December 2022

Ministry for the Environment
PO Box 10362
WELLINGTON 6143

By email: FGas@mfe.govt.nz

Attn: Submissions Analysis Team

RE: Submission to the discussion document "Te hau mārohi ki anamata - Transitioning to a low-emissions and climate-resilient future" F-gases

The Climate Control Companies Association of New Zealand (CCCANZ), the Institute of Refrigeration, Heating and Air Conditioning Engineers of New Zealand Inc (IRHACE) and the Refrigerant Licence Trust Board (RLNZ) hereby jointly submit to MfE's discussion document *He haurahi mārohi ki te whakaheke i te panga o te haurehu kowhai ki te taiao - Proposed measures to reduce the environmental impact of fluorinated gases* (Consultation Document).

We note that MfE has expressed a preference that submitters not send their submissions in by email. Because we represent the bulk of the HVAC&R industry, we are unable to make an adequate submission by solely answering the set questions via an online portal, therefore we have emailed a fuller submission.

The CCCANZ, IRHACE and RLNZ would be pleased to discuss our submission with MfE.

Who are we

Organisation	Representation
CCCANZ	HVAC&R companies throughout New Zealand.
IRHACE	Individuals within the HVAC&R industry located both in New Zealand and its overseas members.
RLNZ	Charitable Trust Training organisation established by IRHACE/CCCANZ.
RRNZ	Refrigerant Recovery NZ Ltd
RRO	Refrigerant Recovery Operating Company NZ Ltd

Whilst each organisation is a separate legal entity, within the HVAC&R industry sector they work together on key initiatives. IRHACE/CCCANZ/RLNZ/RRNZ/RRO have a central governance, operations, and administration centre (HVACR Centre). The structure of these entities is illustrated in the Submitter Profile section at the end of this submission.

The CCCANZ, IRHACE and RLNZ represent the majority of the HVAC&R industry and as such should be regarded as the primary voice for the industry with respect to engagement with the government on industry related matters including climate change policies. By working closely together, in close

collaboration with HPSANZ, are able to clearly articulate an across-the-industry approach to the mitigation of f-gas refrigerant emissions.

We have reviewed the Heat Pump Suppliers Association of New Zealand's submission (HPSANZ) and are very pleased to support it as it closely aligns with ours.

Our serious concerns regarding the consultation process

Background

The **CCCANZ** and **IRHACE** made detailed submissions to the following consultation documents:

> March 2021: Climate Change Commission's *"Climate action for Aotearoa Draft Advice".*
>
> November 2021: MfE's discussion document "*Te hau mārohi ki anamata - Transitioning to a low-emissions and climate-resilient future*."
>
> April 2022: MfE's discussion document *"Proposed changes to regulations for the New Zealand Emissions Trading Scheme 2022: Consultation document is given due consideration".*

We have also engaged with MfE by way of various webinars, as well as participating in the facilitation meeting held in Auckland on 30 July 2022.

We have also set out in detail in correspondence from our solicitors, Heimsath Alexander, our concerns about the circumstances in which the current trustees of Recovery were appointed and came to control the NZUs to which the MfE appears to attach considerable significance in the consultation document. For ease of reference, we **attach** copies of this correspondence to this submission.

We have also made it clear to MfE that we intend to submit an application for accreditation as a product stewardship scheme and that work on this is under way.

Recovery

Against that backdrop, it is a significant concern that, as a result of its focus on scheme funding, the Consultation Document appears to have predetermined that the purported "co-designed scheme" engineered by Recovery will be accredited as a product stewardship scheme. For example:

- Page 18, Scheme Funding:

  > For a regulated product stewardship scheme to achieve greater benefits than a voluntary scheme, it must have sufficient resourcing to undertake improved programmes and services, as well as industry-wide participation.
  >
  > Currently, the Refrigerant License Trust Board is funded by a voluntary levy on industry. The Recovery Trust has also, until recently, been funded by a voluntary levy on bulk imports and some modest liquidation of its NZ ETS credits held in trust for these activities. The co-designed scheme proposed a combination of NZ ETS credits and establishment of a new 'advance stewardship fee' (appendix 2).

- Page 16, Stewardship scheme competence recognition framework: This section of the consultation document discusses at some length the future activities of the voluntary scheme.

