

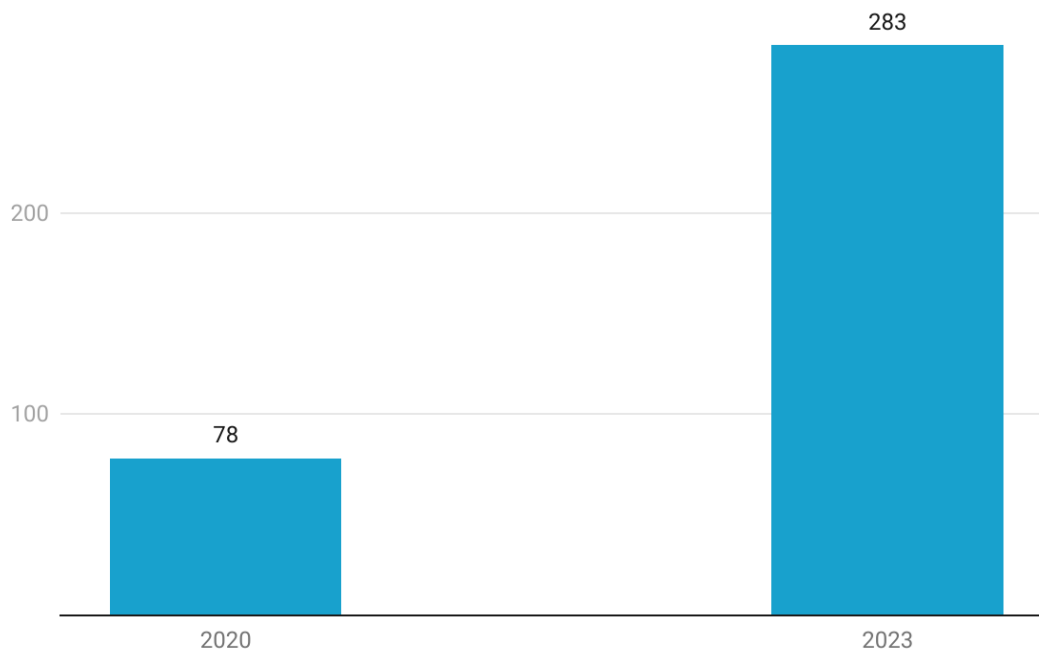
High-Efficiency Gas Furnace Installations Surge

New estimates using industry shipment data and IRS statistics show consumers make more efficient choices when selecting natural gas heating equipment

August 13, 2024

Adoption of highest-efficiency gas furnaces have increased nearly fourfold since 2020

Shipments of natural gas, propane, and oil warm-air furnaces rated 97% AFUE or higher (Thousand)



Consumers are increasingly adopting high-efficiency gas equipment due to changes in the market and the availability of incentives. The Inflation Reduction Act (IRA) included an Energy Efficient Home Improvement Tax Credit, which modified the existing 25C Nonbusiness Energy Property Credit by increasing federal tax incentives for installing high-efficiency gas, propane, and oil furnaces from \$150 previously to 30% of the project cost, up to \$600. The efficiency rating for qualifying direct-use heating equipment was raised to 97% AFUE. Actual shipments in 2023 are likely greater than reported here since higher-efficiency furnaces that did not apply for tax credits are not captured here.

Chart: American Gas Association • Source: Calculated estimates from American Gas Association based on shipment data from AHRI and IRS Clean energy tax credit statistics. IRS data reports number of tax credit returns taking credit collectively for natural gas, propane, and fuel oil warm air furnaces. • Created with Datawrapper

Data on the adoption of tax credits available in the Inflation Reduction Act of 2022 show that the number of high-efficiency (97%+ AFUE) natural gas furnaces installed by consumers has increased considerably since 2020. Consumers continue to select natural gas equipment for home heating and are increasingly installing the highest-efficiency models.

Background

The Inflation Reduction Act (IRA) introduced an Energy Efficient Home Improvement Tax Credit, which enhanced the existing 25C Nonbusiness Energy Property Credit. This enhancement increased federal tax incentives for a wide range of energy-efficient home improvements, including high-efficiency gas, propane, and oil furnaces. Under the 25C provision, incentives were raised to 30% of the project cost, up to a maximum of \$600. To qualify, furnaces must have an Annual Fuel Utilization Efficiency (AFUE) rating of 97% or higher.

