REFRIGERANT RECLAIM AUSTRALIA

CELEBRATING 25 YEARS
25
REFRIGERANT RECLAIM AUSTRALIA

ANNUAL REPORT
2018 — 2019

FROM THE CHAIRMAN

Refrigerant Reclaim Australia has passed the important milestone of a quarter-century in operation, gaining international respect as one of world's leading refrigerant stewardship schemes.

It is without exaggeration that I credit RRA's long-serving General Manager, Michael Bennett, with the vast majority of this success. He is the visionary who conceived much of what we do today and has executed on that vision – and continually enhanced it – through seemingly endless reserves of dedication and determination, with good humour in equal measure.

Such opening remarks have never before made their way into an RRA Annual Report, simply because Michael would have edited them out. But now I can get away with it for Michael has stepped down from his humbly titled General Manager position after 22 years.

He will remain part of the organisation, contributing in a part-time capacity with a focus on special projects that we will update you on in our next Annual Report.

The achievements of RRA under Michael's leadership are well known.

He was among a group of IPCC and TEAP authors who were collectively awarded the Nobel Peace Prize in 2007 for their work on the landmark report, Safeguarding the Ozone Layer and the Global Climate System.

Other accolades awarded to Michael and RRA include the UNEP Montreal Protocol Implementers Award and two from the United States EPA for Stratospheric Ozone Protection and for Climate Protection.

In addition to the usual information included in an Annual Report, this document also tries to reflect on what these numbers mean in terms of a successful environmental program.

We, as an industry, have made history and set a template for a highly effective and efficient stewardship program. We have demonstrated what can be achieved when an industry takes control of its own destiny and works cooperatively to achieve a desired outcome.

By first identifying our own issues, taking action to address them and then seeking supportive legislation from Government the HVACR industry in Australia has set the standard for what can be achieved. The environmental benefits of all this are profound.

If somebody offered a politician an almost frictionless method of abating the greenhouse gas emissions of more than 70 billion kilometres of car travel today, they would leap at the chance.

RRA, backed by the diligence of Australia's refrigeration and air-conditioning community, has delivered this and more, as well as punching above our nation's weight in terms of contributing to the recovery of the ozone layer.

For Michael Bennett, that is quite a legacy.

But 25 years in RRA is far from finished. Building on our success, RRA will continue to provide an end-of-life service for refrigerants but will also look to evolve as the requirements of our industry change.

RRA is uniquely positioned to help our industry with other forms of emissions abatement. RRA is developing new programs, helping with improved education and training and developing a deeper understanding of the needs of our industry to deliver better environmental outcome.

As we go forward in these new directions, RRA remains in the safest of hands with our new General Manager Kylie Farrelley at the helm.

Kylie has great industry experience and is passionate about delivering improved outcomes for our industry. Having been an importers' representative to RRA since 2008 and a member of the RRA board since 2016, Kylie's technical and industrial knowledge is second to none, having been put to good use during two successful decades at refrigerant manufacturer Arkema.

On behalf of the RRA board of directors, I will sign off with a very warm welcome to our new General Manager, Kylie Farrelley and a heartfelt thank you to Michael for his tireless efforts, guidance and friendship.

John McCormack
RRA Chairman

25 YEAR MILESTONE

TONNES RECOVERED SINCE 1993

7000+

TONNES RECLAIMED

400+

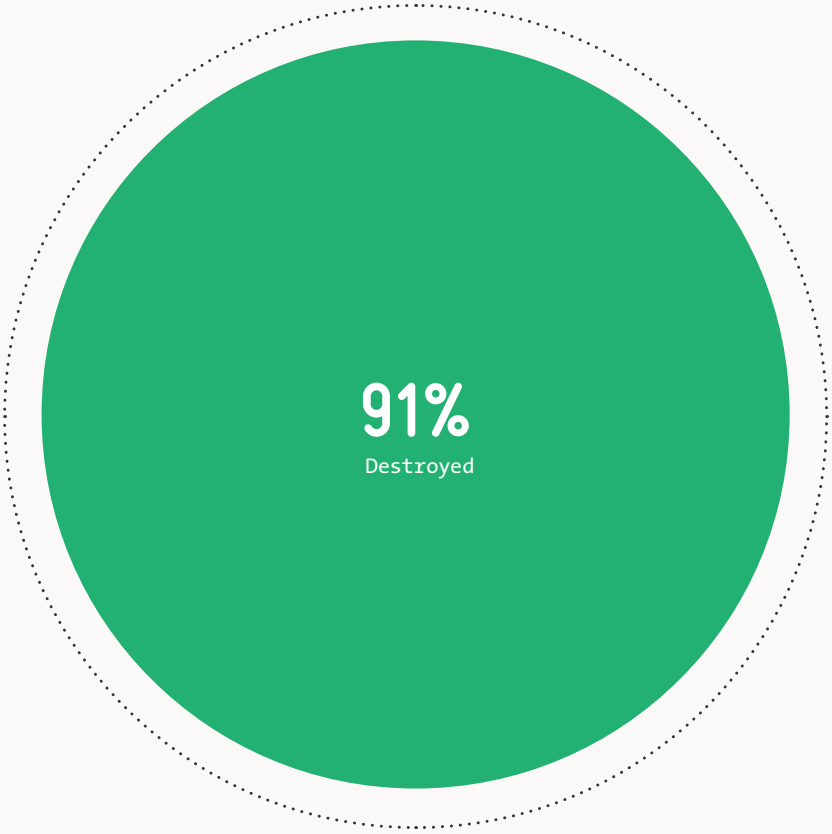
TONNES SAFELY DESTROYED

6700+

TONNES USED AS FEEDSTOCK

100+

Progress Activity 1993-2019



6%
Reclaimed

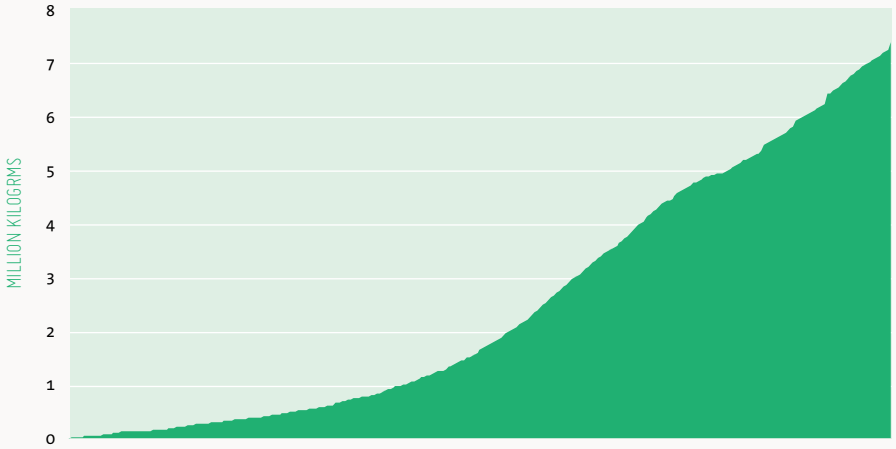
2%
Feedstock

1%
Stored

TONNES CUMULATIVE TOTAL TO JUNE 2019

7,398

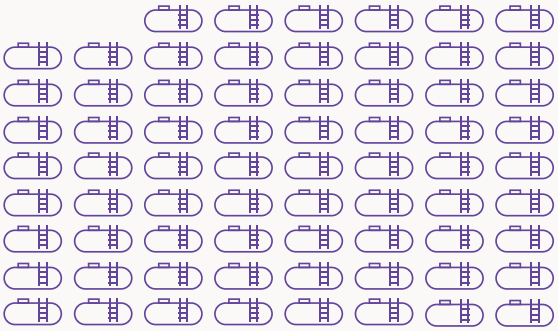
Cumulative Recovery 1993-2019.



20,000 units

More than 10 million tonnes of stratospheric ozone preserved – enough to fill 1.4 million ISO gas tanks, which if placed end-to-end would stretch from Brisbane to Perth and back.

10M

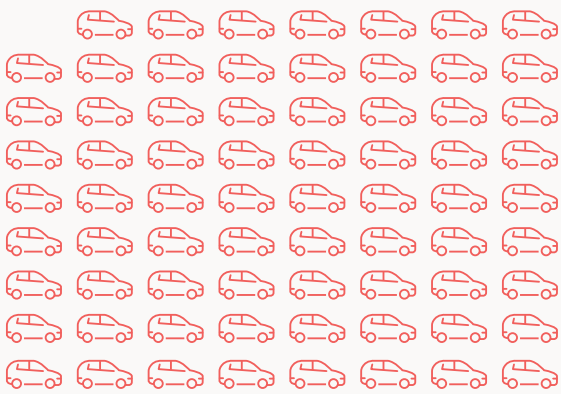


OZONE

1 billion kilometre

Equivalent to almost 14 million tonnes of CO_2, the average greenhouse gas emissions of driving 71 billion kilometres in a passenger car or light commercial vehicle.

