

# HVAC&R Nation

AN AIRAH PUBLICATION



## Skills

WORKSHOP

**Controlling  
condensation  
in mechanical  
services**

## A cool career

**Finding  
the next  
generation  
of fridgies**

# Heroes in red

**Refrigeration's vital role  
in our blood banks**

# A COOL CAREER



Source: PEER

Much has been said of the invisible nature of the HVAC&R industry and how it has led to the current skills shortage. But behind the scenes, efforts are being made to attract a new generation to the trade, as **Sean McGowan** reports.

As part of the broader electrotechnology sector, refrigeration and air conditioning has been experiencing a skills shortage for the best part of a decade, perhaps even longer.

A host of reasons have been put forward, from an ageing workforce to HVAC&R's low profile compared to traditional trades. Yet for all the finger pointing – and the best efforts of industry participants – an end to the skills shortage has appeared as far away as ever.

But more recently, the industry seems to be gaining traction.

Apprenticeship commencements in the refrigeration and air conditioning sector have risen since 2012 – against the overall downward trend of apprenticeships and traineeships in Australia. The number of women and older candidates starting a refrigeration and/or air conditioning apprenticeship has also grown, although the participation rate of women remains very low.

But with the industry predicted to keep growing – and the demand for skills with it – a “steady-as-she-goes” strategy is unlikely to do the job.

As head teacher of refrigeration and air conditioning trades at the Kingswood Campus of Nepean TAFE, Steve Smith, M.AIRAH, says there is still much the industry needs to do to present HVAC&R as a viable career choice for school leavers. And that work needs to start by winning the hearts and minds of parents.

“Back in my day, I decided what to do for a job with a bit of guidance from my parents,” says Smith. “This was common in my generation, but I have come to realise that things are different today. Parents tend to control where their children end up, and a large majority prefer that their children pursue a career that involves university-level training.”



Refrigeration and air conditioning technician Skye DaVinci from Veolia Australia appeared in the ARC careers video.

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Smith believes the industry needs to do a better job of making itself known to the general public.

“We have been a hidden industry for too long and we are now suffering the effects of this,” he says. “How can employers attract anyone when the public are not aware that it’s an incredibly diverse and rewarding occupation?”

That’s the question. And while key industry stakeholders formulate their battle plans, HVAC&R Nation has discovered that many individuals, companies and industry organisations are already looking for the answer.

## THE YOUTUBE GENERATION

In 2017, the issue of skills shortages in some states drove the Australian Refrigeration Council (ARC) to develop a careers video aimed at presenting the RAC industry as a dynamic career choice.

“The ARC services over 90,000 individuals and businesses in the wider refrigeration and air conditioning (RAC) sectors,” says Alex Doran, general manager of communications and business development at the ARC.

“It is because of these close ties to the sector that we feel so strongly about the health and sustainability of the RAC community as a whole.”

The video was produced to target students in Years 9 and 10, based on research that has shown this is the period when young people begin to seriously consider their career and future.

“At a grass roots level, the video was about presenting the industry as vital to modern life,” says Doran.



Faircloth & Reynolds set up at a recent careers expo held in Coffs Harbour.

“When you consider that surgical operations can’t happen without refrigeration facilities, or that there’d be no transport of meat without refrigeration, then you start to understand how important a role refrigeration and air conditioning technicians play in society.”

The video also focuses on the cutting-edge technologies and diverse career pathways offered by the industry.

“In widening the scope of what our industry can offer, it became about ‘climate control’ and using new terms that speak to the youth of today who are considering many career options.”

The ARC developed the careers video in conjunction with additional promotional and educational materials. Information packs sent to secondary school careers counsellors included the ARC video on a fridge-shaped USB stick, information leaflets and phone-activated fans.

The video is hosted on the ARC’s website and YouTube channel. It has since been republished by TAFEs and associations on their websites and communications.

“We’ve been thrilled about the positive response the video has received from students and schools, as well as from members of the RAC community,” says Doran.

See the video yourself – [www.arcltd.org.au/careers](http://www.arcltd.org.au/careers)

## VALUING PEOPLE

Based in Coffs Harbour with offices in Brisbane, Sydney, Darwin, Ballina, Port Macquarie and Armidale, refrigeration and air conditioning contractor Faircloth & Reynolds employs about 150 staff and trains approximately 10 apprentices every year.

Director David Reynolds, AM.AIRAH, says the company has always placed enormous importance on the training of new apprentices and the retention of staff.

“Few business owners would argue that their employees are surely the best asset that their business has,” says Reynolds. “Some of our staff have been with us for over 30 years, and many others for 10 years or more. Many were apprentices that started straight out of school, progressing to become tradesmen and department managers.”

Having recently received a grant under the federal government’s Regional Jobs and Investment package

to upgrade the manufacturing capacity of its Coffs Harbour facility, Faircloth & Reynolds is taking a proactive approach to recruitment and training.

