



COOLCHANGE

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ARctick licence applications just got easier

ARctick licensing applications just got quicker, simpler and more convenient now that the Australian Refrigeration Council (ARC) has activated a completely online application process.

The system has been built around improving convenience for applicants, enabling them to upload required documents digitally and then finalise payment by credit card online. It puts control in the hands of the applicant for maximum convenience – for example, applicants can save an application at any stage and come back later to complete it.

No longer is it necessary to get certified copies of documents or photos, so there's no more running around for that sort of thing. And once all the information has been suitably submitted, you can expect ARC to process the application within a few days.

Whether for apprentices applying for their first trainee licence, or for licence holders updating their details, it provides a straightforward online process where all documents can be supplied in digital form. The system has been optimised for use with either Google Chrome or Mozilla Firefox, ideally on a desktop PC/Laptop rather than a mobile device. Underlying licensing requirements remain the same, ensuring people have the skills and competencies (and, for trainees, supervision) required to work on air conditioning and refrigeration equipment using prescribed refrigerants.

Online applications can be made at the www.arctick.org website, which includes full details of licence types and requirements, and payments can be made by credit card online.



Brett Meads new VASA president

ARC board member Brett Meads has been elected president of VASA, the national association for Australasia's automotive air conditioning, thermal management and electrical industry.

Brett Meads takes on the role after a decade as VASA vice-president, and succeeds long-serving president Ian Stangroome, who continues to represent VASA on Refrigerant Reclaim Australia, Refrigerants Australia, and the industry advisory body formed by ARC and the Department of Climate Change, Energy, the Environment and Water.

Mr Meads represents the automotive industry on the ARC board. His professional work includes industry training, technical writing for national and international publications, and consultancy to state and federal government bodies and numerous industry and educational organisations.

VASA has also welcomed three new directors to its board: Brendan Sorensen, who is lead diagnostician at his family's independent Brisbane workshop; Casey Swain, a mechanic in her father's independent workshop; and Tim Boyd, a senior product manager of cooling products at GPC Asia Pacific.

Continuing directors are Mark Rowe as vice-president, David Ellis as treasurer, Catherine Tocker representing New Zealand, Robert Picone, and executive director of communications and editorial Haitham Razagui.



Video evidence leads to fine for unlicensed work



Video evidence provided to ARC by a licensed refrigeration technician has led to a Melbourne man being fined for unlicensed work he published in a TikTok video.

The man was fined \$444 after showing a TikTok video of himself making a 'do it yourself' repair on a portable fridge – and the detail reported by the technician was the key to a successful enforcement action.

If you've ever wondered what happens when people report alleged offences to ARC, this is a good example, because it all came down to evidence. In this case it was the TikTok video itself, which clearly showed unlicensed work being done.

When you lodge a complaint, the ARC verifies the incident and will then escalate it to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) for further investigation.

If you believe you have seen a breach of the regulations, the best way to lodge a complaint is at arctick.org/information/lodge-a-complaint



The complaints form gives you the prompts to supply the sort of detail that can assist the ARC in making further enquiries. An informal email or phone complaint gives us a lot less to go on, but we will still follow up to see if you have additional information.

The ARC works hard to support industry and ensure that those who do not do the right thing are made aware of requirements to work on refrigeration equipment and may also result in an enforcement response from the DCCEEW.

Heat pumps vital to achieving net zero

Recent statements by the Clean Energy Council regarding the Australian Energy Employment Report (AEER) help to remind us that the climate control sector is a major contributor to the pursuit of net zero.

The Climate Control Sector is integral to Australia's efforts to electrify our economy and reduce greenhouse gas emissions, and to our ultimate pursuit of net zero carbon emissions. The selection, installation, maintenance, and repair of heat pumps will be pivotal, and it is therefore vital to ensure the workforce has the specialist skills needed to maximise the potential from new technologies.

The heating and cooling sector uses around 25% of Australia's electricity and produces 12% of our greenhouse gas emissions.

A key factor in reducing these figures will be technology such as heat pumps to replace inefficient water heating equipment.

