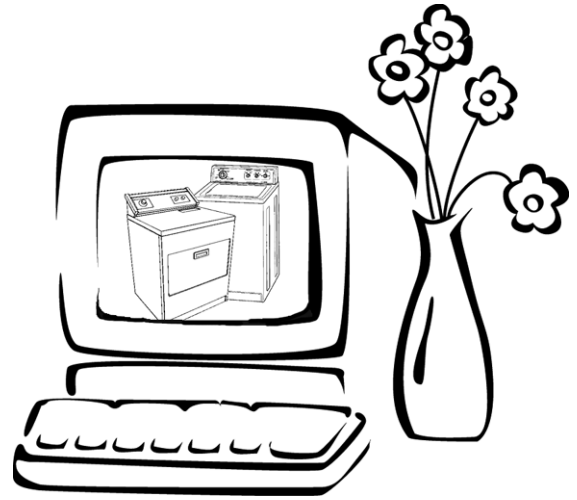


Web Resources for Energy-Saving Appliances

by Marlene Vogelsang



Energy-efficient home appliances provide a way to save energy, save money, and contribute to protecting the environment. Where can you find up-to-date information on energy-efficient appliances? One place to look is the World Wide Web.

Currently, most Web sites for appliance energy efficiency are geared to the consumer. Exceptions include the California Energy Commission Appliance Efficiency Database, which details efficiency exceeding federal standards for use in planning and implementing efficiency programs, and the Association of Home Appliance Manufacturers site, which includes information for the industry. Given the increasing popularity of Web-based information, I expect to see more robust and customized Web resources in the coming years.

Following are brief summaries of a handful of sites that I think are both legitimate and helpful to people in the field of energy efficiency. Please note that Web sites are always “under construction,” so don’t be too surprised if the information has changed by the time you visit or revisit the site. At the time this article went to press, the Web site addresses and content descriptions were accurate.

Government Web Sites

Two of the most complete and usable Web sites for appliance energy efficiency are posted by the government.

Department of Energy

The Department of Energy (DOE) has a helpful Web site at www.eren.doe.gov/buildings/consumer_informa-

[tion/](http://www.eren.doe.gov/buildings/consumer_informa-). It provides information about the department’s Appliance Standards Program and the economic and environmental benefits of choosing and using efficient appliances. The site provides generic discussion of home appliances and heating, cooling, and water-heating equipment. A consistent and straightforward design makes for easy navigation through the site.

Want to know more about government regulation of the efficiency of residential appliances—or just wondering what that bright yellow EnergyGuide label is all about? You’ll find the answers on this Web site. The downside is the absence of brand names and detailed data for these appliances.

The site provides a link to each type of appliance, where more information is available on that item’s typical efficiency and the savings possible under the latest DOE appliance standards. Each appliance page features a set of tips. The first section, “Tips for Buying,” offers useful guidelines for choosing a more efficient model. The next section, “Tips for Lowering Energy Usage,” suggests practical ways to enhance energy savings during everyday use and maintenance. The final section gives links to additional publications and information resources, as well as to Web sites of major manufacturers. This site gives clear and easy-to-understand information about more efficient home appliances and ways to use them more effectively.

Energy Star

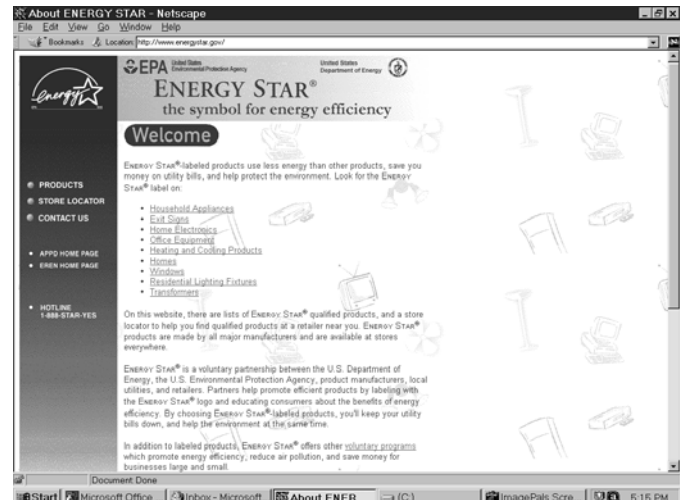
The Environmental Protection Agency (EPA) and the DOE maintain a joint Energy Star Web site at www.energystar.gov. It is easy to move through and provides a great detail of information about specific products and energy use. It also is the most interactive of the sites mentioned here, and takes advantage of the Internet’s programming ability to provide customized information.

