



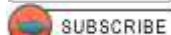
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Home energy Q&A

By KEN SHEINKOPF - McClatchy-Tribune News Service

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Q: We've got some older appliances in our home that still work OK, but I'm thinking they use a lot of energy and maybe we'd be better off buying newer ones that will cost less to operate. Is there a way to figure out when it's time to buy new ones

A: I like the way you're thinking. As energy costs have risen over the years, it can make sense to get rid of older appliances and buy new energy-efficient ones that will save you energy on your monthly utility bill. The true cost of an appliance is how much it costs to buy plus its lifetime maintenance costs and utility bills.

There are a couple of ways to answer your question.

First, you can estimate how much energy an appliance uses with a simple formula: the daily kWh (kilowatt-hour) usage can be calculated by multiplying the product's wattage times the number of hours it is used each day. Multiply this result by the number of days you use the product each year, convert the result to kilowatt-hours, and then multiply this by the kWh rate you pay your utility company (this rate is available on your monthly bill).

For example, say you've got a 200-watt fan that you use about four hours a night for four months a year (120 days): 200 watts times 4 hours a day times 120 days equals 9,600 watts. Divide this by 1,000 to convert the watts to kWh, then multiply the result by the rate your company charges (let's say it's 10 cents per kWh). The answer is \$9.60 per year for the electricity to power the fan. You can use this formula to estimate energy usage for any product in your home (the only exception is when you calculate energy use of refrigerators. The U.S. Dept. of Energy recommends that you divide the total time you use the refrigerator by 3 because even though the appliance is plugged in all the time, it actually cycles on and off to maintain the required temperature).

Most appliances have their wattage stamped on the back or bottom of the unit, so it's usually easy to find the information you need. Keep in mind this is just an estimate, since many appliances are used at different power levels so the actual energy use is hard to determine precisely.

If you really want to get the exact figure, though, there is a second answer to your question. Put words like "power meter" or "power monitor" into your computer's search engine and you'll find a number of fairly low-cost products on the market that are specifically designed to let you measure the actual power use of products in your home. Just plug the television or toaster or electric fan or any other electricity-using appliance into the meter and plug that unit into the wall. You'll get an easy-to-read measurement of current energy use, and you can then compare this number with the energy use of a new appliance you're looking at in a store. Many new products have labels telling what their estimated annual energy use is, so a comparison will quickly let you know if you'll save enough money by buying a new one to make the purchase a smart one to do.

Knowing how much energy you use lets you change your lifestyle to save energy at various times. Once you find out how much energy that big- screen TV actually uses, you'll possibly think twice before leaving it on when no one is watching it. That electric space heater you keep near your desk may use so much energy when it's in use that wearing a sweater might keep you just as comfortable in cold weather without running up the electric bill.

The United Kingdom recently announced that they plan to put "smart" energy meters in every home and business in the country by 2020 that will help homeowners and renters easily track how much electricity and gas they are using. This information can help the consumer pay more attention to ways they are now wasting energy. If you don't believe that this really works, go outside and take a look at your home's electric meter. If that dial is spinning quickly, it's letting you know that you're using a lot of electricity right now. Turn off some unneeded lights and appliances, and another look at the meter will show that it's slowed significantly.

Knowing how much energy you're using is an important first step in reducing energy waste.

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