The increasingly sophisticated reverse cycle air conditioning equipment now in use is about 60% more efficient than it was 20 years ago.

The growing electric vehicle sector has similar needs, as EVs rely on well-tuned air conditioning and refrigeration systems to get the most out of battery technology. Ensuring that the tradespeople working on these vehicles have the appropriate training is essential for consumers and the community to reap the benefits from this technology.

Today's climate control technician is a specialist who possesses a high level of skill in a complex and evolving industry. In terms of skills development, our sector's focus must be on training which will support an industry, and respond easily to and facilitate the uptake of new technology, thereby maximising environmental and consumer protection outcomes.

Cold food chain increasingly high-tech

Australia's food cold chain is embracing the latest refrigeration technologies for the benefit of the environment and the bottom line, with the big grocery retailers investing heavily in equipment and staff.

Both Coles and Woolworths have sustainability plans which cover all aspects of their businesses, and cold chain management is a major part of those plans. Woolworths, for example, has transitioned towards cascade R134a-CO₂ solutions, and is now moving towards 100% natural refrigerant transcritical CO₂ refrigeration – and it is running a dedicated refrigeration apprenticeship program to train the workforce of the future.

Similarly, Coles' refrigeration management program includes the use of natural refrigerants, which have close to zero GWP, and more than 90% of new Coles supermarkets now use natural refrigerants.

How important are these advanced cold food chain systems in the wider picture of global energy and food management? Are they a first world luxury or a global environmental benefit?

The International Institute of Refrigeration (IIR) addressed these questions at COP26, the 26th Conference of the United Nations Framework Convention on Climate Change in 2021. IIR estimated food losses due to a lack of refrigeration and then compared their global carbon impact with that of refrigeration equipment emissions. If the whole world had a cold chain operating at the level of developed countries, it would generate only half the CO₂ equivalent emissions caused by food perishing, so overall the cold chain is an environmental gain.

In this brave new world of global cold chain development, a major challenge is training the specialised workforce for the job. Companies installing these systems need skilled, qualified and accredited technicians trained in the new technology – the specialised trade skills required will be more specialised than ever. The climate control industry is already developing training courses to meet the challenge, the best of them complying with the Australian Qualifications Framework (AQF).

Meanwhile, the relentless march of green technology continues, not least in renewable energy. Coles aims for the entire Coles Group to be powered by 100% renewable electricity by the end of FY25, and has signed numerous renewable electricity agreements with wind and solar farms across Victoria, New South Wales, South Australia and Queensland.

Perhaps more visibly, it has completed the installation of solar panels on its distribution centre at Edinburgh Parks, South Australia. With more than 4,200 solar panels, it is expected to reduce grid electricity requirements at the site by 30%.

Many of these improvements will go largely unremarked by casual observers, but they are all contributing to the energy efficiency and low emissions of the food cold chain that Australian consumers use every day. Their cost-efficiency benefits everyone from food producers to end users, and their energy efficiency benefits the whole planet.

Needless to say, other grocery retailing groups are heading down a similar path. The major gains made by the cold food chain in recent years show no signs of abating.



Europe revises F-gas plan

The European Parliament's Environment Committee has proposed a revised F-gas plan with ambitious targets to accelerate the transition to natural refrigerants.

Europe's proposed plan would include a ban on F-gases in self-contained air conditioning and heat pump equipment from 1 January 2026; in single split systems including fixed double duct systems containing less than 3kg of F-gases from 1 January 2027; and in split systems up to 12kW from 1 January 2028.

In addition, it proposes to restrict split systems between 12kW and 200kW to refrigerants with a GWP under 750 by 1 January 2028, and would ban F-gases in split systems of more than 200kW by 2028.

