

# Grocery Stores Slash Emissions with Honeywell's Low Global Warming Refrigerant

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By [Jessica Lyons Hardcastle](#)

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This will lower the store's [emissions](#) as well as its electricity bills. Festival Foods expects using Solstice N40 will increase the Somers, Wisconsin store's energy efficiency by 3 percent or more compared to other locations using other refrigerants. And a Honeywell spokesperson told Environmental Leader that global supermarket adoption of the Solstice N40 refrigerant has resulted in the elimination of more than 323,000 metric tons of CO<sub>2</sub>e to date.

Solstice N40 is a reduced global-warming-potential (GWP) hydrofluoro-olefin (HFO) blend refrigerant for low- and medium-temperature refrigeration equipment such as supermarket

refrigerated and freezer display cases. It is an alternative to hydrofluorocarbons ([HFCs](#)), man-made chemicals used in refrigeration systems and toxic greenhouse gases. The EPA says they can be up to 10,000 times more potent than carbon dioxide.

Zero Zone designed the refrigeration equipment for the Somers store.

Following the successful start-up at the Somers location, Festival Foods plans to design all new stores to use Solstice N40.

In supermarket trials conducted in the US and Europe, Solstice N40 demonstrated 3 percent lower energy consumption in low-temperature applications and 5 to 16 percent lower energy consumption in medium-temperature applications compared to R404A.

Honeywell says it is a near drop-in replacement for R-404A and R-507, and can also be used to replace R-22, helping users comply with [new EPA rules](#) aimed at phasing out commonly used high-GWP refrigerants for supermarket refrigeration. As of July 20, R-404A and R-507 are unacceptable in retrofit systems under the EPA rule; the deadline for new supermarkets' compliance is Jan. 1, 2017.

The international community is working to phase out high-GWP refrigerants as well. Globally, 197 countries are working to [amend the international Montreal Protocol agreement](#) to phase out HFCs.

Solstice N40 has a GWP of 1273. It is non-ozone-depleting and nonflammable, and is approved for use by major compressor manufacturers. Solstice N40 is listed under the EPA's Significant New Alternatives Policy (SNAP) Program and is UL-listed.

In other efforts to eliminate high-GWP refrigerants, late last year [Target announced](#) that all new stand-alone coolers in its stores will be HFC-free and said it will expand the use of carbon dioxide refrigeration systems to replace HFCs in new stores.

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