

# Synthetic Refrigerant Stewardship

## Milestone 4: Report 2

### *Training Overview Document*

This scoping report has been prepared by the Synthetic Refrigerant Stewardship Working Group as part of a process to develop an industry led product stewardship programme for synthetic greenhouse gas refrigerants in New Zealand.

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## Document Control and Sign Off

Date	Version	Document	Author
30/03/20	Draft V1	Synthetic Refrigerant Stewardship Milestone 4: Report 2 Training Overview Document	IHRACE Christine Johnston
4/05/20	Final	Milestone 4: Report 2 Training Overview Document	IHRACE Christine Johnston Working Group

*This report was funded, in part, with money provided by the Waste Minimisation Fund. The Ministry for the Environment does not necessarily endorse or support the content of the publication in any way.*

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# Product Stewardship Scheme for

## Training and Licensing Requirements

### Introduction

Members of the broader Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) Industry, including subject matter experts (SME's) from these and the Industry Training entity Refrigerant License New Zealand (RLNZ), have discussed at length the training and accreditation requirements for a successful Product Stewardship Organisation handling Synthetic Refrigerants (SR). In formulating this document IRHACE has also consulted with SME's of the Automotive Industry Associations who have provided input.

The below document covers two specific areas, which must be considered in tandem,

1. Industry Training
2. Accreditation/ Licensing

The Working Group of SME's involved in developing this document is confident that including this training and licensing/accreditation regime will ensure industry needs are addressed under a Product Stewardship Scheme for Synthetic Refrigerants (SR).

### Supporting Documentation

Attached are 3 Appendices which illustrate the content of the Training Programme from a Qualifications perspective. These are:

- Training Matrix ( Appendix A)
- Summary of Qualifications by Sector (Appendix B)
- Refrigerant Unit Standards Explained (Appendix C)

### Training & Licensing

To successfully operate a training and licensing/accreditation regime the Product Stewardship Organisation will require important data and insights on the industry. The Working Group recommends that the PSO should partner with recognised industry training organisations. This will allow continuity for existing training, along with quality and speed to market.

The Working Group points out, Approved Filler Compliance Certificates are key to the training requirements under the Health & Safety at Work Act. Organisations who have authority to deliver Compliance Certificates, have more contact with more technicians in the HVAC&R industry than anyone other than the technicians' employers.

This positions these organisations well to assess and maintain the knowledge levels and competency of the technicians as part of this accreditation/licence, and to continue to develop the industry specific training which RNLZ has done for both apprentices and technicians for over 10 years.

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## Industry Training

The HVAC&R Industry SME's in developing this framework, are aware of the HFC Phasedown of Synthetic Refrigerants (SR) and resultant introduction of new often flammable, or toxic refrigerants coming to market. The Working Group of SME's has proactively met over several years, to develop a robust training and accreditation regime to support all refrigerants.

Cognisant of the often conflicting, Health & Safety and environmental needs our industry is faced with, training has been developed to reflect these situations and all refrigerants, not only SR's. We have covered training for SR's. There is, however, no doubt technicians will require training in all refrigerants. With many of our SME's closely involved in training over many years, a number of these SME's have supported apprentices into the industry. They have in developing this document drawn on experience and their collective insights to develop a comprehensive training programme appropriate to the tasks they undertake.

### Recommended training verticals

Specific to this, is recognition that this training cannot be 'One size fits all'. As illustrated in the table on Appendix A, current training modules and desired training to meet those health & safety and environmental demands have been addressed.

One benefit for the below model allows technicians to gain a qualification which can become a 'building block' towards another vertical in the future, should the employment focus change. This model is consistent with governments' expectation of tertiary and skills based learning in a changing marketplace.

There are 6 specific Levels of license for those working on Synthetics, which will be administered by the PSO:

- Automotive, National Certificate in Motor Industry – 3 Classes of License
- Appliance Servicing – Class 1 License
- RAC Trade Assistant L3 – Class 1 License
- Building Services Installer L4 – Class 3 License
- Air Conditioning Installer L4 – Class 3 License
- Commercial / Industrial Refrigeration and Air Conditioning (RAC) – Class 4 License

### Training common across all sectors

Some businesses do specialise in a specific activity within the industry i.e. domestic heat pumps installation and servicing or commercial refrigeration. Simply though, all must have a similar grounding in key tasks, NZ is too small to risk inadequately trained technicians who have potential to find workarounds.

