



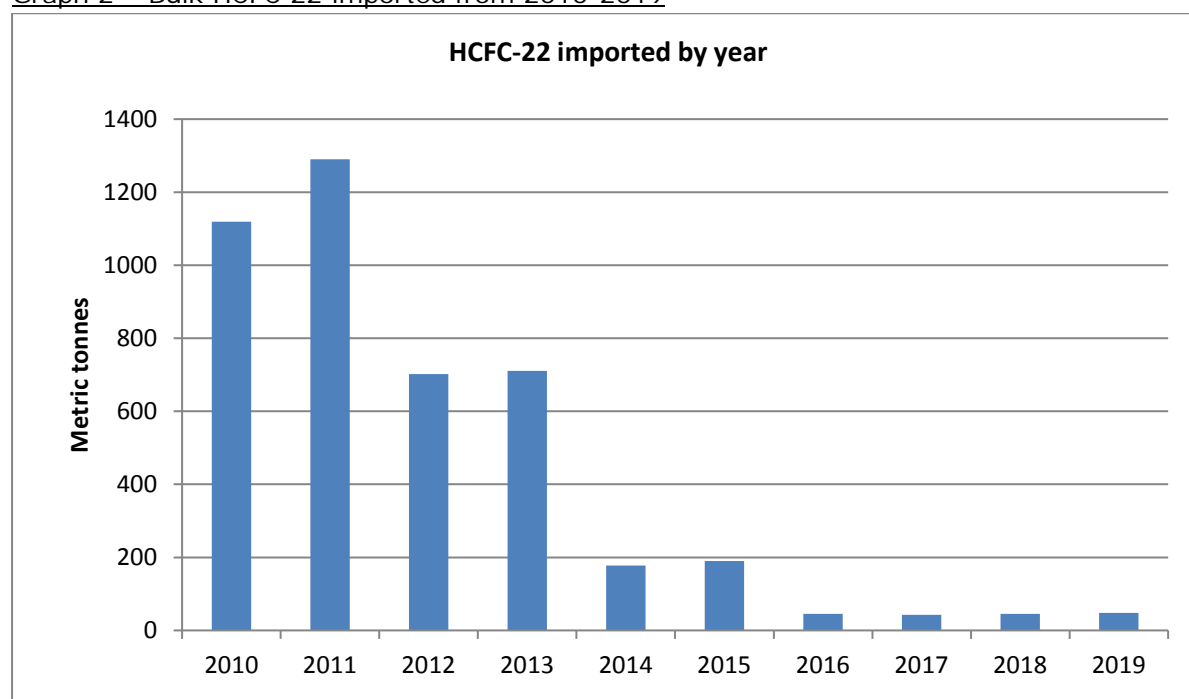
Australia's imports and exports of ozone depleting chemicals (2019 report)

Bulk HCFC imports into Australia

Importers have changed the mix of HCFC species they import in response to market requirements and opportunities. [Graph 3](#) shows importers decreased imports of HCFC-141b and HCFC-123 and increased the import of HCFC-22 in preference to other HCFCs ([Graph 2](#)).

Australia reached the second last step in its HCFC phase out in 2016. The annual import limit HCFCs from 2016 to 2029 is 2.5 ODP tonnes which equates to around 45 tonnes of HCFC-22 annually. In 2030, the import limit goes to zero for all developed countries.

Graph 2 – Bulk HCFC 22 imported from 2010-2019



Graph 3 – Bulk HCFC imported from 2010-2019 (excluding HCFC-22)

