



Wednesday, February 8, 2023

Department of Climate Change, Energy, the Environment, and Water

The Australian Institute of Refrigeration, Air Conditioning and Heating (AIRAH) strongly supports the government's efforts to define a national strategy for improving energy performance. As we face the increasingly urgent need to act on climate change, all levels of government, as well as industry and the public, must work together. We see the National Energy Performance Strategy as an important step towards this goal.

AIRAH is a peak body for professionals working in heating, ventilation, air conditioning and refrigeration (HVAC&R) and building services. In any conversation about energy performance, we can provide valuable information.

As a member of ASBEC, AIRAH has contributed to the ASBEC feedback on the National Energy Performance Strategy, and we fully support the comments it contains. At the same time, we would like to provide additional information related more directly to our area of expertise: HVAC&R building services.

In Australia, HVAC&R uses more than 24 per cent of the country's electricity. As well as being one of the largest energy users, HVAC&R also plays a major role in determining the peak loads across the grid, and their timing. As noted by the [International Energy Agency \(IEA\)](#), over the coming decades, cooling will drive peak electricity demand. This means that HVAC&R systems offer huge opportunities for smoothing out our energy load.

In the built environment, cooling and heating constitutes about half of a building's energy use for both [residential](#) and [commercial](#). As highlighted in the ASBEC response to this consultation, it is vital that we improve the performance of our buildings, not just through appliances, but also through design and the building envelope.

We would stress the importance of improving existing buildings. [Recent research by DCCEEW](#) quantified the significant energy penalties of common HVAC faults. The study clearly demonstrates that preventative maintenance minimises technology failure, reduces refrigerant leaks, and increases the energy efficiency of properly installed equipment. Simple measures such as checking for refrigerant leaks and cleaning coils can often be just as effective in reducing energy use as installing new energy-efficient technology.

Although mechanisms such as the National Construction Code (NCC) regulate the design of HVAC systems, there are major opportunities to improve energy efficiency through better installation, commissioning and maintenance practices. This could be achieved through the NCC, better licensing and compliance regimes, and mandated maintenance schedules.

Government also plays a key role in supporting innovation. In particular AIRAH would highlight the potential of smart building systems along with big data and analytics, thermal storage, district heating and cooling, and energy-efficient heat pumps that use low-GWP refrigerants and can replace gas boilers. As we strive to electrify our built environment, these technologies warrant attention and investment.

AIRAH looks forward to seeing the development of the National Energy Performance Strategy and would welcome the chance to be involved in ongoing consultations on this topic.

Regards,

A handwritten signature in black ink, appearing to read "Tony Gleeson". The signature is fluid and cursive, with a large initial "T" and "G".

Tony Gleeson, M.AIRAH  
Chief Executive  
AIRAH

**About AIRAH**

The Australian Institute of Refrigeration, Air conditioning and Heating (AIRAH) is an independent, specialist, not-for-profit technical organisation providing leadership in the air conditioning, refrigeration and heating sector through collaboration, communication, engagement and professional development.

Formed in 1920, AIRAH has earned renown from government and other industry bodies for its expertise across a broad expanse of issues in the realm of engineering services for the built environment. AIRAH represents the entire breadth of the Heating, Ventilation, Air conditioning and Refrigeration (HVAC&R) industry, from “the man in the van” to research-focused academics; from plumbers and fridgies to designers of the nation’s most high-performing buildings; from sole operators to the chief executives of large corporations. Indeed, as Australia’s leading refrigeration and air conditioning organisation AIRAH represents a membership – and an industry – that is crucial to our community’s comfort, health and safety.