



## Carrier Completes Department of Energy's Cold Climate Heat Pump Challenge: Transformative Innovation Set for 2024 Commercial Rollout

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*Consumers in northern regions can use incentives such as rebates and tax credits ranging from around \$2,000 - \$8,000 depending on location and eligibility to purchase these high-efficiency units.*

INDIANAPOLIS, Sept. 12, 2024 /PRNewswire/ -- With the successful completion of field trials and laboratory testing, [Carrier](#) has achieved the Department of Energy's (DOE) Cold Climate Heat Pump Challenge for residential applications. The first DOE challenge designated cold climate heat pumps are slated for production this month at Carrier's Collierville, T.N. factory. The facility was recently designated as its Center of Excellence for high-efficiency heat pump production to support increased demand. Carrier is a part of Carrier Global Corporation (NYSE: CARR), global leader in intelligent climate and energy solutions.

"We looked at this challenge as more than an opportunity to help electrify colder climates, we saw unlimited potential in what our heat pumps could do in even the harshest regions," said Nick Arch, Vice President and General Manager, Residential HVAC Solutions, Carrier. "We're proud of our engineering team, which didn't just meet the challenge criteria but also incorporated new, innovative technologies."

Three [Carrier Infinity® variable-speed heat pumps with Greenspeed® Intelligence](#) and advanced cold climate technology trial units were installed in Syracuse, N.Y. homes for the 2022-2023 heating and cooling seasons. Under the challenge, the units:

- Operated at 100% capacity at 0 degrees Fahrenheit.
- Operated reliably down to -13 degrees Fahrenheit in the field, while operation down to -23 degrees Fahrenheit was demonstrated in Carrier labs.
- Worked with Carrier's advanced [Infinity System Control](#).

"We knew we wanted to go above and beyond the requirements to build a unit we could truly consider next generation," said Adam Finney, Director of Global Ducted Residential Systems, Carrier. "Incorporating advanced technologies that provide consistent comfort without sacrificing efficiency in frigid temperatures was key to driving adoption. Our new cold climate heat pumps offer a more energy efficient solution that more homeowners across the country can now benefit from."

In addition to meeting the challenge criteria, these units are the first in Carrier's residential ducted heat pump portfolio to provide 100% rated heating capacity at 5 degrees Fahrenheit. Units include Bluetooth modules for digital monitoring and servicing through Carrier's Connected Portal for dealers, have an observed operating range of almost 130 degrees, going up to 125 degrees Fahrenheit and as low as -13 degrees in field trials, and will use Carrier's refrigerant of choice R-454B, known commercially as [Puron Advance™](#). A new feature, advanced defrost, monitors the outdoor coil to detect the presence of frost. It then adjusts the compressor speed to ensure the unit defrosts on time, and once the unit has sensed completion of the frost melt and drain, the defrost mode concludes. Units will qualify for up to \$2,000 in income tax credits (nonrefundable) and up to \$8,000 in state rebates (subject to income restrictions, programs vary by state), and additional utility credits may be available (programs vary by location).

Carrier's participation in the challenge came on the heels of its ambitious sustainability goals in which Carrier has committed to investing \$4 billion in the innovation and development of sustainable solutions, and helping customers avoid more than one gigaton of greenhouse gas emissions by 2030.

In addition to completing the residential Cold Climate Heat Pump Challenge, Carrier is participating in the [DOE's Better Buildings Commercial Heat Pump Accelerator](#) and is developing innovative heat pump technologies in higher efficiency light commercial units with reduced life cycle costs for end users.

To learn more about Carrier, visit [www.carrier.com/residential](http://www.carrier.com/residential).

### **About Carrier**

Founded by the inventor of modern air conditioning, Carrier is a world leader in high-technology heating, air-conditioning and refrigeration solutions. Carrier experts provide sustainable solutions, integrating energy-efficient products, building controls and energy services for residential, commercial, retail, transport and food service customers. Carrier is a part of Carrier Global Corporation, global leader in intelligent climate and energy solutions that matter for people and our planet for generations to come. For more information, visit [carrier.com](http://carrier.com) or follow [@Carrier](#) on Twitter.

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