ASAP | APPLIANCE STANDARDS AWARENESS PROJECT

State Appliance Efficiency Standards Focus on: Portable Air Conditioners

Portable air conditioners (ACs) serve the same function as window air conditioners. However, instead of being installed in a window, portable ACs are floor-standing units usually outfitted with wheels to allow them to be easily moved. They remove the hot air through a hose, which vents through a window.

Appliance standards are the best energy policy you've never heard of

Many of the products in our homes and businesses are covered by appliance standards that limit energy and/or water waste. Appliance standards can cover any energy- or water-using device, including home appliances, plumbing products, lighting products, and commercial and industrial equipment. In general, states can set standards for any products that are not subject to national standards. State standards are set by legislatures or state agencies and apply to products sold or installed in a state.

Proposed efficiency standard will cut energy waste by 20%

Most portable ACs on the market today waste large amounts of energy. Consumer Reports calls portable ACs "the cooling choice of last resort" and found in testing that they "barely got a room below sweltering."[1] In some cases, inefficient portable ACs add heat to a room. The proposed standard would reduce portable AC energy use by more than 20%.

The standard is already adopted in other states

The proposed portable AC efficiency standard copies a rule completed by the US Department of Energy (DOE) in late 2016 but never officially published. Even though manufacturers support the national standard, the Trump administration refused to publish it, leaving consumers and savings in limbo. A pending lawsuit may compel DOE to publish the standard, but until that happens, states are at liberty to adopt it.

California and Vermont adopted portable AC standards in 2018 effective in 2020 and 2022 respectively. Six to eight additional states are considering portable AC standards in 2019

Savings

Consumers save $125 over the life of the product.

Annual electricity savings by 2025 are enough to power about 60,000 households for a year.

Annual emissions reductions equivalent to the emissions from about 60,000 cars in one year.

Energy	Money	Emissions
700	**115**	**300,000**
Million kWh Annually by 2025	Million $$ Annually by 2025	Metric tons CO2 Annually by 2025

Consumers will benefit from the standard

The proposed standard would weed out the worst-performing, most inefficient portable ACs. Consumers will save about $125 on average over the lifetime of a portable AC unit that meets the new standard, according to DOE estimates. For some consumers, portable AC is their only choice. The standard will ensure that these consumers have a product with a reasonable level of efficiency.

If enough states adopted portable AC standards such that only compliant products were sold nationally, by 2025 annual electricity savings would reach 700 million kWh – enough to power about 60,000 households for a year -- and consumers would save $115 million annually on their electricity bills. Carbon dioxide emissions would be reduced by about 300,000 metric tons in 2025, which is equivalent to the emissions from about 60,000 cars in one year.

Efficient models are readily available

According to DOE, as of 2016, about 15% of products on the market met the proposed standard. Of the remaining portable ACs, most could meet the standard by swapping out components, rather than reengineering a new product.[1] Manufacturers can improve the efficiency of portable ACs with more efficient compressors and improved heat exchangers.

Sales of portable ACs have increased rapidly in recent years. DOE estimates that current annual shipments are more than 1.3 million. DOE identified about 250 models of portable ACs on the market, with prices ranging from about $150 to $1,000. The recently-adopted California standard for portable ACs will likely result in a significant increase in the market share of products complying with the proposed standard.

Portable ACs are manufactured outside the US

According to DOE, all portable ACs are manufactured overseas, primarily by three major manufacturers. The imported products are then sold under a variety of brands including Haier, LG, De'Longhi America, and Danby.

What's better: a window AC or a portable AC?

In general, a window AC unit will be more efficient than a portable AC unit. Window units have been improved by several rounds of national standards, while portable ACs have not had to meet any efficiency requirements. Typical portable ACs sold today use about twice as much energy as a typical new window AC.[2] Many portable ACs also do a poor job of cooling a room. But, sometimes a window AC just won't work in a certain room, so portable ACs may be the consumer's only choice. A standard that ensures a basic level of efficiency will ensure those consumers don't get stuck with needlessly wasteful products.

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1 https://www.consumerreports.org/portable-air-conditioners/are-portable-air-conditioners-a-lot-of-hot-air/
2 DOE Technical Support Document; https://www.regulations.gov/document?D=EERE-2013-BT-STD-0033-0009