- Page 19:

> In recent years, the market value of these NZUs has increased significantly. This has created an option for the Recovery Trust to fund baseline regulated scheme activities for several years if they are accredited as a regulated scheme.
>
> …
>
> If the reserved credits held by the Recovery Trust were used to return value to the industry and wider community through a regulated scheme, such perceived double charging could be avoided for a time. However, this would not be a long-term remedy for scheme funding, because the Recovery Trust will no longer have a monopoly on removal credit NZUs.

- Page 36, Appendix 2, Scheme funding:

> To fund the scheme, the working group recommended a mix of advance stewardship fees (ASFs) based on the costs of collection, destruction and management of the scheme, and New Zealand Emissions Trading Scheme (NZ ETS) credit units received from destruction of refrigerants.

The MfE's focus on scheme funding, and the fact that Recovery holds valuable NZUs, can be contrasted with the MfE's apparent reluctance to engage with how the current trustees of Recovery came to hold those NZUs and, accordingly, enjoy the funding advantage conferred by them. This was set out in detail in Heimsath Alexander's letter to MfE dated 11 May 2022 and are not repeated here. In short, we consider that the NZUs in question were unlawfully transferred to the current trustees and should still be held by RRNZ. The dispute over the lawfulness of the restructure of Recovery, and the resulting transfer of the NZUs, is ongoing. In the meantime, we have been advised by the Environmental Protection Authority (EPA), which administers the account in which the NZUs in question are held, that the account is subject to a "temporary hold". Accordingly, our understanding is that the NZUs are not currently available to Recovery for use in the way that the Consultation Document appears to contemplate. The comments in the Consultation Document about Recovery's ability to fund an accredited scheme appear to be based on a material misapprehension.

The restructure of Recovery detailed in Heimsath Alexander's letter dated 11 May 2022 was clearly intended to transfer the NZUs into the control of the current trustees and manoeuvre themselves, rather than RRNZ, into pole position for accreditation. Inevitably, when it comes to accreditation, there are significant advantages that arise from having operated the existing voluntary scheme and acquired the resulting NZUs. Until the restructure, that scheme was operated by RRNZ. The restructure removed those advantages from RRNZ and transferred them to the current trustees. However, it did not transfer the knowhow, experience, training resources, and industry support that remains with RRNZ.

The Consultation Document fails to have regard to the views we have previously expressed on behalf of the industry about Recovery under its current trustees.

"Co-designed scheme" / Milestone Reports

There would appear to be further misapprehensions on the part of MfE in relation to the so called "co-designed scheme". For example, the Consultation Document states, at page 34, that "[r]epresentatives from several synthetic refrigerant sectors were involved (Table 5)". These included RRNZ in its then capacity as corporate trustee of Recovery. RRNZ's representative at the time was John Bowen. However, as set out in detail in Heimsath Alexander's letter dated 11 May 2022, Mr Bowen is one of the former directors of RRNZ whose conduct is at the heart of the dispute with Recovery. With the other directors of RRNZ at the time, Mr Bowen resolved to appoint three of his fellow former directors (Lionel Rowe, Clifton Madgwick, and Sameer Handa) as trustees of Recovery and resign RRNZ as trustee. Mr

Bowen became a paid adviser to the newly restructured Recovery and was, prior to Recovery's recent rebrand, was referred to on its website as an adviser.

This restructure was a major transaction for the purposes of s 129 of the Companies Act 1993 and, as such, required the consent of IRHACE as shareholder. Such consent was not sought or obtained. It was well known to Mr Bowen and his co-directors of RRNZ at the time that, had consent sought, it would have been refused. Mr Bowen's input in to the "co-designed scheme" cannot therefore be regarded as representative of the industry participants whose interests we represent as he clearly had a conflict of interest. Rather, his input into the Scheme would appear to have been intended to further the interests of the new trustees of Recovery.

The final draft of the Milestone 4 Report was not presented to the boards of our organisations. Consequently, there was no opportunity to comment on it before it was published.

Accordingly, the MfE should exercise caution in giving weight to the Milestone Reports to the extent they purport to represent the collective will of the industry groups we represent. They do not represent RRNZ's position.

The Milestone Reports can, however, be relied upon to the extent that they set out the MfE's expectations of product stewardship schemes in terms of corporate governance. The nature and extent of Recovery's shortcomings in this regard have previously been set out in Heimsath Alexander's letter dated 11 May 2022.

