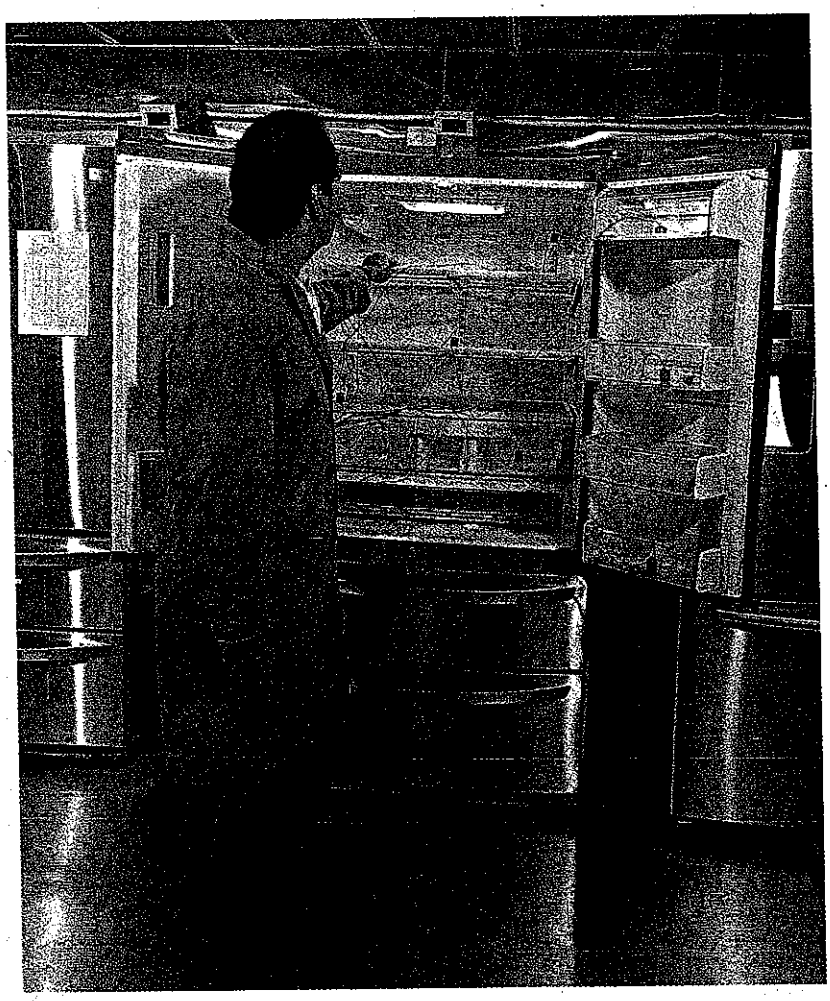
# Energy Star has lost some luster

## The program saves energy but hasn't kept up with the times

IF YOU NEED a new refrigerator, you might be drawn to the Samsung RF267ABRS. This sharp-looking bottom-freezer, which we're testing for a future report, is equipped with French doors, through-the-door ice and water dispensers, and many other inviting features.

This refrigerator might also appeal because it carries the Energy Star badge of honor, thanks to its claimed 540-kilowatt-hour annual consumption. "By being Energy Star compliant you are assured that your Samsung model is helping the environment by using less energy while saving you money," a blurb on the company's Web site says.

But in our comparative energy tests, which are tougher than the Department of Energy's and better resemble how you use a refrigerator, it used 890 kWh per year.



WIDE DISCREPANCY Senior program leader Emilio Gonzalez tests the LG LMX25981ST refrigerator. That French-door model and others we tested used significantly more energy than other manufacturers' comparable refrigerators.

There's an even larger difference between company claims and our measurements for the LG LMX25981ST French-door fridge. LG says it uses 547 kWh per year. We found through our tests that real-life energy use would be more than double.

Why the energy-use gap? DOE procedures call for a refrigerator's icemaker to be off during testing. On the LG, turning off the icemaker also shuts off cooling to the ice-making compartment, located on the refrigerator door.

