

Stronger Refrigerator Standards Are a Must to Save Consumers Money, Protect the Climate

JANUARY 2023

Federal efficiency standards for residential refrigerators and freezers have not been updated in more than a decade, even as energy-saving technologies have improved. Upcoming Department of Energy (DOE) standards could ensure all models waste less energy, saving money for their users and cutting planet-warming emissions from power plants.

Many household refrigerators on the market today rely on outdated technologies that cause higher utility bills for consumers and needless climate pollution. DOE should spur manufacturers to use available energy-saving technologies in all their products by setting stronger refrigerator efficiency standards.

Today's refrigerators use far less energy than models from decades ago, even though they are significantly larger. But most models could be much more efficient. A preliminary DOE [analysis](#) from 2021 found that for the popular models with freezers at the bottom, stronger standards could potentially reduce energy use for the least efficient models by more than a third—all while ensuring consumers save money overall.

DOE's standards could effectively require refrigerators to use variable-speed compressors instead of single-speed compressors, which are more common yet far less efficient. Variable-speed models can run at a lower average speed and do not have to toggle off and on; they can also keep foods at more consistent temperatures. Stronger standards could also ensure that all models also take advantage of other efficiency improvements, such as more-efficient fan motors, heat exchangers, and insulation. These improvements would help refrigerators in the United States catch up to models in Europe and Japan, where the efficiency standards for refrigerators are more stringent.

DOE is expected to issue its proposal for household refrigerator and freezer standards early this year, with separate efficiency levels for different types of standard-size refrigerators (such as top-mount and bottom-mount refrigerator-freezers) and standard-size freezers (upright and chest freezers), as well as for compact refrigerators and freezers (used in hotels and dorm rooms, for example). Under federal law, DOE was required to propose these standards by 2017.

SAVE CONSUMERS MONEY

Inefficient refrigerators cost more over the lifetime of the product because they require more energy to operate. High-efficiency refrigerators more than pay back their higher upfront cost, DOE found in the 2021 analysis.



Stronger standards would be particularly important to reduce utility costs for renters, who rarely get to choose their own refrigerator and pay a greater percentage of their income on utility bills than homeowners do. Strong efficiency standards can help ensure that landlords buy efficient refrigerators for their rental units.

CUT GREENHOUSE GAS EMISSIONS

Phasing out the most inefficient refrigerators would reduce electricity use and thus decrease greenhouse gas emissions from power plants. Because refrigerators generally last a decade or two, standards are critical to avert already-outdated appliances going into homes and causing needless emissions for years to come.

Because about 15 million refrigerators and freezers are sold each year—and large efficiency improvements are possible—the potential reduction in climate pollution from stronger standards is significant.