Other flaws

Other critical flaws in the Consultation Document include:

- The continued focus on f-gas end-of-life (EOL) recovery and destruction, while playing lip-service to the crucial issue, this being the bulk of f-gas emissions occur upstream in the supply chain as a result of substandard installations, poor maintenance and illegal discharges.
- Any assumption that a Recovery PSS will be supported by the HVAC&R industry is false. Our organisations strongly believe a continued focus on EOL recovery and destruction neither meets the government's PSS expectations nor serves the industry well.

  Furthermore, we believe an effective PSS must be established and managed by the peak industry organisations who are at the sharp end of refrigerant use, as well as being ultimately responsible for technician training and workplace safety.

  The apparent lack of focus on a comprehensive ETE scheme can be traced back to the synthetic refrigerant PSS/PSO industry working group which, while addressing a wide range of refrigerant management issues, failed to recommend effective refrigerant management strategies in its final report.

  The final report Milestone 4: ***Guiding principles for preferred industry stewardship solution*** was published on 20 March 2020, not in May 2020 as is stated in the consultation document.

  The Milestone 4 report essentially recommended a continuation of the existing Recovery Trust scheme [emphases added]:

2.8. Focus of the scheme - *The PS scheme* ***will only destroy collected synthetic refrigerants***

and in response to

4.10. Market development - Government's expectation

a) The scheme will have a research and development budget to develop new recycled products, encourage transition to circular product and recycled product materials design, and cooperate with other stakeholders to enhance onshore infrastructure.

Working Group's response

a) Given the significant GWP of these SR and the current phasedown to lower GWP SR ***the sole focus of the PSO and scheme at the current time will be the destruction of the unwanted gases****. This will be reviewed in the future when it can be shown that the refrigerant bank comprises predominantly low GWP SR.*

While Recovery may now be scrambling to implement a wider based scheme a fundamental problem it faces is it lacks the experience and the capabilities to implement an effective ETE scheme.

A particular issue currently facing the industry is the replacement of f-gases by flammable hydrocarbons, high-pressure CO2 and toxic ammonia. Given they are replacing f-gases, and the risk this poses, their management should sensibly be integrated into the PSS scheme. However, due to the risk involved, and the lack of capability on the part of Recovery in this regard, the industry is not going to surrender the governance and management of the replacement refrigerants to Recovery.

- As noted above, some material assumptions relating to Recovery are incorrect. IRHACE's and RRNZ's lawyers, Heimsath Alexander, have previously written to MfE regarding these matters, which were also discussed at the Facilitation Meeting and are well known to the MfE. It is unfortunate that the Consultation Document fails to have regard to this information and these misapprehensions persist.

Application for Accreditation of a Product Stewardship Scheme

Our organisations will submit an application for a product stewardship scheme under s.7 of the Waste Minimisation Act 2007 (WMA).

Our industry organisations believe the PSS scheme we propose will more comprehensively meet the Ministerial Guidelines (WMA s.12) for a Product Stewardship scheme than can be proposed by Recovery.

Responses to the consultation document questions

Question 1

Do you agree in principle that a regulated framework should be introduced to ensure effective product stewardship for synthetic refrigerants?

If not, why not?

We agree that there should be a regulated framework for the effective management of synthetic refrigerants.

However, it would be far more sensible for synthetic refrigerants to be regulated under Part 7 of the Climate Change Response Act 2002 than under Part 2 of the Waste Minimisation Act 2008 (WMA).

In our opinion where this has come off the tracks is synthetic refrigerants have in recent years been positioned more as an end-of-life (EOL) waste product than for their global warming potential, this being the result of being included as one of the six priority waste products to be regulated under Part 2 of the WMA.

Synthetic refrigerants are the odd-man-out amongst the six priority waste products. The majority of synthetic refrigerant emissions are occurring upstream prior to reaching EOL; they are irrecoverable gases once they are emitted to the atmosphere; they have significant GWP. This means they cannot be effectively managed by a PSS that fundamentally focuses on EOL recovery.

In comparison the other five priority waste products are solid waste that remain physically recoverable. They are more suitable for EOL recovery schemes, as in their waste product state they have either little or no GWP.

Question 2

Do you agree with the proposal to make it mandatory to sell a product only in accordance with an accredited scheme for synthetic refrigerants?

If not, why not?

Yes, with the proviso that New Zealand has no market influence over overseas manufacturers. Accordingly, the government must allow the PSS the flexibility to adapt to overseas trends.

