



State Appliance Efficiency Standards

Focus on: Air Purifiers

Air purifiers (or room air cleaners) are portable units that remove fine particles, such as dust or pollen, and even unpleasant odors from indoor air. According to Consumer Reports, people are buying more air purifiers than ever before, but the worst-performing products may not be worth the investment due to high operating costs and ineffective air filtration.

Inefficient air purifiers can also cost a lot on a person's monthly energy bill. In fact, air purifiers that do not meet the proposed specification can use more than 500 kWh per year on average, equivalent to the annual energy consumption of a new refrigerator.

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 cover 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.

The proposed air purifier standard will cut energy use by 40%

Air purifiers that meet the proposed efficiency levels save about 40% relative to baseline products. The average lifetime of an air purifier is 9 years, and the average per-unit annual savings is just over 200 kWh. That means each time someone buys an energy-efficient air purifier over a baseline product, they save nearly 2,000 kWh of electricity over the product's lifetime. That's the greenhouse gas equivalent of driving from Los Angeles to Anchorage!

Consumers will benefit from the standard

The proposed standard would weed out the most inefficient air purifiers. Consumers on average would save about \$30 a year, or nearly \$270 over the typical 9-year life of an air purifier.

Best of all? Efficient air purifiers cost no more than inefficient air purifiers, so consumers start saving right away. **In fact, a number of retailers sell models that both meet the proposed specification and cost less than \$100.** According to an Internet search conducted by ASAP in 2020, Home Depot, Lowe's, and Walmart each sold at least five different models of air purifiers that were both energy-efficient and cost less than \$100.

ASAP estimates that about 35% of air purifier models on the market today would meet the proposed standard.

National savings from air purifier standards

If enough states passed air purifier standards such that only compliant products were sold in the US, then:

Annual electricity savings by 2025 in the US would be enough to power about 220,000 households for a year.

Annual emissions reductions in the US would be equivalent to the emissions from more than 210,000 cars in one year.

Energy

2.5

Billion kWh
Annually by 2025

Money

361

Million \$\$
Annually by 2025

Emissions

1 Million

Metric tons CO₂
Annually by 2025

The standard is based on ENERGY STAR

In 2019, ENERGY STAR published an updated specification (Version 2.0), replacing Version 1.2, which had been in effect since 2004. The proposed standard for air purifiers maintains the same stringency of Version 1.2 but uses a new metric from Version 2.0.

Despite the new metric, almost all air purifiers that meet the ENERGY STAR Version 1.2 specification would meet the proposed standard. The new metric is based on the clean air delivery rate (CADR) for smoke, instead of the older metric for dust. In addition, while V 1.2 contains a single efficiency level for all air purifiers, the new specification includes standard levels for air purifiers of different capacities, ensuring compliant products are available for any room size.

Air purifiers that do not meet the ENERGY STAR specification typically use more than 500 kWh per year on average, equivalent to the annual energy consumption of an average new refrigerator.

