



Refrigerants Australia: Submission on Repeal of the Carbon Price

9 September 2013

Executive Summary

Refrigerants Australia supports the repeal of a carbon price on HFC refrigerants, but cautions that a sudden guillotining of the carbon price will have an adverse impact on industry, potentially leading to bankruptcies among small business and wider industry disruption.

Refrigerant Australia proposes that instead of an immediate removal of the carbon price, transition arrangements are put in place to remove the price as quickly as possible, but giving industry the necessary time to adjust. Refrigerant Australia is eager to work with Government to develop this approach. One option for a carbon price removal involves an averaging of price over a 2 year period – which would mean the price would be removed 18 months after legislation took effect. This proposal is described in detail in this submission.

The issue with removing the carbon price is particularly acute for HFC refrigerants given the enormous impact it has had. There is no other industry where the carbon price has acted to multiply the price by several times (for other industries the impacts are typically 10% or less in terms of overall prices.)

Consumers of refrigerants see the potential reduction that would occur on 1 July 2014 with a shift to a floating price and a reduction in costs as a welcome respite. As a result, however, they are likely to delay purchasing new equipment and maintenance and refurbishment works in the months leading up to 1 July 2014, and – as refrigerant prices will not plummet on 1 July as gases with the higher price associated with it will still need to work through the supply chain – a buyers' strike could last until the summer of 2014.

This strike in purchasing could be tremendously disruptive to the literally tens of thousands of (typically small business) contractors who earn 50% or more of their business income from installation of new equipment, as well as reductions in maintenance activity. It is probable that there would be significant bankruptcies and other commercial disruption as a result of a buyers' strike.

Use of a rolling average price that quickly and predictably eliminates the carbon price on refrigerants provides consumers with some immediate relief on prices but also allows the refrigerants industry to readjust smoothly.

Refrigerants Australia is also eager to work with Government on developing new policy on HFC refrigerants under the Coalition's Direct Action approach. We will be making a subsequent submission on this in late September.

Refrigerants Australia is pleased to make this submission and stands ready to work closely with Government to ensure policy settings deliver their objectives and provide the certainty that industry requires.

Table of Contents

Introduction	1
The impact of a carbon price on HFC refrigerants	3
The refrigerant supply chain.....	4
Why a buyers' strike is possible in the refrigerant market	7
Proposed alternative approach.....	9
Appendix I Putting the carbon price on HFC refrigerants in context	10
Comparing carbon price impact of HFC refrigerants with other sectors.....	10

Introduction

The refrigerant industry is a vital and large part of Australia's economy, but this fact is often obscured by the diffuse use of refrigerants. As the recently released Government study entitled *Cold Hard Facts 2* reveals, the refrigeration and air conditioning industry:

- Consists of more than 20,000 businesses employing about 173,000 people.
- Represents at least 1.7 per cent of Australia's GDP.
- Had overall expenditure of about \$26.2 billion in 2012.
- Supports many essential uses, including nearly \$30 billion worth of perishable food per annum from farm to domestic refrigerator, using more than 28,000 refrigerated trucks. It also provides comfort conditions for millions of workers and visitors in more than 140 million square metres of non-residential buildings.

Despite the large and diverse nature of the refrigerants industry, there was near unanimous and heated opposition to the introduction of a carbon price on refrigerants. The industry believed that Australia's regulatory system (passed under Coalition leadership in 2003) was world's best practice. Further it felt that given refrigerants were only one component of equipment purchase costs, it would only marginally change buying behavior – more where there were larger refrigerant charges - but would sting consumers when they went to conduct maintenance. Additionally, particularly given that the carbon price on HFCs was on imports not emissions, there was a strong belief that emissions would not be reduced substantially, but simply prices would rise.¹ Finally, the industry felt that projected emission reductions would obscure the fact because of price rises many consumers would reuse old and dirty refrigerant, or use non HFC refrigerants, that decreased energy efficiency and, potentially, presented significant safety risks. Industry is adamant that its expectations of failure of the carbon price in reducing emissions have been demonstrated by real life events in the months since 1 July 2012.