In our preliminary tests with the icemaker off, the energy use we measured was much closer to LG's figure. But that's not how you'd use the feature at home since doing so melts all the ice. When we gauged energy use with the LG's icemaker on, we got a consumption of 1,110 kWh per year.

Such a loophole lets manufacturers label products more energy efficient than we've found them to be, and they get the Energy Star and its cachet when you won't see those savings.

The issue highlights a fundamental drawback to Energy Star, a 16-year-old federal program administered by the DOE and the Environmental Protection Agency that covers more than 50 product categories and is voluntary for manufacturers.

Qualifying Energy Star appliances and consumer electronics should use less energy—about 10 to 25 percent less than the DOE's maximum allowed amount for that category. Last year alone, according to Energy Star, the program slashed greenhouse-gas emissions equivalent to those of 27 million vehicles and saved Americans $16 billion in energy costs. But our investigation has revealed some flaws:

**Qualifying standards are lax.** About 25 percent of products in a category should qualify, according to the EPA. But until recently, for example, 92 percent of all dishwashers qualified. Under a tighter standard, it's now about 50 percent. A high number of residential-use oil-fired

boilers (67 percent) and dehumidifiers (60 percent) also qualify for the program.

**Tests are out of date.** Federal test procedures haven't kept pace with technology, a point Energy Star leadership conceded in a meeting with Consumers Union, nonprofit publisher of CONSUMER REPORTS.

"A number of test procedures are out of date or problematic," says David B. Goldstein, codirector of the energy program at the nonprofit Natural Resources Defense Council (NRDC). "Part of the reason is that the DOE doesn't have the staff they need to do very much on test procedures. There's also willpower. They don't want to do it."

What's more, it usually takes the DOE three years to publish new rules—a period that includes comments from manufacturers, organizations such as Consumers Union, and others—and another three years for the updated minimum efficiency requirements to take effect. Comment cycles at other federal agencies are much shorter.

Input into the rule-making process by those who have a vested interest in easy-

## Until recently, 92 percent of dishwashers qualified for Energy Star.

to-meet standards, such as manufacturers, can also help dilute those standards. "Because of all the parties involved, you may get a level that isn't as aggressive as it could be," says Jennifer Thorne Amann, director of the buildings program for the nonprofit American Council for an Energy-Efficient Economy.

**Companies test their own products.** The DOE does not test products for compliance with its standards; manufacturers do it. And there's no independent verification of what they report. Rather, the government relies on manufacturers to test their competitors' appliances and notify it of suspicious energy-use claims.

### A standard intended to be gold

Energy Star grew out of efforts by the federal government to forge a set of nationwide guidelines and create a logo that clearly indicates energy-efficient products. "Prior to Energy Star," Amann says, "different states and utilities had their own symbols. It was confusing for anyone trying to promote energy efficiency."

Today, more than 70 percent of U.S. consumers are aware of the logo, the EPA says. "You know you're getting some level of energy efficiency beyond the average when you see the logo," Amann says.

Energy Star often raises standards, as it did in 2007 for washers. Recent revisions include the Modified Energy Factor, which accounts for how much water a washer leaves in a washed load and is the best measure of the energy it takes to wash and dry a load.

Even as Energy Star has modernized, it is not nimble enough, critics say. The Consumer Federation of America, the NRDC, and many states say federal officials must do a better job creating and enforcing tougher standards to prevent appliances and electronic devices from getting the Energy Star when they shouldn't.

