Industrial processes and product use sector emissions reduction pledge 2026–30

VICTORIA
Australia

Minister's foreword

The 2026–30 industrial processes and product use (IPPU) sector pledge focuses on continuing the Victorian Government's work to reduce emissions from leaking high-emission refrigerant gases, while saving businesses money.

The IPPU sector makes up a relatively small share of Victoria's total greenhouse gas emissions when compared to other sectors. Most IPPU emissions come from gas leaks in refrigeration and air conditioning (RAC) systems used in homes and businesses across Victoria. To cut these emissions, we need better maintenance and management of RAC equipment, safer handling and disposal of refrigerants and ongoing support for the transition to newer, lower emission technologies.

Working together at both the state and national level is the most effective way to build on efforts already underway to reduce emissions in this sector. Through Victoria's IPPU sector pledge, we're acting locally to improve how RAC equipment and refrigerant gases are managed, while pushing for stronger national policies to cut emissions and speed up the shift to cleaner alternatives.

The 2021–25 IPPU sector pledge focused on actions to manage RAC systems and refrigerant gases at end-of-life. The previous pledge's actions included reducing gas leakages by developing guidance and establishing a stronger national regime for RAC equipment through advocacy with the Australian Government.

By building on existing Victorian Government initiatives, these actions have led to increased uptake of energy-efficient equipment that uses refrigerants with a lower global warming potential.

Hon. Colin Brooks

Minister for Industry and Advanced Manufacturing

Overview of IPPU sector emissions

In 2023, the IPPU sector accounted for 4% (3.7 Mt CO_2-e) of Victoria's greenhouse gas emissions.

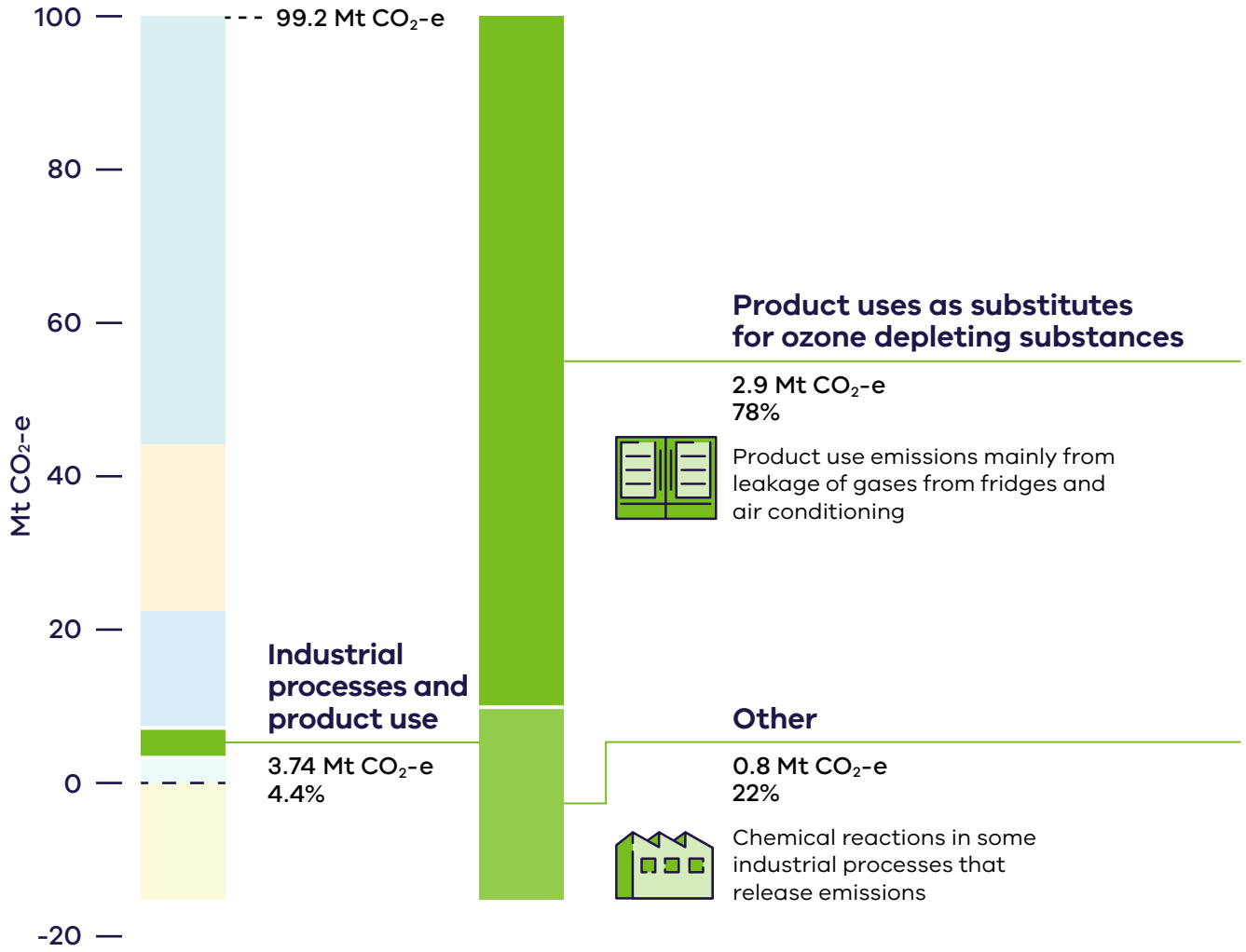
The largest source of IPPU emissions (78%) is from leaks of synthetic greenhouse gases such as hydrofluorocarbons (HFCs) which are gases used in refrigeration and air conditioning (RAC) equipment in households and businesses. These leaks mean that refrigeration appliances like fridges and air conditioning units perform less efficiently, leading to increased energy use and emissions.