The Web site gives consumers an interactive search capability for energy saving appliances. Consumers can find detailed information on clothes washers, refrigerators, dishwashers, and room air conditioners (other household appliances are not covered by the program). They can search each product by brand, type, or size, or do a Quick Search by model number.

The results include data on energy consumption, government minimum standards, product test data, and the percentage of units exceeding minimum federal National Appliance Energy Conservation Act (NAECA) standards. The results can be sorted according to brand or type for easier comparison either within a single manufacturer or among selected brands. The “Find Products” page at www.energystar.gov/products/product-finder.html allows users to be either very general or very specific in their methods of seeking information.



The Department of Energy's Appliances home page offers links to efficient appliances and information on the EnergyGuide label.



The Energy Star Web site offers detailed information about efficient appliances as well as other products that can display the EnergyStar label.

More targeted information is available through the "Find Stores" feature, which allows browsers to find nearby stores that feature Energy Star products. Simply enter the zip code and a mileage radius, as well as the type of product wanted, and a single click brings up a listing of retail stores and addresses tailored to those specifications. I found this feature fairly accurate; a spot survey of listed stores in two zip codes showed all but one carried Energy Star-labeled appliances.

Energy Star does not stop there! The on-line "Calculator" feature allows consumers to customize their calculations for an estimate of savings from Energy Star products compared to typical appliances.

The calculator is currently available only for clothes washers.

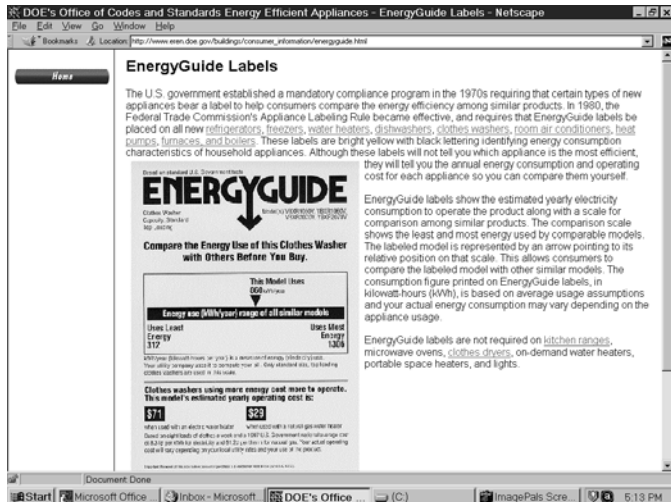
Interested in a new clothes washer? Simply enter the electricity rate, the cost of the water, and the number of loads that are typically run each week; then choose a brand and model for comparison. The program automatically accounts for different tub sizes and then computes the savings against a typical washing machine. A bar graph displays the savings in dollars, while text information provides savings in water used, kWh of electricity consumed, and dollars from energy and water costs.

According to Jennifer Fitzgerald of the Energy Star Programs Office, the appliance product pages are updated

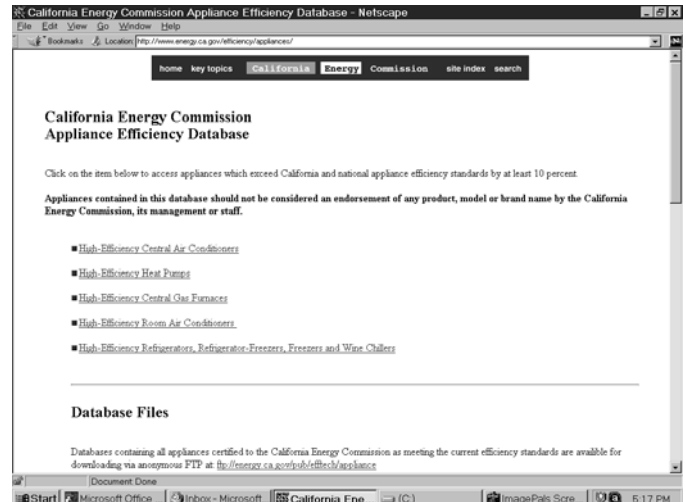
about once a month; partners and stores are added continuously. She invites readers to e-mail suggestions for the site to info@energystar.gov.

