|  |  |
| --- | --- |
| **DOE Introduces Cold Climate Heat Pump Technology Challenge Partners November 2, 2021** <https://www.esmagazine.com/articles/101882-doe-introduces-cold-climate-heat-pump-technology-challenge-partners> | VRF heat pumps system |

WASHINGTON — Vice President Kamala Harris joined U.S. Secretary of Energy Jennifer M. Granholm in New York to announce the **U.S. Department of Energy (DOE) has confirmed the first six industry partners to participate in the Cold Climate Heat Pump Technology Challenge**. The challenge, which was announced in May at the White House, **aims to reduce the carbon footprint of cold climate heating solutions by improving the efficiency and affordability of new heat pumps** in the field. While in New York, they discussed the benefits of U.S. investment in clean energy and efficiency technologies, like heat pumps, to combat the climate crisis and create good-paying jobs.

Through this partnership, DOE will build upon recent industry advancements to accelerate the market's shift to more efficient, clean cold-climate heat pumps for consumers and help reach the Biden administration goal of a net-zero carbon economy by 2050.

“Cold climate heat pumps are a win-win for American families to comfortably heat their homes and businesses while significantly cutting down carbon pollution and lowering their energy costs,” said Secretary of Energy Jennifer M. Granholm. “DOE’s Cold Climate Heat Pump Challenge will mobilize the heating industry to accelerate a safer, cleaner, and greener method for heating American homes and keep families and workers across the country warm during the coldest months.”

**Through continued advancements, cold-climate, electric heat pumps have the potential to save an average U.S. family as much as $500 annually** on their utility bills, reducing exposure to volatile fossil fuel prices. Currently, space conditioning and water heating account for more than 40% of primary energy consumption in buildings in the U.S. and are a major source of carbon emissions. Heat pumps, which heat and cool buildings by extracting heat from the air, use electricity as their only-fuel source creating significant opportunities for on-site carbon emissions reductions compared to traditional gas heating appliances.

Six HVAC manufacturers will partner with DOE, Natural Resources Canada, the U.S. Environmental Protection Agency, states, and other efficiency program and utility stakeholders to demonstrate the performance of prototypical products and launch field demonstrations and pilot programs to accelerate adoption. The next generation of cold climate heat pumps developed under this challenge will have: Increased performance at cold temperatures; Increased heating capacity at lower ambient temperatures; More efficiency across broader range of operating conditions; and Demand flexibility (advanced controls to adjust usage on demand). The industry partners announcing their commitments to advance innovation and efficiency of next generation heat pump technology are:

**Carrier** (Palm Beach Gardens, Florida**) Daikin** (Waller, Texas) **Johnson Controls** (Milwaukee) **Lennox** International (Richardson, Texas) **Mitsubishi** Electric (Suwanee, Georgia) **Trane Technologies** (Davidson, North Carolina) Throughout the challenge, DOE will host regular workshops with manufacturers, as well as utility and state partners, to coordinate the lab and field-testing activities.

DOE initially launched the Cold Climate Heat Pump Challenge as part of the Initiative for Better Energy, Emissions, and Equity (E3 Initiative). The E3 Initiative advances the research, development, and national deployment of clean heating and cooling systems that include heat pumps, advanced water heaters, low-to-no global warming potential refrigerants, and smarter HVAC diagnostic tools in residential and commercial buildings.

Contact DOE’s Building Technologies Office and the Better Buildings Initiative to partner with DOE on any of these opportunities.