R-TRADE

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Refrigeration Technician Recruitment, Advancement, Development, and Education

YEAR 2 IMPACT REPORT

Fall 2024 to Spring 2026

nasrc.org | rtrade.org

Introduction

NORTH AMERICAN Sustainable Refrigeration Council

ABOUT THE NORTH AMERICAN SUSTAINABLE REFRIGERATION COUNCIL

NASRC is a 501(c)(3) environmental nonprofit working to advance climate-friendly natural refrigerants and reduce greenhouse gas emissions caused by traditional hydrofluorocarbon (HFC) refrigerants. We collaborate with stakeholders from across the industry, including over 55,000 food retail locations, to eliminate the barriers to natural refrigerants in supermarkets.

OUR MISSION

To lead the transition to natural refrigerants by collaborating across the refrigeration industry to drive a sustainable workforce, facilitate funding opportunities, and act as a catalyst for continuous improvement.

OUR VISION

Eliminate refrigeration's environmental impacts by facilitating the transition to natural refrigerants.

At NASRC, Workforce Development is R-TRADE

R-TRADE (Refrigeration Technician Recruitment, Advancement, Development, and Education) is NASRC's nationwide workforce development program providing necessary solutions that benefit every sector of the refrigeration industry. By fostering a skilled technician workforce, R-TRADE meets the refrigeration industry's immediate workforce development needs while equipping technicians to enable a smooth transition from HFCs, paving the way for a sustainable and resilient sector.

Why Workforce Development

The refrigeration industry faces an increasingly critical technician shortage. There aren't enough refrigeration technicians to keep essential operations running, let alone enable the widespread transition from HFCs.

The shortage has led to demanding, unsustainable schedules, causing some technicians to leave the field, further exacerbating the workforce shortage. Moreover, limited training opportunities on natural refrigerant technologies are further bottlenecking the industry's ability to swiftly transition from HFCs.

Our Approach

R-TRADE takes a three-pronged approach to addressing the refrigeration technician shortage:

- **RECRUITMENT: Increase awareness and support for this career path by engaging youth and adults to build a robust pipeline of refrigeration technician candidates.**
- **TRAINING: Increase access to comprehensive training on refrigeration and advanced refrigeration technologies to train over 14,000 technicians.**
- **RETENTION: Identify and promote best practices, technologies, and other support mechanisms to retain more existing technicians in the refrigeration trade.**

R-TRADE Advisory Committee

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The R-TRADE Advisory Committee is a group of industry leaders who provide guidance to ensure the successful launch and implementation of the R-TRADE program. The committee brings a balanced, cross-sector perspective and industry influence to help accelerate and scale the program's impact.

We extend our sincere appreciation to the R-TRADE Advisory Committee for generously contributing their time, expertise, and leadership, and thank each member for their ongoing participation and commitment to strengthening the refrigeration workforce.

More information available here:
nasrc.org/r-trade-advisory-committee

Recruitment

Our Goal

Increase awareness and support for this career path by engaging youth and adults to build a robust pipeline of refrigeration technician candidates.

OUR PROGRESS

Student Networking

- Each Natural Refrigerant Training Summit event features a student career fair that gives local R/HVAC students and faculty access to industry stakeholders and the opportunity to network.

BY THE NUMBERS

8 networking events

507 students engaged

27 employers participated

57 schools participated

What Students Think

70% very likely to pursue a career in refrigeration

> ***I like taking things apart and putting them back together, and it's hard work but fun, and you tend to make a lot of money in the field.***
>
> – Student attendee on why they're interested in refrigeration

> ***I am very intrigued to gain more knowledge***
>
> – Student attendee

> ***What most excited me [about refrigeration] is the fact [that] I can get a career straight out of high school.***
>
> - Student attendee

Cultivating Tomorrow's Engineers

Sustainable refrigeration starts at the design phase, and encouraging students in higher education to pursue careers in refrigeration is mission-critical.

In April 2026, we co-hosted a **one-day training event** with the **Cal Poly Mechanical Engineering HVAC&R Program** designed to equip engineering students with foundational knowledge in refrigeration design, practical tools, and industry-specific applications.

The event had over **120 participants** and support from **11 industry giants**!

