



Submission to the Environment Select Committee on the Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer (the Kigali Amendment).

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On Behalf of : **Institute of Refrigeration, Heating and Air Conditioning Engineers (IRHACE), Climate Control Companies of New Zealand (CCCANZ) and Refrigeration Licensing Trust New Zealand (RLNZ)**

On behalf of IRHACE, CCCANZ and RLNZ, thank you for the opportunity to make the following submission.

The entities for the Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) Industry, represented by membership organisations, Institute of Heating Refrigeration and Air Conditioning Engineers (IRHACE) and Climate Control Companies of New Zealand (CCCANZ), along with the training organisation Refrigerant Licensing Trust Board New Zealand (RLNZ), are all committed to supporting a smooth transition into the ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer.

We also speak, where possible, for both domestic, commercial, motor vehicle-transport refrigeration and industrial businesses, along with primary producers who will be substantially affected by these changes.

Introduction

In general, the HVAC&R Industry supports ratification and agrees that the country should make a contribution to the goals of the Montreal Protocol. We acknowledge that ratification will allow our industry to plan for the HFC Phase-down for New Zealand, manage associated costs, work with stakeholders to upgrade and replace equipment, to meet our Health & Safety obligations, and mitigate risk, where possible.

In a number of instances, however, we firmly disagree with and challenge statements made in the National Interest Analysis, and point our views below.

Costs associated

The impending phase-out of HFC's is not without controversy for our industry and stakeholders. As mentioned in sections 30 & 32 of the National Interest Analysis, this is not the first time that this industry has participated in a ratification. Effective 1996 and for years to follow, New Zealand ratified CFC's and then HCFC's successfully. Certainly, this is a strong example of the success, however it did not occur without significant cost to business and, for some, those costs remain on

their books. Some in the industry are also painfully conscious of the need to change so soon after the CFC Phase-down and seeing life on their legacy equipment. Therefore, the expectation that costs of ratification are to be minor, is a somewhat spurious and misleading claim.

The transition from CFC's to HFC's was a relatively smooth one, in part due to the 'like for like' nature of these refrigerants, which required compared to the current challenge, minimal retrofitting to accommodate the new gases.

This will not be the case with the transition from HFC's to low-GWP high pressure, flammable and increasingly toxic refrigerants, this scenario is totally different. There is no 'like for like' nature, in fact even if retrofitting is possible the cost of making those changes will be significant. The other alternative is to 'throw out' legacy equipment that still has value and replace it with new equipment that supports the low-GWP refrigerant. We also point out that in the attempt to maintain existing legacy equipment operating it will in most cases be at the expense of energy efficiency which is not an inconsequential side issue. Please note, this isn't a domestic fridge at \$2,000.00, but in many instances millions of dollars of cool store or equipment. On top of that, one must consider the resource, downtime and infrastructural changes required to accommodate that change.

We also point out that the government have never consulted with the HVAC&R industry on the cost implications to businesses for retrofitting or replacement. The cost is not insubstantial, as you allude to in the National Interest Analysis; in fact, we have analysed the cost implications to industry and find for many the life of legacy equipment could be reduced by 40-60%, with the cost to replace potentially being much greater with low-GWP refrigerants. Government in the National Interest Analysis have chosen to underplay the cost implications. As mentioned, our investigations find that the cost implications of changing to low-GWP refrigerants will be substantial and will ultimately be passed on to the consumer.

Risks

Quite rightly, it is noted in [section 33](#) of the National Interest Analysis that alternatives to HFC's can be highly flammable, toxic or volatile, and that this presents enormous risk to Health & Safety. Our industry can cite a number of instances (the Tamahere disaster in 1998 being one) where low-GWP refrigerants have contributed to accidents and near misses continue. The likelihood of these accidents increasing goes without saying when these low-GWP refrigerants will proliferate with the ratification of HFC's.

Our industry does not share the view again noted in [section 33](#) that '*with time much of the risk will be mitigated by appropriate replacement of current equipment with that specifically designed for the alternative gases*'. This statement is simply not correct and is misleading the reader. The Health & Safety risk to worker and public safety will be profound while this industry remains unregulated and workers are able to handle refrigerants without any mandatory credential.