HFCs and other synthetic greenhouse gases have high global warming potential (GWP) values and are much more effective at trapping heat in the atmosphere than carbon dioxide, further warming our planet.

Emissions from synthetic greenhouse gases are expected to decline steadily from now until 2030 as Australia progresses its phase out of HFCs in line with the internationally agreed Montreal Protocol.

In 2016, 137 countries agreed to phase out high GWP refrigerants such as R404A (GWP of 3920). This agreement was known as the Kigali Amendment to the Montreal Protocol. Since then, international governments have implemented policies to incentivise switching to lower GWP refrigerants such as R744 (GWP of 1), which has and continues to result in reduced worldwide emissions.

IPPU sector emissions in Victoria in 2023



Figures represent latest emissions data from 2023. Numbers may not sum to 100% due to rounding.

Achievements

Emissions
decline steadily

Emissions from synthetic greenhouse gases are expected to decline steadily from now until 2030 as Australia progresses its phase out of HFCs in line with the internationally agreed Montreal Protocol.

Advocate
for stronger policy

Victoria has advocated to the Australian Government to strengthen national policy regimes for managing RAC equipment.

Published
guide to optimise performance

The Victorian government published a guide to optimising the performance of commercial refrigeration and cooling equipment – helping equipment operators reduce leakage of refrigerant gases and save on energy costs.

VEU
requirements strengthened

We strengthened requirements under the Victorian Energy Upgrades to support appliances using lower GWP refrigerants. Only heat pump water heaters and air conditioners (below 15kW) using refrigerants with a GWP of less than 700 are eligible for installation under the program.

Emissions reduction pledge 2026–30

The 2026–30 IPPU sector pledge addresses three strategic themes, focusing on accelerating the transition from high-GWP refrigerants to low-GWP refrigerants:

- educate owners and operators of RAC equipment on best practice technology and maintenance activities
- stimulate the transition to low-GWP and natural refrigerants and upskilling relevant technicians
- enable improved refrigerant recovery at end-of-life and compliance with licensing obligations.

The Victorian Government will issue updated guidance for RAC system owners and operators, promoting best-practice operation and maintenance to minimise refrigerant leaks. This will include business webinars, in partnership with industry bodies, to increase awareness of high-GWP refrigerant alternatives.

Well-maintained equipment will save electricity and avoid using higher cost refrigerants not included in the Australian Government's HFC phase-down.

We'll continue to advocate for stronger national policies to increase end-of-life refrigerant recovery from 20% to 30%. This will support us to reduce non-compliant end-of-life practices in demolition, waste and recycling. It will also reduce fugitive emissions from end-of-life disposal of RAC equipment and automotive vehicles.