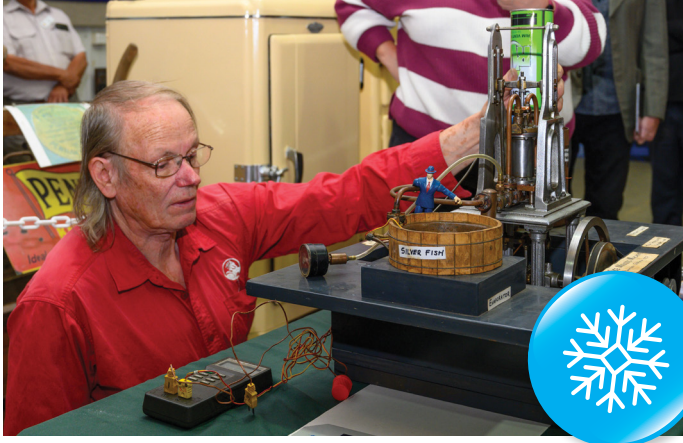
Also included in the proposal is a steeper HFC phasedown trajectory from 2039 onwards, with the goal of a zero HFC target by 2050.

Final details are subject to tripartite negotiations between the European Parliament, the European Council and the European Commission.



European Parliament





Harrison model on show in Geelong

Australia's James Harrison, the father of refrigeration, continues to command headlines in his home town of Geelong, with the recent exhibition of a scale model of his pioneering technology to an international audience.

The Geelong and Region Branch of the National Trust (GRBNT) organised a special display of the working model to coincide with a UNESCO City of Design subnetwork meeting in the city. Harrison's pioneering achievements were a major factor in Geelong being designated a UNESCO City of Design in 2017 in recognition of its long history as a leader in design. The machine on show is a functioning 1:10 scale model of Harrison's first commercial ether vapour-compression ice-making machine, built in 1857 using the technology he first showed to the world in 1851.

Built by retired local Holden engineer Warwick Bryce, the machine was set up at the Geelong Showgrounds Museum for a TV shoot by French documentary maker Basile Roze, to feature in a story about Harrison for French ARTE TV. Harrison's original steam-driven machine pioneered the principles of modern refrigeration, using the evaporative cooling of ether to freeze up to three tonnes of ice a day.

Future:gas coming to a location near you

The successful future:gas series of industry-supported refrigerant education events has returned for 2023 with a series of 26 seminars throughout the Australia-Pacific region.

Organised by VASA, the Automotive Air Conditioning, Electrical and Cooling Technicians of Australia, the seminars address the latest trends in both mobile and stationary air conditioning. The stationary section of the tour will begin in Vanuatu on May 11 and end in Lae, PNG, on July 12, followed by the automotive section which will kick off in Auckland, NZ, on July 25 and end in Perth, WA, on September 6.

As with the previous future:gas roadshows in 2016 and 2017, tickets are heavily subsidised at just \$20 per person. All the sessions take place on weekday evenings, beginning at 5pm with complimentary welcome drinks, food and trade displays.

The seminars will address the many changes in the world of refrigerants since the last future:gas roadshow in 2017. They will again feature expert speakers to discuss and explain the latest on the recovery and handling of new refrigerants, the laws that will influence each part of the industry and what this will mean for the day-to-day life of those in the business of handling refrigerants.

future:gas2.0

Tickets to the future:gas 2023 are now on sale



futuregas.ac/automotive



futuregas.ac/stationary

PFAS proposal could undermine 1234yf



Proposed European restrictions on PFAS (per- and polyfluoroalkyl substances) could undermine the low GWP refrigerant R1234yf just as it is beginning to become established in Australia.

Found in many everyday products including refrigerants, and known as 'forever chemicals', PFAS could be facing restrictions in Europe over environmental and health concerns.

PFAS build up in living organisms and never break down.

The European Commission describes them as 'extremely persistent in the environment' and says their production and use have caused severe contamination of soil, water and food, and harmful exposure to humans. Contamination makes its way up the food chain from crops and livestock, as well as through drinking water.

As soon as 2025, proposed bans could directly affect refrigerants such as R1234yf, which in Europe has successfully replaced R134a in new car air conditioning systems.