It is stated in [section 34](#) that the permitting system will discourage imports of HFC's and encourage alternatives. Potentially, without addressing the said Health & Safety risks and introducing a mandatory credential, the risk will increase as alternative HFC's are sought and potential workarounds are found by potentially inexperienced operators. The government must close this loophole or witness more accidents like Tamahere (potentially even worse or more numerous).

The current legislation, mentioned in [section 35](#), is almost meaningless in an unregulated environment and does not adequately manage the risks, nor encourage workers and employers to suitably train to handle these low-GWP refrigerants. We point out that Tamahere occurred in 2008

despite the presence of these acts. Similarly, the RLNZ Refrigerant License training is not mandatory and therefore is ignored by some. This is disappointing.

Currently and until they are legally required to do so, workers and employers can take the 'path of least resistance' and find workarounds or shortcuts, thus increasing risk. We fully support the work Worksafe and MBIE are doing to regulate the industry and use of low-GWP refrigerants, along with encouraging a highly trained and qualified workforce in this sector. Our industry is, in fact, working to affect a more qualified workforce regardless, though to what end?

Our industry expresses concern that as mentioned in [section 36](#), New Zealand Industry will be unprepared for this phase-down. Ratification will allow an endpoint to be set and enable our industry to promote the changes more definitively. Our industry and stakeholders will be prepared, but certainly not satisfied with the decisions made.

Legal obligations

There is concern and scepticism in our industry over the baseline recommendations. Regardless, it is essential for the determination to be fair to all businesses and to ensure the continued financial viability of all businesses. To make decisions to the disadvantage of current suppliers and wholesalers would be detrimental.

Our industry supports the baseline mentioned above; however in [section 54](#) of the National Interest Analysis, the 80/20 grandfathering ratio is discussed. The industry questions the validity of that ratio and continues to recommend a ratio such as 60/40 as the 80/20 scale was potentially ill-conceived. We do however support the 2015 to 2017 scale as mentioned in [section 55](#) as this reflects a current market environment and is likely to fairly represent most current businesses.

As mentioned in [section 56](#), we do question where unused allocation will go. Given the reducing scale of the phase-down already, our industry recommends that the unused allocation be increased in the non-grandfathered percentage for others to utilise.

Pre-charged units

Government's decision to totally overlook imports pre-charged with refrigerant shows a real lack of foresight or consideration, for the industry and, in fact, for the environment. Without suitable product stewardship and accounting for these pre-charged units at the border, consideration is not given to what might ultimately be lost from these units.

It may be that the Kigali Amendment does not cover pre-charged units, but it makes a mockery of the efforts that others are required to take. For instance, The Recovery Trust for the Destruction of Synthetic Refrigerants will be left to recover refrigerant from these pre-charged units without any financial or regulatory support from government. In addition, the levy paid by importers won't cover the ballooning cost of refrigerant recovery in coming years, at a time when levies start to phase out.

The government despite regular advice from both the industry and Recovery, chooses to 'turn a blind eye' to the eventuality that some less worthy importers can evade the law by not declaring imports in pre-charged units. This incidence will proliferate as refrigerant grows in price.

The explosion of three refrigerated shipping containers last year led to the discovery of counterfeit R134a being distributed from China. While originally thought to be isolated to reefers, Sean McGowan reports that it has also found its way to Australia, prompting safety warnings from authorities.

BEWARE COUNTERFEIT R134A

We also cite a recent (above mentioned) incident regarding an explosion of 3 shipping containers that contained counterfeit R134a. As the below article alludes this is not an isolated incident.

https://www.airah.org.au/Content_Files/HVACRNation/2012/August2012/HVACRNation_2012_08_F01.pdf

One last point advocating for the need to account for pre-charged imports, is the inability of the industry to carry sufficient bulk to service these appliances now, let alone as these appliances require recharging. It is inconceivable that the 100,00-200,000 units imported each year can be tossed out due to no refrigerant being available. The government must consider the implications of allowing redundancy in appliances on such a scale.

We would appreciate governments answer to the issue of pre-charged units.

