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Refrigerant Gas & Carbon Pricing Summary

Overview

Refrigerant gases consisting of hydrofluorocarbons (HFC's), also referred to as Synthetic Greenhouse Gases, were developed to replace ozone depleting refrigerants. Globally, the environmental focus has now switched from 'ozone' to 'global warming potential' (GWP) and HFC based refrigerants are categorised as high global warming gases.

Whereas ozone depleting refrigerants are managed under the Montreal Protocol which sets out a mandatory timetable for phase out, HFC's are managed under the Kyoto Protocol. To date, proposed carbon legislation in Australia has included all gases defined under the Kyoto Protocol. However, under the latest version of the Climate Change Plan HFC's are excluded from the Carbon Price Mechanism. Instead these are to be managed under the existing Ozone Protection & Synthetic Greenhouse Gas Management Legislation.

The Climate Change Plan

The Climate Change Plan, which was released by the Government as part of the suite of documents forming the Clean Energy Plan on 10th July, makes two specific references to Synthetic Greenhouses Gases which are outlined below:

"The carbon pricing mechanism will cover four of the six greenhouse gases counted under the Kyoto Protocol. The remaining greenhouse gases counted under the Kyoto Protocol (hydrofluorocarbons and sulphur hexafluoride) will face an equivalent carbon price, which will be applied through existing synthetic greenhouse gas legislation. " Source: Climate Change Plan (Chapter 3, Page 28)

"High global warming potential synthetic greenhouse gases (with the exception of perfluorocarbons from aluminium smelting) will not be included in the carbon pricing mechanism but will be subject to an equivalent carbon price using existing import and manufacture levies under the Ozone Protection and Synthetic Greenhouse Gas Management legislation. Levies will be adjusted annually to reflect the prevailing carbon price.

From 1 July 2013, incentives will be provided for destruction of waste synthetic greenhouse gases, including ozone depleting substances, recovered at end of life." Source: Climate Change Plan (Appendix A, Table 4)

Impact Assessment

A carbon price equivalent levy on HFC's, to be calculated with reference to each products Global Warming Potential, would have a significant price impact.

The Climate Change Plan provides fixed carbon prices for the first three years of the scheme which are set out below:

PERIOD	CARBON PRICE (PER TONNE)
1 July 2012 – 30 June 2013	\$23.00
1 July 2013 – 30 June 2014	\$24.15
1 July 2014 – 30 June 2015	\$25.40

The global warming potentials (GWP's) which must be applied to these prices to calculate the impact on HFC pricing are listed in the IPCC 2001 Report (Chapter 2, Table 2.6). The relevant GWP's related to some of the most commonly used HFC refrigerants are as follows:

HFC	GWP
R134a	1300
R404A	3260
R410A	1725
R407C	1525.5

For example: 1kg of R134a equates to 1.300 metric tonnes of carbon.

Using these values, the resultant carbon prices per kg for each HFC listed in the three years specified would be:

HFC	Jul '12-Jun '13	Jul '13-Jun '14	Jul '14-Jun '15
R134a	\$29.90	\$31.40	\$33.02
R404A	\$74.98	\$78.73	\$82.80
R410A	\$39.68	\$41.66	\$43.82
R407C	\$35.09	\$36.84	\$38.75

For example: R134a carbon price Jul '12-Jun'13 equates to $1.300 \times \$23.00 = \$29.90/\text{kg}$.

The above pricing relates to the carbon element only and therefore does not take account of product price, financing costs or any other taxes or levies which may be applicable.

Outlook

With 12 months remaining until the proposed start date of the Climate Change Plan there remains the potential for significant changes to all aspects of the proposal. Heatcraft & A-Gas will be playing an active role in the debate and we will continue to advise you of any updates as soon as this information becomes available.

Further Information

For further information contact your Heatcraft Account Manager.