Among the refrigerants considered likely to be affected under the PFAS definition are: HFC-125, HFC-134a, HFC-227ea, HFC-245fa, HFC-365mzz, HFO-1234yf, HFO-1234ze, HFO-1336mzz and HCFO-1233zd.

Many of these chemicals are low-GWP substitutes for air conditioning, refrigeration and foam-blowing applications, currently being used to phase out their high-GWP predecessors, or are a component of new refrigerant blends either on the market or under development. Although environmental bodies and chemical producers disagree on the details, PFAS have suspected links to human health issues including cancer, as well as immunity, reproductive and developmental problems.

Connected TV helps consumers get the licensing message

Australia's air conditioning consumers are getting the message about the importance of licensed technicians, with more than a million people seeing the 'look for the tick' online and TV ads in this year's ARctick summer advertising campaign.



With eye-catching new ad designs, more people than ever got the message about where to go for their air conditioning needs. A major boost this year came from video commercials on YouTube and Connected TV, which contributed a quarter of a million views to the total audience.

The ad campaign ran from 3 October 2022 to 28 February 2023, targeting air conditioning and refrigeration consumers in the areas of purchase, installation, servicing, repair, maintenance and decommissioning (RAC and Auto). From the moment the ads began, consumers were busy visiting the Look for the Tick website to find their local licensed businesses – your businesses – with views and clicks peaking in January.

As usual, the main digital advertising channels were Google Search, Google Display (including Display Remarketing), Facebook Lead Ads and Facebook Website Click Ads. The new video commercials on YouTube and Connected TV made a powerful contribution to awareness of the 'look for the tick' message.

Each year this online campaign directs consumers to ARctick licensed businesses in their local area, so it's worth ensuring that consumers think of your business when they see the tick. Ensure your business gets maximum recognition by including the ARctick symbol on your advertising and paperwork, your premises and vehicles – you can obtain the logo artwork for free by emailing comms@arctick.org.

Protect your household appliances

YouTube

Maintain your cars air conditioning

YouTube

Australian Government
AUSTRALIAN APPRENTICESHIPS
Your Life. Your Career. Your Future.

New Energy Apprenticeships Program

New Energy Apprentices commencing from 1 January 2023 are eligible to receive up to \$10,000 during their Australian Apprenticeship and work with an industry mentor from July 2023.

The New Energy Apprenticeships Program is available to Australian Apprentices working in the clean energy sector. Up to 40 occupations are eligible and listed on the [Australian Apprenticeships Priority List](#).

This incentive supports the Australian Government's commitment to invest in the clean energy sector and to secure a pipeline of talent to deliver Australia's clean energy infrastructure.

Apprentices

To be eligible for the New Energy Apprenticeships Program, you must be:

- Undertaking a Cert III, IV, Diploma or Advanced Diploma level qualification listed on the [Priority List](#).
- Training towards an occupation identified as a clean energy occupation on the [Priority List](#).
- Employed by an organisation in the clean energy sector, with most of your work in clean energy.
- Willing to sign a declaration stating your commitment to building your skills in the clean energy sector.

Employers

If you employ a New Energy Apprentice, you may be eligible for the Priority Wage Subsidy.



RAC added to Green Energy priority list

ARC has welcomed the recent addition of refrigeration apprenticeships to the Green Energy Priority List as a further incentive to complete apprenticeships.

Cash incentives available for apprenticeships on the Green Energy list are up to double those already available under the Australian Apprenticeships Incentive System. Whereas the existing incentives are up to \$5,000 over two years, the New Energy Apprentice Support Payment for Green Energy trades provides for \$10,000 over three-plus years for apprentices undertaking a Certificate III or above qualification.

ARC chief executive officer Glenn Evans said inclusion in the Green Energy list was welcome recognition for our specialised trade as being vital to achieving Australia's national clean energy and emissions targets.

"Not only will this further ease the financial struggle which can cause apprentices to drop out, but it puts us on the radar of prospective apprentices who might not have previously considered it," he said. "ARC is a strong advocate of climate control as a career of first choice for bright young people, and anything that raises the profile of our apprenticeships has to be a good thing."