This common training would include (but is not limited to)

- Approved Filler US28950
- Jointing, US 2679, US 23959
- Leak testing, US 28953
- Health and Safety (various Unit Standards)

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## Permitted Activity under NZQA

We have also detailed in the Training Table Matrix (Appendix A) the on and off job requirements (Permitted Activity) under the NZQA qualification framework. This is further expanded in Summary of Qualifications by Sector (Appendix B) which covers the purpose and outcome of such training, in more detail as an overview of the individual courses.

## Unit Standards

The Training Table Matrix (Appendix A) lists the current Unit Standards which are for the most part, 'fit for purpose', and also identifies a number of Unit Standards which will require review to ensure improved handling of synthetics under the Product Stewardship Scheme, which include:

- Leak Testing US28953
- Jointing and brazing of pipe, US 2679, US23959

## Automotive Training Requirements

Separate to this, holding a unique position in the market, the automotive industry has also provided input.

The automotive industry requires a qualification framework that addresses all the activities related to diagnostic, servicing and repair of automotive air conditioning systems as well as specifically, the collision repair and vehicle dismantling sector(excluding mobile refrigeration systems). *A list of unit standards that make up this minimum standard to be a licensed worker in this industry are attached in Appendix B which includes proposed additional unit standards.*

To ensure consistency of standards within the automotive air-conditioning industry we recommend that an industry code of practice be mandatory as part of this regime. The current MTA automotive air-conditioning code of practice introduced in 2013 will be refreshed to reflect current working requirements and will form the basis of industry wide consultation on an accepted code of practice.

The licensing regime for automotive air-conditioning activities will cover current refrigerants used in automotive application and allow for new automotive refrigerants as they come into play (currently refrigerants such as R134A, 1234YF).

Some points specific to the automotive industry are:

- In considering training across all sectors, the Approved Filler unit standard and training courses are being updated to accommodate focussed outcomes for the automotive sector where appropriate.
- With regard to additional Unit Standards, Jointing and brazing within automotive installations is not common and typically, joints that technicians work with have mechanical fixings. There are, however, pre-trade qualification unit standards that adequately cover learning outcomes required for the limited situations where jointing and brazing would be required.

- In the licensing/ accreditation of International Qualifications for automotive, there will be cross referencing of vehicle manufacturers specific product training as evidence of meeting the same requirements of equivalent unit standards listed in the proposed automotive training framework

## Licensing regime

The automotive industry SME's will need to be closely involved ( preferably running) the licensing regime for automotive air-conditioning technicians. Due to the motor industry associations prime contact with automotive technicians along with continued experience in the knowledge level and competency of these technicians. The automotive industry are best placed to assess and recommend equivalence of competency and qualification.

The automotive "and" HVAC&R industries would implement a 5-year licensing period with a subsequent 5-year renewal.

## Accreditation/ Licensing

Assessing training and qualifications for a license/accreditation under the Product Stewardship Organisation will not be a 'one size fits all'. There are a number of variables and hurdles, to encounter in order to license/accredit a technician.

Some of those variables include:

### Technician holding a NZQA recognised Trade Certificate

If the technician holds a current L4 Refrigeration and Air Conditioning Trade Certificate, and had completed all other relevant qualifications, such as Approved Filler Certification, and the technician can verify they have been and are currently working in the industry, they should then qualify for accreditation/licensing.

### Grandparenting of all existing technicians

Grandparenting of the workforce will support a smooth and fair transition into a license/accreditation regime under the Product Stewardship Scheme.

All technicians will be admitted into the license/accreditation Scheme under the Product Stewardship Scheme with a prior acceptance lead in period of 2 years.

The Working Group recommends both an online/face to face and a practical course for final granting of license/accreditation to ensure competency on final granting of license within that two year period.