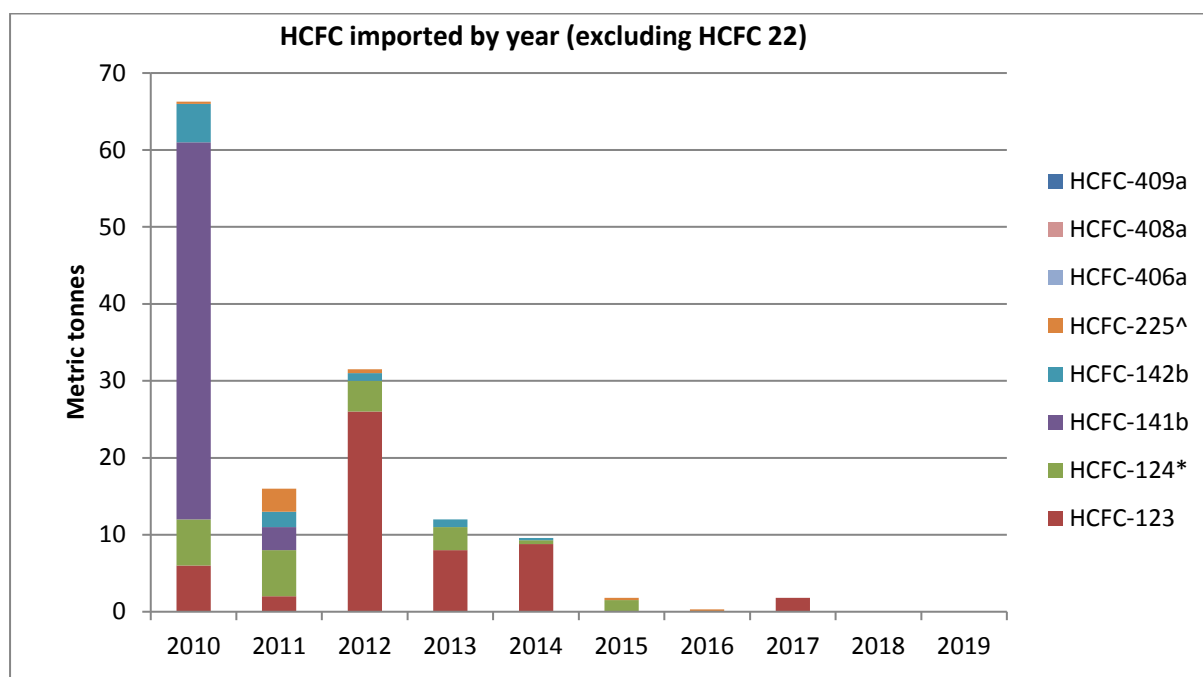


Table 1 – Bulk HCFC imported from 2012-2019

(Metric tonnes)	2012	2013	2014	2015	2016	2017	2018	2019
HCFC-22	702	711	178	190	45	42.8	45.4	46.06
HCFC-123	26	8	8.8	0	0	1.8	0	0
HCFC-124	4	3	0.5	1.5	0	0	0	0
HCFC-142b	1	1	0.3	0	0	0	0	0
HCFC-225	0.5	0	0	0.3	0.3	0	0	0

Australia's bulk HCFC imports compared to other countries

Australia's phase out of HCFC is similar to or ahead of other developed countries (non-Article 5 or "non-A5" parties) which are on the same phase out schedule ([Graph 4 and Table 2](#)). From 2020, imports of HCFC can only be used to service existing refrigeration, air conditioning and fire protection, equipment.

The HCFC phase out in developing countries (Article 5 or "A5" parties) commenced in 2013 with a freeze at baseline levels and a 10% reduction step in 2015. This is reflected in the drop in HCFC imports in 2014 for Article 5 Parties and a steady reduction thereafter. The next phase out step for developing countries is a 35% reduction in imports and production in 2020, although some countries are already well in advance of this target.

Graph 4 – Australia's HCFC consumption compared to global consumption (2010-2018)

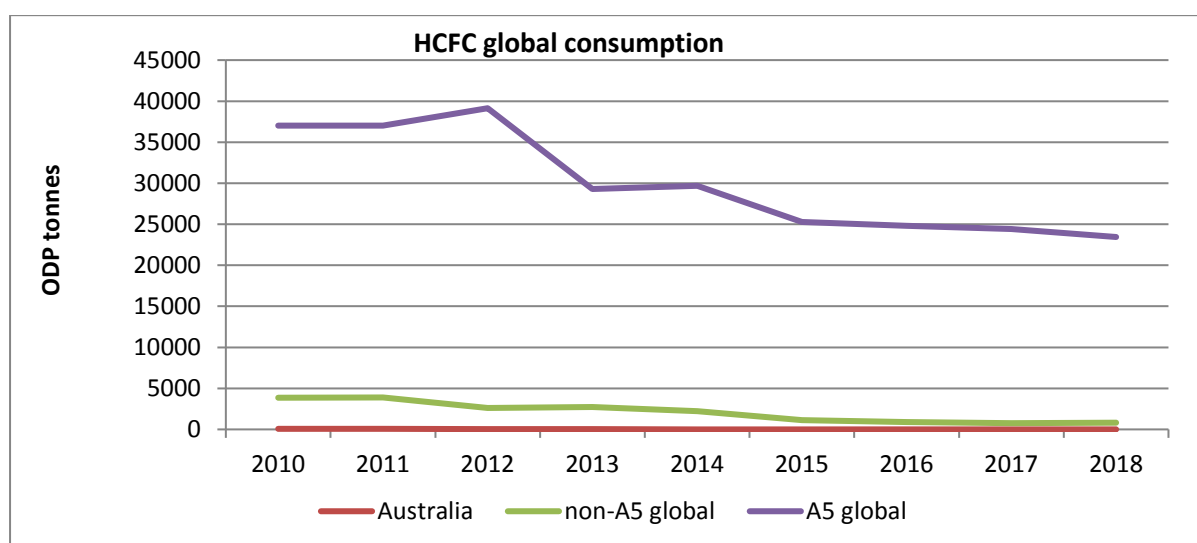


Table 2 – Australia's HCFC consumption compared to global consumption (2010-2018)

(ODP tonnes)	2010	2011	2012	2013	2014	2015	2016	2017	2018
Australia	70	70	40	40	10	10	2.5	2.5	2.5
Non-A5 global	3,874	3,893	2,605	2,716	2,207	1,117	904	760	805
A5 global	37,026	37,015	39,137	29,283	29,690	25,278	24,822	24,423	23,445

HCFC imported into Australia in pre-charged equipment

HCFCs imported into Australia in equipment are not counted against Australia's consumption by the Montreal Protocol. Instead they are accounted for in the country where the equipment was manufactured. Australia regulates imports of pre-charged HCFC refrigeration and air conditioning equipment under the Ozone Act to provide data on the bank of HCFC equipment and the HCFCs required to service the equipment.