There is not the same degree of unanimity in opinion about how the carbon price should be removed. Many consumers and some industry participants simply want the price removed as quickly as possible in a “tear the bandage off” maneuver. However, Refrigerants Australia and most of the industry are concerned that such an approach would lead to further wounding of the industry and contend that with a little care and patience, the carbon price can be removed quickly and in a manner that does not further harm the industry.

Refrigerants Australia recognises that many industry sectors claim “special circumstances”. However, given the peculiarities of how the carbon price

¹ Australian Government projections support this contention: the carbon price was projected to reduce Australia's emissions of HFCs by only a 6% in 2030. See <http://www.climatechange.gov.au/sites/climatechange/files/files/climate-change/projections/aep-industrial.pdf>

impacted HFC refrigerants, including that the carbon price needed to be dealt with under a different act, we believe this stance is appropriate.

Refrigerants Australia recognizes that working through the issues associated with any amendment often requires significant information and consultation. We are committed to assisting you in answering any questions you may have. Please contact Greg Picker, Executive Director, Refrigerants Australia (greg.picker@refrigerantsaustralia.org or 0403741715) if you need any further information.

The impact of a carbon price on HFC refrigerants

The introduction of a price on carbon had a significant and dramatic impact in the refrigerant industry. Given the high global warming potential of many of the HFC refrigerants, and that the cost applied at import of the substances rather than at emissions, the carbon price had a large impact on the overall prices. Take two common refrigerants, for example:

- R134a (HFC 134a) is used in car air conditioners and is the most common refrigerant. It has a global warming potential of 1300. At a carbon price of \$24.15, importers pay an additional \$31.40 per kg. This is an increase of 4 to 6 times over import cost.
- R404A (a blend of 3 HFCs) is used in supermarkets and other commercial refrigeration applications. It has a global warming potential of 3800. At a carbon price of \$24.15, importers pay an additional \$93.10 per kg. This is an even more significant cost than on R134a, and is up to 9 times the imported cost of refrigerant.

As a point of reference, it is worth noting that refrigerant costs prior to import to Australia typically vary from a few dollars per kilo for the most common refrigerants to \$20 per kg or more for more exotic substances.

The refrigerant industry was uniquely exposed to the carbon price in the Australian economy. No other sector saw prices rise in multiples, rather price increases were comparatively modest at 10% or less. Similarly, the changes experienced by the refrigerant industry were far greater than through typical commercial exposure, such as the fluctuations in the exchange rate. Please see [Appendix I](#) for details on the comparative impact on prices.

The refrigerant supply chain

Calculating the impact of the carbon price on HFC refrigerants, however, is not as simple as multiplying the global warming potential with the carbon price and assuming that these prices are simply be passed through the supply chain.

In a market without a carbon price, as these substances move through the supply chain, costs increase as a result of handling and storage costs, regular business expenses and profit. The cost to a consumer is a multiple of several times the cost to the importer. In this way, the refrigerants market operates just like all other markets for other substances in Australia. This is true for refrigerants in equipment as well, although that supply chain varies from the bulk supply of refrigerants described here.

The introduction of the carbon price saw overall prices increase dramatically and this has resulted in changes in business models and commercial behaviour. This is because the price of carbon does not pass through the supply chain as a static cost, which is simply passed through unaltered to the consumer, rather it is added to the import costs and the same multiplier impacts that typically operate throughout the supply chain apply under these circumstances. This is not a surprise given the carbon price has had marked influence on the industry: insurance costs have risen markedly, loans have been required to manage the significantly increased cash flow, and industry has shifted to preferring smaller cylinders (requiring new purchases). These changes increased both costs and risks to the industry throughout the supply chain and prices have risen to reflect both direct cost increases, as well as a higher risk profile. The scale of investment needed to participate in this market changed the dynamics of many of its participants, throughout the supply chain. Please see Figure 1 below for further explanation of how the refrigerant supply chain operates.