Question 3

What would be the impacts on your business if your participation in the proposed schemes is required? Please provide details of anticipated costs, benefits and other impacts.

We are answering this question from the industry perspective of HVAC&R businesses installing and servicing plant HVAC&R plant.

We expect that the PSS will increase business costs. However, due to the fact that the detail of the PSS has not yet been fleshed out it is impossible at this time to quantify the additional costs, noting increased costs are ultimately passed onto the customer.

As we keep reiterating the major causes of f-gas GHG emissions are leakage due to substandard installation, poor maintenance and illegal discharges happening at the asset level. A major causal factor of this is customer resistance to paying for appropriate maintenance, many customers choose the cheapest price they can get. This has seen a shift away from comprehensive maintenance contracts where the service provider is responsible for recharging leaks and therefore is incentivised to properly maintain the assets.

Refrigerant leakage is a particular issue for the motor trade. the Expert Group's 2017 report "Hydrofluorocarbon Consumption in New Zealand[1]" stated that *"mobile air conditioning systems in cars in New Zealand are often not serviced, are let fail and are not repaired"*. The report also estimated that *"a little less than half of the calculated leaks from mobile air conditioning are replaced every year"*.

What is required is an ETE scheme that engages the end-use customers in a way that demonstrates the economic and environmental benefits of quality installation, appropriate maintenance whilst providing strong disincentives to illegal discharging of f-gases. An EOL focused scheme that doesn't seriously address the problem at the customer level will see a continuation of the race-to-the-bottom problem

The single greatest benefit accruing from a well-designed ETE scheme is the significantly greater visibility of f-gas transactions throughout the supply chain making it possible to identify where leakage is occurring whilst simultaneously tracking technician certification. The increased visibility will help drive the industry's efforts to standardise maintenance practices, significantly reducing f-gas leakage.

Question 4

Do you agree with the proposal to restrict sales of F-gases, in bulk, pre-charged units or products, to companies that are registered with an accredited scheme or an individual who can demonstrate appropriate competence recognised by an accredited scheme under section 23(1)(b) of the Waste Minimisation Act 2008?

If not, why not?

The problem with requiring companies and/or individuals to register with the PSS is that it presumes that enforcement will happen. The reality is that, in the absence of visibility of f-gas transactions across the supply chain, enforcement will be near impossible.

[1] Expert Group – Hydrofluorocarbon Consumption in New Zealand, October 2017

While it is illegal to intentionally discharge f-gases to the atmosphere this still happens far too often, it is easier and cheaper to discharge the refrigerant to the atmosphere during servicing or at EOL. This is a contributing factor to why Recovery's recovery rate has historically been so low.

The f-gas emissions problem is not restricted to those businesses who purchase the f-gases. There are others such as electricians, plumbers and builders who interact with HVAC&R assets. For example, builders doing renovation work regularly disconnect AC units without realising it will result in the loss of all or part of the refrigerant charge. The question is how far can you spread the net?

The optimum solution requires visibility of f-gas transactions through the supply chain as well as tracking technician licensing, based on appropriate training and associated licensing of those handling the refrigerants

To this end Refrigerant Licensing New Zealand (RLNZ) has made significant progress with developing and rolling out a tiered competence training regime aligned the weight of the refrigerant charge in HVAC&R units. This progress is in spite of the uncertainties caused by the merger of the 16 polytechnic institutions to form Te Pūkenga and the associated restructuring of Competenz. The course development has been carried out by Competenz with appropriate input from the sector advisory group (SAG) and WorkSafe.

The training/licensing regime for working on HVAC&R plant is:

1. Up to 5kg refrigerant charge – Filler & handler's course;
2. >5kg to 50kg refrigerant charge – AC installers course, this builds on the filler & handler's course;
3. Above 50kg refrigerant charge – Qualified refrigeration engineer qualifications required, e.g. refrigeration engineer apprenticeship.

The above courses are designed to be fit for purposes and industry training needs. Currently it is possible to get the handler and filler certification over the phone from a 3rd party provider. The comparable course our organisations offer is much more rigorous.

Question 5

Do you agree with the proposal to require businesses decommissioning, dismantling, disposing of or recycling equipment containing refrigerants or other synthetic greenhouse gases to register with an accredited refrigerant stewardship scheme and demonstrate appropriate competence recognised by the scheme under section 23(1)(g) and (h) of the Waste Minimisation Act 2008?

