

Media release

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GBCA and AIRAH call on industry to tackle refrigerants and future-proof buildings

The Green Building Council of Australia (GBCA) and the Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) have joined forces to highlight the important role of refrigerants in reducing emissions and improving building performance, with the release of a new discussion paper, *Freeze Frame: Refrigerants as long-term building infrastructure*.

Refrigerants are central to modern heating, cooling and ventilation systems, and the decisions we make about these systems today will determine the sector's costs, risks and emissions profile for decades.

The scale of the issue is significant. More than 62 million refrigerant-dependent devices are now in use across Australia – up 15% in just five years – with the sector valued at around \$12.7 billion annually, more than double a decade ago.

Heating, ventilation, air conditioning and refrigeration (HVAC&R) systems are typically replaced every 15-20 years, meaning refrigerant choices made today will shape emissions and financial risks well into the 2040s.

The systems in use today already contain an estimated 55,000 tonnes of refrigerant, equal to around 100 MtCO₂e if released – roughly a quarter of Australia's annual emissions.

This refrigerant bank is projected to grow to 80,000 tonnes by 2036. At the same time, modelling shows demand for new refrigerants will outstrip supply, with a threefold shortfall projected by 2036 under the current phase-down.

Jorge Chapa, Chief Impact Officer at GBCA, said refrigerants are a critical but often overlooked piece of the climate puzzle.

"Every building relies on refrigerants, yet they're rarely factored into long-term planning," Mr Chapa said.

"If we don't plan ahead, we risk higher retrofit costs, supply shortages and emissions that could have been avoided. The refrigerant choices we make now will shape building performance for decades to come."

Mark Vender, Advocacy and Policy Manager at AIRAH, said the *Freeze Frame* paper is an important opportunity to bridge the gap between the property and engineering sectors.

"The HVAC&R industry is on the front line of Australia's refrigerant transition," Mr Vender said.

"By bringing together technical expertise and property-sector leadership, this paper encourages the practical steps we need to take – from smarter design and maintenance to better refrigerant tracking and stronger collaboration across industry and government."

With the global phase-down of high-global warming refrigerants underway and demand increasing as buildings electrify, the organisations agree forward planning and collaboration are essential.

The *Freeze Frame* paper outlines opportunities across both new and existing building stock, including:

- **Existing buildings** – reducing risks by reviewing and registering refrigerants currently in use and planning staged transitions.
- **New buildings** – designing to minimise reliance on refrigerants through passive design, efficient systems, and forward-looking refrigerant choices.
- **Collaboration** – scaling supply of lower-impact alternatives, aligning with global phasedowns, and avoiding stranded assets.
- **Voluntary action** – how voluntary solutions, like Green Star, the Australian Sustainable Finance Taxonomy, and industry action is moving the conversation forward towards lower harm refrigerants, including ultra-low GWP solutions.
- **Policy action** – measures that state and federal governments can introduce now to change our current approach to regulating, installing, and replacing refrigeration equipment that is not ready for the future.

Mr Chapa said the initiative also connects to Australia’s growing leadership on climate and building performance.

“With COP31 on the horizon in 2026, Australia has an opportunity to demonstrate its climate leadership, and refrigerants is one area where the property sector can show practical action,” he said.

The *Freeze Frame* discussion paper is [available now](#), with feedback open until 2 April 2026.

To learn more, an on-demand webinar featuring experts from GBCA, AIRAH, UNSW and Six Capitals Consulting is available www.gbca.au/course-event/insights-into-refrigerants. The session explores how refrigerants impact building design and operations, and what industry can do to prepare for the future.

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About us:

Green Building Council of Australia (GBCA) is the nation’s authority on sustainable buildings and communities. Our mission is to accelerate the transformation of Australia’s built environment into one that is healthy, liveable, productive, resilient and sustainable. We work with industry and government to encourage policies and programs that support our mission. We educate thousands of people each year on how to design and deliver sustainable outcomes for Australia’s buildings and communities. And we operate Australia’s only national, voluntary, holistic rating system for sustainable buildings and communities - Green Star. www.gbca.org.au