Details of cost increases

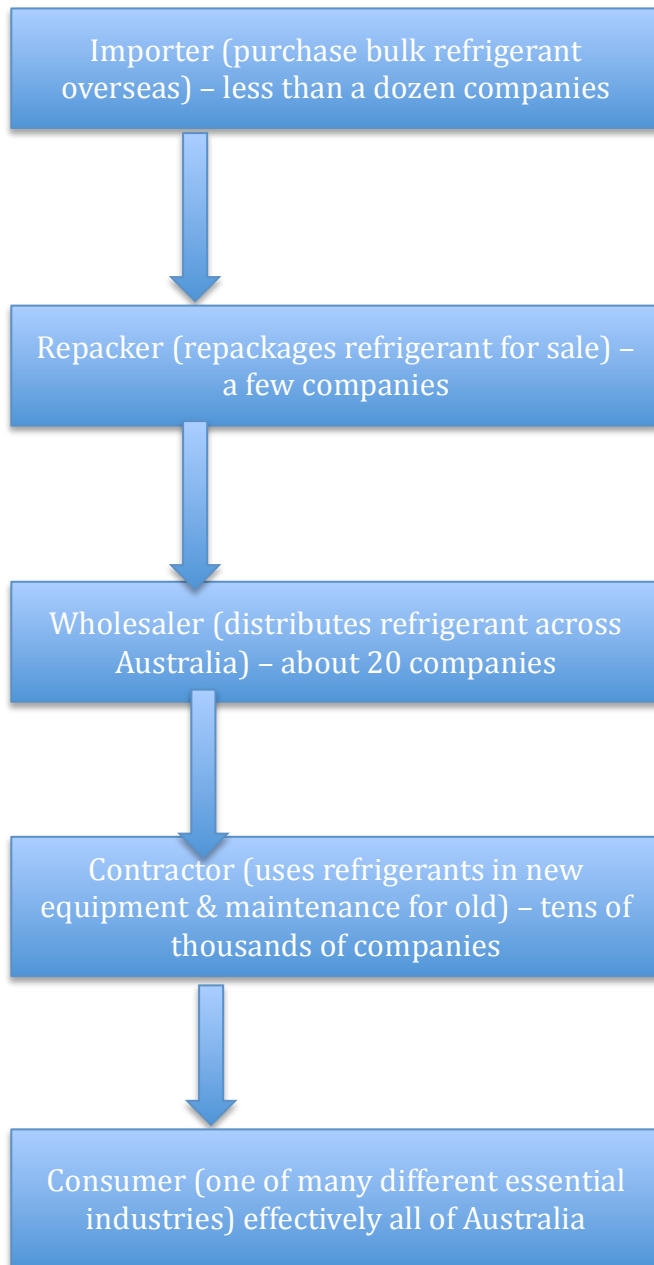
Business as Usual costs

There are range of standard business costs that apply between stages in the supply chain including storage and transport, insurance, labour, on-costs, typical business expenses and the like. As a result of these costs it would be expected that a refrigerant sold to a consumer might cost 6 to 7 times what it cost an importer in bulk.

Increased costs under the carbon price

There was an assumption by some that the carbon price would simply pass through the supply chain. This was inaccurate and did not reflect commercial realities. With a carbon price multiplying the value of refrigerant there were significant costs accrued as a result of increased need for finance, higher insurance costs, increased storage costs, and new cylinder fleets given the market's desire to purchase refrigerant in smaller quantities. These costs also have a multiplier effect through the supply chain and mean that total costs for consumers were markedly higher than the simple pass through of the carbon price.