The fundamental objective of the PSS is to minimise f-gas and GHG emissions. Provided the technicians undertaking the work have the necessary competencies, there would appear to be no compelling reason for the companies to register with the PSS.

The ability to track refrigerant transactions through the supply chain will ensure to the maximum extent possible that f-gas emissions are minimised and the work is done by properly accredited technicians.

Per our answer to Question 4 there are a number of business types including electricians, plumbers and builders who interact with HVAC&R assets. For example, how do you stop a builder doing renovation works from pulling out an old AC unit?

An option would be to introduce a system akin to the Acceptable Solutions and Verification Methods used in the building industry to ensure compliance with the building code. The Acceptable Solutions would be developed in collaboration with the manufacturers, alternatively the manufacturers' recommended installation and maintenance manuals could be adopted as approved Verification Methods.

Question 6

Do you agree with the proposal to require businesses that install, service, modify or dismantle any equipment containing or designed to use any controlled substance that is a refrigerant, or the direct handling of these substances involving a possible risk of their release into the atmosphere, to:
(a) register with the accredited refrigerant stewardship scheme and
(b) demonstrate that employees have the appropriate competence recognised by that scheme for their work,
under a new regulation using section 11 and section 16 of the Ozone Layer Protection Act 1996?

If not, why not?

Refer to our response to Question 5.

Question 7

What would be the impacts on your business if registration with an accredited refrigerant stewardship scheme and appropriate competence assurance for technicians were required for the sale and management of F-gases?

Please provide details of anticipated costs, benefits and other impacts.

Refer to our response to Question 3.

Question 8

Do you agree in principle that a regulated refrigerant scheme should be funded in the first years through New Zealand Units earned under the New Zealand Emissions Trading Scheme by the Trust for the Destruction of Synthetic Refrigerants while longer-term funding options are developed and consulted on?

If not, why not?

We agree in principle that a comprehensive ETE scheme should be funded by the NZUs held by the industry, both those currently held in NZ ETS Registry accounts and those earned from future recovery and destruction of f-gases.

However, while we are not opposed to open competition for the recovery and destruction of f-gases we point out some issues this may cause in our submission to April 2022: MfE's discussion document

"Proposed changes to regulations for the New Zealand Emissions Trading Scheme 2022: Consultation document is given due consideration"

In particular there is a need to establish a sinking fund to pay for the recovery and destruction of f-gases in the out-years when the phase-down of f-gases sees a reduction in the volume available for recovery. By then competitors chasing the NZUs in the early years will have gone leaving the industry or the taxpayer to deal with the tail of the f-gas refrigerant bank.

Another factor that may adversely impact on dealing with the tail of the f-gas bank that as the world solves the climate change challenge the value of the NZUs will fall further diminishing the industry's ability to fund f-gas recovery and destruction in the out years.

As part of preparing this submission we have reviewed Treasury's Regulatory Impact Assessment[2] on open competition. The RIA's key statements read:

9. *Most refrigerants imported into New Zealand are eventually emitted here or are exported in bulk or in manufactured goods such as air conditioning units. Only a very small percentage are being recovered and exported.*

10. *The Inventory report released in 2022 show sectoral background data for industrial processes and product use. It reports between 4% and 14% of SGG disposal emissions in 2020 were avoided through collection. These numbers indicate there is potentially large amounts of SGG that could be collected instead of emitted on disposal, however these are only estimates, and not exact numbers. There are many thousands of untracked potential sources of disposal emissions.*

The New Zealand's Greenhouse Gas Inventory 1990–2020: Table 2(II).B-H Sectoral background data for industrial processes and product use[3] shows the f-gas refrigerant bank to be approximately 6,500 tonnes. Recovery reported collecting 37 tonnes of f-gases in FY2020, above the recent historical average of around 30 tonnes.

Examination of Table 2(II) shows the weighted average for f-gas disposals to be circa 6% which would suggest that the potential for collecting f-gases at EOL is in the order of 600 tonnes per annum. Alternatively, assuming f-gas refrigerant bank's 6,500 tonnes is retired at an average 15-year life the annual f-gas disposal is 430 tonnes suggesting the recovery rate Recovery achieved in FY2020 was 8%.

The problem is there is a lack of quality data, until there is good visibility across the f-gas supply chain the government and industry will be relying on estimates that are fundamentally educated guesses.