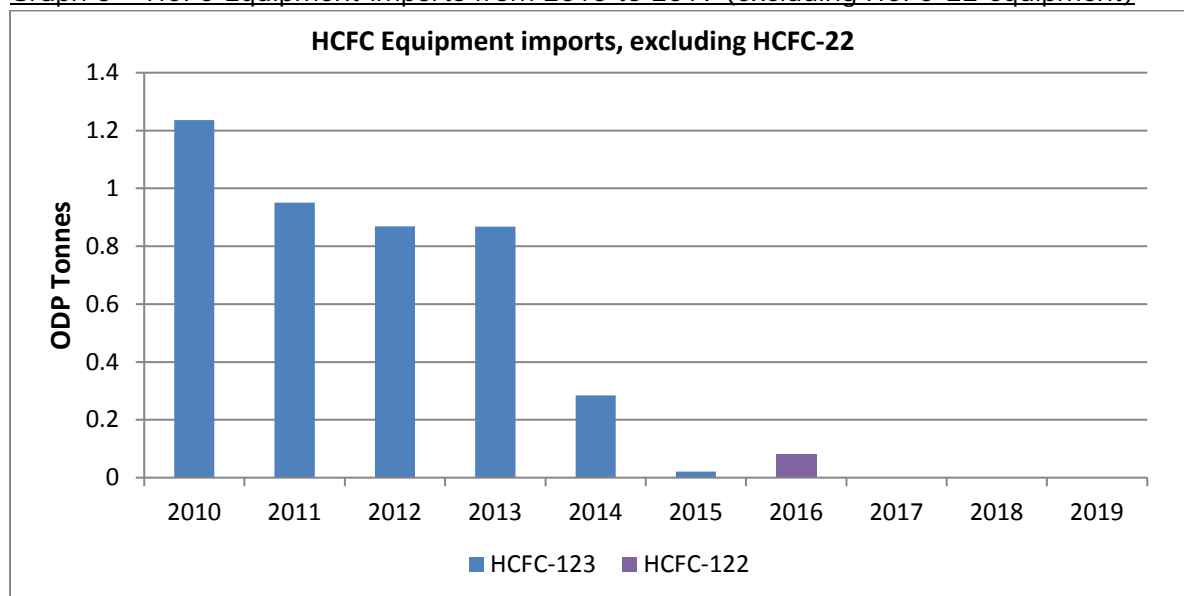
Import and manufacture of refrigeration and air conditioning equipment charged with HCFCs was largely banned in Australia in 2010, except for a few exemptions. From 2016, exemptions are limited to replacement parts for existing equipment and the import of equipment for private or domestic use that has been owned by a person for more than 12 months.

There were no non-HCFC-22 equipment imports for the period 2017 to 2019 as reflected in Table 3.

Table 3 – HCFC Equipment imports 2012-2019

	2012	2013	2014	2015	2016	2017	2018	2019
HCFC-22	1.06	0.12	0.16	0	0	0.02	0.02	0.01
HCFC-123	0.87	0.87	0.28	0.02	0	0	0	0
HCFC-122	0	0	0	0	0.08	0	0	0

Graph 5 – HCFC Equipment imports from 2010 to 2019 (excluding HCFC-22 equipment)



Destruction of HCFCs and CFCs by Refrigerant Reclaim Australia

Under the product stewardship program run by Australian industry to manage waste refrigerants at end of their life, thousands of tonnes of HCFCs and CFCs have been destroyed after being returned to Refrigerant Reclaim Australia (RRA). RRA also collects and destroys waste HFCs (hydrofluorocarbons) refrigerant. These substances are destroyed using Montreal Protocol approved technologies.

Graph 6 charts the amount of HCFCs and CFCs destroyed since 2005. The reduced amounts of HCFC destroyed from 2012 onwards reflect the greater re-use of recovered HCFCs as import limits reduce. Despite imports of CFCs being banned from 1996, there are still tonnes of CFC being returned for destruction, largely from decommissioning of old equipment. This data includes a small amount used refrigerant imported from New Zealand for destruction.