Figure 1: Refrigerant Supply Chain for bulk refrigerants



Risk associated with removal of carbon price

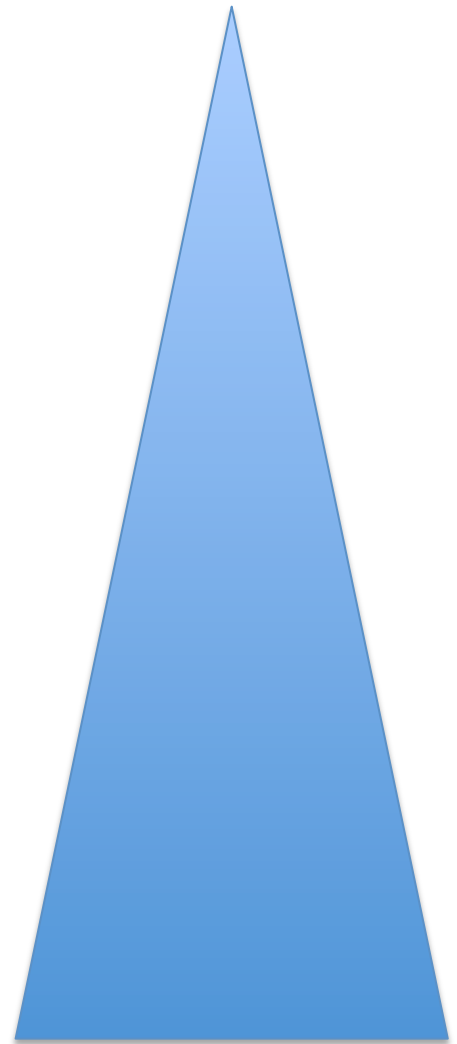
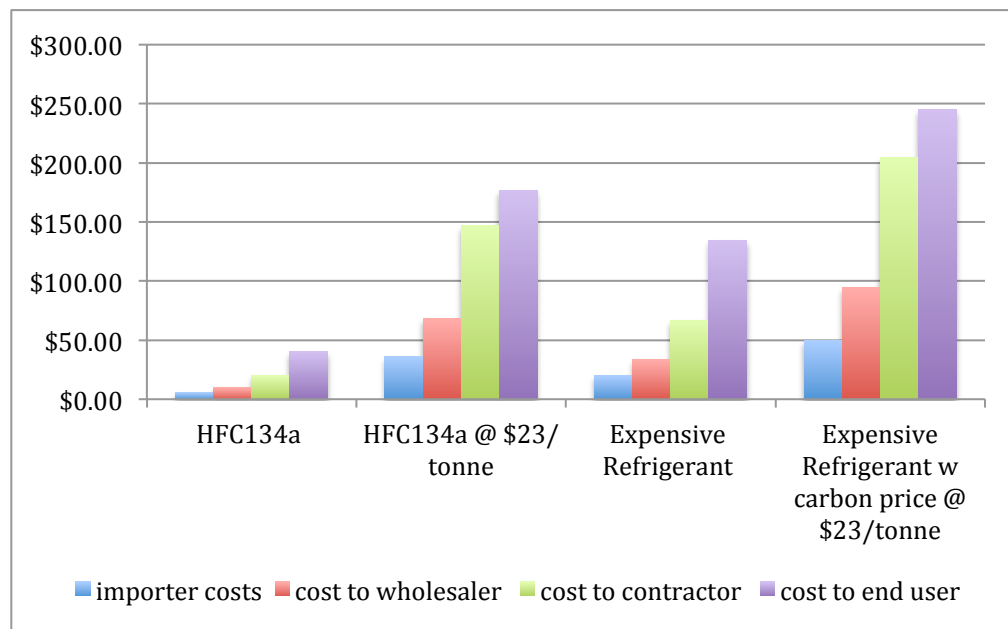


Figure 2 below provides an indicative illustration of costs for two refrigerants moving through the supply chain. It demonstrates that even without a carbon price, costs work through the supply chain dynamically, and not as a simple pass through. It further shows that the multiplier effect caused by the carbon price impact on high GWP refrigerants at import is only part of the story of the industry's exposure to the carbon price. Any detailed assessment of the impact of the carbon price will show that the impact is greater the further down the supply chain, and that, therefore, the consequences of changes or removal of the carbon price will be more strongly felt at the contractor at the end of the supply chain (typically small business end) rather than at import.

Figure 2: Indicative prices of refrigerants through the supply chain²



A number of questions have been asked about price increases on refrigerant that was imported prior to the 1 July 2012.³ Given the much higher, unfunded and additional costs on all elements of the supply chain caused by the price of carbon, prices needed to rise markedly to meet the dramatically increased costs on the industry (loans, insurance, cylinders and the like). Businesses in the supply chain needed to raise prices early to help meet their real and substantive costs.

² Please note that this figure was developed using anecdotal industry information known by the Executive Director. Given the requirements on Refrigerants Australia in relation to the Trades Practices Act, a more detailed survey was not attempted. The work to be undertaken by RPS as described in this submission will make this assessment more robust.