Recruitment *(cont.)*

School Support Pilot Program

This program is made possible through the generous support of the California Air Resources Board's (CARB) F-gas Reduction Incentive Program (FRIP).

- Developed with support from the California Air Resources Board's F-gas Reduction Incentive Program, the pilot empowers R/HVAC faculty to expand their curriculum to include refrigeration and ultra-low-GWP refrigerants, offering hands-on training, individual consultation, and support throughout the process.

  NASRC is currently working closely with targeted schools in California, providing resources and guidance at no cost to participating faculty and schools.

Social Media Campaigns

- **Refrigeration is a Cool Career**
  An NASRC-produced video series featuring technicians and other industry stakeholders sharing why refrigeration is a cool career. **Check them out >>**

- **NASRC, not NASCAR**
  Thanks to an in-kind donation from a generous supporter, the R-TRADE logo prominently features on Motorsport driver Landen Lewis' racecar and race suit, increasing our visibility among our target audience.

Training

Our Goal

Increase access to comprehensive training on refrigeration and advanced refrigeration technologies to train over 14,000 technicians.

OUR PROGRESS

Technician Training

- Over the past 2 years, we've trained over 3,600 technicians through our various training events, including the Natural Refrigerant Training Summit, Technician Workshops, and our Technical Training Program.

> ***CO2 training is one of the most important investments we can make—skilled technicians help us maintain performance, reduce risk, and deliver on both operational and environmental goals.***
>
> **– Wayne Rosa, Director of Engineering Strategy, Ahold Delhaize, USA**

BY THE NUMBERS

3,685 technicians trained

55,916 training hours

78 training events hosted

Natural Refrigerant Training Summit

- The Natural Refrigerant Training Summit is a series of free, regional events for refrigeration technicians on the latest CO2 and propane technologies. Each multi-day event provides concurrent training sessions from multiple manufacturers and industry experts, an R/HVAC student career fair and networking session, and an exhibit hall featuring the latest natural technologies. In addition to technicians, attendees include retailers, trade school faculty, service contractors, and more.

NUMBER OF EVENTS COMPLETED 8

NUMBER OF EVENTS COMPLETED 3

Technician Workshops

- Similar in format to the Training Summits, the Technician Workshops provide a deeper dive on a smaller scale. Experts deliver advanced training that builds on the foundational content from the Summits, providing deeper, hands-on instruction in natural refrigerant installation, service, and troubleshooting for working technicians.

> ***CO2 systems aren't the future—they are the present. Investing in CO2 training now protects customers, technicians, and competitiveness in a market that's already moving.***
>
> –Michael Dellecave, Director, Refrigeration & Mechanical Services, Kroger

Technical Training Program

- The Technical Training Program provides comprehensive, customizable, vendor-neutral group training to organizations. NASRC's Training Director travels to organizations to provide tailored instruction in refrigeration fundamentals and natural refrigerant technologies to meet the specific needs of retailers, contractors, and technicians. Through a mix of classroom, field-based, and on-demand training formats, the program helps employers upskill their workforce, close critical knowledge gaps, and support long-term technician retention in the refrigeration trade.

NUMBER OF EVENTS COMPLETED 67

Online Training

- **R-TRADE Online Learning** is our new e-learning platform built as a supplement to the hands-on training experiences we offer. The platform offers **technicians of all skill levels** access to expert-led instruction that's available from computers, tablets, and phones.

  Our first course, CO2 Basics: Transcritical Booster Systems, launched in January 2026.

> ***[I've] been doing supermarket refrigeration for 18+ years and gained a new perspective and clarity between the different types of CO2 as well as the different ways they are utilized. [I] definitely [recommend this] course to fellow technicians of all skill levels.***

R-TRADE ONLINE LEARNING
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BY THE NUMBERS

1,478 course licenses issued

What Course Takers Think

88% improved their CO2 knowledge

88% improved their confidence with CO2 systems

4.7 reported overall rating

100% are very likely to take another R-TRADE course

Training Resources

- **CO2 Education Committee**
  The CO2 Education Committee is a cross-industry group of refrigeration technicians, educators, end users, and manufacturers convened by NASRC to develop neutral, high-quality educational resources and standards that advance technician proficiency in food retail refrigeration applications. Guided by principles of accuracy, practicality, and currency, the committee defines an educational progression to measure technicians' knowledge and skills and collaborates to develop widely adoptable training materials and best practices for natural refrigerant systems.

