

# Teacher does her homework to save energy

After 20 years in the same home, retired Portland School District Teacher Kathy Young had to replace some of her appliances. But, despite her busy schedule, Young didn't just hastily buy her appliances. She did her homework first.

"Everyone wants to conserve energy," Young said. And, Young followed through to ensure her choice supported her conviction. She researched her purchase and did some comparison shopping.

In the fall of 2002, Young discovered her dishwasher not working and beyond repair. Energy-efficiency was her top priority in shopping for a new dishwasher.

"I found that the more energy efficient the appliance, the better quality it was," Young said.

She also discovered the premium efficiency dishwashers qualified for tax credits from the Oregon Department of Energy.



*Retired teacher Kathy Young and her energy-efficient dishwasher.*

Young's dishwasher, a Kitchen Aid premium efficiency model, qualified for a \$40 tax credit.

Next on her list was to make some much-needed storage space in her laundry room located in a closet in her guest bathroom. About the same time, her nephew got married and moved into a new home. The newlyweds welcomed her old washer and dryer set.

Young set off in pursuit of an energy-efficient clothes washer and dryer that would take up less space. She was relieved to find that a full-size front loading clothes washer and dryer stacked one on top of the other, fit into the laundry closet area. The front-loading Bosch clothes washer also qualified for a \$180 tax credit and is "just great," according to Young.

"The tax credit made a difference," said Young. "I could see that with the tax credit, I was getting better quality and a better value."

Front-loaders, also called horizontal axis washers, have been standard in Europe for many years. They use an estimated 60 percent less energy and about 40 percent less water than a normal washer. The machines can use less energy and water because they have no agitator but clean with a tumble action to lift clothes in and out of a pool of water.

Because they use less water, they need less detergent. In addition, the load gets rinsed three times — not just once as in a standard washer. That means cleaner clothes with less soap residue. And, because the new machines have no agitator, there is less wear and tear on clothes. The high-speed spin of the front loader removes more water from clothes, reducing dryer time and again, saving energy. (The tax credit is for the clothes washer and not the dryer.)



*Young's full-size Bosch front-loading clothes washer (bottom) qualifies for an Oregon Residential Energy Tax Credit.*

In 2003, Young's furnace died. Again, Young did her homework and bought a Maytag natural gas furnace that had an Annual Fuel Utilization Efficiency (AFUE) of 90, a variable speed blower kit and a \$350 energy tax credit.

And, in 2004, Young replaced her old refrigerator with a new energy-efficient Kitchen Aid that qualified for a \$40 tax credit.

"I guess the next thing to go is the water heater," Young said.

When that happens, Young plans to research tankless water heaters that qualify for a tax credit. (Standard water heaters do not qualify.) Tankless (also called on-demand or instantaneous) water heaters use less energy than standard water heaters because they don't store water. They work only when you turn on a hot water tap. Since standard water heating accounts for 20 percent of an average household's energy use, tankless water heaters can save considerable energy and earn a tax credit.

Young is pleased with her new energy-efficient appliances. Doing her homework paid off — both in energy savings and tax credits.

### **Appliance Tax Credits**

The Energy Tax Credit Program is an incentive for Oregon residents to purchase **premium** efficiency appliances. As manufacturers produce more efficient appliances, the Department of Energy raises its standards for appliances that are eligible for a tax credit. The lists of qualifying appliances (dishwashers, clothes washers, refrigerators, water heaters, furnaces, boilers, heat pumps and air conditioning systems) are available on the Department of Energy's Web site: [www.energy.state.or.us/res/tax/taxcdt.htm](http://www.energy.state.or.us/res/tax/taxcdt.htm) or by calling 1-800-221-8035 (toll-free).

On August 2, 2004, the Oregon Department of Energy increased the standards for dishwashers and refrigerators-freezers qualifying for an Oregon Residential Energy Tax Credit Program. Refrigerators-freezers qualifying for an Oregon Residential Energy Tax Credit must have at least 20 percent lower energy consumption than allowed by the July 1, 2001 US Department of Energy standards for refrigerators. Previously, refrigerators-freezers had to meet at least 15 percent lower energy consumption.

Dishwashers qualifying for an Oregon Residential Energy Tax Credit must have an energy factor of 0.61 cycles/kWh or higher as of August 2, 2004. Previously, the energy factor was 0.58 cycles/kWh or higher. Also, qualifying dishwashers must have a maximum water use per cycle, as tested, of 6.5 gallons. Previously, water usage for dishwashers was not specified. To conserve water and to be consistent with the water usage requirement for tax credit qualifying clothes washers, a water usage factor was added to the requirements for tax credit qualifying dishwashers.