³ In Cold Hard Facts 2 it was estimated that imports in 2011-2012 were 270% normal. This means that the industry purchased an extra 19 months of supply, suggesting that stockpiles will be used up during the 2013-14 summer.

Why a buyers' strike is possible in the refrigerant market

A fundamental point that needs to be understood, is that for every other industry other than landfill, the carbon price is applied where and when emissions occur. Further, the activity is usually close in terms of time to subsequent commercial activity. For example, the production of electricity from coal or gas has a carbon liability with it, but the downstream users of that electricity do not have a choice to delay purchase in any meaningful way. They will buy the electricity and pay the carbon price. On the other hand, an importer can buy a refrigerant and sell it to a wholesaler, who can further sell it to a contractor, but a consumer can decide not to buy and run equipment without a full charge, or delay maintenance. Refrigerants typically take about 6 months to move through the supply chain.

There is strong anecdotal evidence that consumers of refrigerants – building owners, hospitals, food handling businesses for example – are focused on the cost reduction that they believe will occur with a shift to a floating price on 1 July 2014. There are two issues with this belief that have the potential to significantly disrupt industry. Firstly, facility owners will likely delay purchase of equipment and refrigerant to after 1 July 2014 in the belief that this will save money. This strike in purchasing could be tremendously disruptive to the literally tens of thousands of (typically small business) contractors who earn perhaps 50% or more of their business from installation of new equipment. Additionally, as the prices probably will not fall immediately on 1 July as the gas in the supply chain that has already had the carbon price paid will need to work through the system, further delaying in purchase of new equipment is likely. It is certainly plausible that there will be a buyers' strike lasting 6 to 9 months severely impacting on the industry.

Further, in some parts of the industry – particularly automotive air conditioning – it is likely that many consumers will delay maintenance work in the hope of future price reductions. This delay in activity is likely to be significantly disruptive to low margin, highly exposed small businesses and may cause many of them to lay off staff or go bankrupt.

Secondly, there is also a possibility that the refrigerant supply chain will attempt to deplete their stores of refrigerant prior to 1 July 2014. It is possible that various refrigerants will become difficult to source in Australia in the months and weeks leading up to 1 July 2014. Given custom regulations that goods on ships bound for Australia are considered landed in Australia this potential refrigerant drought could last several months after 1 July 2014.

Independent Analysis

Refrigerants Australia has recently hired RPS to undertake an analysis to provide more evidence about whether and how commercial disruption is likely as a result of removal of the carbon price and how this might impact the refrigerant supply chain. This analysis is expected to be completed by the end of September 2013 and will be forwarded to Government and officials at that time.

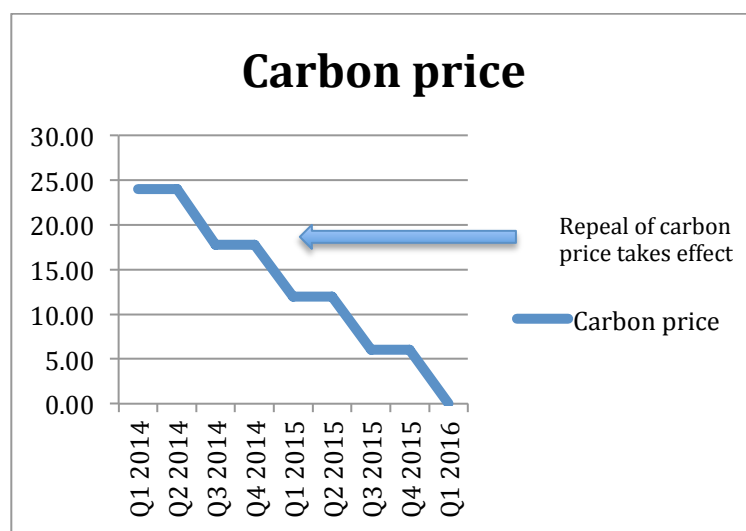
These potentialities are not insignificant. There have been several assessments over recent years detailing that contractors are under significant financial risk currently. A buyers' strike over winter (a typically slow time anyway) could well put hundreds or more small companies out of business. Additionally, refrigerants are used in a range of essential services including food handling, health and telecommunications. Any degradation to refrigerant supply or the refrigerant industry's capacity to support these essential uses needs to be addressed. The potential impacts of a refrigerant buyers' strike are too important not to take steps to avert this possible outcome.

