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# Ecolibrium

# Tall timber

Brisbane is home to  
Australia's tallest CLT building.





## Paradigm shift for AC delivery

What if building owners only paid for the cooling they received, while a service provider purchased and maintained the equipment itself?

Cooling as a service (CaaS) has been identified as one of the leading investment ideas for 2019 by the Global Innovation Lab for Climate Finance, an initiative aimed at accelerating investment in the low-carbon economy.

CaaS involves end-users paying for the cooling they receive, rather than the physical product or infrastructure that delivers it. A technology provider installs and maintains the cooling equipment and recovers costs through periodic payments made by the customer.

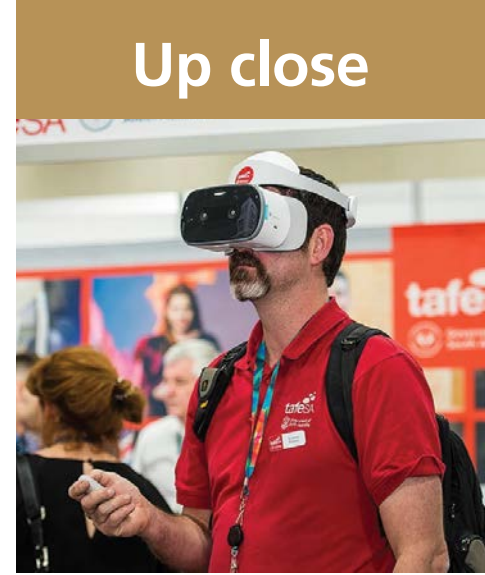
These payments are based on the cooling service delivered – for example, dollars per tonnes of refrigeration, or cubic metres of cooled air – and are calculated on actual usage. The payment is not dependent on the savings, but agreed in advance.



“Technology providers own equipment, maintain it, and pay electricity, incentivising efficient cooling technology, maintenance practices, and the design of equipment that is modular,” says the Global Innovation Lab. “Parts [are] reusable/recyclable, since the ownership of the equipment remains in their hands.”

The Global Innovation Lab says improving the energy efficiency of cooling systems could halve the yearly emissions associated with the amount of AC projected by 2050 (according to the IEA). It could also reduce costs while improving air quality, services, comfort and productivity.

The CaaS idea is supported by the Kigali Cooling Efficiency Program (K-CEP) and the Basel Agency for Sustainable Energy (BASE). They estimate that there is a market opportunity of \$17–50 billion per year from present to 2050 if the model can be implemented for 10 per cent of the global AC market. They also estimate that this will result in 30–60 per cent energy efficiency improvement, and a dramatic decrease in high global warming potential refrigerants such as HFCs. ■



Shannon Baldock, Affil. AIRAH, is refrigeration lecturer at TAFE SA.

### Responsibilities

I oversee the training of the electrical components of our Certificate III in Air Conditioning and Refrigeration. I am also running a virtual reality pilot of our natural refrigerants safety courses.

### Specialty

Electrical safety and control is one. My background is in heavy industrial maintenance, and I enjoy fault-finding and improving systems. IT and automation are other specialties. I have a background in electronics and IT, and like to think of myself as a digital handyman.

### Passions

Innovation in training and assessment. I'm always looking for alternative ways of engaging students without sacrificing the core skills required by our trade. I'm also passionate about encouraging young people to see a trade as something to aspire to and be proud of.

### Challenges

Being a sparky in a world of fridges!

### Professional development

I recently attended the World Congress of the World Federation of Colleges and Polytechnics and the National VELG Conference to learn about the latest developments in training and assessment.

### Inspiring words

Ataturk's Quote at ANZAC Cove. It shows that even from one of the worst conflicts in history the human spirit survives.

### Future plans

To expand our VR training to other parts of the Cert III and to engage with industry to develop innovative training materials based on the latest our sector has to offer.

### Favourite destination

The Fleurieu Peninsula, SA. I never get tired of the views as I drive around. ■

## Devoted to data

Recognising the rising importance of technology in the built environment, AIRAH is holding the inaugural Big Data and Analytics Forum.

Although big data has been around for many years, historically it has been used to validate temperature complaints or system operation over relatively short periods. Now, analytics is radically changing the situation.

It is possible, for instance, to track and trend historical patterns to help diagnose faults or equipment deterioration. Using this previously unexploited information, big data is transforming the way buildings can be managed and maintained.

AIRAH's Big Data and Analytics Forum 2019 will be held in Sydney on August 1. It offers a chance to focus on these topics and network with industry leaders to break down what big data is and how it can help improve the built environment's operational efficiencies.

The technical organising committee is now calling for speakers to present on an array of subjects. Submissions should be emailed to [conferences@airah.org.au](mailto:conferences@airah.org.au) by Friday, May 3. ■

Would you like to know more?

Go to [www.airah.org.au/conferences](http://www.airah.org.au/conferences)