This includes close engagement with local secondary schools, where the company introduces the HVAC&R industry to students at careers events, including the technology involved. Students interested in taking up an apprenticeship with Faircloth & Reynolds are asked to submit a hand-written application, and as part of their interview are offered a few days of work experience.

“Out of that, you really get a feel for their interest, their aptitude and whether or not they are there just because their parents told them they had to, or whether they really want a job,” says Reynolds.

Those that demonstrate an aptitude for the trade are then offered an apprenticeship.

“Bringing young people through, and putting them with decent tradesmen, also means you can mentor them into being decent people in the community,” he says, “and this contributes to the building of our company culture.”



Students from Port Hacking High School “try a trade” at ARBS 2018.

## FREE TAFE?

From January 1, 2019, the Victorian government has offered free TAFE for priority courses. The program aims to reduce the financial barrier for students wanting to train in areas of high demand.

The Free TAFE for Priority Courses program covers tuition fees for students who are eligible for government-subsidised training. It includes 20 Victorian apprenticeship pathway courses (sometimes known as pre-apprenticeships).

Among these are the Certificate II in Electrotechnology (Career Start) and Certificate II in Engineering Pathways courses – both potential pathways into a refrigeration and air conditioning apprenticeship.

The initiative from the Victorian government follows similar moves in other states.

In Queensland, Year 12 graduates can enjoy free TAFE in high-priority courses, including Certificate III in Air-conditioning and Refrigeration. The NSW government, meanwhile, is paying the course cost of 100,000 new apprenticeships.

As well as apprentices, the company is committed to the employment and upskilling of mature-age tradespeople through traineeships.

“Training and upskilling both new and existing staff is part of our growth,” says Reynolds. “If we don’t do that, we don’t grow – and we need to grow to keep ahead of both local and international competition, particularly since we manufacture a varied range of customised products out of our Coffs Harbour factory.”

## HAVING A CRACK

The Refrigeration and Air Conditioning Contractor’s Association (RACCA) is another organisation that feels the impact of the industry’s skills shortage on a daily basis – and is trying to address the problem.

“We at RACCA have attended careers events, and are out there spreading the word about our invisible industry,” says RACCA Australia president, Kevin O’Shea.

At last year’s ARBS exhibition in Sydney, RACCA introduced a Try-A-Trade program, with school students invited to learn more about the industry and its career prospects. RACCA was assisted by three apprentices: Amber Perrott-Jones from A.G. Coombs, Marcus Jackson from Equilibrium Air Conditioning and David Kupta from the BevWizz Group.

Students from Port Hacking High School attended day two of ARBS. Split into three groups, the students were allocated an apprentice to guide them around the exhibition, talking to exhibitors and learning what the industry has to offer. They also observed the WorldSkills National Refrigeration Competition.

After the tour, students were given the opportunity to “try a trade” by learning how to cut, bend and flare copper pipe under the tuition of the apprentices.

“The response was great, and every student enjoyed the day and left happy,” says O’Shea. “Obviously not all will follow a career path into our trade, but they went home and told their parents and friends about their experience, and from that word starts to spread about our wonderful trade.”

RACCA intends to continue the Try-A-Trade program at the next ARBS exhibition in Melbourne 2020, and hopes two schools will attend each day.

As well as building on this program and attending careers events, RACCA is exploring opportunities to adopt programs from overseas in a bid to lift the profile of the industry.

“We have been in contact with ASHRAE in the USA to find out more about their STEM (science, technology, engineering and mathematics) program, which we are hoping to be able to use,” says O’Shea.

“I am very passionate about our industry and will do whatever I can to lift the profile of this great trade.”

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My over-riding passion is to encourage young women to seriously consider becoming fridges . . .

## A NOVEL IDEA

Dave Peall, Stud.AIRAH, is an educator and a long-time refrigeration and air conditioning technician who seized an early career option to become a marine refrigeration engineer. While working in the Far East on the MV Golden Summer in the late 1960s he began his first manuscript, *A Reefer in Paradise*.

Encouraged by friends and family to follow a lifelong ambition to be an author, Peall recently completed a Bachelor of Creative Industries degree at the University of the Sunshine Coast (USC). He is writing a fictional novel to encourage more young women to consider an apprenticeship the RAC trade as an exciting career option.

“The desire to write the book was partly inspired by my own adventures,” he says, “but I feel that I’m being swept up in a whirlwind, driven to encourage more women to join the industry.”

## THE GOOD NEWS OR THE BAD NEWS?

**At a national refrigeration and air conditioning teachers meeting held recently at the new ActronAir facility in Sydney, all TAFE representatives present reported an increase of between 25 and 50 per cent in 2018 enrolments compared to 2017.**

“The numbers here at my college went from 287 in 2017 to 400 in 2018,” says Steve Smith, M.AIRAH, head teacher of refrigeration and air conditioning trades at the Nirimba College of TAFE NSW.

And in what is encouraging news for the industry, Smith says the intake for this year is expected to be higher again.