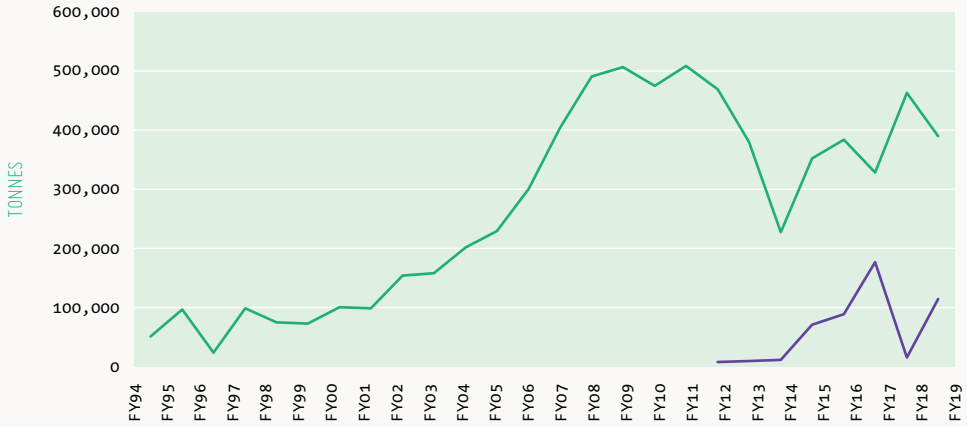
14M



CO_2

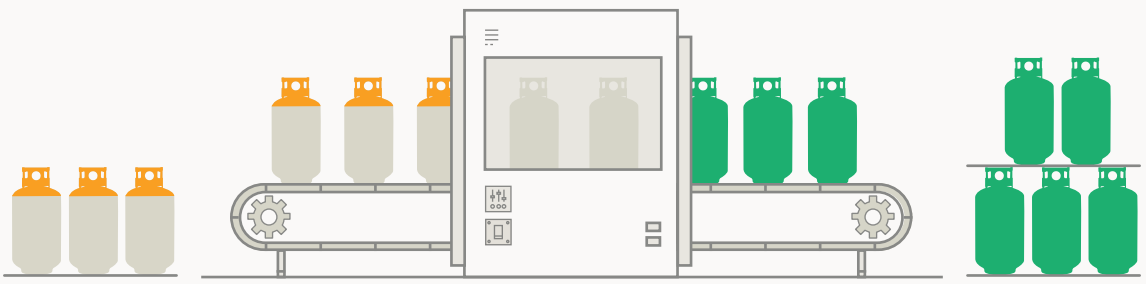
TONNES RECLAIMED TO JUNE 2019

442

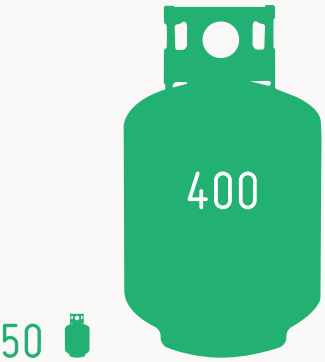


In the early days of the program, 115 tonnes of refrigerant were used for feedstock for the manufacture of new refrigerants.

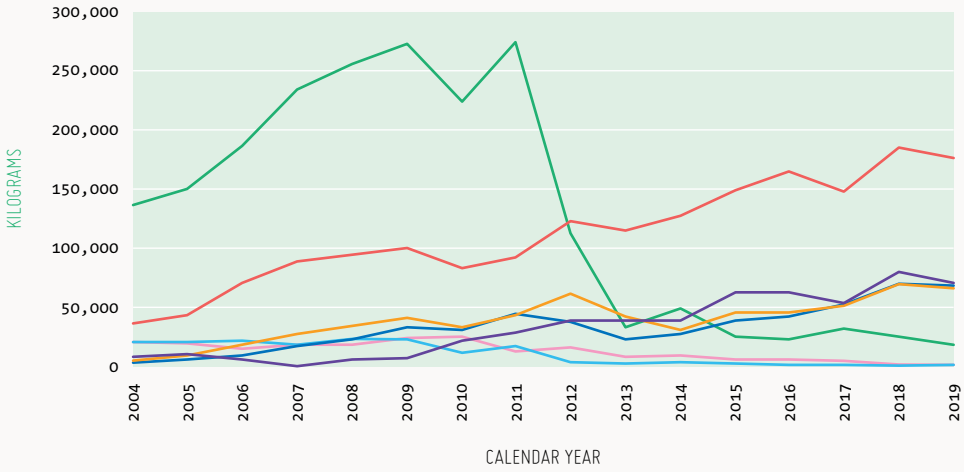
115



Program has grown from 50 tonnes per year to more than 400 tonnes



Refrigerant Recovered by Species 2004-2019.



$1 million

Almost $70 Million of rebates have been paid to industry since 2004.

70M

Read more in Long-term performance on Page 9.

PERFORMANCE
THE YEAR IN NUMBERS

REFRIGERANT

In FY19 497 tonnes of refrigerant were recovered, preventing further ozone depletion and abating a million tonnes of climate forcing CO2 equivalent (CO2e) emissions.

For comparison, 471 tonnes of refrigerant were recovered in FY18 and 498 tonnes in FY17. The FY19 total is similar to the 381 tonnes returned in FY16.

TONNES RECOVERED FY19

497

471
Tonnes Recovered FY18

498
Tonnes Recovered FY17

7398
Tonnes Recovered since 1993

RRA reclaimed (purified to as-new specification for resale) 109 tonnes of refrigerant in FY19, a substantial increase in the 8 tonnes reclaimed in FY18.

Fluctuations in reclaimed refrigerant are due to peaks and troughs in the reporting cycle. The average reclaimed from FY16-FY19 is 92.5 tonnes per year.

TONNES RECLAIMED FY19

109

In the 2019 calendar year, RRA safely destroyed 1.5 tonnes of CFC, 16.1 tonnes of HCFC and 349.5 tonnes of HFC.

TONNES DESTROYED FY19

370.8

349.5
Tonnes HFC

16.1
Tonnes HCFC

3.7
Tonnes HC

1.5
Tonnes CFC

TONNES OF REFRIGERANT ARE AWAITING DESTRUCTION

75

FINANCES

The introduction of license exemptions for companies importing pre-charged equipment (PCE) containing less than 25 kilograms of refrigerant per year also waives the requirement for these companies to make import levy contributions to RRA.

As a result, the number of contributing companies has reduced from 800 to 711 and income from PCE importers has reduced from $7.2 million in FY18 to $6.4 million in FY19.

In FY19, the number of bulk importers of refrigerant in cylinders and ISO containers has increased from 24 to 25.

