

American Gas Association: Natural Gas Furnace Efficiency Rule

NEW PROPOSED STANDARDS FROM THE U.S. DEPARTMENT OF ENERGY WOULD ELIMINATE EFFICIENT, NON-CONDENSING FURNACES, CAUSING AN UNDUE BURDEN ON, AND SIGNIFICANT COSTS FOR, MANY NATURAL GAS CUSTOMERS.

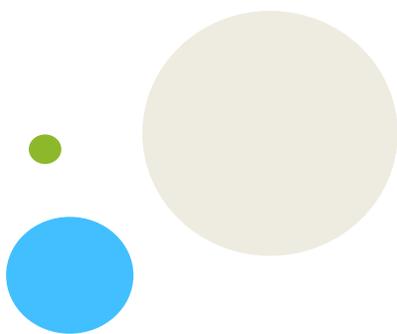
The U.S. Department of Energy (DOE) issued a notice of proposed rulemaking (NOPR) for residential natural gas furnaces, which would mandate that all non-weatherized natural gas furnaces manufactured must have a 92 percent or higher efficiency rating.

Burden on Consumers

DOE states that customers would bear between \$6 and \$12 billion in new costs, an amount that AGA believes DOE is underestimating.

- Today, because of its costs, efficiency and environmental health benefits, there are approximately 47 million homes across the country that have natural gas furnaces.
 - Most furnaces in the U.S. are non-condensing and generally vent through the roof or chimney of a home.
 - However, some homes have condensing furnaces, which include a sealed combustion area, combustion draft inducer and a secondary heat exchanger. The exhaust usually exits through the side of the house and has a separate water drain.
- Most of the furnaces in use today are non-condensing and meet the current 80 percent efficiency standard. A 92 percent efficient condensing furnace cannot be connected to the existing venting in a home, requiring a new venting system and even possible relocation of the equipment, all of which would indirectly increase the cost of the more energy-efficient natural gas appliance options.
 - On average, condensing furnaces cost about \$350 more than non-condensing furnaces, along with an additional \$1,500 and \$2,200 in installation costs.
 - For an individual who lives in an apartment or condominium where outside venting is restricted, or for a homeowner who is unable to meet venting requirements, installation of a condensing furnace would not be an option, requiring the consumer to choose an alternative energy source.
 - If a non-condensing furnace utilized a shared chimney with a water heater, the chimney will need reconfiguration after the furnace is no longer in use. Converting to a condensing furnace means the existing water heater will need new venting to meet the code, leading to additional costs.
 - Consequently, consumers would be incented to buy electric appliances that are initially cheaper, but ultimately less efficient and therefore more costly in the long term.

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- DOE has consistently obscured the assumptions, data and methodologies contained in their technical documents. Because DOE has failed to provide sufficient information needed by the public to develop a clear understanding of the technical analysis used for this rulemaking, it is impossible to ascertain whether or not the proposed rule meets the criteria established by law for setting new and/or amended standards.

Unintended Consequences

Due to challenges and costs required when moving to a condensing furnace, consumers and builders may be incented to move from the use of natural gas to another fuel with higher costs and emissions.

- Through a nationwide survey, AGA collected and analyzed data from home builders and HVAC contractors, which indicated that a sizeable percentage of change in energy source for heating/water heating systems from natural gas to electric would occur if a condensing furnace standard is established.
- Using the results from the Contractor/Builder survey along with the marginal cost study, AGA developed a model to project the impact a new efficiency standard requiring condensing furnaces would have on the three key metrics

energy efficiency standards are intended to address: consumer energy costs, primary energy usage and CO2 emissions.

- AGA modeling results indicated that all of the reductions in energy costs, consumption and emissions that would be achieved by the percentage of households that would move from a non-condensing furnace to a condensing furnace would be more than offset by the incremental energy costs, consumption and emissions associated with the percentage of households that would be forced to switch from a non-condensing furnace to electric heating and water heating systems.
- Natural gas efficiency programs today already achieve 60 percent more annual emissions reductions at far lower costs than DOE's proposed rule would accomplish after three decades of implementation. Even a low incidence of changes in heating system choices would have a negative impact, resulting in increased overall energy costs, primary energy usage and CO2 emissions.

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Natural Gas is Efficient

When used in homes and businesses, natural gas is extraordinarily efficient and emits fewer greenhouse gas emissions than other leading energy choices.

- Natural gas usage per household has decreased even as overall demand for energy has risen.
- Today, there are 30 million more households using natural gas than in 1970, but the typical American household uses 50 percent less gas than it did at that time.
- This is due in large part to natural gas utilities that promote energy efficiency in homes and businesses.
- The direct use of natural gas in appliances in America's homes and businesses achieves 92 percent energy efficiency, and a household with natural gas versus all-electric appliances saves an average of \$874 per year and produces 41 percent lower greenhouse gas emissions.
- In typical homes appliances, the direct use of natural gas results in energy consumption that is 33 percent less than a similar home will all electric appliances.

Commitment to Energy Efficiency

AGA and its members have demonstrated a commitment to promoting comprehensive, customer-focused and cost-effective approaches to increasing energy efficiency.

- AGA members provide natural gas safely and reliably to more than 177 million Americans using the safest energy delivery system in the nation.
- With more than 100 efficiency programs in 39 states, natural gas utilities are helping provide

homeowners a financial incentive to purchase and install high-efficiency gas furnaces.

- Program incentives include rebates, low-interest loans and other financial tools and state utility regulators require a justification for these programs based on the ratio of costs to benefits.
- In 2013, utility efficiency programs reduced natural gas usage in participating homes by 18 percent, the equivalent of 12 days of residential gas consumption.

Call to action

It is critical that the U.S. Department of Energy consider the full implications its rules will have on the way Americans heat their homes, and commit to developing a rule that will work toward our shared goals of environmental protection and economic advancement.

\$874

Average savings per year for households that use natural gas for heating, cooking, water heating and clothes drying instead of electricity.

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