

# HVAC&R Nation

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# The XX Factor

Women strengthening our HVAC&R workforce



Despite efforts to attract more women into the HVAC&R industry, the overwhelming majority of workers are still male.

**Willow Aliento** talks to women and men in our sector who share a passion for building a more diverse and inclusive workforce.

It's no secret that HVAC&R is an industry with a relatively small number of women. It's also no secret that many would like this to change.

Grant Swanson, M.AIRAH, has been in the HVAC&R sector for around 40 years, and teaches HVAC and refrigeration at Ultimo TAFE in Sydney. Although the number of female apprentices and students remains low for HVAC&R, it is growing. This year, for example, there were a total of 13 female students across courses including Certificate II Career Start Electrotechnology, Certificate III Journeyman Air Conditioning and Refrigeration, and apprentices across Stage One, Stage Two and Navy apprentices.

While those are not big numbers, Swanson points out that the HVAC&R trade as a whole has historically struggled to attract new quality apprentices because it is not as high-profile as building, plumbing and electrical.

"The industry has grown rapidly over the last 20 years, but over this same period those entering the industry at trade level has declined," he says.

One way of tackling this challenge and increasing the talent pool is to actively attract women.

"We have been looking at ways to target and promote greater female uptake of air conditioning and refrigeration apprenticeships," Swanson says. "The industry requires a large injection of quality trades people to service the continual growth of the sector."

The TAFE NSW Ultimo refrigeration section is currently actively seeking female participation in a Certificate II Electrotechnology Career Start course in 2021. The course is two days a week for six months, and provides students with key foundation skills and knowledge, and a sample of what the industry has to offer, before they commit to a full apprenticeship in either electrical or HVAC&R.

## LIFE AS A FEMALE FRIDGIE

Swanson says there are a number of factors beyond the classroom that contribute to low female participation rates. The perception of HVAC&R workplaces as very male-dominated is one of them.

"This may not be very inviting to young girls starting out on a career," he says.

"Coming from an all-girl high school or co-educational high school to a TAFE class where you may be the only female in the class could be intimidating for some."

There are also some features of workplaces that can be discouraging. Swanson observes that facilities on many smaller construction sites are of a low standard and would generally not meet female needs.



Bridie Kate McDonald

This is something Bridie Kate McDonald, a qualified refrigeration technician and former student at Ultimo TAFE, has experienced first-hand.

She often works on sites where there are no amenities for women, including hygiene product disposal. These are facilities all workplaces should be providing, she says.

"Even if it is a male-dominated workplace, it is just basic workplace health and safety [to have sanitary product bins]. Women don't necessarily speak up about having those amenities. They are too anxious, and we don't want to draw attention to ourselves."

When she attended TAFE she was the only female student in her classes, and there was some adjustment required by the male students. This has carried through into the workplace, where she says some of her male colleagues have found it difficult to feel comfortable with their usual "joking around".

"A lot of them I think are worried about what they can and cannot do around women at work," she says. "Nobody knows where the line is."

McDonald says there needs to be workplace resources around this to help men understand what is and is not OK in terms of behaviour. This is also something that

could be done at TAFE. Just as courses often bring in a bank representative to talk about managing finances, they could bring in a workplace gender relations coach to talk about how to build good working relationships between men and women.

Another challenge she has encountered is colleagues and others being concerned about her physical abilities, such as lifting.

The low number of female fridges also makes being in the trade more challenging.

"But there are a lot of females who like to take on a challenge!" she says.

McDonald is positive about the pathways the trade can offer, from big plant rooms and chillers and cooling tower work through to coolrooms, freezer rooms, refrigerated cargo containers and buildings including major commercial offices and retail centres.

In addition to the diversity of sites, there is diversity in products, technology and tasks.

"You are always learning something different – it is not everything being the same every day."

There are also multiple skills involved beyond technical and tool skills, including communication skills. This is an area where McDonald thinks women may have a path to success.

"Communication skills are one of the biggest keys," she says.

A sense of humour is also essential, McDonald says.