REVENUE **$15.8M**

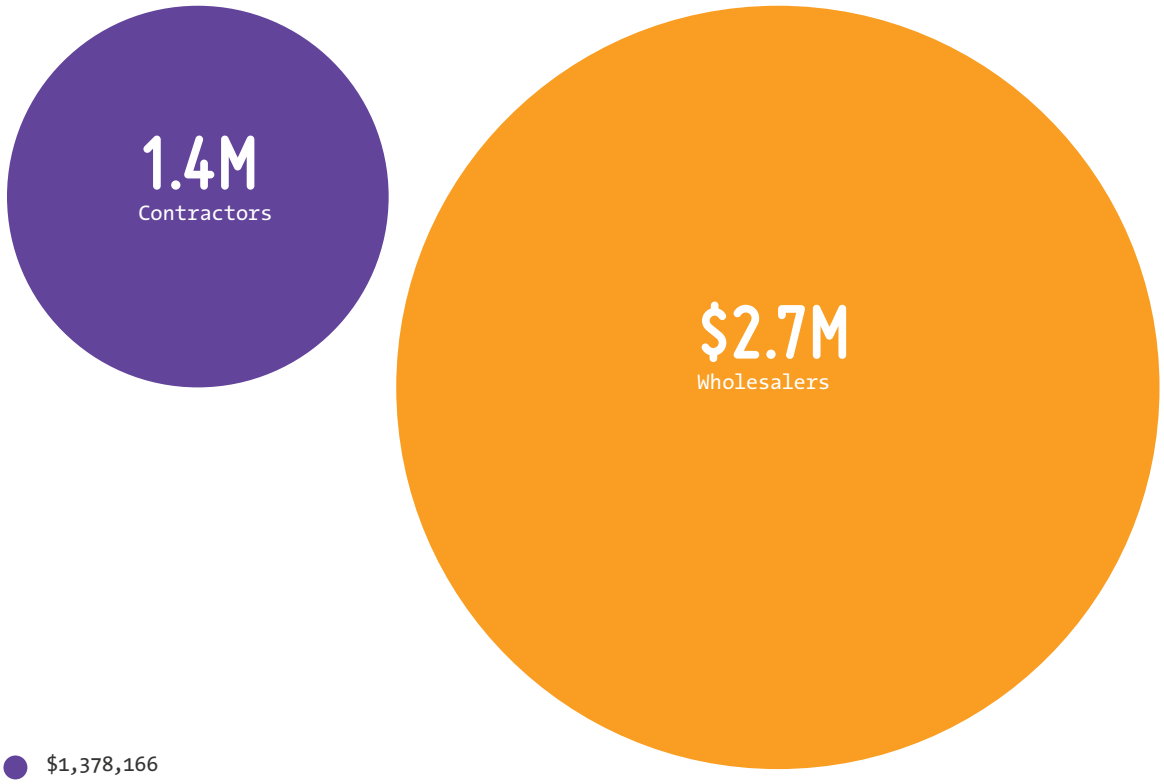
6.8M
From 25 bulk importers

6.4M
From 711 PCE importers

2.6M
From investment income

REBATES BACK TO INDUSTRY

$4M

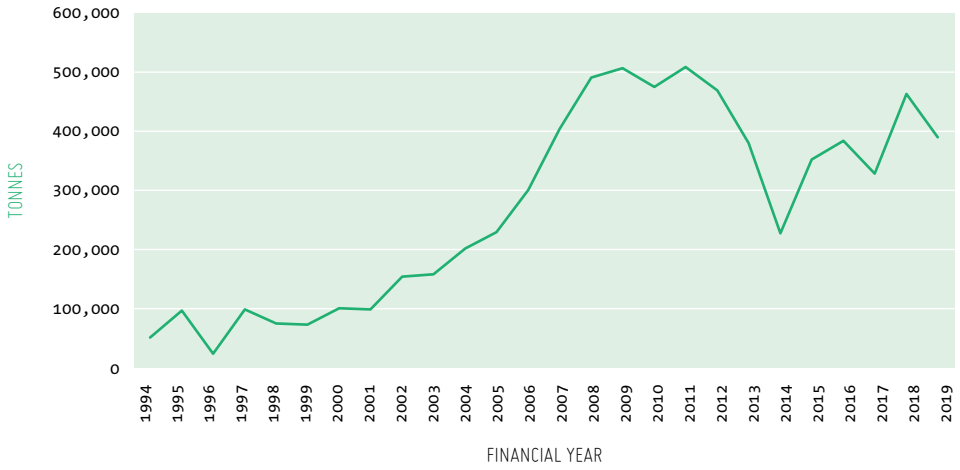


LONG TERM PERFORMANCE

A strong bounce-back in the volume of refrigerant returned for destruction in FY15 followed the carbon price repeal that restored refrigerant prices to market rates, at the same time restoring the practice of refrigerant recovery following a short period of high levels of retention and potential re-use.

Product returned for destruction has since been tempered somewhat by significant volumes of legacy refrigerants – predominately the widely used HCFC-22 - being reclaimed to new specification, as these refrigerants become scarce.

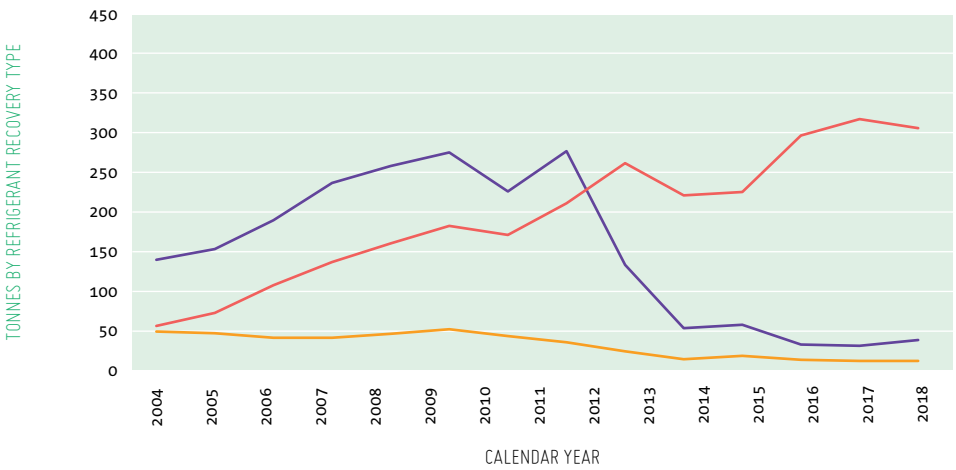
Refrigerant recovered 1993-2018.



Since FY13, HFCs have become the predominant refrigerant type returned to RRA for processing, reflecting a sharp decline in HCFCs and the sheer volume of installed equipment now using HFCs.

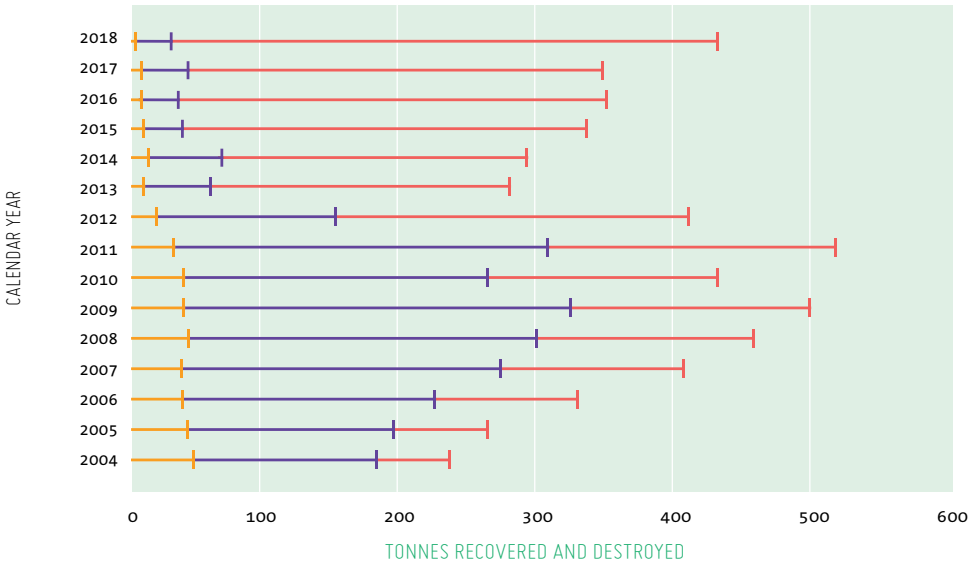
Having been phased out in the mid-1990s, CFCs continue to trend downwards as equipment reaches end-of-life. Due to the phase-out of all ozone depleting refrigerants by 2030 and a strict limit on imports, HCFC-22 is increasingly reused and will remain sought-after for servicing purposes until existing equipment reaches end-of-life.

Refrigerant Recovery by Type 2004-2018.



Volumes of HFC recovery have grown consistently since collections began in FY03 will continue to grow strongly, with a sharp increase toward the end of the 2020s.

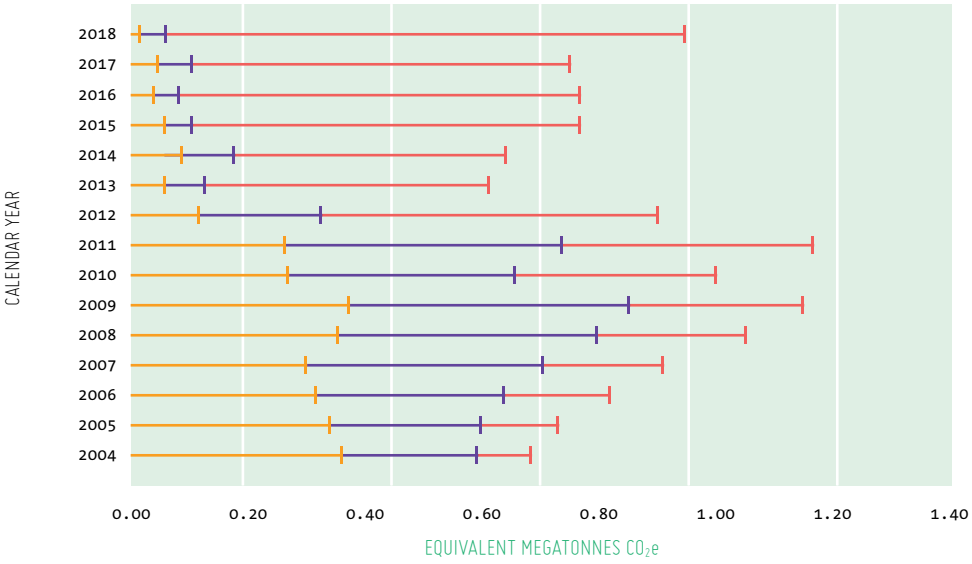
Refrigerant Recovered and Destroyed in Tonnes.