Existing energy safety and work-related health & safety legislation

We have already mentioned our concerns regarding the risks associated to business and the public with the current lack of regulation for industry workers. We welcome the work The Ministry of Business, Innovation and Employment is undertaking to resolve the inconsistencies in the current regulatory requirements.

With due respect, the current regulations listed in [section 62](#) do not have 'sufficient teeth' to be effective. Under the current acts, the lack of mandatory control results in, as mentioned earlier, 'the least line of resistance' and shoddy operators not abiding by the law. Without mandatory control, it could take another disaster like 'Tamahere' for government to acknowledge an issue and implement more robust regulation. What's more, we question the validity of multiple acts if accidents escalate under the increased presence of CO2 and Ammonia.

Another sound view is that the faster the transition to low-GWP refrigerants the bigger the risk, due to the potential for lack of training and shortcuts.

The refrigeration sector of the HVAC&R industry, in particular, believe mandatory controls are intrinsically linked to the ratification. Failure to see a control aligned with ratification leaves scope for unnecessary and increased risk to workers and the public alike. In the main, our industry is aware that regulations are likely and welcome that change. They are also prepared for the associated costs as it will merely align them with other similar construction related industries.

It must also be pointed out that refreshing of skills due to the rate of change and the implications of new refrigerants must be a requirement. The massive step changes we foresee must be accommodated for in regulation. There is as an immense risk for incidents to prevail, with the complexity of technical knowledge required for both a retrofit or a replacement scenario. The HVAC&R industry have considered this, but have government?

Simply, the benefits of mandatory regulation to lift training standards to our Industry and therefore the wider public will far outweigh the associated costs.

Economic, social, cultural and environmental costs and effects of the treaty action.

We appreciate the comments listed in the National Interest Analysis in relation to economic, social, cultural and environmental costs and effects of the treaty action. We do, however, make the following comments below:

Section 67 comments on the impact of HFC's with pre-charged equipment. We understand the ruling around pre-charged equipment however wish to note that there has been international backlash regarding pre-charged export, in particular in Europe. Should pre-charged be accounted for at the border, the ability to manage effective product stewardship would be reinforced and the ultimate cost to the country of recovery of HFC's from pre-charged units more fairly managed. The government must acknowledge this loophole, as ultimately our industry believes it will be required to.

Section 77 refers to the costs to affected businesses. As a primary producing nation, the incidence of refrigeration sites is immense and the cost to those businesses considerable. Some can prepare for it, others may find the cost to upgrade or replace plant is unsustainable. There has been little work done on the impact of this, though conversely there has been little or no contribution from government by way of incentives to soften the blow. This is unfortunate.

The Health & Safety risks must be addressed and be mandatory. As already outlined, failure to do so could have serious repercussions. The need to train and continually improve is something our industry must all be committed to, and we see this as a positive. Analysis we have done on those costs tell us that the costs will not be excessive, and the downstream benefits will be far greater. For most the costs incurred will be taken as a cost of doing business and improving their operational standards.

Appendices

Appendix III, #9. We support the import /export accountability you outline in this section. It is fair for all, however as previously mentioned the volume of pre-charged equipment at about 50% is significant and must be reconsidered.

Appendix IV Awareness raising, as it is referred to here, is not sufficient action to mitigate risk. There are no gaps in the regulatory requirements as there is no mandatory regulation. There can be, and once again the HVAC&R industry ask for it.

In conclusion

Thank you again for the opportunity to make this submission, we appreciate there is no 'silver bullet' and that there are a number of issues and factors to consider.

IRHACE, CCCANZ and RLNZ representing the wider HVAC&R Industry in the main support the Public submission on the Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer (the Kigali Amendment), with several important qualifications.

Views and statements noted in this document require urgent review and consultation by government. Reiterating these

- There is a lack of concern by government, this is evident in several areas in the National Interest Analysis which have been underplayed.
- The costs of replacing and retrofitting legacy equipment will be substantial and has to date been overlooked.
- The risks associated with Health & Safety and compliance must be discussed and considered further and the outcomes addressed.
- Our industry is emphatic that the costs to our industry in terms of mandatory training, compliance and regulation will far outweigh the cost to not comply.

We confirm these views may be published publicly, however our entities would also appreciate the opportunity to discuss the issues in more depth.