For the reasons outlined above, and in previous correspondence, the consultation document's assumption that Recovery is entitled to deal with the subject NZUs is, in our view, incorrect. In particular:

- The bulk of the NZUs are held in NZ ETS Registry account (NZ-6146), the account holder of which is RRNZ, the account having been registered by RRNZ on 20 May 2013. Recovery has

[2] Regulatory Impact Assessment: Updating the Climate Change (Other Removal Activities) Regulations 2009, June 2022.

[3] New Zealand's Greenhouse Gas Inventory 1990–2020: Table 2(II).B-H Sectoral background data for industrial processes and product use

been reporting the NZU's on its annual balance sheet despite RRNZ being the account holder and IRHACE being the 100% shareholder of RRNZ;

- Recovery registered an ETS Registry account (NZ-12209) on 5 October 2021, with the same account operators as the RRNZ account. It is assumed that since Recovery set up this account they have been crediting NZUs being earned from the destruction of f-gases to the new account.
- It appears that after setting up the Recovery account the account operators then sought to transfer the NZUs from the RRNZ account into the new Recovery account.
- The EPA placed a "temporary block" on the NZ-6146 account. In correspondence dated 14 June 2022 (copy **attached**), the EPA stated:

> We note that both the Trust for the Destruction of Synthetic Refrigerants (the Trust) and Refrigerant Recovery NZ Limited (RRNZ) have approached the EPA regarding access to holding account NZ-6146. Information provided to the EPA has raised questions about reporting obligations and which entity may lawfully have access to the account. The EPA has placed a temporary block on NZ-6146 preventing the transfer of units to or from the account until the matter can be resolved. The EPA has not placed controls on any account to which New Zealand Units may have been transferred from this account.
>
> (emphasis added)

- As far as we are aware, this remains in place and the NZUs cannot currently be dealt with.

Question 9

Do you agree that any person whose business is or includes the decommissioning, dismantling or degassing of any equipment containing or designed to use controlled substances, or any representative of such persons, be required to ensure that disposal of F-gases or other synthetic greenhouse gases is through full destruction (eg, plasma arc plant) or recycled into plant with documented leak-testing and repair protocols, never by release to the air?

If not, why not?

Yes.

Question 10

Do you think that recycling of F-gases into other heating, ventilation, air conditioning and refrigeration applications (domestic use or exported) should be allowed under such a quality standard?

If so, what measures could ensure such gases are not leaked to the atmosphere from the new heating, ventilation, air conditioning and refrigeration applications?

Yes, where this is a pragmatic option. Refrigerant Reclaim Australia manages to recycle useful volumes of f-gases, New Zealand should be able to do the same.

However, without visibility of the particular recycling event there is the danger that the recovered f-gas refrigerant will re-charged into the same unit causing more harm than good. For example, many f-gas refrigerants are blends that tend to separate into their constituents when evacuated, they can also be

contaminated by moisture or cooked oil resulting from compressor burnout. Accordingly, the recycled f-gas needs to be purified before being reused.

Greater visibility of f-gas transactions coupled with standardised maintenance will do more to reduce leakage than anything else.

This is another area where introducing a system of Acceptable Solutions and Verification Methods could add value (refer to our response to Question 3).

Question 11

Are there other quality standards you would suggest relating to reusing, recycling or recovering F-gases?

Refer to our response to Question 10.

Question 12

Do you agree in principle that a regulated refrigerant stewardship scheme should be required to meet and report on specified targets for:

(a) recovery and destruction of high global warming potential refrigerants?

(b) phase-in of a comprehensive workforce competence recognition framework?

If so, what levels should these targets be set at, and over what period?

If not, why not?

Yes, but this question is blind to the elephants in the room – these being substandard installation; leakage from poor maintenance and illegal discharges. Win the absence of visibility and associated reporting on these factors a EOL scheme, such as the Recovery's, will fail to deliver acceptable outcomes.

Our organisations believe that a comprehensive and effective ETE scheme that provides vastly increased visibility of transactions through the supply chain can be developed and implemented within 3-years of commitment, noting considerable work has already been done on the industry side of the solution.

The other factor that must be accounted for is energy efficiency, while New Zealand may enjoy a high level of renewable electricity generation there will still be indirect emissions at the power station due to HVAC&R plant inefficiencies, typically due to refrigerant undercharge. The extra electricity consumed is an energy penalty to the plant owner that also increases the load on the nation's electricity generation system.