CFC
HCFC
HFC

The high GWP and ubiquity of HFC refrigerants remains an environmental threat that will require careful ongoing management, with continued strong industry participation in Australia's refrigerant stewardship scheme.

Abatement of Carbon Dioxide Equivalent Megatonnes CO_2e.



CFC
HCFC
HFC

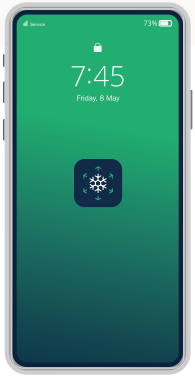
ACHIEVEMENTS

APPOINTMENT OF NEW GENERAL MANAGER

Having dedicated the past 22 years of his life to executing his vision of the world's most successful and effective refrigerant stewardship operations, Michael Bennett stepped down from his role of RRA General Manager and eased into a part-time role. Remaining close to the organisation, he now focuses on special projects including a seamless succession plan as Kylie Farrelley, transitions into the General Manager position.

Ms Farrelley has almost two decades' experience at refrigerant manufacturer Arkema, having been an industry representative to RRA since 2008 and a member of the RRA board since 2016. In addition to providing RRA with a new and exceptionally qualified General Manager, the carefully designed succession plan retains organisational knowledge while providing opportunities to carry out additional project work that will continue to improve recovery long into the future.

COMMENCEMENT OF TAFE TOOLS PROJECT



RRA is developing a suite of digital training resources, including a series of videos and an augmented reality app, to provide apprentices with innovative and hands-on ways of understanding the refrigerant recovery processes for various equipment types and an enhanced understanding of RRA's product stewardship program.

DEVELOPMENT OF AC RESEARCH PROGRAM

RRA is developing an app to better understand what happens to refrigerant from split system air conditioners when they are replaced.

A reasonable amount of data is available on how many systems there are and how much refrigerant is installed throughout Australia. However little, if any, information exists on how long these systems last, how much they leak and how much refrigerant is left when they get replaced. It seems this data void is universal. Such information is crucially important for RRA to manage the future destruction liability associated with the installed refrigerant bank in this sector.

The Refrigerant Recovery Survey app has been developed to crowd source this information.

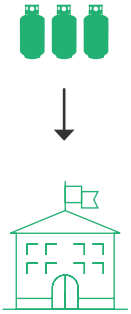
AUTOMOTIVE FLAMMABLE REFRIGERANTS SAFETY BOOKLET

Publication of a booklet entitled Flammable Refrigerants and Safety in Automotive Applications was the conclusion of a long-running project between RRA, GHD Engineering and automotive air-conditioning trade association VASA.

World-first research was required to fully understand the management of health and safety risks associated with the use of flammable refrigerants in an automotive workshop environment.

SUPPLY OF REFRIGERANT TO TAFE

To help address a funding shortfall that prevents some TAFEs from acquiring new-generation, lower-GWP refrigerants required to train apprentices, RRA has established a program to supply these products at no cost to TAFE.



Now Australia's RAC apprentices can be taught with the latest available refrigerant technologies, including those suitable for safely retrofitting older equipment as a replacement for high-GWP legacy refrigerants.

ANNUAL AUTOMOTIVE REFRIGERANT SURVEY

In conjunction with workshop members of automotive air-conditioning trade association VASA, since 2013 RRA has conducted regular surveys of which refrigerants are installed in vehicles undergoing service at metropolitan and regional locations around Australia.

Systems containing no refrigerant at all are included in the study, along with those charged with HFC-134a, hydrocarbons and mixtures of hydrocarbons with other refrigerants. Occasionally, vehicles still show up with a full charge of CFC-12. The vehicles' year of manufacture is also recorded.

ASSISTING PACIFIC NATIONS

During the reporting period, RRA destroyed 670kg of R22 from Papua New Guinea.

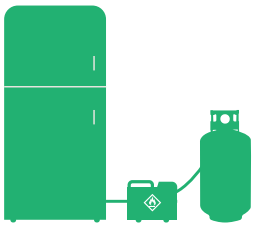
RRA also agreed to facilitate the export of unwanted refrigerant from Fiji and Samoa to Australia in RRA-owned cylinders for safe destruction on a cost-recovery basis. However, these shipments have not yet commenced.

OPPORTUNITIES

IDENTIFYING SUITABLE A3 REFRIGERANT RECOVERY EQUIPMENT

RRA continues to pursue numerous avenues to identify a refrigerant recovery unit that is both suitable for Class A3 (high flammability) refrigerants and meets Australian electrical standards after LogiCamms found a promising piece of equipment to fall short of Australian electrical standards.

The search goes on for a recovery unit that will help ensure the safety of technicians, as well as legal compliance when they encounter systems charged with a flammable mixture of hydrocarbons and HCFC or HFC refrigerants.



IMPROVING RECOVERY FROM END-OF-LIFE EQUIPMENT AND MOTOR VEHICLES

Improved working practices and equipment quality with fewer leaks increase the amount of refrigerant in end-of-life equipment – particularly domestic refrigerators and air-conditioners – and vehicles but this must be backed by better management of the equipment and vehicles when they reach end-of-life.

RRA continues to work with governments, the Australian Refrigeration Council and industry to ensure more refrigerant is recovered and safely disposed of, rather than emitted, when systems are uninstalled and vehicles are dismantled.

Without adequate measures to ensure end-of-life refrigerant recovery from decommissioned and end-of-life equipment, the leakage rate from these systems is 100 per cent. Around one million new systems are installed, and more than a million new vehicles are sold each year, causing the installed refrigerant bank to rapidly grow.

To illustrate the potential scale of this problem, a 2015 Expert Group report estimated that in 2013, 170 tonnes of HFC-134a and 20 tonnes of CFC-12 remained in end-of-life vehicles in Australia. A 2014 KPMG report on end-of-life domestic freezers, refrigerators and split air-conditioners in Australia estimated that 212 tonnes of refrigerant was not recovered from such equipment that year.

LICENSING AND COMPLIANCE

RRA continues to strongly support efforts to transition Australia's comprehensive licensing system to one that is based that incorporates work with all refrigerants.

The existing system only covers certain refrigerants based on their inclusion in environmental legislation, meaning it will face obsolescence as unregulated lower-GWP refrigerants become mainstream.

FLAMMABLE REFRIGERANTS

RRA will continue to prepare and support the recovery chain for major changes relating to the management, storage, transport, handling and destruction of flammable refrigerant as increasing quantities enter the market. Class A2L mildly flammable products such as HFO-1234yf and HFC-32 are projected to make up more than half the refrigerant bank by the end of this decade.

Although the low GWP and high price of HFO-1234yf makes it less likely to be returned for destruction, HFC-32 has a GWP of 675, meaning it will be returned and the installed bank is expected to reach approximately 20,000 tonnes in the next 10-15 years.

REDUNDANT REFRIGERANT

The transition to lower-GWP refrigerants will result in large volumes of redundant refrigerant when whole generations of equipment reach end-of-life. One example is split systems using HFC-410A that currently contain more than 20,000 tonnes of refrigerant. RRA is preparing its infrastructure and processes to successfully handle high quantities of legacy refrigerants when they become available for recovery and safe disposal.

THE ATMOSPHERE

Since the 1990s, the amount of ozone-destroying chlorine in the atmosphere has reduced by 10 per cent as a direct result of global action by industry under the Montreal Protocol. By 2030, this will prevent an estimated 2 million cases of skin cancer every year.

In addition to aiding the recovery of the ozone layer, since the Montreal Protocol was ratified it has prevented an estimated 100 billion tonnes of CO2e from entering the atmosphere, making it more successful at reducing greenhouse gas emissions than the first commitment period of the Kyoto Protocol.

Now the Kigali Amendment to the Montreal Protocol promises to reduce global greenhouse gas emissions by a further 72 billion tonnes of CO2e by 2050, encompassing the phase-down of HFC production and consumption into the what is widely regarded as the most successful international environmental treaty in history.