- **CO2 Training Manual**
  The Technician Training Manual for CO2 Systems is a comprehensive, field-focused resource that consolidates best practices, safety protocols, and troubleshooting guidance for servicing CO2 refrigeration systems. Written by technicians for technicians, this manual will serve as a consistent reference to help them translate training into high-quality, reliable performance in real-world store environments.

Ongoing Support

Our Work Continues with Your Support

While we've accomplished so much this year, more remains to be done. Below are some of the projects we hope to accomplish in the next year.

None of this work is possible without your ongoing support—thank you!

> ***Investing in CO2 training for technicians is no longer optional; it's a necessity. In our experience, contractors who invest early in CO2 training are better positioned to support retailers as adoption continues to scale.***
>
> –Matt Van Zant, Refrigeration Installation Program Manager, Publix

Recruitment

- **Conduct an Employer Survey**
  An employer survey would provide R-TRADE direct input from industry partners on hiring demand, skill gaps, and employment outcomes, helping align workforce programs with real employer needs. This actionable data will support a more coordinated, targeted response to the refrigeration technician shortage by offering clear insights into the size of the gap and where to focus efforts.

- **Establish a Network of Refrigeration Schools**
  Our school network initiative strengthens R/HVAC programs by equipping faculty with training in refrigeration and natural refrigerants, supporting curriculum expansion, and helping participating schools develop clear roadmaps for program growth. As we scale this work beyond California, we plan to develop a searchable database of schools offering R/HVAC certificates to make programs easier to find, strengthen connections across the training ecosystem, and support a broader national pipeline of future refrigeration technicians.

- **Expand Career Marketing Campaign**
  We hope to expand and scale our refrigeration career outreach campaign into a national, multi-channel effort that elevates awareness of the trade and its climate impact among high school students, young adults, and veterans. By developing targeted messaging, digital content, and in-person engagement tailored to each audience, we aim to position refrigeration as a high-opportunity, mission-driven career path and drive more diverse candidates into the technician pipeline.

Ongoing Support

Training

Scale Training

Building on the success of our past training events, we plan to expand our reach by offering a mix of regional training, more advanced Summit sessions, and on-demand online courses that technicians can access anytime, anywhere. Working alongside contractors, end users, manufacturers, and trade associations, we'll reach more technicians while using a standardized curriculum to ensure consistent, high-quality training as we grow.

Launch Certification Program

The CO2 Training Manual will serve as the foundation for a comprehensive natural refrigerant technician certification program based on a standardized set of competencies and industry standards. By creating a recognized credential that validates both classroom learning and hands-on skills, this program will help ensure consistent, high-quality installation, servicing, and maintenance of natural refrigerant systems across the industry.

> ***Investing in CO2 training empowers technicians to keep systems running reliably and efficiently, supporting consistent store operations and a seamless experience for employees and customers. Well-trained teams are key to maximizing uptime and long-term performance, which is why we strongly support continued investment in training.***
>
> –Amber Hardy, Director of Systems & Sustainability, ALDI

Retention

Ongoing Data Collection

We plan to strengthen our data collection to better track recruitment, training, and retention, helping us measure the impact of our programs and improve them over time. By monitoring technician retention and career growth, we'll better understand how our efforts are bringing more people into commercial refrigeration and helping them build lasting careers.

Developing Best Practices

As a neutral nonprofit, we plan to convene contractors, end users, and manufacturers to share insights, identify challenges, and develop best practices that help reduce technician burnout and improve retention.

R-TRADE Supporters

Our accomplishments were made possible by your support. Thank you!

R-TRADE Founding Partners

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Thank you to all who generously co-hosted our training events!

Plumbers & Pipefitters Local 562 · Steamfitters Local Union #449 · UA Local 342 Oakland, CA · Steamfitters Pipefitters Local 455 St. Paul, Minnesota · UA 32 Seattle Washington · PG&E · Southern California Edison · California Air Resources Board · California Climate Investments · F-gas Reduction Incentive Program · New York State NYSERDA Regional Clean Energy Hub · New Yorkers for Clean Power · Cornell Cooperative Extension Smart Energy Choices — Mid-Hudson

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