## HARD TO BE WHAT YOU DO NOT SEE

Mikaila Ganado, M.AIRAH, is Chair of the Women in AIRAH Special Technical Group and a director of GWA Consultants. She says one of the most important factors in recruiting more young women into the trade is ensuring they know it is an option.

Careers advisers could be suggesting young women who are good at science and maths consider engineering and trade careers.

At the same time, she says change needs to "come from the top down" in terms of how the industry presents itself to the wider public.



Women need to see engineering trades are not a socially hard choice

"Women need to see engineering trades are not a socially hard choice," Ganado says.

The image of the industry as a place where there are "girly magazines in the coffee room" is outdated and needs to be changed. Advertising also plays a role – with outdated gender stereotypes rampant. Ganado points out it is always a man installing the air conditioner, or a male roadside mechanic coming to the rescue of a mother with a baby in the car.

"We are subtly reinforcing the stereotype for another generation of girls that these are men's roles," she says.

It is already tough being a teenage girl and navigating social expectations, Ganado says. The last thing most want to do is take a career path they see as the "road less travelled".

"Many school-aged girls don't want to be seen as different," she says.

Ganado says part of raising the visibility of women in the HVAC&R sector is also about reaching critical mass – around 30 per cent female participation.

## LEAPING THE GENDER PAY GAP

Once women are in the trade there are some advantages compared to other professions.

For a start, while many roles partly judge a female worker by appearance, Ganado says high-vis and uniforms are a great leveller. In HVAC&R a person is judged by the quality of their work.

The gender pay gap of around 14 per cent on average difference between women's average weekly earnings and male weekly earnings is also not as likely to be encountered.

In the early years, apprentice wages are set by awards and enterprise bargaining agreements, so are strictly gender-neutral. At higher career levels, Ganado says being assertive is important to ensure wages and salaries keep pace with male peers.

## DIVERSITY IS A SUPERPOWER

For the industry too, there are benefits. Women do think differently to men, and Ganado says difference is "a superpower".

"I have seen my difference in thought as an asset and an advantage in my career," she says. "And research shows that companies with diverse boards financially outperform those that lack diversity."

"We don't need the same solutions from the same people. We need new and creative solutions from a diverse range of people."

Parental responsibilities are one area where some women see potential career roadblocks. Ganado says that "every industry needs to drop the idea of maternity leave and paternity leave. It's parental leave."



Mikaila Ganado, M.AIRAH

“We should be focusing on improving our working environments for people and moving away from the idea of improving conditions for women, or mothers, or fathers, or carers and so on. Ultimately, flexible workplaces and a healthy work-life balance benefits everyone, not just certain groups.”

McDonald says there is potentially a financial issue that needs to be resolved in terms of paid maternity leave or parental leave. Not all awards or all employers do include paid leave for pregnancy and the post-pregnancy period.

## NOT TREATING TRADES AS SECOND-BEST

To ensure the HVAC&R industry can recruit the new, female talent it needs, Swanson says we need to change the mindset that all girls “should go to university, or if not university, retail or fitness.”

“Trades other than hairdresser or beauty therapist are not generally considered as an option,” he says.

“School career advisers and parents need to be more open to encouraging girls leaving school toward more male-dominated trades that are paying top dollar but lacking numbers of quality candidates entering the trades.”

He says the HVAC&R industry in turn needs to promote itself as a trade of first choice for both male and female school-leavers.

The true scope of the industry also needs to be showcased.

“When Joe Public thinks of air conditioning or refrigeration they think of their kitchen fridge or a little wall-mounted air conditioning unit. The actual trade is far more diverse and interesting than these simple domestic appliances,” Swanson says.

“HVAC&R is a multi-skilled trade where you learn fitting, welding fabrication, sheet metal, electrical, piping, programming and control skills just to name a few.”

That means trainers and employers are looking for intelligence – not super strength.

“Girls should not be discouraged thinking that it is a physically demanding career that involves constant heavy lifting. Females can also contribute heavily in the key service skills of being good communicators and organisers, and understanding client needs.

