Just the Facts About ...

Energy Efficient Washers and Dryers

Energy Wise Homes

A typical household spends about 150 dollars per year on the energy cost of doing laundry. This does not include the cost of detergents, bleach, etc. However, the way you do laundry can have a big effect on that cost, and on the environmental effects.

For example, if you do four loads of laundry each week using hot or warm water, the total annual cost is a little over 100 dollars. If you were to use all cold water the cost is only about six dollars a year, saving you about 94 dollars.

Using a dryer costs 22 cents per hour, on average. This runs the average household about three dollars and 50 cents per month, or 42 dollars annually. If you dry some of your clothes on a line or on hangers, or if most of the water is thoroughly spun out of your clothes before you put them in the dryer, you save money.

Washing Machines

The majority of the energy used by washing machines is consumed in heating the water. For rinse cycles, always select cold water; it performs just as well as a hot rinse and saves energy. The temperature of water in your washing machine is affected by the temperature setting on your hot water heater. It is important to keep your hot-water heater thermostat setting no higher than 120 degrees F, for safety reasons as well as energy savings. Each ten degree reduction in water temperature will cut the cost of washing clothes by up to 13 percent. It also helps to locate the washing machine close to the hot water tank, to reduce the heat loss in long pipe runs. If you can't do that, make sure to insulate exposed hot water pipes.

The water level is also important. It is best to launder as large a load as possible, but if a small load must be done, use the water cycle most appropriate for its size.

Be careful when measuring detergent. Most people use too much, and most loads can be cleaned using one-third to one-half the recommended amount. Excessive suds will cause a washer to work harder, reducing efficiency. Also, some people are sensitive to the residue and perfumes left behind by some products. Shop for environmentally preferable brands to help preserve our waterways and protect your family's health.

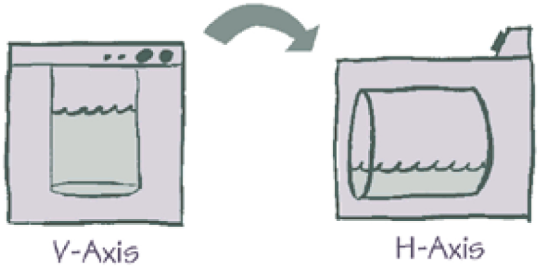
If you have very heavily soiled articles, presoak them. This helps cut back on the amount of water used, since the clothes will not have to be washed a second time.

Dryers

When drying clothes, remember to clean the lint screen after every load. A clogged screen will hamper efficiency, and might create a fire hazard. Also make sure that the outside dryer vent is clear of lint and debris.

Separate heavy items (like towels and blue jeans) from light items (like cotton shirts and sheets). This is an important step in saving energy, as the lighter load will take less time to dry.

On nice days, consider hanging your clothes outside on a line. Folding clothes lines and racks have gained renewed



popularity in recent years, as people seek that "fresh air and sunshine" feeling in their laundry. Also, the sun doesn't charge by the kilowatt-hour.

Horizontal-Axis Washers

In recent years, there have been important advances in energy efficient appliances. Perhaps foremost among these is the introduction of the horizontal-axis washing machine to the American market. Used in Europe and Japan for years, this washer employs a horizontal, rather than vertical, drive.

In addition to being more energy efficient, this design uses only one-third the water of conventional washers. Its higher rate of spin also extracts a greater amount of moisture from clothing, resulting in noticeably shorter drying times.

Generally, horizontal-axis washing machines are smaller than their vertical counterparts, and more expensive. Those living in apartments may find this smaller size particularly beneficial, as it enables the machines to be stacked. Washer and dryer combinations are sometimes sold as a single, stacked, space-saving unit. Residents of urbanized areas will also find benefit in using a more energy efficient machine, as they will be less affected by drought or power crises.

Critics have attempted to downplay the efficiency of horizontal axis machines. In some cases, writers have commented that the machines must be less efficient because they are smaller. Reputable sources such as *Consumer Reports*, however, have rated horizontal-axis machines over vertical washers. Further studies show that horizontal axis machines may be more gentle on clothes than vertical axis machines, due to the lack of an agitator.

ENERGY STAR Label

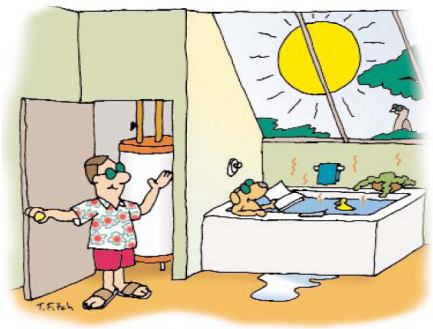
When shopping for household appliances, always look for the ENERGY STAR label. ENERGY STAR is a certification by the U.S. Environmental Protection Agency that the product outperforms other similar products in energy efficiency. For washing machines, ENERGY STAR specifications require that qualified products have a Modified Energy Factor (MEF) of 1.26 or greater. MEF is a calulation of energe efficiency that takes in to account the amount of dryer energy used to remove the remaining moisture content from laundry.. These machines use 35 percent to 50 percent less water than the average machine, and are at least 50 percent more energy efficient.

In general, ENERGY STAR machines are more expensive than other machines. This is because these high-efficiency washers have not yet been widely marketed in the U.S. However, with some models, you can recover up to a third of the machine's cost in energy cost savings in just one year. (The savings are much less if you have always done all your wash with cold water.) The cost of these machines is expected to come down over time.

If an ENERGY STAR washer or dryer doesn't fit your budget right now, you might consider a fairly efficient, but less expensive machine. You can compare the efficiency of various models by looking at the "EnergyGuide" labels that are displayed on every appliance in the store (as required by law). The label tells you how much it costs each year to operate the appliance, and compares it to the range of similar models available.

Solar Hot Water

Consider using solar energy to heat water for your home. Solar hot water systems are more expensive than traditional water heaters, but they save money over their lifetime, and typically pay for themselves in a few years though avoided energy costs. These systems are particularly cost effective in instances where they replace electric hot water heaters. See our *Solar Hot Water* fact sheet for more details.



For more information:

You can learn more about the ENERGY STAR Program and efficient applicanes by visiting the Government/Consumer Information Sites at: energystar.gov

For more information:

Department of Environmental Protection / Montgomery County, Maryland
255 Rockville Pike, Suite 120, Rockville, MD 20850
240-777-7770 fax: 240-777-7765 email: askDEP@montgomerycountymd.gov
Facebook: www.facebook.com/mygreenmontgomery Twitter: www.twitter.com/MyGreenMC