



COME TOGETHER



Can leading businesses and institutions across the HVAC&R spectrum join forces to create new climate and energy solutions? The Innovation Hub for Affordable Heating and Cooling is banking on it.

Air conditioning and refrigeration accounts for almost a quarter of all electricity generated in Australia. It is responsible for about 12 per cent of Australia's CO₂ emissions, and makes up about half of peak electricity demand across different parts of the electricity network.

In view of this, the Innovation Hub for Affordable Heating and Cooling (i-Hub) was created to bring about a step change in our industry.

The idea is to create a common platform on which leading businesses and institutions can discuss and adopt an integrated approach to developing more affordable heating and cooling solutions.

GETTING CONNECTED

The initiative is led by AIRAH in conjunction with the CSIRO, Queensland University of Technology, the University of Melbourne and the University of Wollongong and supported by the Australian Renewable Energy Agency (ARENA).

The i-Hub brings together leading universities, researchers, consultants, building owners and equipment manufacturers to create a connected R&D community in Australia. The aim is to support the HVAC&R industry with knowledge dissemination, skills-development and capacity-building.

In line with the National Energy Productivity Plan, i-Hub is geared towards facilitating the

HVAC&R industry's transition to a low-emissions future, stimulating jobs growth, and showcasing HVAC&R innovation in buildings.

"The i-Hub project brings a uniquely concerted effort from the HVAC&R and property industries to use the design and operation of air conditioning services as a tool for supporting onsite and local grid renewables," says AIRAH CEO Tony Gleeson, M.AIRAH.

"Through the deferral of HVAC&R loads – during renewable energy supply shortages – and the use of HVAC&R loads as a 'productive source of demand' during periods of excess supply, this project will increase the value of onsite renewable energy production and increase the fraction of building energy that can be economically provided by onsite renewable energy."

INNOVATION PLATFORMS

The i-Hub project is made up of three interlinked initiatives. They are the Smart Building Data Clearing House, Living laboratories – Green Proving Grounds, and Integrated Design Studios.

Their role is to support the HVAC&R industry with knowledge dissemination, skills-development and capacity-building.

Each of the initiatives has a clearly defined scope and agenda.

The i-Hub Data Clearing House was developed to support Australian innovation in the area of smart controls and the digitalisation of buildings.

The Living Laboratories aim to provide real-world validation of technologies that integrate onsite renewable energy and HVAC loads to improve the value of renewable energy in front of major building portfolio owners.

With a view to facilitate integrated design in the industry, the i-Hub Integrated Design Studio aims to explore its development between architects, engineers, and clients in a project environment.

TECHNOLOGICAL BET

At a time when rising electricity costs are putting enormous pressure on Australian consumers and businesses – a problem made worse by COVID-19 – initiatives like the i-Hub are betting on technology to reverse the trend.

The i-Hub reflects the strong desire to support Australian innovation in delivering better energy efficiency and minimising peak demand. The project also aims to deliver innovative solutions that have renewable energy and building efficiency at their core.

Stark as the current energy and climate challenges are, new market opportunities abound for smart energy and energy-efficient products and services.

The i-Hub is working to assist the HVAC&R industry's transition towards a low-emissions future. In so doing, it is strengthening Australia's position to lead the global market for smart and zero-energy buildings. ■

For more information about i-Hub and to subscribe to the i-Hub newsletter go to www.ihub.org.au