There are likely several reasons for the increase in numbers.

For instance, Sydney and Melbourne are undertaking massive infrastructure projects likely to drive a spike in apprenticeship numbers in both cities. Meanwhile most TAFEs around the country indicate the clear majority of apprentices are working in the residential air conditioning sector.

Smith recently reflected with a colleague on how things have changed over the 40 years he has been involved in the trade.

“When I was attending TAFE as an apprentice, 12 of the 15 students in the class worked for companies that predominantly did commercial refrigeration work, with a bit of commercial air conditioning work thrown in,” he says.

“I was one of those 12. The other three worked for commercial air conditioning companies in the high-rise sector.”

When he looks at a typical class today, Smith finds that almost all his students work in the installation of residential air conditioning systems only.

“This is of particular interest, as it demonstrates why the commercial refrigeration and air conditioning sectors are experiencing serious issues in finding competent, experienced technicians these days. The high-rise chiller companies are in extreme jeopardy, while the industrial sector is yet another leap worse off.”

Smith says this exacerbates skills shortages and wage increases in those sectors. It also shows, he says, the national trade course is no longer fit for purpose.

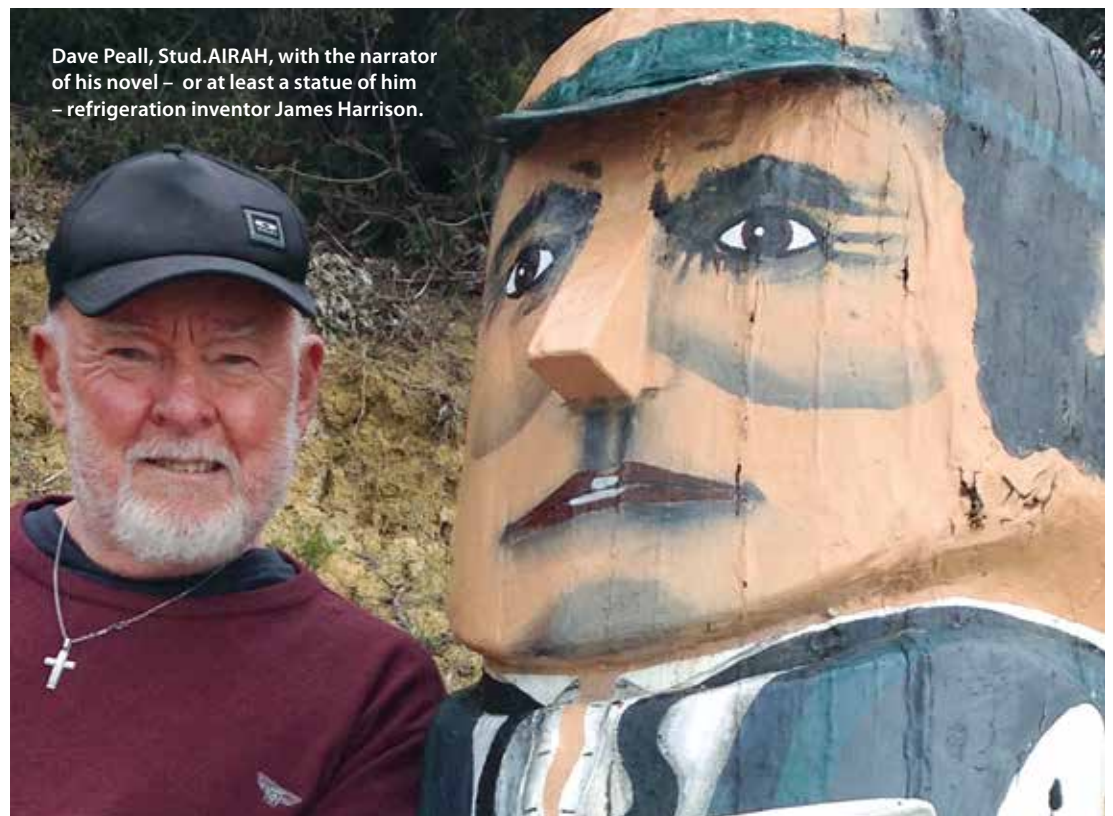
“We are all delivering a course structure,” he says, “that was essentially created 50-plus years ago!”

Peall says the book began life as an illustrated work directed at middle grade schoolchildren but is now being targeted towards young women facing confusing career choices.

“The first book is targeted to the RAC trade and family support groups who surround young school leavers and job seekers,” he says. “But my over-riding passion is to encourage young women to seriously consider becoming fridges as a career stepping stone.

Peall says the story has received excellent reviews, with readers praising the concept, the creative use of James Harrison as a historical narrator, and a contemporary protagonist.

Professional review is under way, with plans to independently publish the book in the coming months. Peall is now researching the experiences of successful female tradies as background for a sequel to be co-written with a female author. ■



Dave Peall, Stud.AIRAH, with the narrator of his novel – or at least a statue of him – refrigeration inventor James Harrison.