

Buying and Using Dishwashers

When shopping for a new dishwasher, there's more to consider than price and features. The amount you'll spend on energy to operate the appliance over its life far exceeds the purchase price. Spending a little more on an efficient appliance saves you money each month for years to come.

Several programs have been developed to help you identify more efficient appliance models. The Oregon Office of Energy publishes monthly a list of high efficiency appliances (by model number) that qualify for the Oregon Residential Energy Tax Credit (see page 3). The tax credit is available to homeowners and renters for qualifying appliances installed in their principal residence or vacation home in Oregon. You take the credit on your state income tax. Your dealer can provide you with the paperwork. Submit your completed application to the Office of Energy well before tax time, as confirmation may take several weeks.

Although the efficiency standards are not as high as standards for the Oregon tax credit, the U.S. Environmental Protection Agency and U.S. Department of Energy sponsor Energy Star™ labels on efficient refrigerators, heating equipment, water heaters, computers and office equipment.

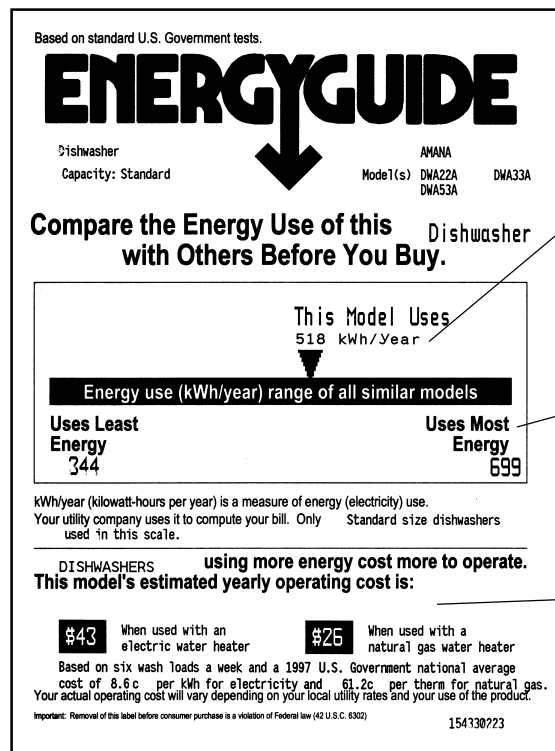
The yellow EnergyGuide sticker on most major home appliances in the dealer's showroom makes it easy to compare energy efficiency of different models.

The heart of the EnergyGuide label is the annual energy consumption, in therms or kilowatt hours, that the appliance uses

under typical operating conditions. Usage is based on standardized tests for typical household size and usage.

For dishwashers, the EnergyGuide label shows estimated consumption and operating costs for use with an electric water heater or natural gas water heater.

Efficient appliances usually cost more than regular models. How can you calculate whether spending extra money for a more efficient appliance is worth it? Use a "life cycle cost comparison"



For approximate cost in your home, multiply this number by the local utility rate.

Scale shows efficiency compared to similar-sized models.

Operating cost with electric or gas water heater (at national average utility cost).

Sample EnergyGuide label for a dishwasher.



(see page 3). In addition to the purchase price, the calculation includes the energy bills you'll pay to operate the appliance over its life. The appliance with the lowest life cycle cost is the best investment.

Efficient Use

- Wash full loads of dishes whenever possible. Most of the energy used in dishwashing is for heating water. You'll use the same amount no matter how full the dishwasher is.
- Scrape food scraps before loading, but don't pre-wash dishes. If you don't think your dishwasher will get unrinsed dishes clean, try an experiment. You might be surprised how clean they get.
- Use the AIR DRY or ENERGY SAVER drying option. It saves about 10% of the total energy used for dishwashing.
- Use the NORMAL cycle for most loads; the POT setting uses more water. The RINSE & HOLD setting also wastes water because the dishes will be rinsed again when they're washed.
- Measure dish soap. Too much detergent can "cloud" glassware and probably won't get things any cleaner.