Graph 6 – HCFC and CFC destruction from 2005 to 2019

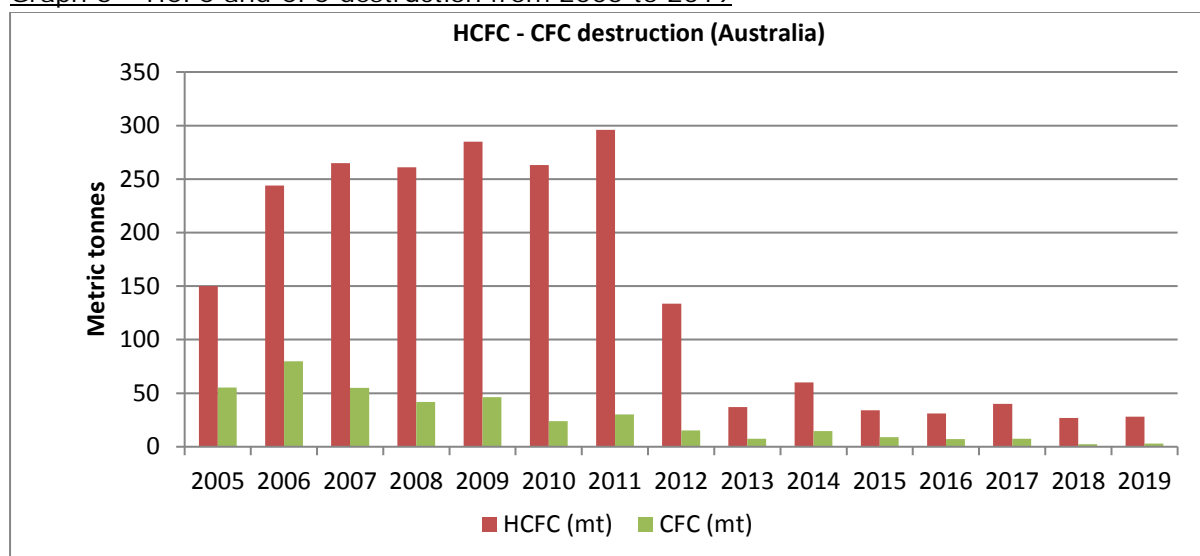


Table 4 – HCFC and CFC destruction (2010-2019)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CFC	24	30	15	7	15	9	7	7.5	2.3	3
HCFC	263	296	134	37	60	34	31	40	27	28

Quarantine and pre-shipment uses of methyl bromide (MB)

Quarantine and pre-shipment (QPS) uses of methyl bromide are controlled by the Montreal Protocol. However, QPS uses of methyl bromide are not subject to phase out as there is a lack of alternatives and they play an important role in preventing the spread of invasive pests and diseases, and facilitating trade. The amount of methyl bromide imported for QPS uses in Australia varies from year to year depending on growing conditions, export markets, sources of imports and pests being targeted (see [Graph 7](#)). [Graph 7](#) also illustrates that MB QPS imports vary on a global level from year to year and no clear trend on use is evident.

Graph 7 – Australian QPS imports of methyl bromide versus global imports from 2005 to 2018

