

New Standards for Tankless Water Heaters Will Save Households Money and Cut Climate Pollution

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The U.S. Department of Energy (DOE) recently finalized standards that will lower total costs for households using new gas tankless water heaters. Less than 10% of all gas water heaters sold will be affected.

Water heating is one of the largest energy uses in most homes, usually second only to heating. Long-overdue standards finalized by DOE in December will ensure that all new gas tankless (“instantaneous”) water heaters use more-efficient technology that reduces energy waste and overall costs.

The standards are based on [recommendations](#) by a coalition of water heater manufacturers and consumer, climate, and efficiency advocates. They complement strengthened standards for electric tank water heaters and gas-fired tank water heaters—more common products—that DOE [finalized in April](#).

Standards will save energy, lowering bills

Today, homebuilders installing gas tankless water heaters often select among the less-efficient segment of such models because it saves them a little money, while the residents bear the cost of higher gas bills over the 20-year life of the water heater.

The updated standards will require new gas tankless water heaters to use about 13% less energy than today’s least efficient tankless models. This will reduce total costs by an average of \$112 over the lifetime of the product when compared to purchasing and using a less-efficient tankless model.

About 60% of new tankless units sold today already meet the new standards, and all major water heater manufacturers sell such models. These models—more than 100 of them—use condensing technology, which wastes less heat. And since tankless models are only a small portion of all gas water heaters, the standard will only affect less than 10% of all gas water heaters sold.

Consumer savings dwarf manufacturer upgrade costs

DOE estimates that the standards will cumulatively save consumers \$3.1 billion—an amount more than 100 times greater than the \$20 million it projects that manufacturers will need to invest to upgrade the manufacturing lines used for producing models with less-efficient technology.

DOE does not specify the costs to upgrade each facility, but noted that Rinnai had estimated a \$15 million cost to retrofit its U.S. plant, which produces models that do not meet the new standards (the company also produces numerous models that already meet the standards). Rinnai [suggested](#) in 2024

New standards will reduce total costs by an average of \$112 over the life of a water heater, according to DOE. They will cut 32 million metric tons of carbon dioxide emissions from units sold over 30 years.



that if the standards were finalized, it would invest to “retool” the plant at issue. In [2023](#), the company earned almost \$300 million in profits and had close to \$1 billion in cash on hand.

More-efficient tankless water heaters support jobs

DOE’s engineering analysis found that producing a gas tankless water heater that uses condensing technology requires more labor than producing a non-condensing one. Therefore, it expects that if Rinnai invests in modifying the plant, the standards could cause a small increase in domestic jobs producing tankless water heaters.

Standards unlikely to shift sales between water heater types

Consumers (or builders of new homes) who would have purchased a gas tankless water heater before the standard are unlikely to switch to gas tank products. Gas tankless water heaters are marketed for their ability to deliver endless hot water and to save space, and some people are choosing to pay more for those amenities.

The earlier-finalized standards for gas tank water heaters require a similar percentage energy savings as the savings for tankless models in the new standards. And the standards for electric tank models require a significantly larger percentage savings (63%) for most units.



Builders of new homes will still often find tankless models to be the cheaper installation choice among gas models. For homeowners replacing an existing gas tank model, switching to a tankless unit will continue to be about 65% more expensive.

Standards are widely supported

Supporters of the standards [include](#) the Consumer Federation of America, Natural Resources Defense Council, and the Air-Conditioning, Heating, and Refrigeration Institute—the major trade organization representing water heater manufacturers. The three largest water heater manufacturers ([A.O. Smith](#), [Bradford White](#), and [Rheem](#)) each individually supported finalization of the standards.

New standards were long awaited

DOE hadn’t updated residential water heater standards since 2010. By law, it was due to finalize new standards (or determine that an update was not appropriate) for all types of water heaters by 2018. When DOE finalized standards for the most common water heater types in April, it deferred action on tankless models for further evaluation. In a court-approved settlement in September, DOE committed to finalize standards for these products by December 16, 2024.

The gas tankless water heater standards will take effect in December 2029; standards for the other water heater types will take effect in May 2029.

For more information, please contact Michael Johnson at mjohnson@standardsasap.org