California Energy Commission

Since 1978, the California Energy Commission has provided directories of appliances that exceed California and national appliance efficiency standards by at least 10%. These files are now on the CEC Web site, www.energy.ca.gov. The database has been used by utilities in demand-side management programs, for building inspectors for building standards compliance, by agencies that do related research, and by consumers looking for product information.



The EnergyGuide labels site explains the estimated yearly electricity consumption for product operation, allowing the consumer to compare usage among similar models.



Detailed performance information on selected high efficiency appliances is available from the California Energy Commission Appliance Efficiency Database. Data can also be downloaded via anonymous FTP.

The data can be viewed on-line or downloaded via anonymous FTP, which is an Internet file transfer protocol that allows the sharing of very large databases or other electronic file formats between two computers, generally connected via the Internet.

High-efficiency appliances detailed in these files include central air conditioners, heat pumps, central gas furnaces, room air conditioners, refrigerators, refrigerator-freezers, freezers, wine chillers, and gas and electric water heaters. Data are available by size and by Seasonal Energy Efficiency Ratio (SEER) and Energy Efficiency Ratio (EER); heat pumps have Heating Seasonal Performance Factor (HSPF) and gas furnaces are shown by fuel type and Annual Fuel Utilization Efficiency (AFUE) ratings. Files are updated monthly. You can view them at www.energy.ca.gov/efficiency/appliances.

The CEC also provides a useful glossary of definitions of each appliance and of terms used in its database reports. Its site delivers detailed energy consumption information in a straightforward style.

Lawrence Berkeley National Laboratory

The Environmental Energy Technologies Division of Ernest Orlando Lawrence Berkeley National Laboratory (LBNL) offers appliance information at its Home Energy Saver Librarian page, http://hes/librarian_frame.html. This page provides a link to the ACEEE's "Most Energy-Efficient Appliances" list, and gives useful information on residential energy software, utility programs, home energy rating systems, and financing opportunities. The Product Information page links to Energy Star-labeled appliances and to the ACEEE annual appliance ratings. This page includes not only major residential appliances, but also home office equipment such as computers, printers, and fax machines, as well as home electronics such as TVs and VCRs.

Trade and Energy Association Web Sites

Trade or professional-interest associations have long been a rich source of information, and the Web sites they

post are often a valuable resource. Web resources are geared to the association's membership and focus on the association's special interests.

American Council for an Energy Efficient Economy

The American Council for an Energy Efficient Economy (ACEEE) publishes an annual list of the most energy-efficient residential appliances. Portions of these lists are currently available on the Web site of the Environmental Energy Technologies Division of LBNL at <http://eetd.lbl.gov/hes/ACEEE/intro.html>. Click on Product Information. The lists provide information on the very highest-rated models (less than 5% of models currently available) that are mass-produced and are widely avail-

able in the United States. It lists only appliances for which there are standardized efficiency ratings.

Products included in the listing are refrigerators, freezers, dishwashers, clothes washers, water heaters, room air conditioners, heat pumps, furnaces, and boilers. Estimated annual energy consumption is provided in kWh for refrigerators, freezers, dishwashers, clothes washers, and electric water heaters; and in therms per year for gas appliances. Efficiency ratings (the higher the efficiency rating, the lower the operating cost) are given for furnaces, heat pumps, boilers, and air conditioners. ACEEE's Web site at www.aceee.org/consumer-guide provides information from its helpful book the *Consumer Guide to Home Energy Savings*, including tips for saving energy in the home.

