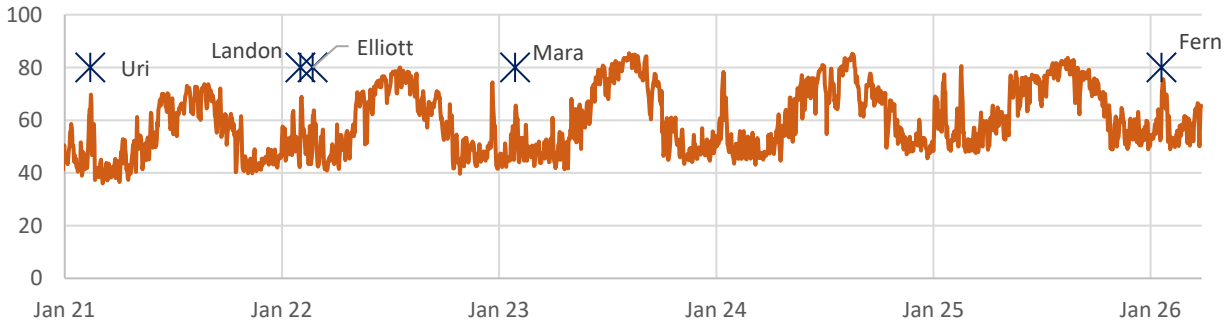
Heat Pumps Cut Costs for the Grid and Texas Families

MAY 2026

Electric resistance heating drives massive winter electric peaks

Winter storms in Texas not only dominate the news but also have a large effect on Texas electric grid planning. As seen in the graph below, total electricity demand spikes during winter storms and other periods of cold weather.[1]

These winter peaks are driven almost entirely by electric resistance heating, such as electric baseboards or furnaces that heat air with electric coils, used in nearly a third of Texas homes. Texas utilities spend billions of dollars annually on additional power generation and grid infrastructure needed specifically for these days when many people need to turn up their electric resistance heating. This additional spending increases utility bills for all ratepayers.



ERCOT Peak Daily Load (GW) January 2021–March 2026 and Beginning Days of Named Winter Storms

Heat pumps can cut peak winter heating demand in half

Replacing electric resistance heaters would reduce electric bills for Texans by avoiding the need for more expensive power generation and would reduce the risk of disruptive and dangerous blackouts. It would also free up more capacity on the grid to meet rapidly increasing electric demand.

An ACEEE analysis in 2024 found that replacing electric resistance furnaces with heat pumps in Texas would reduce peak demand during the coldest days by around 50% in a home, saving up to 12 gigawatts (GW) statewide. This is equivalent to 40 average power plants and more than double the capacity of all the data centers currently operating in Texas.

Heat pumps generate savings year-round

ACEEE's 2024 analysis found that switching from resistance heating to heat pumps saves the average Texas household $343 per year ($143 on average for multifamily housing).

Heat pumps are air conditioners that can run in reverse. They cool more efficiently than typical AC, so they reduce utility bills and peak electricity demand in the summer as well as in the winter. Their

[1] The summer peaks are often slightly higher, but additional resources are available during summer afternoons, such as solar PV.

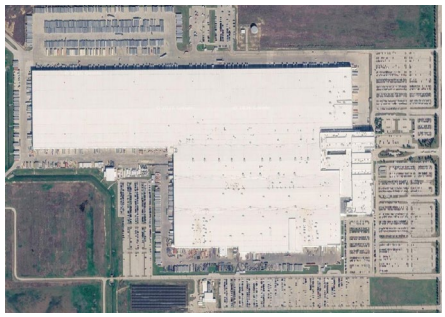
efficiency really shines during milder winter, spring, and fall temperatures, when they can outperform electric resistance by a factor of four.

The utility bill savings are enough to pay back the extra cost of a heat pump relative to central AC in about two years. Heat pumps' incremental cost over standard AC is low (as low as $87 for 1–2 ton units used in multifamily new construction in 2024).

Heat pump manufacturing supports Texas jobs

Heat pumps are already the most popular heat source in much of the South, heating about 40% of homes in Alabama, South and North Carolina, and Tennessee. And many are made in Texas in factories in Tyler (left photo below, 1,450 jobs) and Waller (right, over 10,000 jobs).

Trane plant in Tyler, Texas (1,450 jobs)
Maps Data: Google © 2026 Airbus / Maxar Technologies



Daikin plant in Waller, Texas (over 10,000 jobs)
Maps Data: Google © 2026 Airbus / Maxar Technologies, Vexcel Imaging US, Inc.

Texas can cut costs and strengthen the grid with heat pump policies

Building energy codes are key to reducing extreme peaks from new homes

In new construction, residents pay substantially higher energy bills year after year when builders install inefficient air conditioners and electric resistance systems.

Georgia, Florida, and the city of Austin have adopted building energy codes that favor efficient heat pumps over electric resistance as a primary heating source.

Texas recently adopted the 2024 International Energy Conservation Code for residential buildings, which includes a requirement for one- and two-family homes, but only for Climate Zone 4 (Texas Panhandle). The requirement should be extended south to Climate Zones 3 (Dallas) and 2 (Houston), as heat pumps are cost-effective and can reduce peaks throughout the state.

Utilities should expand heat pump programs for existing homes

In existing buildings, air conditioners are typically replaced on an emergency basis when the equipment fails. Residents often wind up stuck with another inefficient replacement model because they lack access to more efficient equipment or do not know about the higher energy costs of inefficient heating and cooling systems.

Utility efficiency programs in Texas are already successfully replacing air conditioners with heat pumps to reduce peak load, and utilities should be directed to expand these programs.