

Australian Government

Department of Sustainability, Environment, Water, Population and Communities





There is no business in continued non compliance

In the six months between November 2012 and April 2013, a total of 133 RTA re-applications were refused due to breaches of the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 detected during audits.

Of the 133 RTAs which were denied renewal, the ARC has worked with 80 of these businesses to become compliant. The remaining 53 businesses no longer have RTAs, and therefore are no longer legally 'in business' when it comes to the handling and trading of fluorocarbon refrigerant gas. This demonstrates the real consequences for those who try to avoid their obligations.



Additional incentive to recover refrigerant

From 1 July 2013, the Australian Government will provide an incentive to refrigeration contractors for the destruction of waste synthetic greenhouse and ozone depleting refrigerant gas returned to Refrigerant Reclaim Australia.

The incentive will increase the amount currently paid by Refrigerant Reclaim Australia by 50 per cent. The total incentive amount paid to contractors will change from \$3.00 to \$4.50 per kilogram of gas provided for destruction.

The government destruction incentive payment to contractors will encourage recovery and destruction of waste refrigerant gases. This prevents damage to the climate system and ozone layer that would occur if these gases were emitted into the atmosphere. Any reduction of emissions achieved through destruction will contribute to reducing Australia's emission abatement commitments under the Kyoto Protocol.

The Australian Government-funded incentive will be paid to refrigeration contractors through the Refrigerant Reclaim Australia collection network arrangements, based on the amount of refrigerant gas they provide for destruction. The Australian Government recognises the significant and important role that the existing industry scheme operated by Refrigerant Reclaim Australia has played in the destruction of synthetic greenhouse gases and ozone depleting substances since its introduction in 1993.

As a further step in reducing emissions of synthetic greenhouse gases and ozone depleting substances, the Australian Government will examine the potential for the introduction of a complementary product stewardship scheme for domestic refrigeration and air conditioning equipment with small gas charges – usually less than two kilograms, to reclaim waste gas, metals, plastics and hazardous materials for reuse or appropriate disposal.

The Australian Government has also provided additional funding to the Department of Sustainability, Environment, Water, Population and Communities to increase the compliance and enforcement of the legal requirements for those handling synthetic greenhouse gases and ozone depleting substances to ensure these gases are not being intentionally emitted.

Please visit the department's website for further information: www.environment.gov.au/atmosphere/ozone/destruction-program

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R22 Phase out under the Montreal Protocol

Are you an owner of equipment that contains R22 or an importer or technician dealing with R22?

The Montreal Protocol on Substances that Deplete the Ozone Layer has set out legally-binding obligations to phase out the production and consumption of ozone-depleting substances. This includes a mandatory timetable for the phase out of ozone-depleting substances including almost all imports to Australia of Hydrochlorofluorocarbons (HCFCs), such as R22 by 2016.

It is expected that reclamation and recycling will become an increasingly important source of R22 and after 2029, the servicing of the remaining R22-based systems will be entirely dependent on this source.

You do have options:

- R22 will continue to be available in Australia, although the quantity of new R22 imported into Australia is reducing.
- If your R22 system is in good working order, there is no need to transition to an alternative refrigerant/system.
- Regular servicing to minimise leakages is important.
- Existing units using R22 can continue to be serviced with R22.
- Some used R22 is being reclaimed to manufacturer's specifications. Contact your refrigerant supplier for further information.
- Conversion of your existing system to use a non-ozone-depleting substitute refrigerant. Where conversion is being contemplated, you should seek the appropriate advice, including whether the substitute refrigerant is appropriate for that type of use and to ensure that you comply with all the relevant legislation and Australian Standards.
- Delaying equipment replacement where applicable may mean that when you do replace your equipment, alternative technology using low GWP refrigerant may be more readily available and established.

Seek the appropriate advice

Equipment manufacturers, gas suppliers, refrigeration engineers, technicians and state and territory work health safety regulators can provide advice on equipment and refrigerant issues, warranties and safety requirements for your particular circumstances.

For further information, visit www.environment.gov.au and type 'Fact Sheet R22 Phase Out' into the search bar in the top right hand corner of the page.

Nominate as an assessor for the Restricted Refrigerant Recoverer licence

The ARC is calling for interested full refrigeration and air conditioning (RAC) and automotive air conditioning licence holders to nominate to assist applicants of the restricted refrigerant recoverer licence (RRRL).

The RRRL permits a licence holder to recover and handle refrigerant while decommissioning stationary and automotive refrigeration and air conditioning equipment. Obtaining the RRRL requires the successful completion of an online test and a practical assessment of competency in recovering refrigerant from automotive air conditioners, and/or stationary air conditioners and the supervision of a licensed 'assessor'.

Applicants are encouraged to find their own assessor, including by utilising the services of licensed colleagues, licensed service providers, or licensed air conditioning technicians in their area. However, if applicants aren't able to locate someone, self-nominated licensed technicians will be given the opportunity to help at a mutually convenient time and location.