1993
RRA scheme established in Australia

1995
CFCs phased out in Australia, HCFC-22 already a popular alternative with 5.5% the ozone depleting potency of CFC-12 and a much shorter atmospheric life

1998
CFC-12 emissions have peaked but remain a major cause of stratospheric chlorine, HFCs and HFC blends gain popularity

2000
1st Step down in Australia's HCFC phase out

2006
European Union announces mandatory phase out HFC-134a in mobile air-conditioning

2008
First HFO refrigerant developed: R1234yf

CFC-12 emissions reduce 8% per year on average since 1987

100 billion tonnes+ of CO2e emissions prevented as a result of the worldwide CFC phase-out

2015
European Union implements 'F-Gas' regulation to phase-down HFCs

2016
Kigali Amendment to the Montreal Protocol agrees global phase-down of HFCs

2017
Australia ratifies the Kigali Amendment

2018
1st January Australia commenced its HFC phase down

2019
RRA turns 25! Steady increase in global uptake of HFO, lower-GWP HFC and alternatives

Climate impact of popular refrigerants (per 1KG)

CFC-12	HCFC-22	HFC-134a	HFC-32	HFO-1234yf
10,900KG CO_2e	1,810KG CO_2e	1,430KG CO_2e	675KG CO_2e	<1KG CO_2e

CSIRO ATMOSPHERE DATA

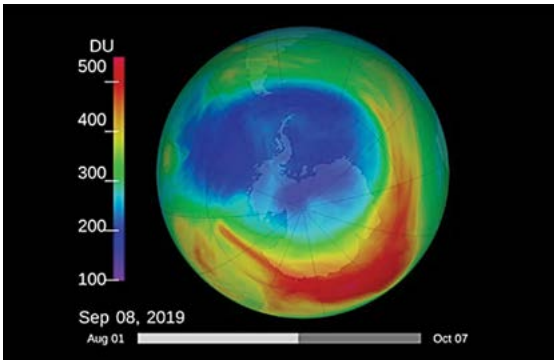
Charts, data, and other information in this section has been provided by the CSIRO from air measurements at the world-class Cape Grim atmospheric research facility in Tasmania, and from Antarctic firn (ice cores).

RRA provides support to the Cape Grim facility and ongoing research projects undertaken by dedicated CSIRO professionals. In addition to assisting with the Advanced Global Atmospheric Gases Experiment program, RRA collaborates more broadly with CSIRO on refrigerant emissions and measurement of refrigerants in the atmosphere.

OZONE DEPLETION AND RECOVERY

Unusual upper atmosphere conditions in 2019 led to the smallest Antarctic ozone hole observed since 1982, according to satellite data from NASA and NOAA.

The hole peaked at 16.4 million km2 – more than twice the area covered by Australia – on September 8 before quickly reducing to less than 10 million km2 for the rest of September and October, reducing harmful UV radiation.



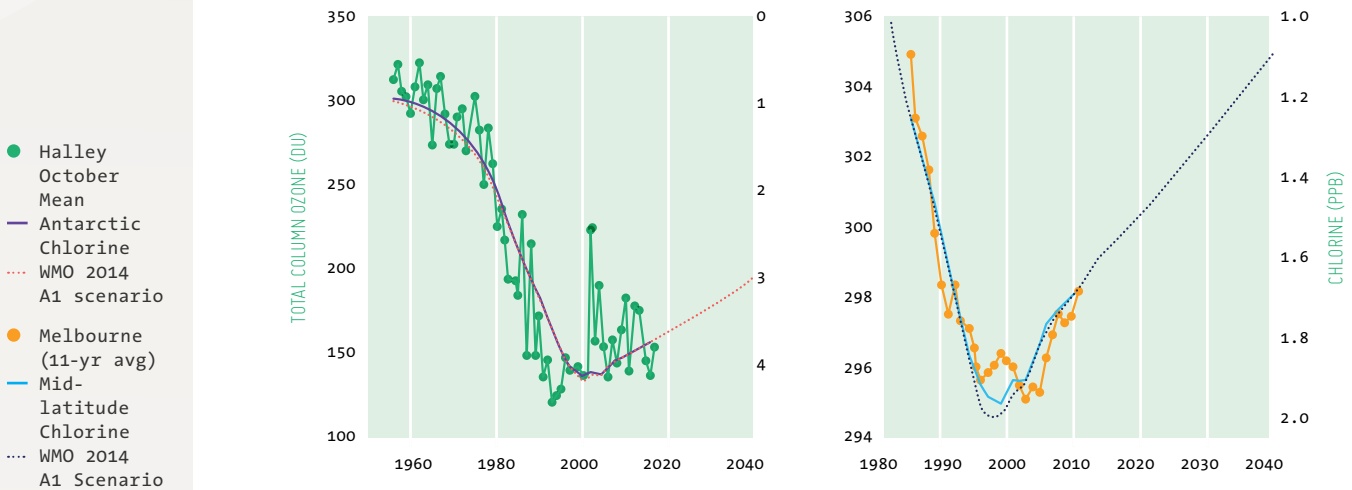
Conditions in 2019 were similar to warm-weather patterns that limited ozone depletion in 1988 and 2002 but no link with climate change has been identified.

Normal weather conditions usually result in an ozone hole of around 21 million km2 during late September and early October, but the hole is steadily getting smaller and Antarctic ozone is expected to recover to 1980 levels by 2070.

This is a direct result of the successful worldwide phase-out of CFCs and HCFCs under the Montreal Protocol that was made even more effective by the collective efforts of the refrigeration and air-conditioning industry in safely recovering contaminated and unwanted refrigerants for destruction, as well as improved equipment design and installation to dramatically reduce leakage.

The below graphs show both the onset and projections of ozone recovery over Antarctica (Halley Station) and at mid-latitudes in the Southern Hemisphere (Melbourne). There is also a strong correlation between the levels of ozone depletion in both regions.

Total column ozone (DU) changes at Halley Station, Antarctica (76ºS) and Melbourne, Australia (38ºS) and Equivalent Effective Stratospheric Chlorine (EESC, ppb) changes at polar and mid-latitudes. The Melbourne ozone data are 11-year running means to minimise impacts of solar variability.

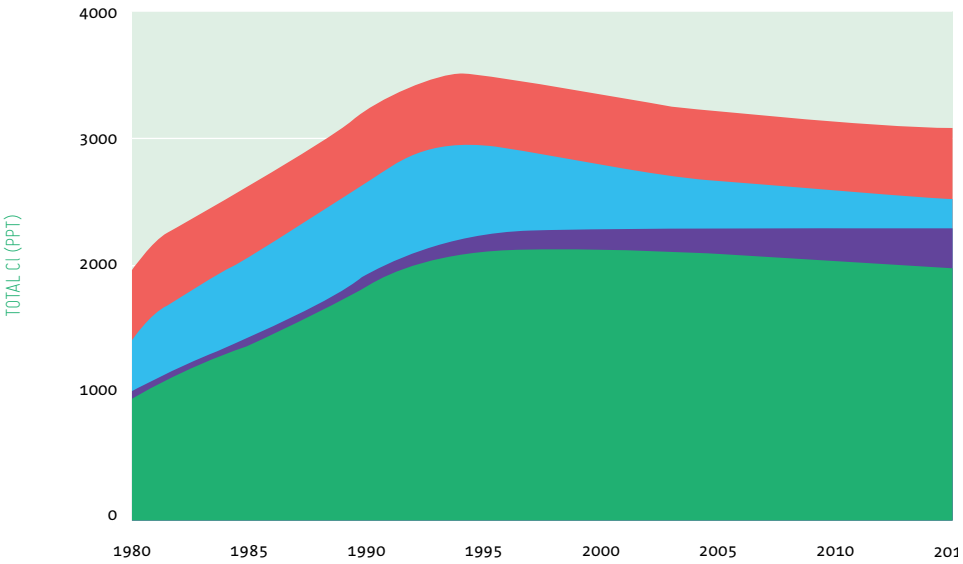


TOTAL CHLORINE

For only the second time in 20 years, there was an increase in total chlorine from ozone depleting substances (ODS) between 2016 and 2017, rising 0.11% from 3170.6 ppt to 3174 ppt.

The decline in chlorine from CFCs in this period was 9.5 ppt was offset by a 4.2 ppt increase in chlorine from HCFCs and a sharp 8.8 ppt increase in chlorine from chlorocarbons compared with 1.3ppt the year prior.

Total chlorine from from CFCs, HCFCs, carbon tetrachloride: CCl_4, methyl chloroform: CH_3CCl_3 and other chlorine-containing ODSs as measured at Cape Grim.

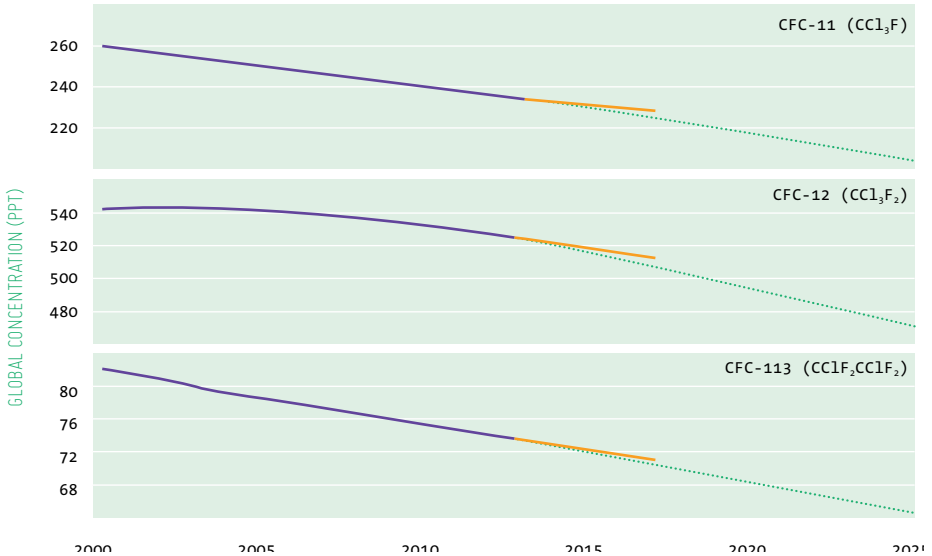


DECLINING EMISSIONS AND CONCENTRATIONS OF CFC-12

Overall global CFC emissions have declined 8% per year on average since their peak of 1,128,000 tonnes in 1987, which is testament to positive international action under the Montreal Protocol. In 2016, 32,000 tonnes of CFC-12 were emitted.