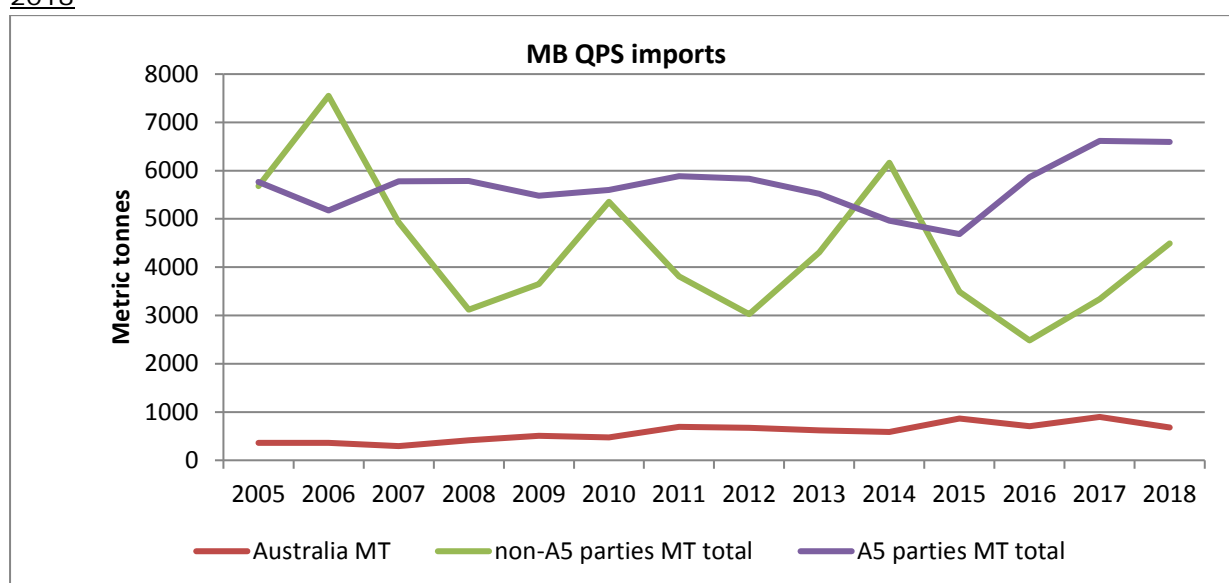


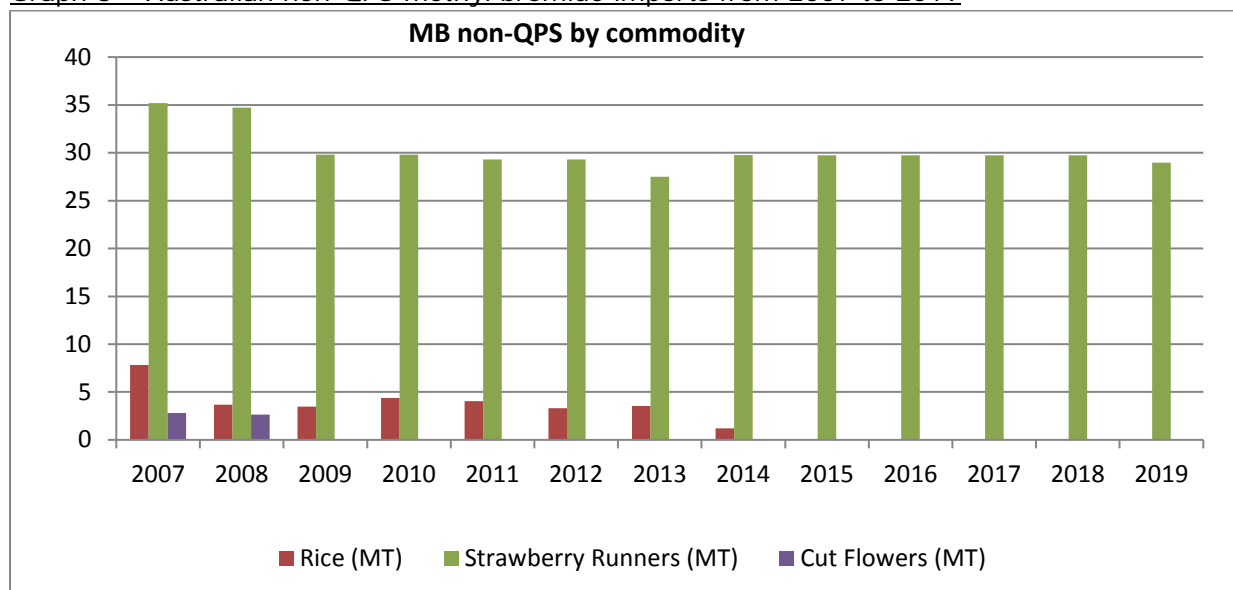
Table 5 – Australian QPS imports versus global imports (2009-2018)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
A5 Parties	5482	5601	5888	5835	5520	4961	4686	5867	6616	6597
Non-A5 Parties	3648	5355	3812	3025	4307	6165	3488	2483	3337	4493
Australia	509	472	690	676	618	588	864	708	898	682

Non-Quarantine and Pre-shipment uses of methyl bromide

Non-quarantine and pre-shipment uses of methyl bromide were phased out under the Montreal Protocol in developed countries from 2005, except for critical uses approved by Parties to the Montreal Protocol. Australia started with six critical uses in 2005, and by 2019, is down to one critical use for strawberry runners in Victoria, for which no technically or economically suitable alternatives are available.

Graph 8 – Australian non-QPS methyl bromide imports from 2007 to 2019



Australia's critical uses of methyl bromide have been small compared to the total amount of methyl bromide sought globally through the critical use process. However, the difficulties in transitioning strawberry runners in Victoria to alternatives due to the soil type and temperatures means this use is now one of only a few remaining globally. Australia's critical uses are a significant proportion of the remaining global critical uses, despite being under 30 metric tonnes per year. Canada is the only other non-Article 5 country that was granted a critical use exemption in 2019 for 5.261 tonnes of methyl bromide use on strawberry runners on Prince Edward Island ([Decision XXX/9](#)).

Graph 9 – Australian non-QPS methyl bromide imports v all non-A5 imports 2010 to 2019