If you have a current full RAC or automotive licence and would like to be added to the list, please email enquire@arctick.org You can read more about the RRRL and what is required of an assessor by visiting www.arctick.org/RRRL.



Inappropriate marketing and practices of training organisations being targeted by regulator

The national regulator for the Australian vocational education and training sector, the Australian Skills Quality Authority (ASQA) has been targeting the inappropriate marketing and practices of Registered Training Organisations (RTOs) during the 2012/13 financial year. There has been a particular focus on qualifications with a licensed outcome, including the ARC licence.

The promotion of two or three day courses to achieve Certificate II level qualifications is of concern to the refrigeration and air conditioning industry. The RTOs advertising these courses require the person enrolling to have previous experience and/ or qualifications which can be officially acknowledged as recognition of prior learning (RPL). The criteria for RPL are based on a set of national competency standards, endorsed

through the National Skills Standards Council process. It is not possible to obtain any of the Certificate II level qualifications required for the various refrigerant handling licences offered through the ARC by completing a two or three day course without also having the appropriate prior qualifications and/or experience.

ASQA has agreed that any promotion that targets a particular audience, such as those with prior training/experience, should clearly indicate the basis of the reduced timeframes. If you believe that a specific training provider is delivering an inappropriate course or providing misleading information in their advertisements, you can contact the ASQA on 1300 701 801 or visit www.asqa.gov.au

Industry innovation in moving towards a low emissions future

In the lead up to and following the implementation of the equivalent carbon price on synthetic greenhouse gases on 1 July 2012, the refrigeration and air conditioning industry has been changing its practices to reduce emissions from synthetic greenhouse gases, to use alternative gases, and to improve the recycling rates of these gases.

To acknowledge some of the achievements made by businesses, the Australian Government, in collaboration with industry, has developed a suite of case studies that highlight some of the effective changes that industry has implemented which include:

Reduction of usage and leak prevention of synthetic greenhouse gases

- Key Services has expanded its preventative maintenance services to specifically identify refrigerant system leaks and developing faults that can cause synthetic greenhouse gases to be released to the atmosphere.
- **Georg Fischer** has manufactured pre-insulated piping which reduces the quantity of refrigerant required and minimises the risk of refrigerant leaks and potential health or safety risks that may occur from a leak.
- AJ Baker & Sons has developed a range of services and technologies that helps to minimise the environmental impact of each store. This includes supplying and installing systems that reduce the possibility of refrigerant leakage, and offering display cabinets and freezers that minimise heat gain and refrigerant consumption.

Use of low GWP refrigerants

- **Electrolux** has reduced the quantity of synthetic greenhouse gases used in the manufacture of its refrigerator range by choosing hydrocarbon refrigerant.
- **Siddons Solarstream** has developed a new range of heat pump water heaters, including hydrocarbon models utilising propane (R-290) refrigerant instead of the commonly used synthetic greenhouse gas, R-417a.
- **Pioneer International** manufactures a range of cassette and ducted split air-conditioning systems that use hydrocarbon refrigerant with all air-conditioning equipment designed and tested to operate in accordance with Australian Standards.
- Naturalise Vintners has upgraded its chiller plant to utilise hydrocarbon refrigerant, to thereby achieve cost savings through greater efficiencies and avoidance of synthetic greenhouse gas refrigerant.
- **Mayekawa Australia** has designed a heat pump that runs on ammonia. Installation of the heat pump produces high coefficient of performance, lower energy consumption costs and zero contribution to the greenhouse warming effect from the refrigerant usage.
- **The Hopper Group** has implemented carbon dioxide as the refrigerant in the freezers and refrigerators in a flagship Sydney IGA supermarket.

For more information, all industry case studies have been published to the department's website and can be accessed by visiting www.environment.gov.au/equivalentcarbonprice, then by selecting 'case studies'.

Considering a move from synthetic greenhouse gases?

One objective of the equivalent carbon price, which was introduced as part of the Clean Energy Future Plan on 1 July 2012, is to encourage a transition to gases, including refrigerant gases, with low global warming potential (GWP).

If your equipment operates on a synthetic greenhouse gas refrigerant, it is likely that you are aware of the equivalent carbon price that is applied to the import and manufacture of synthetic greenhouse gases (SGGs) under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989. The implementation of the equivalent carbon price has presented industry with additional considerations relating to their existing SGGs applications.

Alternative gases

Several refrigerants with very low GWP are available in Australia. These include: ammonia, carbon dioxide and hydrocarbons.

Hydrofluoroolefin (HFO) is a low GWP liquid that is currently used overseas as a replacement for R-134a and is becoming available in Australia. Refrigerants with a low GWP are not subject to the equivalent

carbon price. They may offer improved performance (when compared to SGGs and other high GWP refrigerants) and energy efficiency in fit-for-purpose systems.

Considerations

All applicable regulations, standards and procedures must be followed when handling refrigerants. These may vary between states and territories so the relevant authorities should be consulted for advice. Considerations include:

- **Appropriateness** It is important that refrigerants are selected with care and only used in fit-for-purpose equipment.
- **Safety** All refrigerants should be handled with care. Each refrigerant comes with its own unique risks: some have a high level of toxicity, some are flammable and some are used under high pressure.