### Recognition of prior learning to attain License/accreditation

Recognition of Prior Learning will be needed for those technicians who are currently working within the industry, but for whatever reason are unable to produce the required documentation to be automatically licensed/accredited.

NZQA provides a programme to accommodate these technicians, *Recognising learning for credit: Guidelines for the recognition and award of credit for learning*. All applicants will need to have completed other

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relevant industry related training prior to their application, such as Approved Filler Certificate. The Working Group also recommends completion of a practical course before the license is granted.

### **License/accreditation for applicants with international qualifications**

The working group has identified International Qualifications relevant to the Refrigeration and Air Conditioning Industries that could be acceptable for licensing/accreditation purposes. These include F-Gas, City & Guilds, and Artic.

Technicians applying for licence/accreditation via this method will still need to complete other required training for NZ situations, including Approved Filler Certification.

The Working Group recommends completion of both an online/face to face and a practical course to ensure competency prior to finally granting of license/accreditation.

### **Capstone assessments for overseas applications**

Capstone practical assessment is an alternative method to assess applications where evidence of qualification is not evident.

The Working Group will requires the applicant provide prior evidence of additional training to meet the minimum standards identified online/face to face and a practical assessment will be required to finally attain a license/accreditation.

## **Licensing Board/Organisation**

To operate a successful licensing regime the responsibilities of the licensing board under the Product Stewardship Organisation are to include:

- Manage the accreditation activities of the PSO for Synthetic Refrigerants
- License technicians based on proof of competency and wider assessment criteria (as above for Accreditation and Licensing)
- Maintaining a register of Licensed Technicians
- Investigate and adjudicate on complaints
- Review and manage renewals

It is also recommended, based on other similar models, that this board is administered separately to the Product Stewardship Organisation, on that basis the HVAC&R industry SME's will need to be closely involved ( preferably running) the licensing regime for HVAC&R technicians. It would be possible to share governance however, the two functions, (Licensing/ Accreditation and activities of the Product Stewardship Scheme) are very different and require different skillsets to administer.

### **License Renewals**

A programme will be developed to handle license/accreditation renewals closer to the end of the first license/accreditation term. To be consistent with the HSWA requirements, the Working Group has agreed on a 5 year renewal. Key points of this programme are:

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- Need to evidence upskilling over the term of the license/accreditation period
- Renewal criteria
- Incorporate CPD (Continuing Professional Development)
- A comprehensive database to ensure a high standard of record keeping
- Time required for renewal application to be approved
- Cost to approve renewal application