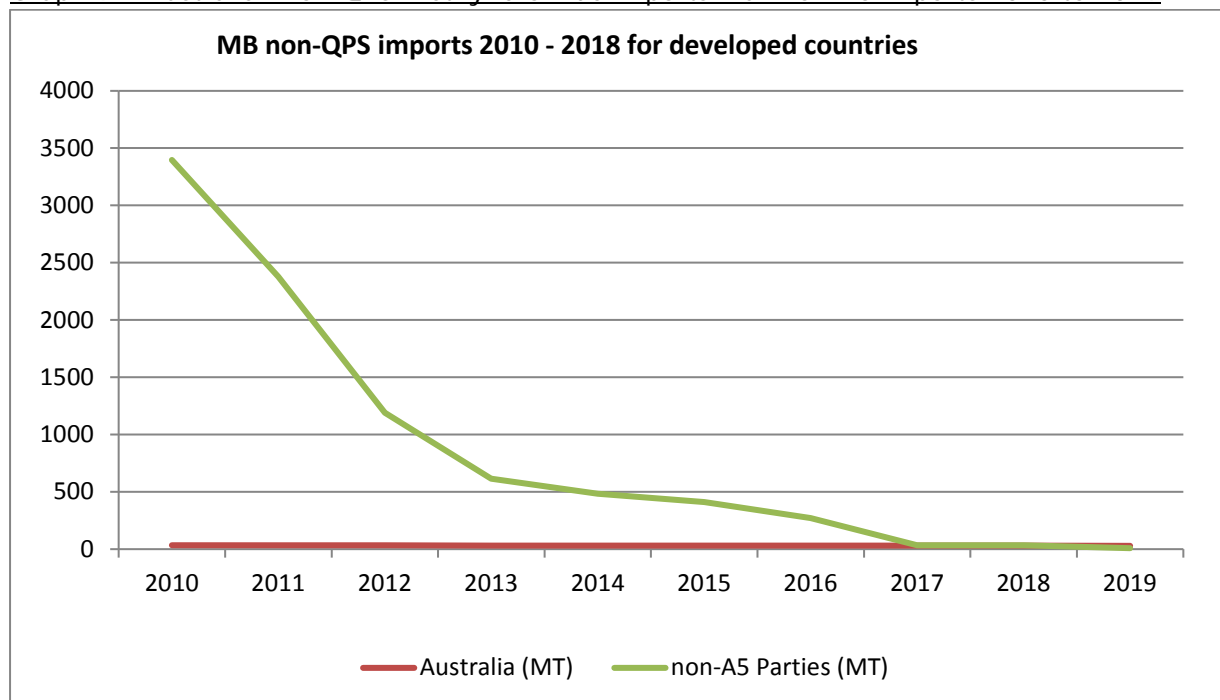


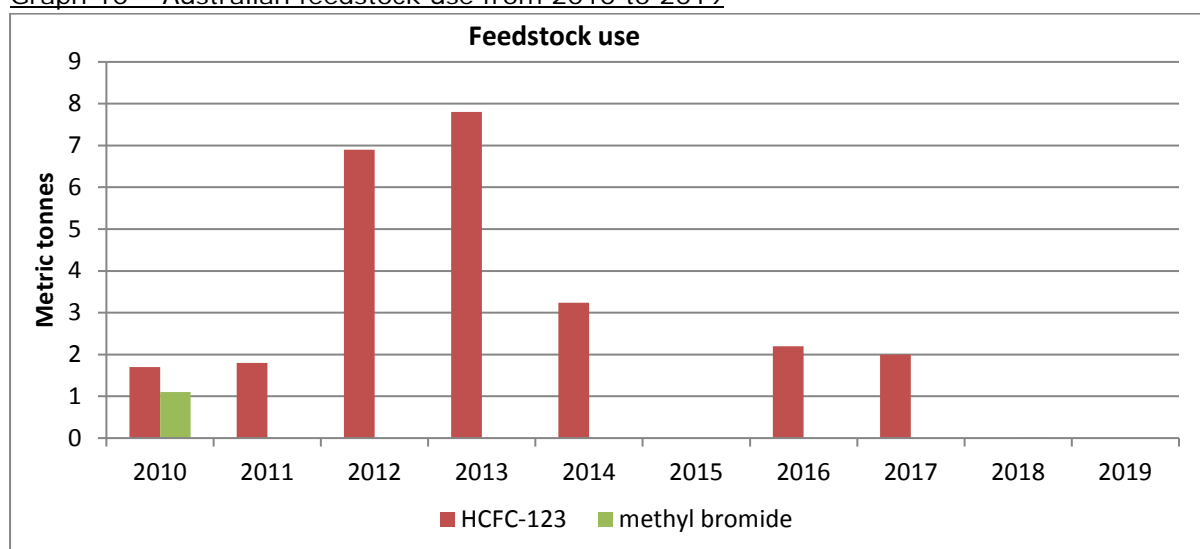
Table 6 – Australian non-QPS methyl bromide versus global non-A5 imports (2010-2019)

(metric tonnes)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Australia	34	33	33	31	30	30	30	30	30	29
Global	3,397	2,377	1,192	616	484	412	270	35	35	34

Imports of ozone depleting substances used as feedstock into Australia

Feedstock uses of ozone depleting substances are those uses of ozone depleting substances where they are transformed in a manufacturing process to another chemical. The resulting chemicals are no longer ozone depleting, and are therefore not included in a country's official consumption figures. Australia has very few feedstock uses of ozone depleting substances – and since 2005 has only imported two ozone depleting substances for feedstock uses (HCFC-123 and methyl bromide). Since 2010, it is predominantly HCFC-123 that has been imported for feedstock use. However, 17 kilograms of methyl bromide was reported for feedstock purposes in 2018, although this amount was not initially imported for feedstock purposes. There have been no feedstock uses reported for 2019 to date.