New Energy Apprentice Support Payment schedule

Payment	Full-time Rate	Part-time Rate
6 month	\$2,000	\$1,000
12 month	\$2,000	\$1,000
24 month	\$2,000	\$1,000
36 month	\$2,000	\$1,000
Completion	\$2,000	\$1,000
TOTAL	\$10,000	\$5,000

Further information can be found in the [Incentives System Guidelines](#)



Woolworths recruits apprentices for diversity and retention

When Woolworths set up its Refrigeration Apprenticeship Program in 2020, it had several objectives beyond building a workforce to support the overarching need for sustainable refrigeration systems to reach its energy and environmental sustainability goals.

Diversity, in particular gender diversity, was a key focus – and equally important was a high rate of retention. Woolworths is an employer where people build lifelong careers, so the selection process for refrigeration apprentices was looking for people with a Woolworths future in mind. Coming up to three years later, 35% of Woolworths refrigeration apprentices are women, and retention rates are sitting around 90% of all apprentices.

Apprenticeship program manager Caroline Fitzgerald, who has recently onboarded the fourth cohort of apprentices, says the success of the program is very much due to the recruitment strategy. “There is a great deal of rigor in our selection process,” she said. “We can advertise on Seek and attract plenty of applicants, but we use a multi-channel approach to reach the right applicants, with a commitment to selecting diverse cohorts.

“In the most recent recruitment campaign 11% of applicants identified as female, but they make up 35% of the 37 apprentices we currently have in the program. We’re not just ticking boxes, not lowering the bar – right through the process we are picking out the qualities that will make successful Woolworths apprentices.”

Diversity in this program means more than just gender diversity, as there is remarkable diversity in the ages, previous occupations and cultural background of the apprentices. The average age of a Woolworths refrigeration apprentice is 27, with a range from 18 to 38. They include a former primary school teacher, a lawyer, a nurse and a beauty therapist – and 45% of them have come from working in Woolworths stores. That lifelong connection with the company runs strong.

As for the motivation behind the program, Caroline says it all comes down to addressing a skills shortage. “With an ageing industry workforce and not enough people entering the refrigeration industry, if we don’t do something, we won’t have the skilled people to support our commercial requirements and continuation of moving into natural refrigerants and our sustainability targets,” she said. “The industry is very niche, especially the supermarket refrigeration sector, and this program is vital to ensure we are well resourced, and to set an example for our industry and for other employers to follow suit.”

Individual apprentice stories highlight the diversity of the group. Sarah is a former beauty therapist who, after her own career pivot, is keen to share her experiences with and encourage other women to consider joining her in the refrigeration trade. Amy is a single mum who is determined to be a good role model for her children, while Josh, as a former school teacher, is at ease when explaining transcritical CO₂ systems to fellow apprentices at TAFE. Kat was

in the Navy for 16 years and Sophie was previously a nurse who was 35 when she joined. Caroline says apprentices like these bring invaluable confidence and life experience to the job.

Caroline herself has worked in various roles in her Woolworths career, and is well matched in recruiting, supporting and promoting the refrigeration apprenticeship. “We take our time to select the right candidates” is a key sentiment behind her running of the program, and there is also a high level of commitment to supporting the apprentices. Caroline maintains a close relationship with the teams training her apprentices and the TAFEs to ensure the whole apprenticeship experience is positive for her recruits.

With a strong commitment to building gender diversity in the Woolworths Refrigeration Apprentice Program, she is quick to point out that having male allies is key to ensuring a sense of inclusion and belonging. She also believes that the thorough recruitment processes that Woolworths operates can be scaled down to much smaller employers.

“Whether you’re recruiting one person or 50 people, you need to do a deep dive into the qualities of the person you’re recruiting to fit your needs,” she said.

“Getting the right person is even more important if you are a sole trader, so it’s worth the effort to get the recruitment right.”

Woolworths is an example of genuine investment in apprentices delivering a strong return on that investment through high retention rates.



Woolworths
The fresh food people

