Refrigerant Transition Plan

Addressing Our Impact

Moving beyond data-driven understanding to authentic action was a key focus to ensure we take practical steps to implement improvements with meaningful impact. As such, our environmental initiatives are designed to drive substantial and lasting change within our operations and broader environment. Focusing on balancing immediate improvements with long-term sustainable practices, we aim to create a culture of environmental responsibility.

Navigating to Natural Cooling

As an organisation with a diverse fleet of refrigeration equipment, refrigerant gases play a critical role in the global warming potential (GWP) and operational impact of our services on the environment.

In light of this, Lowe Rental Corporation formed an internal steering committee to review the collective asset register across our services and locations. Tasked with the creation of processes to ensure the responsible and secure maintenance of refrigerant gases, development of strategic initiatives to reduce the GWP impact of our fleet and advancement of formal technical training to educate relevant personnel within our businesses

Refrigerant Management Steering Committee

Leveraging decades of collective expertise underlined by practical industry knowledge, our committee is comprised of engineering leaders with a proven track record in refrigeration design, maintenance and technical compliance.

40 **Years of Experience**

Passionate about sustainable procurement strategies and supplier partnerships, balancing compliance with cutting-edge technology.

John Peck
Procurement Manager

35 **Years of Experience**

Passionate about identifying and integrating the latest advancements in refrigeration technology, balancing performance, sustainability and compliance.

Darren Russell
Refrigeration Procurement Manager

22 **Years of Experience**

Passionate about sustainable decarbonisation solutions in refrigeration, balancing energy efficiencies, heat reclaim and innovative design.

Jonathan Ward
Design Manager

In 2023, our appointed experts:

Created a Global Refrigerant Policy: Formulated a policy for refrigerant procurement to reduce the GWP impact of our refrigeration fleet. This policy outlines pre-approved refrigerants, restricted refrigerants and banned refrigerants for supply chain and procurement teams.

Evaluated Refrigeration Fleet GWP: Assessed the GWP of every asset within our global fleet of refrigeration equipment and forecast the GWP impact of our global refrigeration fleet.

Set Global Benchmarks: Established our global standards for the safe management of refrigerant gases in line with F-Gas regulations.

Implemented Daily Management Processes: Developed and implemented processes for the safe maintenance, storage and disposal of refrigerant gases.

Responsible Action

In the evaluation of our approach towards managing the GWP of our refrigeration fleet, the replacement of existing refrigeration equipment with new assets utilising lower GWP refrigerants was considered.

This assessment highlighted new equipment procurement would necessitate the manufacture of metal and copper. To procure these materials, mining and onward transportation would create a negative environmental impact that outweighs the value of replacing an existing refrigeration asset fleet with lower GWP refrigerants.

As such, we have adopted a strategy focused on:

1. The preventative procurement of new refrigeration assets with high GWP in accordance with our global refrigerant policy.

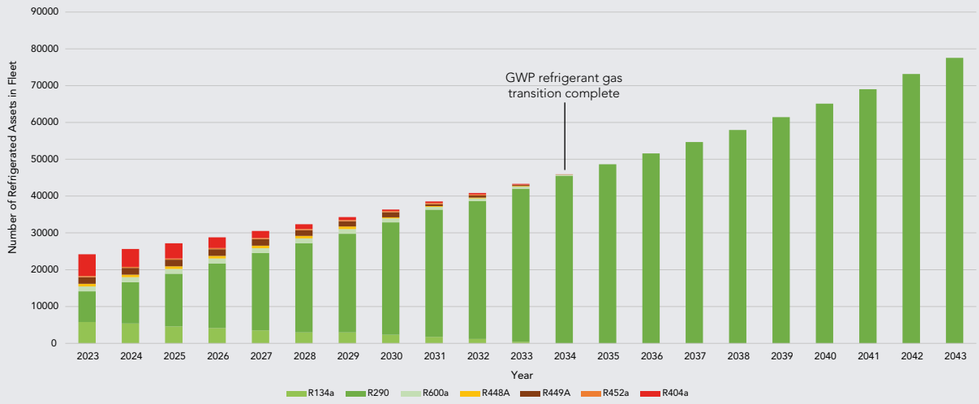
2. A comprehensive transition plan to phase out high GWP refrigerants within our existing fleet over an allocated period.