The Air-Conditioning, Heating & Refrigeration Institute (AHRI) [tracks appliance shipments](#) and reported that 3.3 million furnaces were shipped in 2020, including those for existing homes and new construction. Of these, only 2.8% had a 97%+ AFUE rating. This market share was calculated using state shipment data from a Department of Energy rulemaking analysis on consumer furnaces. Excluding the 520,000 gas and propane systems installed in new homes, approximately 78,000 of the furnaces shipped in 2020 were rated at 97% AFUE.

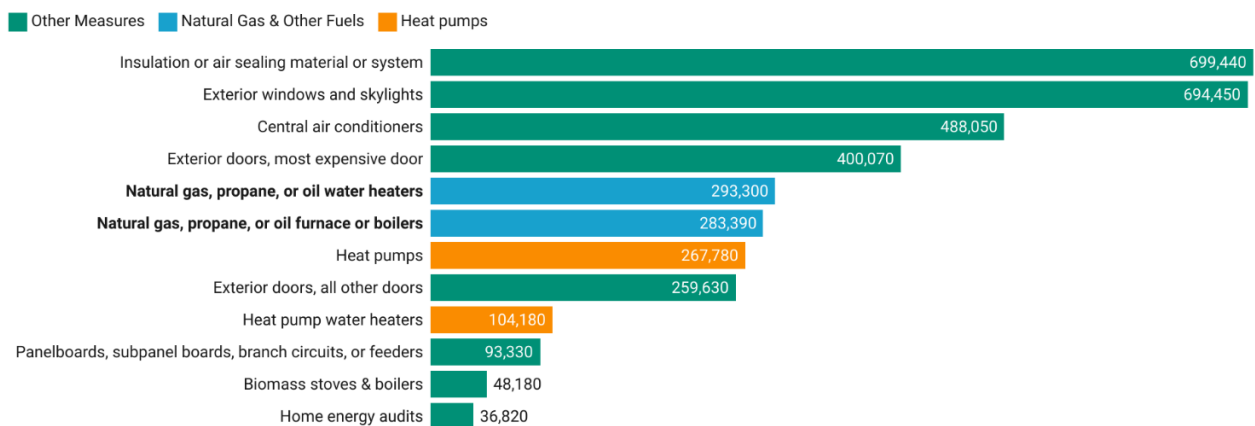
AHRI shipment data, combined with [statistics on tax credits](#) from the Internal Revenue Service (IRS), can provide insight into current market trends. The IRS reported that 283,390 taxpayers claimed the \$600 IRA tax incentive for gas and oil furnaces (and boilers) on their 2023 returns. This incentive is available only for existing homes. In 2023, AHRI reported that 3,012,135 natural gas, propane, and oil warm-air furnaces were shipped, with 492,000 installed in new homes. Based on this, if 84% of the remaining furnaces were shipped for existing homes, it can be estimated that at least 11% of these had a 97%+ AFUE rating. Actual shipments in 2023 are likely higher since this analysis does not account for shipments of 97%+ AFUE furnaces that did not apply for tax credits.

Additional Information

The Internal Revenue Service provides statistics related to the use of tax credits made available under the Inflation Reduction Act of 2022. The data includes the number of tax returns that took advantage of the Energy Efficient Home Improvement Credit and the Residential Clean Energy Credits available under the IRA. The IRS data shows that 576,690 homes took advantage of the credits for natural gas, propane, and oil water heaters, furnaces, and boilers.

Homes are using natural gas tax credits among many efficiency measures available. Consumers are taking advantage of credits that make the most sense for them.

Energy Efficiency Home Improvement Credits Issued



People are taking advantage of credits that make the most sense for them. People want natural gas equipment. It's often more affordable, familiar, and comfortable. The home improvement tax credits help ensure they are making a more efficient choice. The heat pump categories include a small number of natural gas heat pumps.

Chart: American Gas Association • Source: Internal Revenue Service, Return and Account Services (RAAS), August 2024 • Created with Datawrapper

To qualify for the \$600 credit:

- Gas furnaces must achieve an Annual Fuel Utilization Efficiency (AFUE) rating greater than 97%.
- Gas storage water heaters must have a Uniform Energy Factor (UEF) greater than 0.81 for tanks less than 55 gallons and greater than 0.86 for tanks 55 gallons or more.
- Tankless gas water heaters must have a UEF greater than 0.95.

Electric and gas heat pumps qualify for 30% of the project cost up to \$2,000 per year.

Source: *AGA Calculations, Internal Revenue Service, Air-Conditioning, Heating, and Refrigeration Institute, Department of Energy*

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