Equipment manufacturers, gas suppliers, refrigeration engineers, technicians and state and territory work health safety regulators, can provide advice on equipment and refrigerant issues, warranties and safety.

• **Licensing** – Any individual who handles fluorocarbon refrigerants must hold the relevant licence.

The Department of Sustainability, Environment, Water, Population and Communities has recently published a number of relevant fact sheets for industry to refer to if considering a transition, including 'Transitioning to low global warming potential refrigerants' and 'Safety considerations when using flammable refrigerants'. These fact sheets and further information about the equivalent carbon price for synthetic greenhouse gases are available at www.environment.gov.au/equivalentcarbonprice

A cool change in the automotive industry

Since the announcement of the equivalent carbon price (ECP) on synthetic greenhouse gases on 1 July 2012, there has been much interest expressed by the automotive industry on how the ECP will impact their businesses, including transitioning from using HFCs, the alternatives available to them and the legislative and regulatory requirements when working with refrigerants.

Why put a price on synthetic greenhouse gases?

Putting a price on synthetic greenhouse gases provides:

- further incentive for car manufacturers and refrigerant technicians to switch to alternative gases which have a lower global warming potential, provided this is safe to do so and meets the manufacturers' requirements.
- further incentive for car owners to regularly service existing equipment to reduce leakage of gas and increase recycling rates for synthetic greenhouse gases.

Replacement gases

The equivalent carbon price does not restrict the use of any refrigerant or require the use of alternatives. However, the global automotive industry has already indicated that it intends to replace R134a as its preferred air conditioning platform. This change has been driven by the European F-Gas rules where, from 2011, new automotive platforms must use a refrigerant with a global warming potential (GWP) lower than 150.

The common refrigerant gas, Hydrofluorocarbon (HFC) R134a, has a GWP of 1300. Currently the only commercially available alternative that meets the European requirements is hydrofluoroolefin (HFO) R1234yf, although some vehicle manufacturers are already developing carbon dioxide based air conditioning.

Your legal responsibilities

Legislative and regulatory requirements are in place for businesses and technicians working in the automotive refrigeration and air-conditioning industry.

Equipment manufacturers, gas suppliers, automotive refrigeration engineers and technicians are a key source of advice to customers on equipment and refrigerants and will need to be mindful of obligations they may have to provide accurate advice on safety implications, particularly if substitution with a different refrigerant is being contemplated.

All businesses and technicians must comply with regulatory requirements, including:

- Refrigerant handling licence and refrigerant trading authorisation conditions.
- Codes of practice (such as the Australian Automotive Code of Practice for the Control of Refrigerant Gases during Manufacture, Installation, Servicing or Decommissioning of Motor Vehicle Air Conditioners).
- Work health and safety legislation.
- Competition and consumer legislation.

New qualifications accepted for automotive air conditioning licence

The National Skills Standards Council endorsed a new training package for the automotive sector in December 2012 under the Australian Qualifications Framework. The relevant qualifications of this training package have been added as accepted qualifications for obtaining the automotive air conditioning licence through the ARC. Further details are provided in the table below.

AUR20212 Certificate II in Automotive Air conditioning Technology

Individuals who attain AUR20212 Certificate II in Automotive Air conditioning Technology will be considered eligible to obtain an automotive air conditioning licence (excluding 'Install air conditioning systems' and 'Overhaul air conditioning system' components). (Refer to the AUR12 Packaging Rules)

Should an individual require an automotive air conditioning licence enabling them to install and/or overhaul air conditioning systems components they must undertake the following units:

AURETU2001 Install air conditioning systems

AURETU4007 Overhaul air conditioning system components

The following eight (8) qualifications must include the Automotive Air – conditioning Service, Retrofit, and Repair Skill Set. This may be in addition to, or part of, the qualification:

AUR21412 Certificate II in Automotive Cooling System Technology **AUR20412** Certificate II in Automotive Electrical Technology

AUR30312 Certificate III in Automotive Electrical Technology AUR31712 Certificate III in Forklift Technology

AUR30612 Certificate III in Light Vehicle Mechanical Technology

AUR30412 Certificate III in Agricultural Technology

AUR31112 Certificate III in Heavy Commercial Vehicle Mechanical Technology

AUR31212 Certificate III in Mobile Plant Technology

For the full list of qualifications accepted as documentary evidence for the automotive air conditioning licence, visit www.arctick.org and download the 'Refrigerant handling licence information brochure'.

Want to know more?

The Department of Sustainability, Environment, Water, Population and Communities has recently published two fact sheets to assist the automotive industry. The 'Equivalent Carbon Price and the Automotive Industry' and 'Transitioning to Low Global Warming Potential Refrigerants' fact sheets can be viewed by visiting the resources tab at www.environment.gov.au/equivalentcarbonprice and refer to 'industry specific factsheets.'





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