## In Conclusion

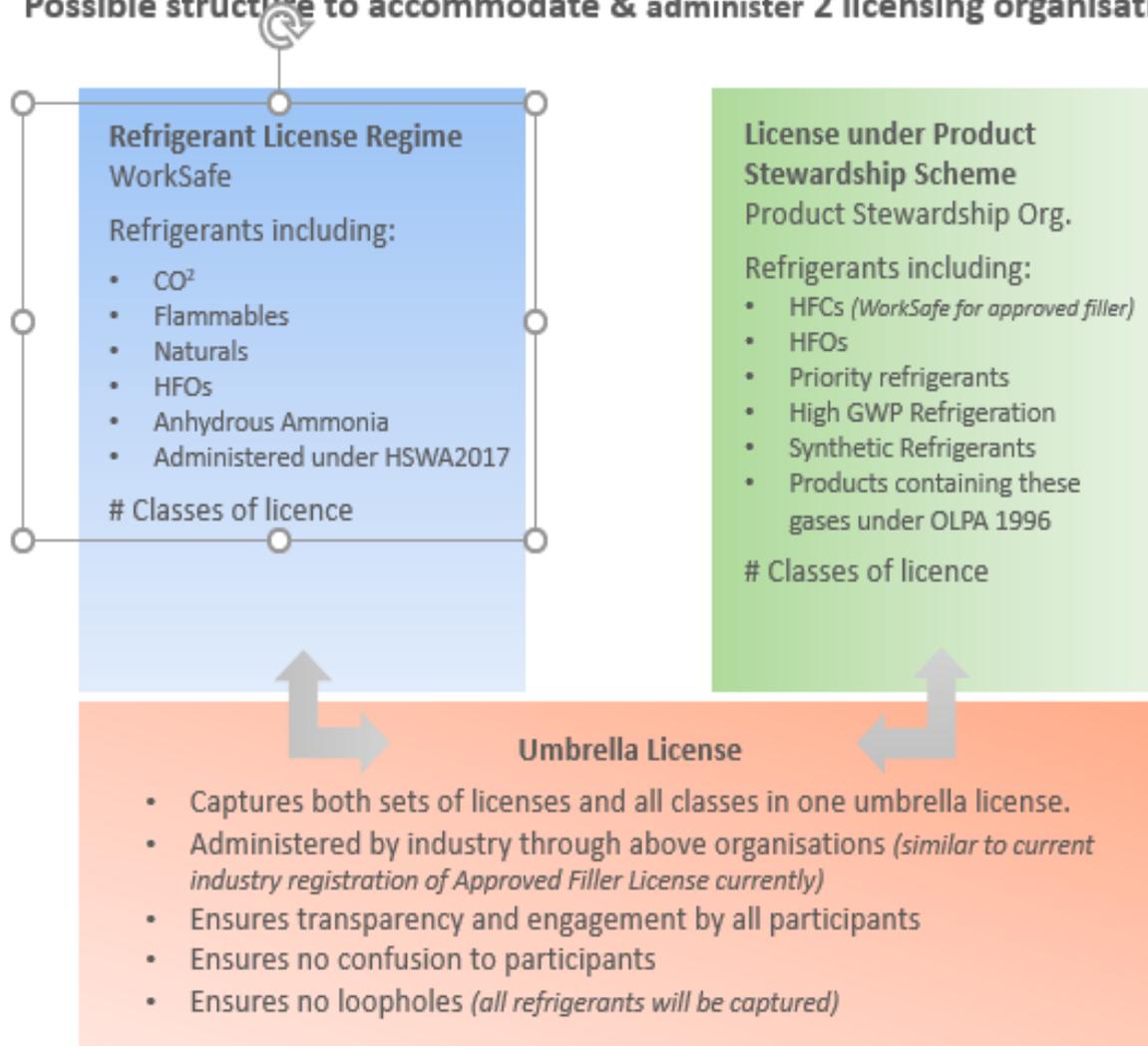
This training overview developed by IRHACE for the successful, Product Stewardship Organisation will provide a more robust level of training and accreditation than that currently seen in our unregulated industry.

This, however, sits with one sizeable caveat.

The Working Group would not be doing its job if it was not to express deep concerns about the proposed regime under the Product Stewardship Scheme. In particular, that without prompt intervention there will be two license regimes, added cost, resource and potential for disengagement of industry, including loopholes and room for error. The HVAC&R and automotive industries are committed to seeing a formal license regime for all refrigerants and technicians and whilst they welcome the implementation of a Product Stewardship Scheme and see this formalised training and license/accreditation regime as a significant step along that path, they cannot ignore the other 'elephant in the room' and significant potential for unwarranted duplication and significant expense for industry.

HVAC&R is a small and understaffed industry. Ignoring industry need and not working to provide a unified scheme will be futile and would be likely to disengage participation in either scheme, directly compromising safety and compliance.

## Possible structure to accommodate & administer 2 licensing organisations



The Working Group, encompassing the wider HVAC&R Industry and the automotive industry, is committed to seeing a comprehensive and fair Licensing Regime, incorporating both; a safe workplace for all, along with ensuring NZ meet its obligations under the Montreal Protocol as the HFC Phasedown progresses.

Based on the examples made above, the working group has asked to reinforce, out the need for a single license regime to encompass both the Product Stewardship Scheme and the Worksafe Refrigerant License Regime which would cover use of all refrigerants.

We ask for immediate and committed dialogue on this matter, in particular to establish common ground with potential for an Umbrella License structure for the industry or a solution which would facilitate a single license.

*For questions or further information on this document, in the first instance, please contact*

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