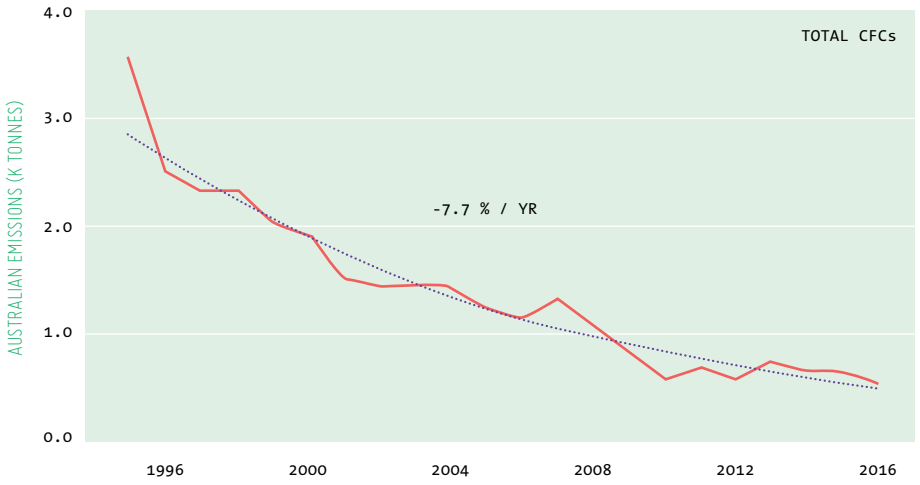
Global atmospheric concentrations of major CFCs are all declining, with the rate of CFC-12 decline continuing to accelerate, -2.64 ppt per year in 2012-2013 to -3.69 ppt per year in 2016-2017.

Global concentrations of CFC-11, CFC-12 and CFC-113 (ppt). The dashed line is the WMO 2014 A1 scenario.



Cape Grim data shows Australian CFC emissions decreased 17% from 691 tonnes in 2015 to 573 tonnes in 2016, with an average decline of 7.7% per year since 1995. In 2016, Australia produced 0.5% of global ODP-weighted CFC emissions.

Australian Emissions (k tonnes)



GROWING CFC-11 EMISSIONS

Research in 2018 found unexpected increases in global CFC-11 emissions that are thought to be new uses of this substance rather than related to existing inventory. It is estimated that 73,000 tonnes of CFC-11 were emitted in 2016 and 67,000 tonnes in 2018.

All global CFC emissions have shown a long-term decline apart from CFC-11, which has remained steady since 2002 and in 2012 overtook CFC-12 as most-emitted CFC for the first time since the late 1970s. CFC-11 and CFC-12 account for 88% of all CFCs in the atmosphere.

The global atmospheric concentration of CFC-11 is declining but this has slowed, from -1.66 ppt per year in 2012-2013 to -1.17 ppt per year in 2016-2017.

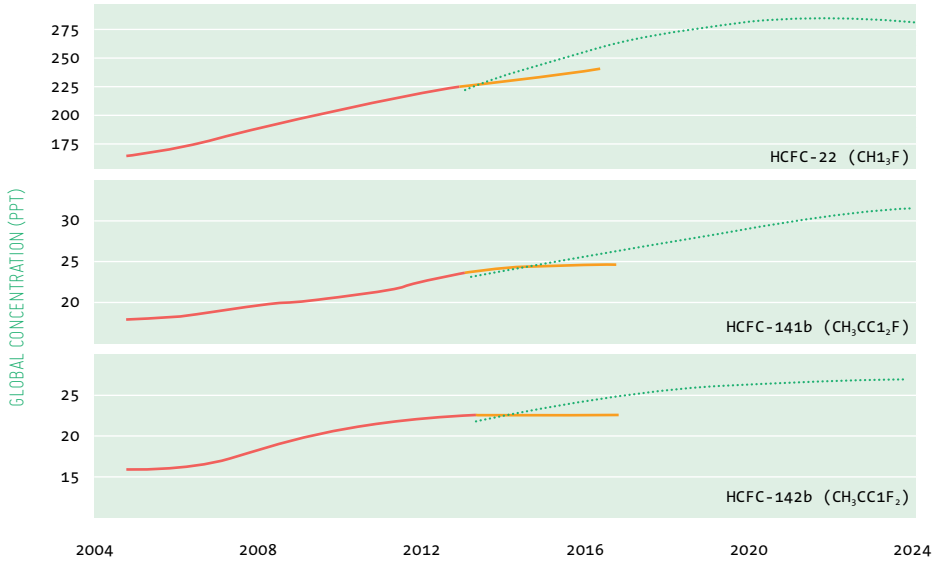
HCFC EMISSIONS CONTINUE TO FALL

The global peak of HCFC emissions was 488,000 tonnes in 2010, which had reduced by 6% to 458,000 tonnes as of 2016. This is a result of all major HCFC emissions being in decline, reversing the average 4% annual increase in emissions between the late 1970s and 2010.

HCFC-22 emissions peaked in 2010 at 386,000 tonnes before declining 0.7% per year to 370,000 tonnes in 2016, HCFC-141b peaked in 2012 at 68,000 tonnes and reduced 4% a year to 58,000 tonnes by 2016 and HCFC-142b peaked at 39,000 tonnes in 2008 and declined to 24,000 tonnes in 2016, or 6% per year.

As a result of these emissions reductions, atmospheric HCFC concentration growth has been slowing. If emissions continue to decline, HCFC concentrations will soon begin to decline.

Global concentrations of HCFC-22, HCFC-141b and HCFC-142b (ppt). The dashed line is the WMO 2014 A1 scenario.



Cape Grim data shows Australian HCFC emissions decreased by 52% between 1999 and 2016, down from 3286 tonnes to 1591 tonnes, with an average annual decline of about 4% in that timeframe. In 2016, Australia produced 0.35% of global HCFC emissions.

Australian Emissions (k tonnes)