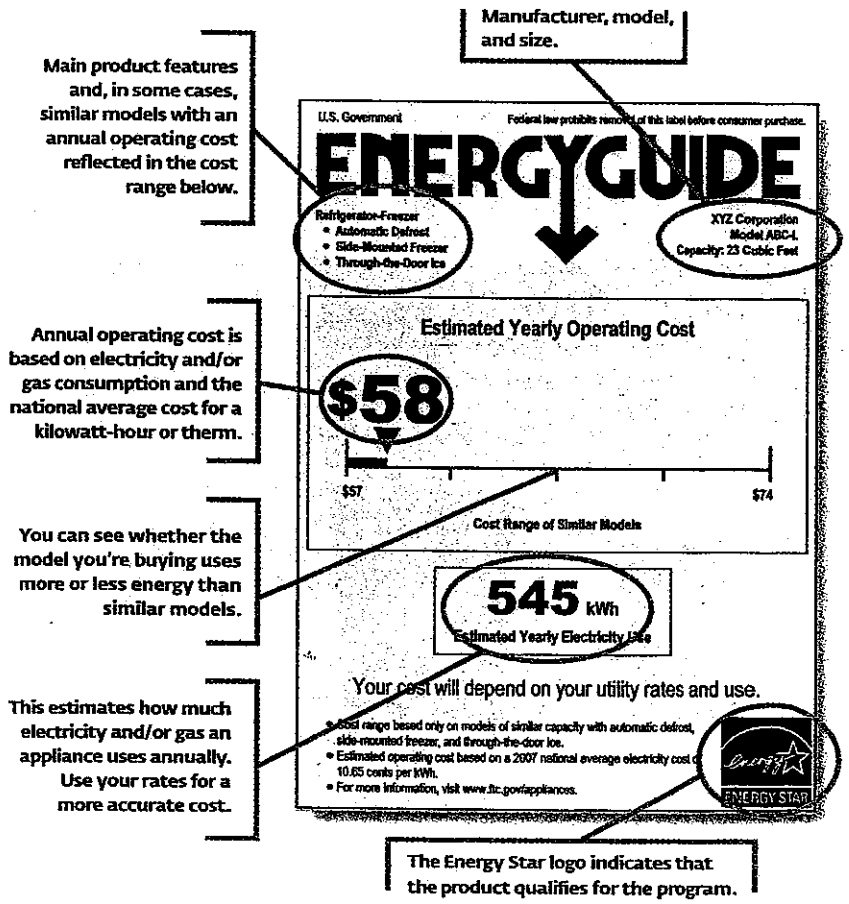
"If a manufacturer wants to claim it has a refrigerator that meets Energy Star, should it be allowed to use a test procedure that lets it say things it ought to know aren't going to be true for how consumers will use the product?" Goldstein asks. "Companies shouldn't get to hide behind test procedures."

In our own tests, we've seen large differences between the energy use we found for three LG and two Samsung Energy Star French-door models with through-the-door ice and water dispensers and the use claimed on their EnergyGuide labels.

A reason for such discrepancies is that DOE testing procedures didn't anticipate French-door models with ice-making com-

## How to interpret the EnergyGuide label

Energy Star appliances should use at least 10 to 25 percent less energy than nonqualified models. Many appliances are required to carry the Federal Trade Commission's EnergyGuide label. It lets you compare the energy consumption of appliances and determine approximately how much it will cost you to run them.



partments in the refrigerated section. Manufacturers of that type of French-door refrigerator needed a waiver to be able to sell their models in this country.

We've also found through our tests that although the EnergyGuide labels on French-door models from three manufacturers state comparable energy-use figures, there are greater differences among the products.

In a June 2008 meeting with Consumers Union representatives, David E. Rodgers, the DOE's deputy assistant secretary for Energy Efficiency in the Office of Technology Development, Energy Efficiency and Renewable Energy, acknowledged that federal test procedures are outdated.

Our tests have revealed problems with other DOE protocols. The DOE test for dishwasher energy used to involve washing clean dishes. In our tests, we've always used a full load of heavily soiled dishes. That demanding workout provides a better gauge of how much energy dishwashers consume when you don't prerinse dishes. Today manufacturers must test a mix of moderately, lightly, and barely soiled dishes.

Self-testing and self-reporting by manufacturers can create other problems. The Energy Star Haier ESAD4066 air conditioner lists a 12.0 Energy Efficiency Rating (EER). That model lacks certification from the Association of Home Appliance Manufacturers, a third-party organization, so we had a recognized outside lab test one according to DOE tests. The lab measured a significantly lower 10.9 EER, borderline for Energy Star.