Appliance Web Site Sources

U.S. Department of Energy
Energy Efficiency and Renewable
Energy Network (EREN)
Forrestal Building
1000 Independence Ave. SW
Washington, DC 20585
Tel: (800) 363-3732
Web site: [www.eren.doe.gov/
buildings/consumer_information/](http://www.eren.doe.gov/buildings/consumer_information/)

U.S. Environmental Protection Agency
Energy Star Program
MC 6202J
Washington, DC 20460
Tel: (888) STAR-YES
Web site: www.energystar.gov/

California Energy Commission
1516 Ninth St.
Sacramento, CA 95814
Appliance Efficiency Database
Betty Chrisman
Tel: (916) 654-4080
Web site: [www.energy.ca.gov/
efficiency/appliances](http://www.energy.ca.gov/efficiency/appliances)

Lawrence Berkeley National Laboratory
Energy and Environment Division
1 Cyclotron Road
Berkeley CA 94720
Tel: (510) 486-4000
Web site: [http://hes.lbl.gov/HES/
librarian_frame.html](http://hes.lbl.gov/HES/librarian_frame.html)

American Council for an Energy
Efficient Environment (ACEEE)
1001 Connecticut Ave. NW, Suite 801
Washington, DC 20036-5504
Tel: (202) 429-8873
Web site: www.aceee.org

Association of Home Appliance Manu-
facturers (AHAM)
20 N Wacker Drive, Suite 1231
Chicago, IL 60606
Tel: (312) 984-5800
Web site: [www.aham.org/
homepage.htm](http://www.aham.org/homepage.htm)

Consumer Reports Online
Consumers Union
101 Truman Ave
Yonkers, NY 10703
Tel: (914) 709-0506
Web site: www.consumerreports.org

City of Austin Green Builder Program
P.O. Box 1088
Austin, TX 78767
Tel: (512) 499-3509
Web site: www.greenbuilder.com

Consolidated Edison
Cooper Station
P.O. Box 138
New York, NY 10276-0138
Tel: (800) 752-6633
Web site: www.coned.com

Maytag
403 W 4th St. N
Newton, LA 50208
Tel: (515) 792-7000
Web site: www.maytag.com

Whirlpool Corporation
Whirlpool Homelife Network
2000 N M-63
Benton Harbor, MI 49022
Tel: (800) 253-1301
Web site: www.whirlpoolcorp.com



The Home Energy Librarian page from Lawrence Berkeley National Laboratory offers links to variety of residential energy-related information, including appliances, home energy rating systems and additional energy resources.



The Association of Home Appliance Manufacturers (AHAM) provides consumer information on its Web site. A series of consumer bulletins gives advice on use, maintenance, and repair of major appliances.

Association of Home Appliance Manufacturers

The Association of Home Appliance Manufacturers (AHAM), provides industry-focused efficiency data at www.aham.org. On-line bulletins offer advice on the use, maintenance, and repair of major appliances in the “Ask the Experts” section at www.aham.org/indexconsumer.htm. Take a look here to learn about everything from warranties to rust prevention.

For the industry, a link in the “Government Relations” section provides a detailed explanation of the National Appliance and Conservation Act of 1987 as well as the latest information from the DOE on the Appliance Stan-

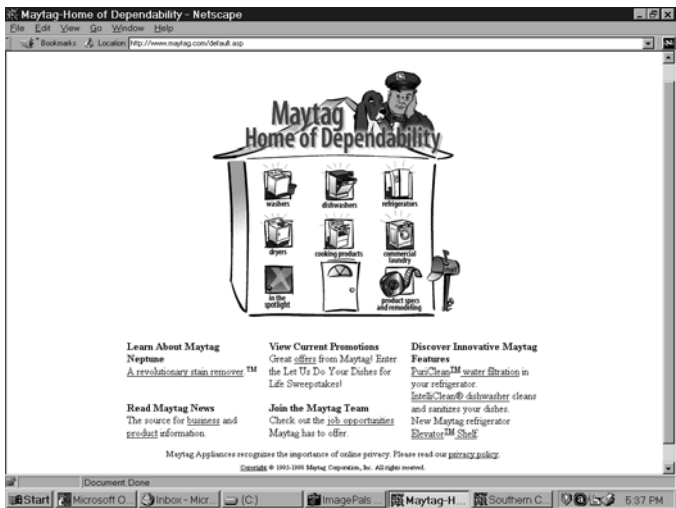
dards program. Energy efficiency and consumption trends are also detailed. For example, a year-by-year table shows that refrigerator efficiency has improved by more than 190% since 1972; and that upright freezers are more than 100% more efficient than the 1972 models. AHAM’s performance certification through third-party testing is also discussed here in detail.