We'll explore options to increase the number of plumbers and refrigeration technicians in Victoria qualified to work with low-GWP and natural refrigerants, addressing a critical skills gap identified by industry. This means efficient electric appliances installed in homes and businesses as part of the Victorian Government's Gas Substitution Roadmap will be safely installed using the latest and most efficient refrigerants.

We'll also review procurement and leasing policies to prioritise low-GWP refrigerants in government buildings and vehicle fleets. Leading by example, we'll stimulate the transition to lower-GWP refrigerants with sustainable procurement.

From 2026 to 2030, the updated Victorian Energy Upgrades program will mandate refrigerants with a GWP below 700 for new appliance installations. This will cut emissions by an additional 0.02 Mt CO_2-e by 2030.

The combined impact of our actions is expected to reduce Victorian emissions by approximately 0.1 Mt CO_2-e in 2030, while supporting workforce development, public awareness and the transition to cleaner refrigerant technologies. These actions will also benefit Victorians by:

- enabling the accelerated uptake of electrification technologies in households and businesses
- enhancing workforce capacity, strengthening accountability and compliance
- mitigating fugitive refrigerant emissions during RAC operation and at end-of-life through improved technologies and best-practice installations, maintenance and record-keeping.

Emissions reduction actions 2026–30

The Victorian Government will implement a targeted suite of emissions reduction actions in the IPPU sector between 2026 and 2030, focusing on reducing synthetic greenhouse gas (SGG) emissions from RAC systems.

These actions will address key barriers such as high refrigerant leak rates, low recovery at end-of-life and limited current industry readiness for low-GWP refrigerants. The 2026–30 IPPU sector pledge is grouped into five key action areas, each contributing to a lower emissions future for Victoria.

Reduce refrigerant leaks and improve maintenance

Leakage from RAC systems is a major source of IPPU sector emissions. We'll issue updated guidance for commercial and residential RAC system owners and operators, promoting best-practice maintenance and servicing activities that result in lower energy use. This will reduce fugitive emissions by improving awareness of operator obligations. These actions are expected to reduce leakage rates by up to 3% in commercial refrigeration and 1% in residential systems annually.

Support industry to transition away from high-GWP refrigerants

We'll work with industry bodies to accelerate the phase-out of widely used, high-GWP refrigerants, particularly R404a, in the supermarket cold food chain. These sessions will raise awareness of lower emission alternatives, highlight the long-term cost benefits of switching to low-GWP refrigerants, and point out the impact of delayed transition given future import restrictions on these refrigerants into Australia.

Increase end-of-life refrigerant recovery

Currently, only 20% of refrigerants are recovered at the end-of-life for RAC equipment. We'll advocate for a national policy to increase this to 30% by 2030. This would reduce Victorian emissions by 0.2 Mt CO_2-e across the pledge period. A national policy will establish a framework to strengthen Victorian Government actions. Of particular focus will be increasing compliance and record-keeping requirements for demolition contractors, landfills and scrap yards. RAC equipment and vehicles are often improperly decommissioned, leading to uncontrolled refrigerant release at end-of-life.