And when our tests showed that Haier's HD656E dehumidifier removed less water per day than the claimed 65 pints, we had the same lab test it under DOE protocols. The analysis showed that it produced 51.9 pints a day, squeaking by for Energy Star.

### The future of Energy Star

In a recent report, the EPA inspector general was critical of efforts to deal with the misuse of the Energy Star. "The Energy Star staff believe that Energy Star products not meeting qualification standards for the program will be reported to EPA by rivals," the report says. But "Energy Star program officials did not produce any evidence the asserted self-policing is occurring."

## A lawsuit spurred moves to change standards.

The DOE is also addressing issues that arose out of a 2006 settlement it reached after being sued by the NRDC, several states, and others to force it to create new energy standards and revise others.

Consumers Union recommends the following changes to fine-tune Energy Star:

- The DOE and EPA should bring test procedures and standards in line with the technology available in consumer products. They must also more frequently review procedures and standards as new technology and products, such as French-door refrigerators, hit the market. The DOE has said it will convene a public meeting to discuss updating test procedures for refrigerators.
- The DOE should require independent verification of test results. That need is underscored by the fact that our tests found wide energy-use discrepancies among comparable refrigerators from different manufacturers even though those models had a similar claimed energy use.
- The program should consider a graded qualifying system like the European Union's Energy Label, which uses letters from A++ to G. That way, you could easily find the best or choose a model that just misses top honors, since the most efficient products often cost more.
- Federal officials need to better police companies and enforce standards, including increasing spot checks of Energy Star-qualified products. That is important since companies have put the Energy Star on products before getting formal acknowledgement. And retailers sometimes alter or improperly display the EnergyGuide label.

Efforts like those could go a long way toward keeping nonqualified products from getting the Energy Star since pulling qualification from a product would be a big blow to a major manufacturer.

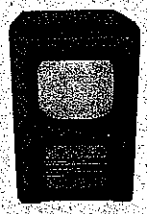
Until the federal government revamps its energy-use procedures and standards, you could be left wondering whether you're getting what you pay for when you reach for the Energy Star.

## Watts on TV: Energy consumption over the decades

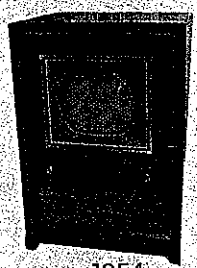
The earliest TV sets consumed as much electricity as today's energy-hungry plasma models. But newer designs in circuitry dropped wattage to less than half by about 1980 even as screen sizes grew.

Today there's a wide variation in how much power the different types of television sets consume. And there's no federally imposed limit on how much electricity TVs can use.

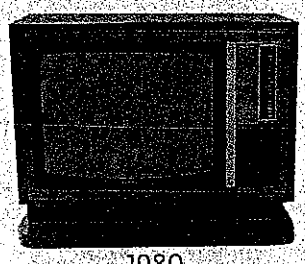
But Energy Star has updated its TV criteria, which go into effect Nov. 1. The new guidelines will cover energy consumption while a set is on and how much energy it uses in standby mode.



1938
DuMont Model 180
**250 watts**
The first electronic TV, the DuMont had an 8x10-inch black-and-white picture.

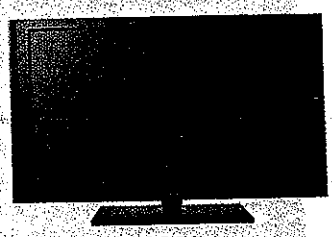


1954
RCA CT-100
**475 watts**
The early color TV had a screen with a 12½-inch viewable area.



1980
Sony KV2601
**102 watts**
This 26-inch CRT, reviewed in our January 1980 issue, came in a 3-foot-wide cabinet.

2000
Sharp LC-10A2U
**28 watts**
One of the first flat-panel TVs sold in the U.S., this 10-inch set was 2½ inches deep.



2008
Samsung FP-T5084
**250 watts**
This 50-inch plasma, at medium brightness, uses the same energy the DuMont did.