Question 13

Are there other targets that you think a regulated refrigerant stewardship scheme should be required to meet and report on? Please specify.

Refer to our response to Question 10.

Question 14

Do you think the dates and global warming potential limits in the proposed timeline are feasible and what changes, if any, would you make to the proposed prohibition timeline?

We don't have a problem with the first tranche of prohibitions from 1 January 2025, they appear to be achievable based on current knowledge.

We would however warn that because New Zealand has no influence on overseas manufacturers' decisions it is crystal ball stuff trying to predict where the industry will be in terms of f-gas use by 2028 and further out. For this reason, MfE should be paying special attention to the HPSANZ and manufacturers submissions.

Question 15

Are any categories missing from the timeline that should be included?

An imported product that special consideration should be given to prohibiting is the 100g DIY cylinders for topping up air conditioning systems in vehicles, they were banned in Australia years ago. The availability of these cans is a factor in New Zealand's low level of maintenance of vehicle air conditioning systems, it's easier to keep topping up the unit than getting the leak fixed.

As we commented in our response to Question 14, MfE should be paying special attention to the HPSANZ and manufacturers submissions.

Question 16

Do you think a ban on importing goods containing ozone-depleting refrigerants will have an impact on any current activities in Aotearoa New Zealand?

We assume the question referred to the importation of GHG refrigerants with high GWFs, not ozone-depleting refrigerants. The question also reads in the sense that the prohibition will apply to products that are pre-charged when they cross the border, leaving it open to import products that run off f-gases but are un-charged when imported.

It must be recognised that a greater volume of f-gas crosses the border in pre-charged units than is imported in bulk. Putting it another way, if products that can use f-gases can still be imported provided they are not current pre-charged, there won't be enough f-gas available to charge them. In any event this is a moot point given the overseas manufacturers pre-charge their units to strict standards, most if not all are not going to export products to New Zealand un-charged.

Therefore, we assume the question should be *"Do you think a ban on importing goods that use high GWP f-gases will have an impact on any current activities in Aotearoa New Zealand?".*

Our response is that any impacts will most likely be manageable provided there is flexibility built into the prohibition system.

Again, per our responses to Questions 14 and 15, MfE should be paying special attention to the HPSANZ and manufacturers submissions.

Question 17

What penalties should exist related to the import of pre-charged equipment (eg, fines, seizure of goods)?

This is not a question our organisations have a view on.

Again, per our responses to Questions 14- 16, MfE should be paying special attention to the HPSANZ and manufacturers submissions.

Submitter Profiles

CCCANZ is the peak industry association representing HVAC&R companies in New Zealand. The CCCANZ purpose is to:

- Promote high standards of business competence and industry conduct for companies engaged in climate-controlled environments;
- Promote the advancement of education, practice, and technology in HVAC&R;
- Promote the continuing improvement of standards in the HVAC&R industries;
- Represent and promote the interests of members;
- Provide for the adjudication and arbitration of disputes between members and the public; and
- Promote a standard of workmanship and design for members to adhere to.

IRHACE is the peak industry association representing individuals working in the HVAC&R industry in New Zealand and its overseas members. The IRHACE purpose is to promote the economic well-being and quality of life of its members, and of the heating, ventilation, air conditioning and refrigeration industries, and to improve the economic well-being and quality of life of every New Zealander through:

- representing and promoting the industry interests of its members;
- advancing and promoting (including the use of standards) the technology used by and activities of those in the industry;
- supporting training and education in the industry;
- promoting a high level of skill, qualifications and continuing professional development;
- promoting the development of practice guides and other industry Standards as the Council thinks is appropriate for and relevant to our industry that members shall follow;

- providing a forum for its members, associates and affiliates to discuss and share their knowledge and experience;
- providing a forum where its members, associates and affiliates and members of the public can settle their disputes;
- To develop a continuing development policy and framework for IRHACE members to support a more skilled and technically competent membership.

IRHACE is the sole shareholder of Refrigerant Recovery NZ Ltd and Refrigerant Recovery Operating Company NZ Ltd.

The Refrigerant License Trust Board (RLTB), operating as Refrigerant License New Zealand (RLNZ), was established by CCCANZ and IRHACE, with funding provided by the refrigerant levy scheme, to develop and provide refrigerant filler and handler training and certification for HVAC&R practitioners. RLNZ has its own board of trustees and is a Charitable Trust.

Structure

Figure 3 – HVACR Structure