3. The effective care and maintenance of refrigeration assets to prevent their the environmental release of refrigeration gases, in compliance with F-Gas standards.

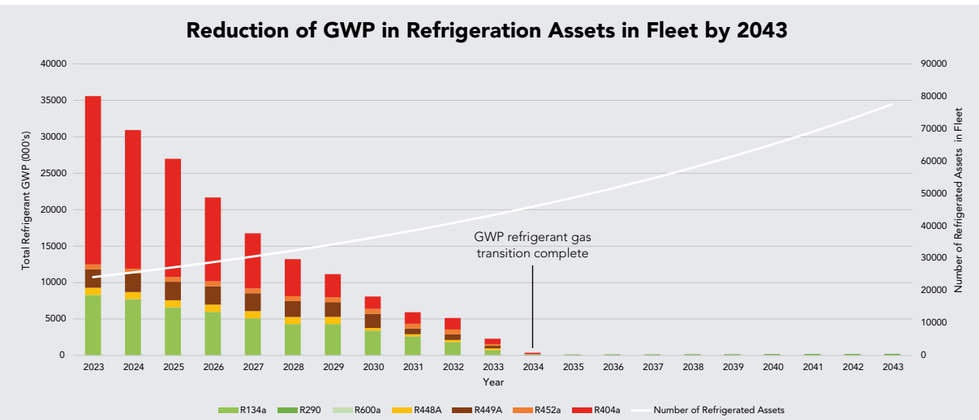
We conducted a comprehensive analysis of the refrigerant gases and their volumes across our refrigeration equipment, enabling us to calculate the current GWP of our fleet. Using historical data, we examined asset disposal trends, equipment replacement rates, and projected fleet growth over the coming years. Many of our older refrigeration assets rely on high GWP refrigerants such as R404 and R452, but as these are phased out, we are transitioning to the purchase of equipment that utilises refrigerants with a significantly lower GWP. The impact of this refrigerant gas transition is illustrated in the graphs below.

Our refrigeration gas procurement policy that was implemented in 2023, has been designed to progressively reduce the potential GWP of our fleet to minimal levels by 2034 or sooner. This ensures that any refrigerant gas leaks that may occur will have an almost negligible environmental impact. As refrigeration is one of the most significant contributors to our tCO2e emissions, this strategy will reduce our Scope 1 and Scope 2 emissions by more than 60% within the next decade.

Number of Refrigerated Assets in Fleet Using Low GWP Refrigerant by 2043



Reduction of GWP in Refrigeration Assets in Fleet by 2043



R290 an R600A are natural refrigerants. R134A, R448A, R449A, R452A and R404A are older refrigerants phasing out.

F-Gas Training

The critical environmental concern with refrigerant gases and the opportunity for refrigerant gases of any GWP rating to negatively impact our carbon footprint arises from their release into the atmosphere. To address this concern, in 2023 we implemented mandatory F-Gas training for required personnel and established a protocol for the safe extraction and containment of gases, subsequently transferring them to local refrigerant gas banks to be reused or safely disposed of if they are no longer required.

Refrigeration Procurement Manager, Darren Russell, held F-Gas training sessions for designated personnel in Operations and Asset Management functions in Lowe Rental Corporation, globally. Applying European best practice, these training sessions took place using a hybrid approach of online and offline training at office and warehouse headquarters around the world.

Key topics included:

- Safe handling
- Use and recovery of fluorinated gases
- Leak detection
- Leak prevention
- Recording and reporting processes

This comprehensive training ensures that our employees are equipped to handle refrigerants responsibly and prevent environmental contamination. By investing in education and rigorous protocols, we aim to follow a proactive approach to safeguard the environment, prioritising preventative measures to reduce the risk of harmful emissions.