“Being a fridgie can take you around the world. You could be cooling a cruise ship, servicing a six-star hotel on an exotic island, or cooling the propulsion or weapon system on a navy ship,” Swanson says.

“On shore you may be working in a critical data centre, supermarket refrigeration, a mine or one of many large-scale industrial cooling or heating applications.”

## RE-ENGINEERING THE GLASS CEILING

Progressing into the higher management levels in HVAC&R can still be a struggle. Project manager – mechanical services at HVAC in Queensland, Patricia Bellotti, Affil.AIRAH, says she needed to overcome “massive roadblocks” when she wanted to step up from contract management to project management, due to being a sole parent.

The perception was that parenting responsibilities would not be compatible with being onsite at the same times the rest of a construction team was there.



Patricia Bellotti,  
Affil.AIRAH

“But I just kept knocking away at that door,” Bellotti says.

Having assistance from a sponsor that saw potential in her and gave her a platform to prove her worth also helped.

“Having a sponsor to assist when you’re starting out and your political capital is not strong, is a valuable benefit of networking and building great working relationships,” she says.

Once she was in the project management space, Bellotti says management recognised it was not essential for a project manager to be onsite from 6am five days a week. This is something the recent COVID-19 situation has also consolidated for many firms, as people have worked remotely and still managed to keep trades on-track.

Women in Design and Construction (WIDAC) is a network of women that was founded in Queensland and has grown into a national network of peer-to-peer support and mentoring.

Founding members SHAPE Australia design manager Althea Papinczak and SHAPE Australia project manager Erin Oxley says they think a 50 per cent target or gender quotas are not the best way to proceed.

Ultimately, recruitment needs to be about who is best for the job, Papinczak says.

But at the same time, encouraging more women into construction and trades – both young women and mature women looking to change careers – is important.

Papinczak says she has never felt she had less opportunity in her career than her male peers. She has also been seeing growing numbers of women in the construction workforce over the past decade.

Mentoring and support are very valuable for women in the industry, Papinczak says. Having a sponsor who “understands your abilities and pushes for you where you haven’t built that social capital up yet in an organisation” can be a major help with career progress.

Male champions are also valuable, she adds, particularly in organisations where women do not feel as well heard or as well supported as would be ideal.

Bellotti says the opportunities created by networking are also “huge”. This includes the kind of networking provided by organisations such as AIRAH and WIDAC.

## LEARNING FROM OTHER SECTORS

In other parts of the economy, cultural shifts around parental leave and balancing family responsibilities have been positive for both genders.

“The better companies are following the example of mining,” says SHAPE Australia project manager Erin Oxley.

Many mining companies recognised they wanted a more diverse workforce, and so put in place measures to support women workers and families including work flexibility and ensuring promotions were still attainable after taking a break for maternity leave.

“Construction companies saw how successful that was for the mining industry,” says SHAPE Australia design manager Althea Papinczak.

“In some cases the people who own the construction companies saw how their own wives were treated [with career breaks].”

The growing emphasis on family-friendly working also addresses the issue many men experience of there being a stigma around needing to dedicate time to children as well as work, Oxley says.

There is another way in which diversity can improve company culture for male workers and that is in terms of addressing some of the underlying attitudes and behaviours that can lead to serious workplace bullying.

Working on respect for diversity can help shift some of those attitudes, Papinczak says.

“The more men feel empowered to share, and talk, it will break down that toxic culture.”

It’s also the responsibility of site managers to call out bad behaviour.

## THE NEXT GENERATION

Some organisations are working proactively to encourage young women into the industry.

“The schools we work with are on the front foot with less biased career advice,” Papinczak says.

WIDAC’s Inspiring the Future career expo sessions at schools introduce participants to project managers, engineers, architects and lighting designers.

“Parents also need to be more responsible for giving their kids a broad range of ideas, looking at their interests and what they are good at,” Papinczak says.

While women onsite in trade roles are still rare, Oxley says the numbers have been increasing “dramatically”.

“But I still notice it [when I see a woman on the tools]. I would love for it to become normal.” ■

**Do you want to connect with the Women of AIRAH special technical group?**

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