Proper Maintenance

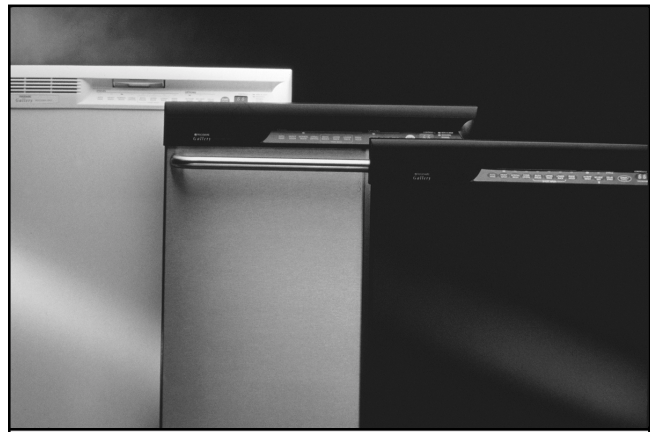
- If your dishwasher isn't cleaning as well as it used to, check that top and bottom wash arms spin freely. Clean the filter in the bottom of the compartment.

How Efficient Are New Dishwashers?

At typical Oregon energy costs: 5¢ per kWh

	1990 average	1999 average
Dishwasher	620 kWh	500 kWh
Total annual cost:	\$31	\$25

Source: Oregon Office of Energy



Water Temperature for Dishwashers

Most dishwasher manufacturers recommend 140° to 150°F water to minimize glassware spotting. Most newer dishwashers have a built-in pre-heater to compensate for lower water heater settings. If you've set your water heater to 120°F, you probably won't have a problem. Even without a pre-heater, your dishwasher may clean dishes adequately—unless your water is very hard. Try this test: Set the water heater to 120°F, run a load of dishes, and check the results.

Buying New

- Compare EnergyGuide labels. (Look at the gas or electricity cost for the dishwasher, depending on what type of water heater you have.) Consider dishwashers that qualify for the Oregon Residential Energy Tax Credit. They use 20% to 25% less energy and water than other new models and are eligible for a tax credit of \$50 to \$70. Although they don't qualify for the Oregon tax credit, Energy Star™ models (those with a listed consumption of 575 kWh or less on the EnergyGuide label) are more efficient than most others.

For More Information

Oregon Energy Line

Publications about home energy efficiency are available at no charge from Oregon Energy Line (sponsored by the OSU Extension Energy Program and the Oregon Office of Energy). Call **1-800-457-9394** and request a list of publications or state the topics you're interested in. Leave your name and mailing address on the message machine. Publications will be sent to you within 3 days.

Oregon Residential Energy Tax Credit

Major household appliances certified energy-efficient by the Oregon Office of Energy are eligible for a tax credit. The list of eligible models changes monthly. Tax credits are available for high-efficiency refrigerators, dishwashers, clothes washers, and water heaters, solar and geothermal heating equipment, photovoltaic systems, alternative fuel vehicles, sealing heating and cooling ducts, and beginning in 2000, fuel cells and wind systems. Contact the Office of Energy: **1-800-221-8035** or **www.energy.state.or.us**

Life Cycle Cost Comparison: Appliance Example

	Standard	Energy-efficient
Annual energy cost (from EnergyGuide label)	\$97.00	\$67.00
Fuel cost escalation multiplier for 10-year life ¹	X 11.07	X 11.07
Total energy cost over 10 years	= \$1,073.79	= \$741.69
Purchase price	+ \$500.00	+ \$600.00
Life cycle cost of appliance	\$1,573.79	\$1,341.69

The appliance with the lowest life cycle cost is the best investment.

¹Assumes you'll keep the appliance for 10 years, with a 5% annual inflation rate and 2% increase in energy costs per year.

Other Resources

Consult back issues of *Consumer Reports* and *Consumer Digest* for comparisons of appliance performance, features and reliability. Two books that include more complete discussions about appliances are:

Consumer Guide to Home Energy Savings, by Alex Wilson and John Morrill; Sixth edition, 1998; 274 pp.; American Council for an Energy Efficient Economy, 2140 Shattuck Ave., Suite 202, Berkeley, CA 94704; (510) 549-9914; ISBN 0-918249-31-7; \$7.95.

Home Made Money: How to Save Energy and Dollars in Your Home, by Richard Heede and Staff of Rocky Mountain Institute, 1995; 258 pp.; Brick House Publishing Co., Box 266, Amherst, N.H. 03031-0266; (800) 466-8642; ISBN 1-883178-07-X, \$14.95.



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