Consumer Reports

The venerable Consumers Union offers a Web-based version of its consumer products evaluation magazine at Consumer Reports Online—www.consumerreports.org. This is a reasonably priced subscription-based service; for

just \$2.95 a month or \$24 annually, you get current and post-1996 product evaluations and reports. The home page offers links to types of products evaluated, so you also have access to reviews on cars and home electronics, as well as personal and leisure, health, and food products. In addition to providing detailed product information and evaluation, the Web site links to Consumers Union’s testing lab for a glimpse behind the scenes in product testing.

The reports rate appliances on a number of factors, including energy use and efficiency. Each report takes a look at key features, new product innovations, and repair history, as well as typical pricing. The discussion of testing



Appliance manufacturers often provide information about choosing, using, and maintaining their energy-efficient appliances.



and comparison is extensive, clearly written, and easy to understand. The ratings are displayed graphically, as in the print version.

Green Builder

The City of Austin's Green Builder Program publishes the *Sustainable Building Sourcebook*, which covers a wide range of issues on environmentally sound building practices. Energy is one of the issues covered, and a chapter on energy-efficient appliances provides a general discussion of refrigerators, dishwashers, and clothes washers.

The chapter also lists U.S. distributors of European products. An electronic version of this document is available at www.greenbuilder.com/sourcebook/EnergyEffAppliance.html.

Utility Web Sites

Not surprisingly, most utilities offer some kind of information on energy-saving appliances on their Web sites. Information ranges from a brief set of tips on using appliances more effi-

ciently to guides to choosing and using appliances and calculating their energy consumption. Most of this information is geared to the consumer, but at least one was designed to help HVAC contractors in sizing air conditioners.

Consolidated Edison, in New York, has a Web site that offers an interactive air-conditioning sizing feature. Simply enter the size of the space to be cooled, exposure, insulation, and other information, and the results provide a Btu-per-hour estimate of the cooling capacity necessary. Find it at www.coned.com/athome/athome_savings.htm.

Manufacturer Web Sites

Almost all of the major home appliance manufacturers in the United States host company Web sites, often with detailed company business information and product specifications. However, energy efficiency is generally mentioned only within the larger picture of appliance performance. Maytag and Whirlpool are the exceptions.

Maytag

Maytag, "Home of Dependability," at www.maytag.com/default.asp, sets a consistent set of topic links under each of its major appliances: washers, dishwashers, refrigerators, dryers, and cooking products. Each set of links includes information on Maytag appliances. Performance features, models, warranties, and (YES!) energy efficiency are discussed in terms of each appliance's specific features.

For example, Maytag dryers use a diagonal air flow design from the top and back to the front and bottom of the dryer that allows for efficient drying at lower temperatures; poly-wool Teflon seals to the drum ensure energy efficiency throughout the life of the dryer. Maytag dishwashers offer a no-heat drying cycle to conserve energy.

Whirlpool

Whirlpool, www.whirlpoolcorp.com/whr/appliance, posts an "Appliance Corner" page with a brief but interesting snapshot history of the appliance and current technological advances. "Buying an Appliance" suggests specific questions to be considered when purchasing a new appliance; "Cleaning and Care" tips are concise reminders on use; "Safety Advice" cautions against hazardous use; and "Environmental Impacts" discuss energy efficiency design and efficient use.

Keep On Connecting

The Internet continues to develop as a useful tool in our quest for information. Web sites also continue to develop; technology is providing new and exciting interactive tools that tailor information to your specific needs. This guide presents some of the most useful Web sites that offer information on home appliance efficiency. Look around, and let us know if you find others.

If you do not have Internet access, check with your local public library. Most libraries now offer access and many can also provide an Internet tutor or "tour guide." ■

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