

Zero-C Products Sold in 2024 Avoided the Lifetime Release of 873,000 Metric Tons of CO₂e and 21.5 Metric Tons of TFA

The calculation was based on a 20-year GWP and done as part of the process for reapproving Zero-C for the ATMO Approved Natural Refrigerants Label.

BRUSSELS, BELGIUM, October 27, 2025 /EINPresswire.com/ -- [Zero-C](#), a Canadian-Swiss refrigeration manufacturer, sold natural refrigerant products in 2024 that avoided the lifetime release of 873,000 metric tons of CO₂e (GWP 20) and 21.5 metric tons of TFA (trifluoroacetic acid), according to estimations by ATMOSphere, the publisher of NaturalRefrigerants.com.



The calculation was done as part of the process for reapproving Zero-C for the ATMO Approved Natural Refrigerants Label. That process is underpinned by a model that considers numerous

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factors, including avoided CO₂ and TFA emissions. The model assumes that every natural refrigerant-based product sold prevents the sale of an alternative using f-gases, thus avoiding that product’s lifetime refrigerant-related CO₂ and TFA emissions.

This is the first time Zero-C has been reapproved for the ATMOSphere label. It was first awarded the label in 2024.

“Being reapproved by ATMOSphere is truly meaningful for the entire Zero-C team,” said General Manager David Bastrash. “It recognizes not only our pursuit of excellence in natural refrigerants and our exceptional industrial

refrigeration and heat pump solutions but also the passion and dedication of our people. We are

committed to leading by example, pushing the boundaries of sustainable refrigeration and heat pumps and showing that innovation with purpose can make a lasting difference.”

The focus on avoiding PFAS (per- and polyfluoroalkyl substances), which include TFA, a byproduct of the atmospheric degradation of some HFO and HFC refrigerants, is a new addition to the label criteria for 2025. Recent research has deemed TFA a “[planetary boundary threat](#)” due to its potential risks to human and environmental health.

Emissions avoided

Founded in 1969, Zero-C has offices in Canada and Switzerland and manufactures commercial and industrial refrigeration systems using CO₂ (R744) and ammonia (R717) for food warehouses and processing facilities, retail stores, arenas, schools and hospitals. The natural refrigerant products Zero-C placed in the market in 2024 avoided CO₂ emissions equivalent to the energy use of 117,000 homes per year in the United States based on data from the U.S. Environmental Protection Agency (EPA) and a 20-year GWP.

Put another way, it was equivalent to taking 204,000 gas-powered cars permanently off the road. Expanding the timeline from 2023 to 2024 increases those figures to 190,000 homes and 337,000 cars, respectively.

The avoided TFA emissions of 21.5 metric tons were calculated using an annual leak rate of comparable products using synthetic refrigerants. TFA has been [found in human blood](#), usually at levels higher than that of longer-chain PFAS. Longer-chain PFAS with a similar chemical architecture (known as perfluoroalkyl carboxylic acids), such as eight-carbon PFOA, have been tied to harmful health impacts, including reproductive toxicity, ulcerative colitis and cancer.

Fully meeting expectations

Customer feedback is also essential in supporting approval for the ATMO label. Patrick Gareau, Equipment Manager at Canadian supermarket chain Sobeys, said Zero-C’s CO₂ refrigeration systems have been “successfully installed across Quebec” and have shown good performance with no issues encountered. He added that Zero-C provides training to local refrigeration technicians “for installations in regional locations” to ensure the equipment can be properly serviced.

Francis Le Moine, VP of Finance and Administration at Fruit d'Or, a provider of frozen and dried cranberries and blueberries based in Quebec, said the CO₂-based freezer provided by Zero-C has helped cut its operating expenses.

“So far the system has been very reliable and less expensive to maintain than our comparable ammonia-based system,” said Le Moine. “We intend to use CO₂ in our upcoming expansion phases, along with our supplier, Zero-C.”

Best-in-class certification

The ATMOsphere label is designed to help qualified manufacturers and contractors market products and services to new customers and regions in the natural refrigerants marketplace. Certified organizations can display the label on products, marketing materials, email signatures and trade show booths, boosting their visibility and helping end users identify best-in-class suppliers.

To qualify, companies must demonstrate excellence across four pillars:

- Company vision – a commitment to natural refrigerants as a core business.
- Customer satisfaction – positive end-user testimonials confirming reliability and performance.
- Measurable impact – mitigation of CO₂ and TFA emissions.
- Proactive training – investment in employee and stakeholder education.

Additional information on the 2025 label and the registration form can be found below.

Zero-C is the 17th company to be approved for the ATMO Approved label in 2025, joining Teko, Vahterus, Secon, Güntner, Ceptek, RefPlus, Novum, OLAB, Nihon Netsugen Systems, Equans Kältetechnik, Refra, GTS, Fenagy, ENNS Industrial Refrigeration, Zudek and SURE Solutions.

About Zero-C

ZERO-C is the reference in terms of innovation, quality and energy efficiency in the areas of commercial and industrial refrigeration, air-conditioning, ventilation, heating and controls. We study, design, plan and carry out sustainable, future-oriented solutions that are tailor-made for your products and wellbeing and that of the environment. The proven expertise of our group of engineers, designers, IT specialists and technicians will lead you toward brand new perspectives and possibilities.

About ATMOsphere

For the past 20 years, market accelerator ATMOsphere (formerly shecco) has been active in helping bring climate-friendly technologies faster to market. ATMOsphere supports over 100 partners worldwide in the HVAC&R sector, where the focus is on sustainable refrigeration, heating and cooling technologies using natural refrigerants.

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