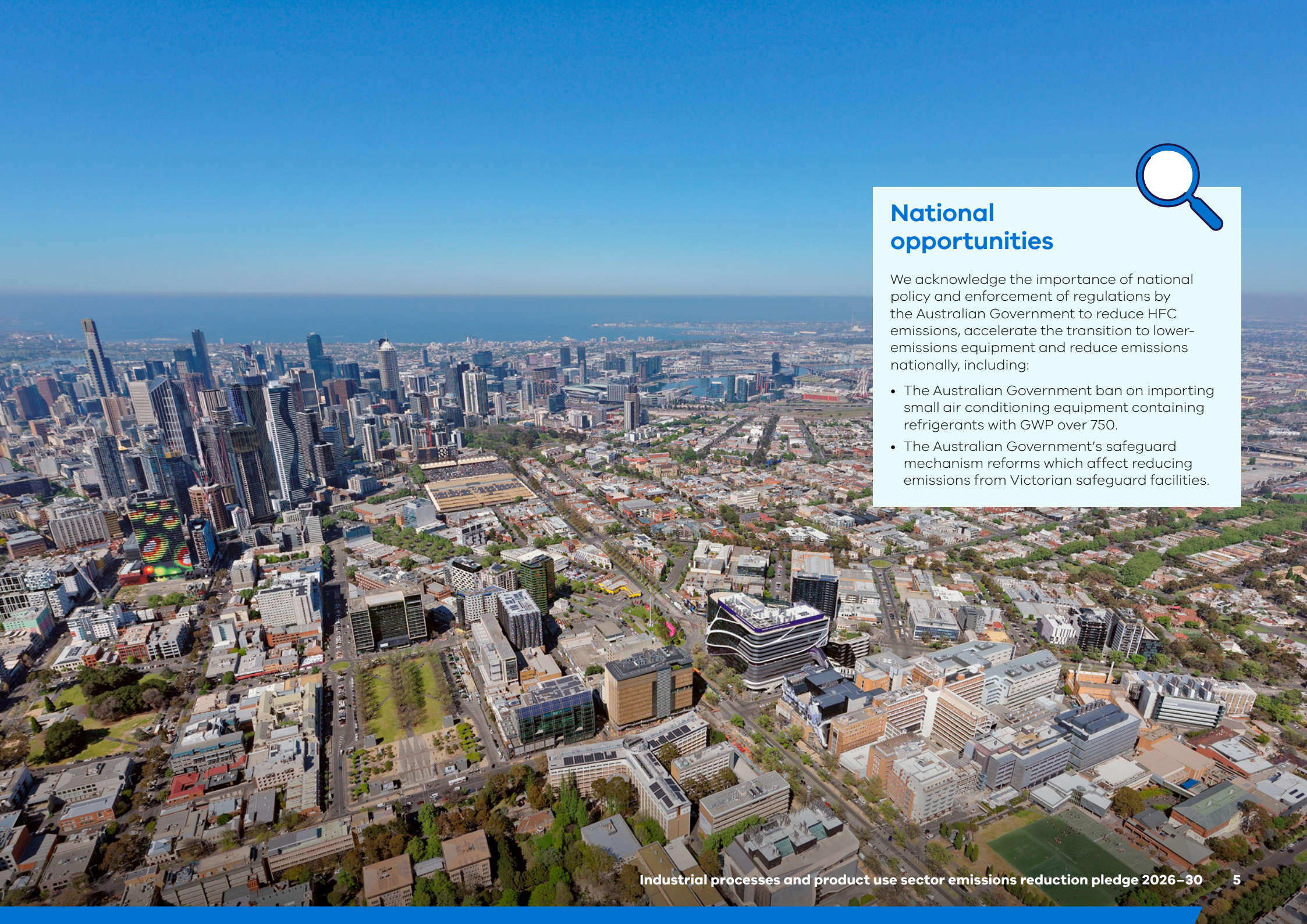
Build workforce capability

The Victorian Government will explore options to increase the number of plumbers and refrigeration technicians in Victoria qualified to work with low-GWP and natural refrigerants. This will be through changes to the Victorian Building Authority licensing framework and advocacy for enhancements to the Australian Refrigeration Council's refrigerant handling licensing scheme.

Safe, compliant installations will support the ongoing electrification of heating and cooling systems under Victoria's Gas Substitution Roadmap.

Lead by example in government procurement

We'll update procurement and leasing policies to prioritise low-GWP refrigerants in government buildings and vehicle fleets. This may include leveraging leasing terms and procurement contracts to build in requirements for purchasing and charging equipment with low-GWP and natural refrigerants.



National opportunities

We acknowledge the importance of national policy and enforcement of regulations by the Australian Government to reduce HFC emissions, accelerate the transition to lower-emissions equipment and reduce emissions nationally, including:

- The Australian Government ban on importing small air conditioning equipment containing refrigerants with GWP over 750.
- The Australian Government's safeguard mechanism reforms which affect reducing emissions from Victorian safeguard facilities.

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Acknowledgement of Country

We acknowledge and respect Victorian Traditional Owners as the original custodians of Victoria's land and waters, their unique ability to care for Country and deep spiritual connection to it.

We honour Elders past and present whose knowledge and wisdom have ensured the continuation of culture and traditional practices.

We are committed to genuinely partner, and meaningfully engage, with Victoria's Traditional Owners and Aboriginal communities to support the protection of Country, the maintenance of spiritual and cultural practices and their broader aspirations in the 21st century and beyond.

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