Proposed alternative approach

The current approach for HFC refrigerants under the carbon price involves taking an average of the price for the previous six month and using that as a fixed price for the current six-month period. Refrigerant Australia’s proposal is to take a rolling average of the carbon price over an agreed number of years using the prices as already set at six month intervals. The advantage of a rolling average is that it is based on historical prices and provides both a rationale for the tempo of price reduction and certainty for industry.

Refrigerants Australia believes taking a 2-year rolling average would allow the industry time to adjust but remove the price only 18 months after legislation takes effect on 1 July 2014. Figure 2 below provides an illustration of how the carbon price would be reduce using this scenario.

Figure 2: Illustration of 2 year rolling average



Refrigerants Australia is not, however, wedded to this approach. We offer this merely as a possible mechanism to enable smooth price reductions reasonably quickly. If this approach does not suit, we remain eager to work with you to develop an alternative model.

Appendix I Putting the carbon price on HFC refrigerants in context

The introduction of a carbon price has impacted multiple sectors of the Australian economy. In understanding what refinements might usefully be made to the emissions trading legislation, particularly with an early transition to a floating price, it is useful to compare the impact on HFC refrigerants with other industry sectors, and against other commercial factors such as the exchange rate. The analysis provided below demonstrates that the scale of impact in other covered sectors is far smaller proportionately than HFC refrigerants (which have been described above). The impact of price volatility on HFC refrigerants is likely to be unique and unprecedented in the Australian carbon market. Further the impact of the carbon price is not akin to other commercial factors such as the exchange rate. This is also detailed below.

Comparing carbon price impact of HFC refrigerants with other sectors

Table 1 below details the costs impact to consumers of a variety of goods impacted by the carbon price. Analysis of this table suggests a number of stark differences between other covered sectors and HFC refrigerants including:

- Scale of the impact at \$23/tonnes is comparatively small for other covered sectors. The largest impacts – energy prices – are about 10%. A reduction in price of 75%, therefore, would see a savings of 7.5% or less. With HFC refrigerants, the impact of the carbon price is a multiplier of 5 to 9 times at import, and increases further through the supply chain. This means shifts in carbon prices are far more commercially significant.
- Many of the industries linked with the goods described below (electricity, steel, aluminum, natural gas, cement) received direct government support to reduce the impact of the carbon price. This did not happen for HFC refrigerants which, while not trade exposed (like coal-fired electricity generators) have far more proportionately significant impacts than any other industry.

Table 1: Impact of carbon price on prices in other industries

Industry	Percentage price increase with carbon price of \$23/tonne	Source
R134a	400% to 600% at import – more to consumers	Refrigerants Australia estimate
R404A	Up to 900% at import – more to consumers	
Electricity Prices.	On average 9% increase in residential electricity bills Businesses estimate the carbon tax increased their energy costs by an average of 14.5 per cent	http://RefrigerantsAustralia.cleanenergyfuture.gov.au/helping-households/your-electricity-bill/ http://RefrigerantsAustralia.aigroup.com.au/portal/binaries/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/LIVE_CONTENT/Publications/Reports/2013/Carbon_price_impacts_Jan_2013.pdf
Natural gas	An increase of 9% is expected for natural gas	http://RefrigerantsAustralia.pwc.com.au/consulting/assets/publications/Carbon-Pricing-Plan-Oct11.pdf
Waste	Price of carbon represents about 6% of total	http://RefrigerantsAustralia.kimbriki.com.au/content/charges-accounts/carbon-pricing-mechanism-faqs
Aluminium in construction	4.1%	http://urbandigestor.com.au/2012/04/carbon-pricing-and-the-construction-industry/
Bricks in construction	3.2%	
Concrete in construction	3.0%	
Carpet in construction	2.6%	
Particleboard in construction	1.5%	
Timber in construction	1.5%	
Plasterboard in construction	1.1%	
Paint in construction	1.1%	
Steel in construction	1.0%	
Glass in construction	0.9%	
Tiling in construction	0.9%	