY

Healthcare: Blackmores Group

When leading healthcare company Blackmores Group looked at cutting emissions at their Braeside manufacturing facility, they pulled the biggest lever – reducing gas use.

"Gas was responsible for virtually all of the site's operational emissions," explains Head of Sustainability Sally Townsend.

By switching to an industrial heat pump for a number of key processes, the engineering team is aiming to reduce gas consumption by 25%, emissions by 517 tonnes, and utility bills by \$100,000 per year.

The engineering team's approach to the problem shows the benefits of big-picture thinking. Instead of replacing a gas boiler like-for-like, they measured the site's actual energy demand, sized the heat pump accordingly, added a buffer tank for peak loads and used waste heat from the chillers.

The business case stacked benefits from multiple angles, including rebates from Victorian Energy Efficiency Certificates (VEECs), grant funding from ARENA, and avoiding future emissions offsets costs. As Townsend explains: "There's so much opportunity when you start looking at heat holistically and not just as a single asset."



CASE STUDY

Commercial buildings: 101 Collins

“We’ve been very happy with the heat pumps and the move toward electrification.”

**Selva Thiru,
101 COLLINS STREET**

Iconic office building 101 Collins has 53 floors, 5000 people to keep warm during winter, and uses zero gas on site.

The Melbourne landmark at the ‘Paris end’ of Collins Street is 30 years old but remains at the forefront of the charge to a renewable-powered future, as one of the first all-electric skyscrapers in Australia.

Previously, two 1.8 megawatt (MW) gas boilers, installed during initial construction decades before, provided hot water for the building. The new system features four high-efficiency air-sourced heat pumps, 6,000-litre tanks to store hot water, and connection to two water-sourced heat pumps. The mechanical solution for the hot water system was the first of this scale in a commercial retrofit in Australia.

“The biggest question in the industry is ‘Can you electrify an old office building?’” says Senior Manager of Engineering, Operations and Sustainability, Selva Thiru. “And we are showing absolutely yes, you can get the work done.”

“We’ve been very happy with the heat pumps and the move toward electrification. It has been a successful collaborative effort and has added value for tenants seeking more sustainable, future-ready buildings.”

As a result of the upgrade, 101 Collins is now certified net-zero emissions for building operations and powered by 100% renewable energy.

Image: Air source heat pumps being installed at 101 Collins. Image from A. G. Coombs

A man with a beard and short dark hair, wearing a light blue and white striped button-down shirt, stands in a laundry facility. He is smiling and looking slightly to his right. His hands are clasped in front of him. In the background, there are metal racks filled with various colored uniforms, including white, yellow, and brown. The facility has an industrial feel with overhead lights and pipes.

**"Energy efficiency is
business efficiency."**

Haris Murtaza,
ALSCO UNIFORMS

CASE STUDY

Laundry: AlSCO Uniforms

"Energy efficiency is business efficiency," says Haris Murtaza, energy and utilities manager for AlSCO Uniforms, which provides laundry services across Australia to restaurants and caterers, food processors, education, retail, mining and more.

"You can never control what you pay for energy, contracts come up at random times and it's quite a volatile market out there. What we can control is how much we consume," adds Murtaza, who led the project to reduce reliance on gas boilers with electrical heat pumps at the company's site in Alexandria, Sydney. The heat pump has only just been installed but is expected to reduce the gas usage at that site by 10%, and to cut carbon emissions by about 700 tonnes per year.

AlSCO Uniforms is installing rooftop solar to power that heat pump with renewable electricity, and is rolling out heat pumps across the region. "We intend to implement this solution not just nationally at our 12 other facilities but actually in New Zealand and Asia as well," Murtaza says. AlSCO Uniforms has more than 180 branches world-wide and 16,000 employees.

Commercial laundries use large quantities of hot water, and AlSCO Uniforms is feeding the outgoing hot wastewater back into the heat pump using heat exchangers to reclaim the previously wasted energy. This saves approximately 170 kWh per hour, which further lowers bills and emissions.

Recommendations to accelerate the uptake of industrial and commercial heat pumps

Recommendation 1: Fix the network as the critical infrastructure of near-term electrification

- Provide network tariff relief to industrial electrification projects that increase grid utilisation / grid productivity
- Direct network operators to develop demand flexibility tariffs for large industrial loads
- Require network operators to publish dynamic operating envelopes for major industrial customers

Recommendation 2: Fund the Powering Better Care Program

- Commit \$100M for aged-care electrification with 50% co-funding, modelled on CEUF
- Extend to hospitals, childcare, and social housing in subsequent rounds
- Pair with a capability building program for heat pump design and installation

Recommendation 3: Shift to opex support for sectors in the near-term viable zone

- Create a time-limited production credit for manufacturers using low-carbon heat (heat pumps, thermal storage, biomass boilers, biomethane)
- Support a national white certificate scheme based on the Victorian Energy Upgrades program either via a revamp of the Australian Carbon Credit Unit (ACCU) Scheme or harmonisation of state-based programs. Ensure methods are available to provide a simplified administrative pathway and earlier claiming of funding

Recommendation 4: Close the data gaps that are preventing near-term action

- Commission baseline data study for large gas users in the commercial building sector
- Commission a report to compare biomethane usage to electrification in the commercial building and apartment sectors
- Fund further rounds of boiler mapping with focus on sectors in the near-term viable zone that lack feasibility study coverage
- Establish a standing Industrial Decarbonisation Advisory Panel to advise DCCEEW on near-term program design

Sources and acknowledgements

How this report was produced

This report is based on structured interviews conducted by A2EP in partnership with DETA Consulting between May and June 2026. All interviews were conducted under strict confidentiality. This report additionally draws on A2EP's Boiler Mapping Study (2023, DCCEEW); A2EP's Bioenergy Feedstock Strategy response (2025); A2EP's NSW Net Zero Commission submission (2025); and the RACE for 2030 Decarbonising Heat programme. Sector data references the ARENA (2019) Renewable Energy Options for Industrial Process Heat sector table. Commercial sector data references the Commercial Building Baseline Study (2022) and NABERS REI data. Abatement cost ranges are A2EP illustrative estimates based on interviews and published literature.

About A2EP

The Australian Alliance for Energy Productivity (A2EP) is an independent, not-for-profit industry body focused on improving energy productivity and accelerating decarbonisation across Australia's commercial and industrial sectors. A2EP is the host organisation of the Australian Renewable Heat Conference.



Above, clockwise from top: heat pump site tours at UNSW Sydney, AlSCO Uniforms, Port Phillip Estate, 101 Collins and Kilcoy Global Foods, conducted in 2025 and 2026.

A2EP is an independent, not-for-profit coalition of business and research leaders helping Australian businesses pursue a cleaner and more successful future by producing more with less energy. www.a2ep.org.au