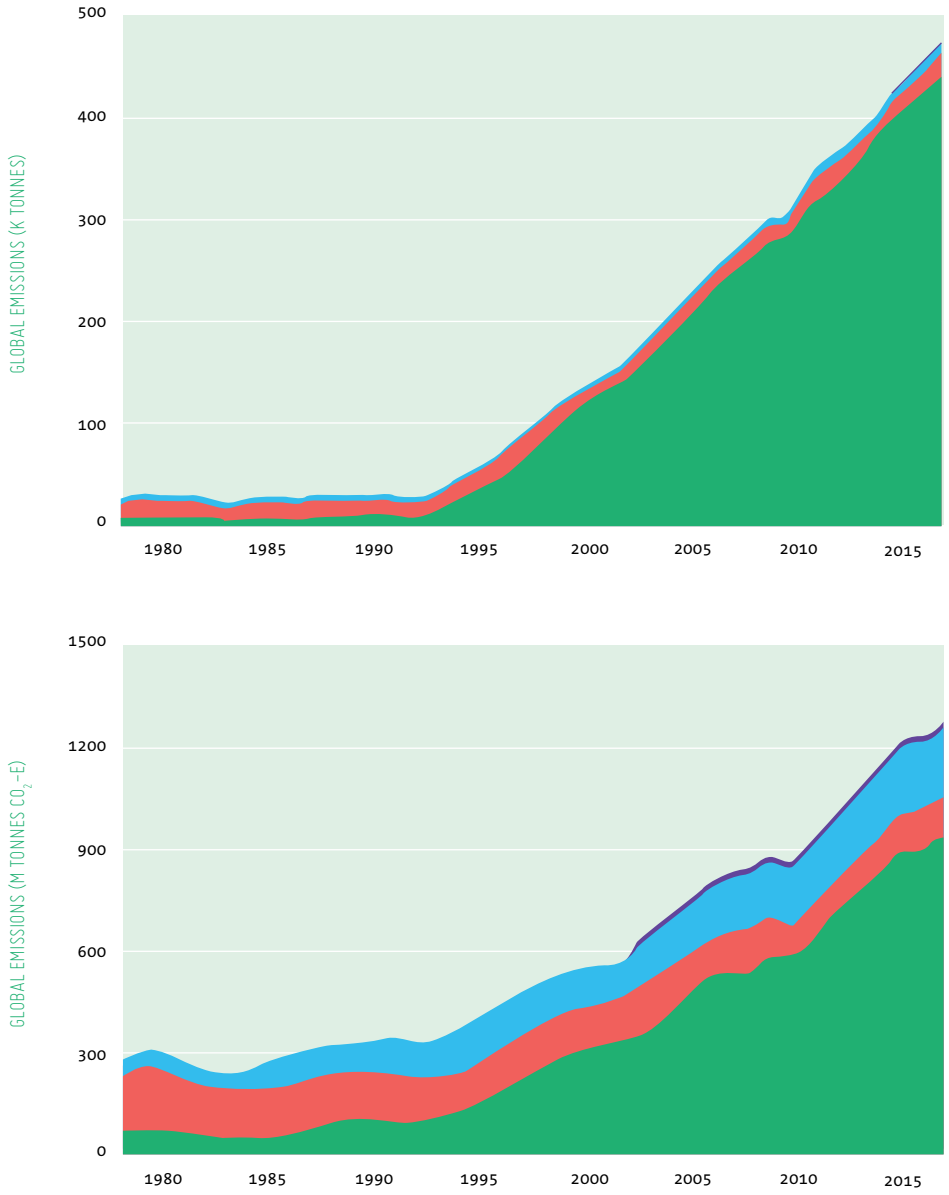
HFC EMISSIONS ARE STILL RISING

Global HFC emissions have risen by nearly 20,000 tonnes per year since 1995. Total emissions of 440,000 tonnes in 2016 were 6% higher than the year prior.

Global emissions of HFC-32, HFC-125, HFC-134a and HFC-143a respectively increased by 9%, 7%, 6%, 6% between 2015 and 2016. Global emissions of HFC-152a peaked in 2011 and began to decline before increasing by 4% between 2014 and 2015 then another 3% from 2015 to 2016. Significantly, global emissions of HFC-23 – a more potent greenhouse gas than HFC-32, HFC-125, HFC-134a and HFC-143a combined due to a GWP of 14,800 – declined by 6% from 2015 to 2016.

Based on Cape Grim observations, Australia's total HFC emissions increased 52% between 2005 and 2016, from about 2200 tonnes to more than 3300 tonnes, contributing 0.9% of global HFC emissions in 2016.

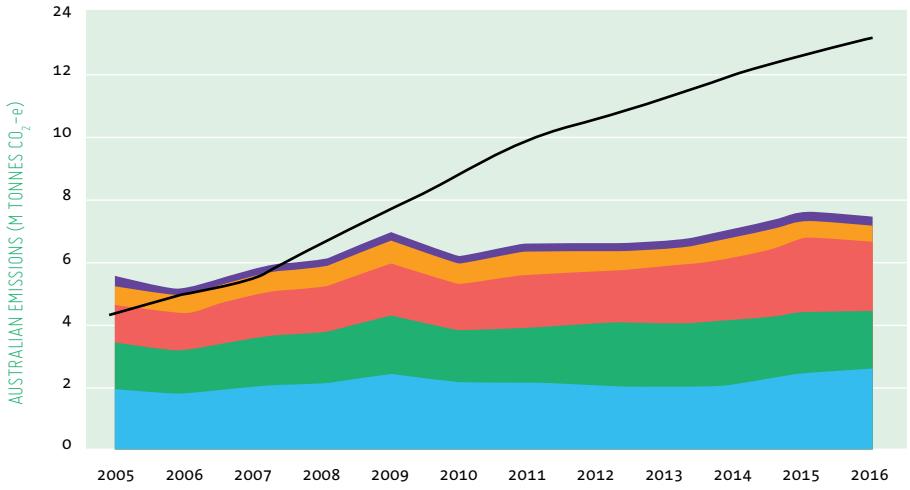
Global HFC, PFC, sulfur hexaflouride and nitrogen trifluuride emissions from global AGAGE atmospheric measurements (Rigby *et al.*,2014 and unpublished data 2018). CO_2-e emission estimates use GWPs from the IPCC 4th Climate Assessment (ARA GWPs).



HFO EMISSIONS YET TO BE DETECTED AT CAPE GRIM

HFO-1234yf and HFO-1234ze have not yet been detected at Cape Grim but trace amounts have been picked up by air monitoring stations in Europe. Uptake of these new-generation refrigerants has so far been concentrated in Europe and North America, so it may take some time for sufficient concentrations to reach Tasmanian air.

Australians emissions of HFCs (-125, -134a, -143a, -23) and other HFCs (-32, -152a, -236fa, -365mfc) estimated from atmospheric data (ISC-InTEM) measured at Cape Grim, and in the *Inventory* (DoEE, 2018), expressed in units of M tonne CO_2-e.



- Australian HFC inventory
- other HFCs
- HFC-23
- HFC-125
- HFC-143_a
- HFC-134_a

THE FUTURE

In Australia, refrigerant recovery has become an integral part of normal working practices, as demonstrated by the rebound in recovery following the carbon price repeal.

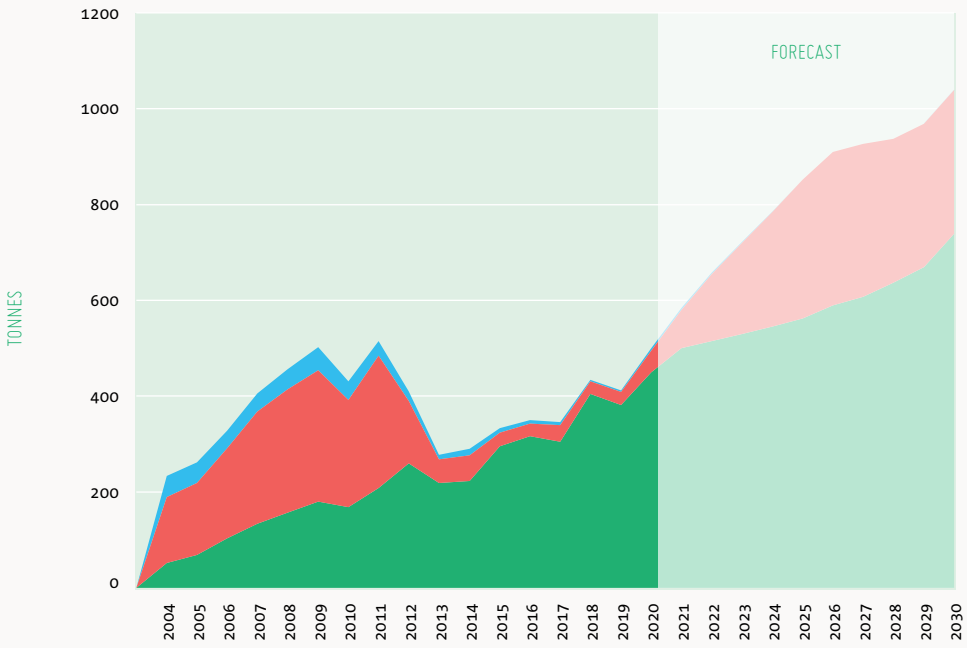
Similarly becoming an integral part of normal working practices is Australia's review of the Ozone Protection and Synthetic Greenhouse Gas Management Act, which passed Parliament in 2017 and incorporates an HFC phase-down from 1 January 2018 in compliance with the Kigali Amendment to the Montreal Protocol.

As more HCFC and HFC equipment reaches end-of-life, the amount of refrigerant being recovered will continue to grow and annual volumes are expected to again exceed 500 tonnes per year in the coming years.

The bank of installed CFCs in Australia is now estimated at less than 40 tonnes, meaning returns should reach almost zero by the mid-2020s.

Meanwhile, HCFC returns are expected to exceed 300 tonnes per year in the second half of next decade. HFC returns will continue to climb, anticipated to reach more than 700 tonnes per year by 2030 and remaining strong well beyond the end of the HFC phase-down program in 2036.

Project Refrigerant by Type



CONTINGENT LIABILITY

If the environmental cost to recover and safely dispose of low GWP refrigerants not covered by the Ozone Protection and Synthetic Greenhouse Gas Management Act, is greater than that of emitting them to atmosphere, they may not be included in the RRA product stewardship program in the future.

Around 52,000 tonnes of refrigerant are now installed in Australia and this – the contingent liability that RRA must manage – continues to increase while revenue from imported refrigerants will inevitably decline.

This means the revenue available to RRA and its ability to collect and safely dispose of unwanted and contaminated recovered refrigerant from servicing or decommissioning older equipment will eventually reduce. For this reason, RRA has accumulated funds in a trust.

