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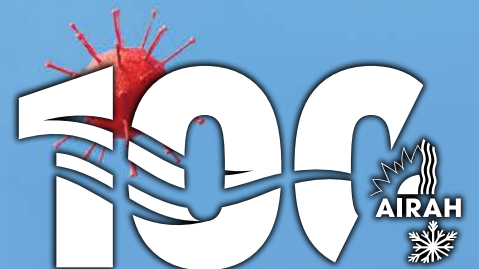
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Ecolibrium



And then?

Living with COVID-19,
and what comes next.



Gaps in refrigeration across the nation prove costly

Issues with the Australian cold food chain lead to massive food wastage every year.

Faults in the Australian cold food chain result in \$3.8 billion in food wastage each year. That's an estimated 2,183,500 tonnes of fresh fruit, vegetables, meat, seafood and dairy products spoiled due to breaks and deficiencies in the cold food chain.

So says a report prepared for Refrigerants Reclaim Australia and the Department of Agriculture, Water and the Environment. Unsurprisingly, the report indicates that poor temperature management is the greatest risk for perishable food.



If wasted food was viewed as a country, it would be the third-largest greenhouse gas emitter on the planet

ASTONISHING NUMBERS

"The numbers in this report are truly astonishing," says Refrigerants Australia executive director Greg Picker. "We always thought there were issues, which has now been confirmed for us in a big way. And it's alarming as the faults are mainly behavioural, which could be changed through educating those involved. Leaving food on the loading dock for too long, not closing truck doors, incorrectly stacked crates – these are small things that are resulting in temperature changes and food being spoiled."

The report says that during transportation and handling between mobile and stationary refrigeration points, there are sometimes huge temperature variations



Refrigerants Reclaim Australia GM
Kylie Farrelley

between truck or trailer, loading docks and storage facilities.

THIRD LARGEST EMITTER

The estimated \$3.8 billion in waste comprises 25 per cent (1,930,000 tonnes) of annual production of fruit and vegetables worth \$3 billion; 3.5 per cent of annual production of meat (155,000 tonnes) worth \$670 million, and seafood (8,500 tonnes) worth \$90 million; and 1 per cent (90,000 tonnes) of annual dairy production valued at \$70 million.

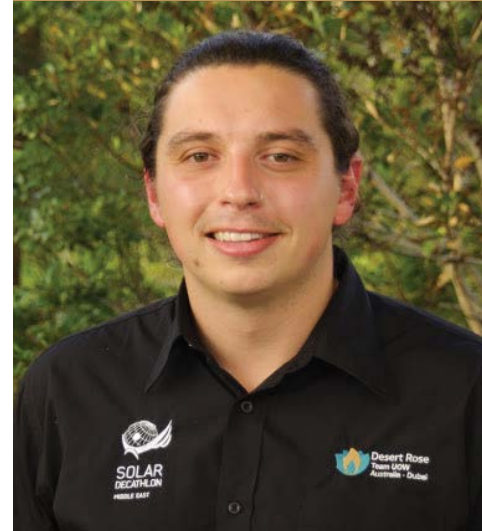
Globally, the report says, if wasted food was viewed as a country, it would be the third-largest greenhouse gas emitter on the planet.

"The refrigeration industry is a crucial part of the cold food chain which, considering the volume of food that moves through it, has been extraordinarily successful," says Refrigerants Reclaim Australia GM Kylie Farrelley. "However, there is room for improvement, both in how refrigeration technology is used and improved practices in the cold food chain. If everyone in the cold food chain works together, we can reduce the amount of food that is wasted, which will have positive impacts on everyone involved – from farmers, to the end consumer and the environment." ■

Would you like to know more?

To read the full report "A Study of Waste in the Cold Food Chain and Opportunities for Improvement", go to www.environment.gov.au/protection/ozone/publications

Up close



Brendan Banfield, Stud.AIRAH, is a research assistant and PhD candidate at the University of Wollongong.

Responsibilities

I am working on two different projects. The first one involves the development of a new type of residential air conditioning controller that utilises artificial intelligence. The second project I am involved in is to develop a custom energy management system for a new type of battery utilising optimal control algorithms.

Specialty

Distributed generation, building automation, energy management and control systems.

Passions

I am passionate about sustainability and transitioning the world to more renewable forms of generating and using electricity. Excuses are often made as to why is too hard to transition to renewables, such as they are too intermittent, they take up too much space, or the grid wasn't built to support electric vehicles, etc. With some intelligent planning and systems in place, there is no reason why Australia could not be run primarily by renewables.

Challenges

Whether it is a new paper or part of my thesis, I feel writing for me is always more challenging than the more technical aspects of my work.

Enthusiasms

I love to snowboard, wakeboard, rock climb, see live music and travel.

Inspiring words

"Do. Or do not. There is no try." – Yoda, *The Empire Strikes Back*

Favourite destination?

Japan – the people, culture and country itself are amazing.

Plans

I hope that one day I can say I left the industry in a better place than I entered it. ■