CO_2 EMISSIONS SAVINGS

Direct greenhouse emissions from
AC refrigerant leakage are significant.

The table shows the kg of CO_2 equivalent for every 1 kg of refrigerant, and its atmospheric lifetime. [17]

REFRIGERANT	20-YEAR kg CO_2 e	100-YEAR kg CO_2 e	LIFE TIME (years)
R22	5,280	1,760	11.9
R410a	4,260	1,924	28.2
R32	2,430	677	5.2
Hydrocarbon	< 3	< 3	< 1

Refrigerant leakage from air conditioning is estimated at 9% of the refrigerant volume, each year, on average. [18]

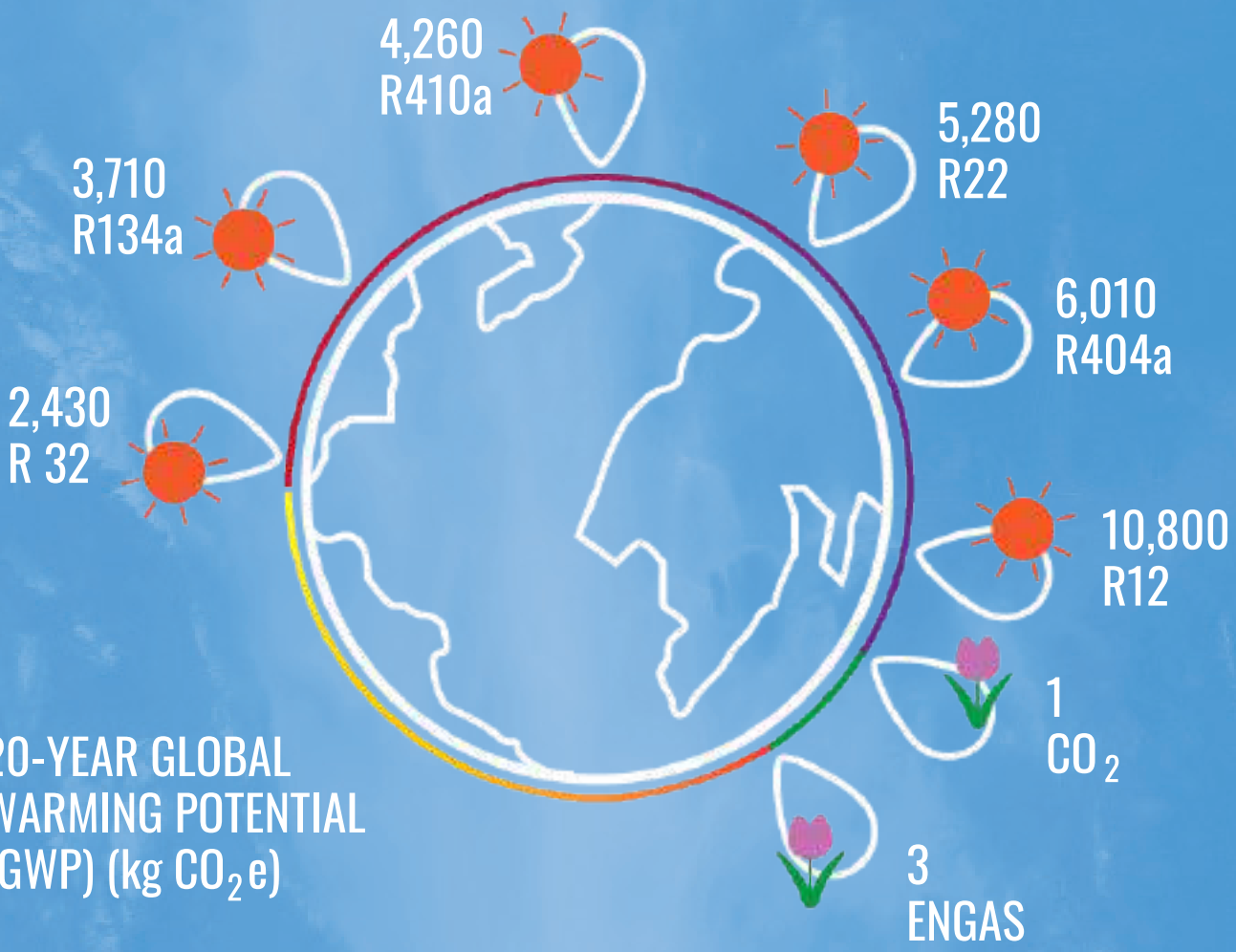
Many of the millions of AC units in Australia will end their life with equipment failure and leak HFC refrigerant into the atmosphere unless changed under planned obsolesce. Industry data shows that 80% of all HCFC 22 ever produced has already been released into the atmosphere, as at 2003.[19]

The direct greenhouse emissions for 1 x R410A 9kW split system AC is more than 1,100 kg CO_2 e each year, for the next 28 years (based on 9% leakage p.a., 2.9 kg of refrigerant and 20-yr kg CO_2 e).

For a Pioneer unit it is less than 4.5 kg CO_2 e p.a. for less than 1 year.

The improved energy efficiency also reduces the indirect greenhouse emissions from the electricity used.

For instance, 1 x 9kW Pioneer AC in an apartment can save 1,298 kg CO_2 p.a., compared to a new chemical refrigerant air conditioner of the same product class, from the reduced electricity consumption.


4,260
R410a
5,280
R22
3,710
R134a
6,010
R404a
2,430
R 32
10,800
R12
1
CO_2
3
ENGAS
20-YEAR GLOBAL
WARMING POTENTIAL
(GWP) (kg CO_2e)