If all 52,000 tonnes of refrigerant arrived at RRA for safe disposal today, the cost of processing it would be in the region of $660 million.

However, with system leakage, failures, accidents and occasional intentional emission, as well as refrigerant that is reclaimed and reused, the final figure could be substantially lower.

If 50% of Australia's refrigerant bank was sent to RRA, the contingent liability would be $330 million, if 75% was recovered and returned it would be $495 million and a 90% recovery and return rate would result in a contingent liability of $594 million.

FINANCIAL REPORT 2018/19

The Directors of:

Refrigerant Reclaim Australia Limited, as trustee for
R.R.A. Environment Trust

Cc: General Manager, Refrigerant Reclaim Australia

Compilation report to the directors of the Refrigerant Reclaim Australia group

Using information you provided, we have compiled the special purpose financial statements for the Refrigerant Reclaim Australia (RRA) group, consisting of Refrigerant Reclaim Australia Limited and the R.R.A. Environment Trust for the year ended 30 June 2019. The financial statements for the RRA group are an aggregation of the audited financial data for each of the entities listed above, after eliminating any inter-entity transactions and balances. The report comprises a combined income statement, combined balance sheet, and related notes.

The responsibility of the directors

The directors are solely responsible for the information contained in the report and have determined that the financial reporting framework used, as set out in Note 1 to the financial statements, is appropriate to your specific purposes.

Our responsibility

On the basis of information provided by you, we have compiled the accompanying financial statements in accordance with the financial reporting framework described in Note 1 to the financial statements.

Our procedures use accounting expertise to collect, classify and summarise the financial information, which you provided, in compiling the financial statements. Our procedures do not include verification or validation procedures. No audit or review has been performed and accordingly no assurance is expressed.

The financial statements were compiled exclusively for the benefit of the proprietor. We do not accept responsibility to any other person for the contents of the financial statements.

PricewaterhouseCoopers

Eugene Kalenjuk
Partner

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Liability limited by a scheme approved under Professional Standards Legislation.

Refrigerant Reclaim Australia Group
Income Statement
for the year ended 30 June 2019

	2019 $	2018 $
Income		
Levies		
- Bulk importers	6,811,918	8,734,171
- Charged equipment importers	6,411,679	7,226,854
Total Income	13,223,597	15,961,025
Operational Costs		
Cost of destruction		
- Destruction costs	2,950,865	3,508,544
- Rebates to contractors and wholesalers	4,082,957	4,611,438
- Other	990,047	1,024,555
Total Operational Costs	8,023,869	9,144,537
Gross Surplus/(Deficit) from Trading	5,199,728	6,816,488
Other Income		
Interest income	2,355,315	1,924,073
Other income	274,033	72,742
Total Other Income	2,629,348	1,996,815
Total Trading Overheads	1,369,784	1,315,209
Operating Surplus	**6,459,292**	**7,498,094**
Net Surplus/(Deficit)	**6,459,292**	**7,498,094**

Refrigerant Reclaim Australia Group
Balance Sheet
for the year ended 30 June 2019

	2019 $	2018 $
ASSETS		
Current Assets		
Funds		
Petty Cash	200	200
General Cheque Account	568,778	254,648
Term Deposits	28,260,512	30,214,786
Investments	7,513,317	11,525,522
	36,342,807	41,995,156
Debtors		
Trade Debtors	2,231,624	3,033,367
Other Debtors	62,122	66,353
	2,293,746	3,099,720
Other		
Prepayments	34,190	35,823
Accrued Interest	480,826	437,936
	515,016	473,759
Total Current Assets	39,151,569	45,568,635
Non-Current Assets		
Funds		
Term Deposits	5,000,000	-
Investments	43,118,027	35,472,477
Cylinders	1,043,470	1,043,470
Less Accumulated Depreciation	(732,889)	(619,782)
	48,428,608	35,896,165
Total Non-Current Assets	48,428,608	35,896,165
Total Assets	**87,580,177**	**81,464,800**
LIABILITIES		
Current Liabilities		
Creditors		
Trade Creditors	1,109,300	954,528
Accrued Expenses	43,080	88,511
Other Payables	14,954	27,725
	1,167,334	1,070,764
Provisions		
Provision for annual leave	45,832	37,080
Provision for long service leave	139,864	126,062
Provision - Destruction Costs	582,673	1,047,840
	768,369	1,210,982
Total Current Liabilities	1,935,703	2,281,746
Total Liabilities	**1,935,703**	**2,281,746**
Net Assets	**85,644,474**	**79,183,054**
EQUITY		
Settled Sum	10	10
Retained Earnings	79,185,172	71,684,950
Current Year Earnings	6,459,292	7,498,094
Total Equity	**85,644,474**	**79,183,054**

Refrigerant Reclaim Australia Group
Consolidated Financial Statements
Notes to the financial statements
for the year ended 30 June 2019

1 Summary of significant accounting policies

The principal accounting policies adopted in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

The Trust is a not for profit entity.

(a) Basis of preparation

This is a special purpose financial report that has been prepared based on the 2018 financial reports of Refrigerant Reclaim Australia Limited and the Refrigerant Reclaim Australia Environment Trust, each of which were individually audited. As the consolidated Refrigerant Reclaim Australia entity presented in this report is not recognised as a consolidated entity under Australian Accounting Standards, management have determined the accounting policies outlined below are appropriate and sufficient to meet the needs of the intended users of this report

(i) New and amended standards adopted by the Group

None of the new standards and amendments to standards that are mandatory for the first time for the financial year beginning 1 July 2018 affected any of the amounts recognised in the current period or any prior period and are not likely to affect future periods.

(ii) Historical cost convention

These financial statements have been prepared under the historical cost convention.

(b) Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable. Amounts disclosed as revenue are net of returns, trade allowances, rebates and amounts collected on behalf of third parties.

Revenue is recognised for the major business activities as follows:

(i) Levy on imported refrigerant

Revenue is recognised when certain types of refrigerant are imported and sold in Australia.

(ii) Interest revenue

Interest revenue is recognised when interest is derived on cash at bank.

(iii) Government revenue

Government revenue is recognised when it is invoiced.

(c) Income tax

Income tax is not brought to account as the trust has exempt status under Division 50 Subdivisions 5 & 10 of the *Income Tax Assessment Act 1997.*

1 Summary of significant accounting policies (continued)

(d) Cash and cash equivalents

For the purpose of presentation in the statement of cash flows, cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short-term, highly liquid investments with original maturities of up to three months that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value, and bank overdrafts.

(e) Trade receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. Trade receivables are due for settlement within 60 days.

Collectability of trade receivables is reviewed on an ongoing basis. Debts which are known to be uncollectible are written off by reducing the carrying amount directly. An allowance account (provision for impairment of trade receivables) is used when there is objective evidence that the Trust will not be able to collect all amounts due according to the original terms of the receivables. Significant financial difficulties of the debtor, probability that the debtor will enter bankruptcy or financial reorganisation, and default or delinquency in payments (more than 120 days overdue) are considered indicators that the trade receivable is impaired. The amount of the impairment allowance is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. Cash flows relating to short-term receivables are not discounted if the effect of discounting is immaterial.

The amount of the impairment loss is recognised in profit or loss within other expenses. When a trade receivable for which an impairment allowance had been recognised becomes uncollectible in a subsequent period, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against other expenses in profit or loss.

(f) Property, plant and equipment

Property, plant and equipment are initially recorded at cost and are depreciated over their estimated useful lives using the diminishing value method. New assets are depreciated from the date of their commissioning.

Depreciation rates and methods are reviewed annually for appropriateness. The useful lives used for each class of assets are as follows:

- Cylinders	7.5 years
- Other property, plant and equipment	3-5 years

(g) Trade and other payables

These amounts represent liabilities for goods and services provided to the Trust prior to the end of financial year which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

(h) Employee benefits

(i) Short-term obligations

Liabilities for wages and salaries, including non-monetary benefits and annual leave are recognised in respect of employees' services up to the reporting date and are measured at the amounts expected to be paid when the liabilities are settled.

(ii) Other long-term employee benefit obligations

The liability for long service leave which is not expected to be settled within 12 months after the end of the period in which the employees render the related service is recognised in the provision for employee benefits and measured as the present value of expected future payments to be made in respect of services provided by employees up to the end of the reporting period using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service. Expected future payments are discounted using market yields at the end of the reporting period on national government bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows.

1 Summary of significant accounting policies (continued)

(i) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of associated GST, unless the GST incurred is not recoverable from the taxation authority. In this case it is recognised as part of the cost of acquisition of the asset or as part of the expense.

Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the taxation authority is included with other receivables or payables in the balance sheet.

Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities which are recoverable from, or payable to the taxation authority, are presented as operating cash flows.

REFRIGERANT
RECLAIM
AUSTRALIA

For more information, please
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Email info@refrigerantreclaim.com.au