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## Power rankings

### Calculating home energy use online; does it pay to improve?

By Stephanie I. Cohen  
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**WASHINGTON (MarketWatch) -- While homeowners can't slash the price of energy services charged by local providers, there are plenty of online tools to help figure out how much power a home is consuming or wasting -- if you dare.**

These online tools are often comprehensive, allowing consumers to calculate the power consumed by nearly every appliance in a home. They can even gauge the cost of using each light bulb and investigate ways to save money.

The residential home market accounted for 21% of the power consumed in the U.S. in 2004, according to the Energy Department. More than half the energy a home consumes is through the heating and air conditioning system.



#### Real estate tools

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"Home energy costs have been rising since 1967. They reached an all time high in 2004, even after [adjusting] for inflation," according to a recent study from Harvard University's Joint Center for Housing Studies.

In some areas of the U.S., prices are rising by double digits. Many power companies are plugging online energy calculators, audits and other Web tools as a way to ease customer wrath over skyrocketing bills and help homeowners get a handle on their costs.

Energy-efficiency experts say online calculators and audits based on answering questionnaires help generate awareness about outdated refrigerators and insufficient insulation and can produce a rough estimate of net energy use.

"They are undoubtedly extremely useful for helping create awareness," said Harvey Sachs, director of the buildings program at the American Council for an Energy Efficient Economy.

"It allows you to think through a strategy" for reducing consumption, Sachs added.

These sites "can ballpark the magnitude of your problem probably," and help homeowners "focus in on what they can do" to reduce cost, said Brian Castelli, executive vice president of the Alliance to Save Energy.

#### Web-based tools

The federal government developed one of the earliest Internet-based tool for calculating energy use in residential buildings at Lawrence Berkeley National Laboratory and introduced it in 1996. By entering a ZIP code, the Home Energy Saver lets consumers find out what the average power bill in their neighborhood is and how long it would take to recoup investments in high-efficiency appliances. [Visit the site.](#)

Want to know how much power it takes to run a home office? San Diego Gas & Electric lets customers use a similar calculator to see how energy demanding an office setup is. [Go to the Web site.](#)

Customers of energy provider Entergy can use a Home Energy Calculator, Appliance Calculator and Lighting Calculator to determine how much power a home is pulling off the grid and the cost. By answering 16 questions about the structure of a home, types of windows, heating sources and the number of occupants, the calculator will generate an approximate annual heating bill. [Check out the calculator.](#)

Entergy also lets customers estimate the energy used by each household appliance, from clock radios to ceiling fans. A blow dryer used for just a handful of minutes each day tacks on around \$11.83 a year to energy bills. Each 100 watt light bulb used for six hours a day will add \$23.65 a year to a power bill. [Appliance calculator.](#) [Light calculator.](#)

Pacific Gas & Electric Co. invites consumers to use a "Home Energy Analyzer." By answering about two dozen questions about a home, homeowners receive suggestions about the best ways to save energy. [See the analyzer.](#)

Consumers interested in alternative energy upgrades for their home such as solar power can use their ZIP code to determine the cost of adding solar technology to their home and the state and federal tax credits available in a particular location. [Check out the solar site.](#)

The Tennessee Valley Authority, which provides power to nearly 8.5 million homes, will mail customers a "Home e-Valuation." A few weeks after filling out a questionnaire and sending it back, homeowners receive a customized report suggesting ways to boost heating, cooling, lighting, and appliance efficiency. [Visit the TVA site.](#)

#### Accuracy in prediction

So just how precise are these tools? The real value for consumers is the physical survey that is required to collect the information and input it into the calculator, Sachs said.

"By doing the data entry required you're increasing your sensitivity to the ways you are using or wasting energy," Sachs said.

But Sachs warned that online tools and calculations come with a margin of error. "It's not just whether you have insulation but how well it was installed," he said. "I would...not be surprised if any of these [calculators] miss by 15% the amount of energy I'm going to use," he added.

The Entergy site warns consumers that the calculator is "not intended to be extremely accurate, but rather, to provide a comparison platform." The site uses average fuel prices over a three-month period but not the most recent months due to reporting delays.

#### The value of investments

Despite soaring energy costs, a majority of Americans still hesitate at the cash register when it comes to investing dollars to improve home energy efficiency.

The Harvard report confirmed this, finding that rising home energy costs typically don't lead homeowners to make significant investments in energy-efficient improvements, unless costs remain high for several years.

For many homeowners deciding whether to invest in more energy-efficient windows or upgrade a heating system the biggest question is what it will do for the resale value of their home.

Energy efficiency upgrades can be a selling feature but efficiency alone isn't a top concern for most home buyers, said Dave Fanale, a real estate broker and owner of Century 21 Eudan Realty in Hasbrouck Heights, N.J.

"Energy efficiency is a factor [for home buyers] to a point...but not as big as you would think" given current energy prices, Fanale said.

But Fanale added that while energy-efficient products and improvements "will not be a deal breaker" for most buyers, they could be "a deal maker" for a particular energy-conscious client.