Graph 10 – Australian feedstock use from 2010 to 2019

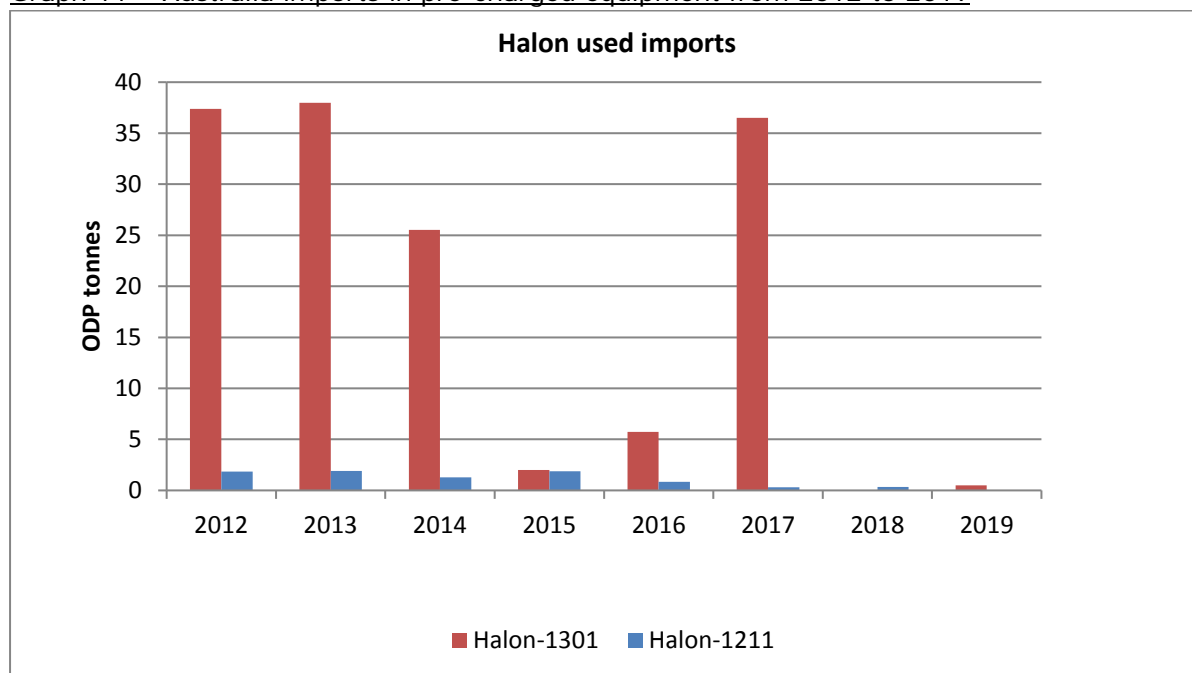


Imports of halon in equipment

The manufacture and import of new halon in bulk into developed countries has been prohibited under the Montreal Protocol since 1994 and in developing countries since 2010. Halon imports in equipment is not prohibited under the Montreal Protocol. Halon charged into new equipment is sourced from halon recovered from decommissioned equipment. This permits used halon to be retained for essential uses like fire suppression. Australia has banned the import of halon in equipment, but allows an exemption for the import of halon in products where they are necessary for medical, veterinary, defence or public safety and no alternatives available.

Graph 11 provides data on equipment containing halon imported since 2011, mainly for aircraft and defence uses. It is worth noting that the ozone depleting potential (ODP) value of halon 1301 is 10 (ie. it is 10 times more potent than CFC 11 at destroying ozone in the stratosphere) and the ODP value of halon 1211 is three. There is an overall declining trend in the import of equipment containing halon. The amount of halon-1301 imported in 2017 is higher than the average due to the used halon imported into Australia that year being exported for reprocessing at a later time.

Graph 11 – Australia imports in pre-charged equipment from 2012 to 2019



Background

The Montreal Protocol sets out a mandatory timetable for the phase out of the manufacture and import of ozone depleting substances. This timetable has been reviewed regularly, with phase out dates accelerated in accordance with scientific understanding and technological advances. Science tells us that thanks to the Montreal Protocol and its 198 signatory nations, the ozone layer is on track to recover to 1980 levels by the 2030s for northern hemisphere mid-latitudes, and by around the mid-century for southern hemisphere mid-latitudes. The Antarctic ozone hole is expected to return to 1980 values in the 2060s.

The Montreal Protocol sets binding progressive phase out obligations for developed and developing countries for all the major ozone depleting substances, including chlorofluorocarbons (CFCs), halons and less damaging transitional chemicals such as hydrochlorofluorocarbons (HCFCs). Binding phase-down obligations for hydrofluorocarbons (HFCs) which are generally high global warming alternatives to ozone depleting substances for developed countries like Australia commenced in 2019, with developing countries commencing in 2024.

Ozone depleting substances are those substances which deplete the ozone layer and are widely used in refrigerators, air conditioners, fire extinguishers, in dry cleaning, thermal insulation in foam products, propellant in aerosols such as asthma inhalers, as solvents for cleaning, electronic equipment and as fumigants in agricultural and quarantine applications. Their potency to destroy ozone is measured by their Ozone Depleting Potential (ODP).

Ozone depleting substances controlled by Montreal Protocol include:

- CFCs
- Halon
- Carbon tetrachloride
- Methyl chloroform
- Hydrobromofluorocarbons (HBFCs)
- HCFCs

- Methyl bromide
- Bromochloromethane

There are other ozone depleting substances, but their ozone depleting effects are very small in comparison to these controlled substances.

Australian obligations under the Montreal Protocol

Australia acceded to the Vienna Convention for the Protection of the Ozone Layer in 1987 and ratified the Montreal Protocol on Substances that Deplete the Ozone Layer originally in 1989, and then again for each of the five amendments agreed between 1990 and 2016.

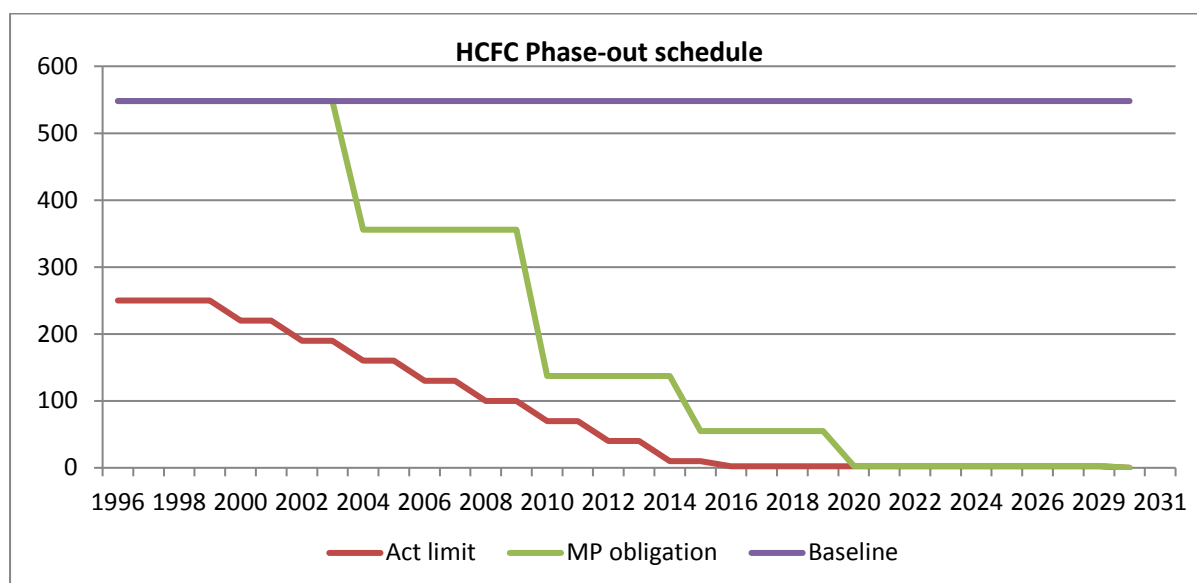
As one of the early countries to ratify the Montreal Protocol, Australia continues to be a leader in the phase out of ozone depleting substances. In many cases, Australia is well ahead of the Montreal Protocol requirements. Australia's approach has been based on a cooperative partnership between industry, community, and all levels of government.

Australia has met or exceeded all of its phase out obligations under the Montreal Protocol. For example, Australia largely phased out consumption of HCFCs in 2016, four years ahead of the schedule required under the Montreal Protocol (see [Graph 1](#)). In doing so, Australia will consume 61 per cent less HCFC in the period 1996-2020 than permitted under the Montreal Protocol - even after the Parties to the Montreal Protocol agreed in 2007 to accelerate HCFC phase out globally.

In 1996 Australia adopted an accelerated phase out of HCFCs. The level of permitted imports and manufacture decreases every two years, as specified in the table below.

Year	Annual import limit (ODP tonnes)
2008, 2009	100
2010, 2011	70
2012, 2013	40
2014, 2015	10
2016 – 2029	2.5
2030	0

Graph 1: Australia's HCFC phase-out schedule compared to our Montreal Protocol obligation



The Australian legislation

The *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (the Ozone Act) protects the environment by reducing emissions of ozone depleting substances and synthetic greenhouse gases (SGGs). The Ozone Act controls the manufacture, import, export and end use of ozone depleting substances and synthetic greenhouse gases and equipment containing these gases.

The import, export and manufacture of these 'controlled substances', and the import and manufacture of most equipment containing these substances, is prohibited in Australia unless the correct licence or exemption is held. The Ozone Act also prohibits the import and manufacture of certain equipment that contains ozone depleting substances such as CFCs and HCFCs, including foams blown with CFCs.

There are four types of import/export licences under the Ozone Act.

1. **Ozone depleting substances and synthetic greenhouse gas equipment licences: (EQPL)** used to import equipment that contains synthetic greenhouse gases, a limited range of refrigeration and air conditioning equipment that contain a HCFC, and some types of equipment ordinarily banned, such as a halon fire suppression system aboard an aircraft
2. **Controlled substances licences:** used to import (in bulk), export and manufacture HCFCs and methyl bromide, and synthetic greenhouse gases (HFCs (hydrofluorocarbons), PFCs (perfluorocarbons), sulfur hexafluoride (SF₆) and nitrogen trifluoride).
3. **Essential uses licences:** The Ozone Act prohibits the import, export and manufacture of CFCs, halons, methyl chloroform, carbon tetrachloride and bromochloromethane, and the import of HBFCs without an essential uses licence. Such licences are only granted for a strictly limited range of essential uses approved by the parties to the Montreal Protocol.
4. **Used substance licences:** The Ozone Act prohibits the import and export of used or recycled HCFCs, methyl bromide, bromochloromethane, CFCs, halon, carbon tetrachloride, methyl chloroform and synthetic greenhouse gases without a used substance licence. Import of these substances is generally only permitted for their disposal.

Australia reports its consumption (manufacture plus imports, minus exports) of bulk ozone depleting substances and HFCs to the Montreal Protocol on a calendar year basis. This data is reported in accordance with Article 7 of the Montreal Protocol and is called "Article 7 data". Most of the information presented in this document is based on Australia's, or global, Article 7 data. Australia does not manufacture controlled substances.