

Energy Efficient Cleaning: Front Loading, Top Loading and New Hybrid Washers



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Front-loading washers are the most efficient design, using about half as much water and detergent as a top-loader, but they are less convenient to load and unload. I use one at my own home and it is difficult not to drop some clean clothes on the floor when unloading it. If you have a bad back, unloading heavy wet clothes can also be a problem.

There is a new design of top-loading washer, by Whirlpool and Sears, which is almost as efficient as a front-loader. Instead of using a large rotating agitator, it uses a wobbling washer plate and small agitator in the tub to move clothes through the soapy water. This design does not require the entire tub to fill with water and has a relatively fast spin speed for a top-loader design.

This new top-loader design has a very large capacity, up to 4.5 cubic feet of clothes. By doing fewer loads each wash day, less electricity is used overall to operate the motors in the washer and less hot water is consumed. The only drawback is, being a top-loader, the dryer cannot be stacked on top of the washer to save floor space.

Another top-loader option is a hybrid top/front-loader by Staber. It has a horizontal axis so it spins like a front-loader, but it loads from the top instead of the front. The washer tub is perforated and hexagonal in shape. It is housed inside an outer tub.

Both tubs are made of stainless steel. There is a door on one of the inner tub sides to add and remove the clothes and a door on the top of the unit. When the inner tub rotates through the outer tub that is full of soapy water, this water flows in the holes in the inner tub and through the clothes. It is a bit pricey – ranging from about \$1,200 to \$1,700.

If you do not mind bending over and you want the most efficient and best cleaning washer, a front-loader is difficult to beat. With the tub on a horizontal axis, the tub has to be only partially filled and the clothes naturally tumble through the soapy water. Fins inside of the tub also catch some of the water and shower it down over the tumbling clothes. Most models have a reversing rotation feature during the cycle so clothes do not get clumped together.

One advantage of a front-loader is you can stack the dryer on top of the washer to save space. This, along with high energy efficiency, is why they are extremely popular in Europe's typically smaller homes. If you already have a dryer, it will likely fit on top of any of the front-loader models.

Another advantage of the horizontal axis tub in a front-loader is the tub is supported such that it can spin at a much higher speed, up to 1,600 rpm, during the rinse cycle. This high spin speed forces more soapy water out of the clothes during each cycle. The fabrics in clothes last longer when there is less residual detergent in them. Also, more thorough rinsing is a plus for people with sensitive skin or allergies.

Just as tumbling the clothes cleans them better, it also rinses out the soap more effectively when the fresh rinse water comes into the tub. You can select the number of rinses (up to five) with the final high-speed spin cycle to remove the most water and soap residue. This also reduces the time required in the dryer so even more energy is saved.

As with most appliances today, front-loading clothes washers are becoming smarter and more automatic. Instead of setting the water level dial depending upon the size of the load, the washer automatically senses the weight of the clothes and selects the most effective and efficient settings. These also have manual overrides in case you prefer a particular setting.

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Another option is a combination front-loading washer/dryer. Put your dirty clothes in it and remove clean, dry clothes a couple of hours later. These have a smaller capacity than wash-only models. By using a condensing dryer design, these models do not have to be vented outdoors, so they can be placed anywhere near a faucet and drain.

The following companies offer efficient washing machines: Asko, (800) 898-1879, www.askousa.com; Equator, (800) 935-1955, www.equatorappliance.com; LG Appliances, (800) 243-0000, www.lgappliances.com; Miele Appliances, (800) 843-7231, www.mieleusa.com; Staber, (800) 848-6200, www.staber.com; and Whirlpool, (866) 698-2538, www.whirlpool.com.

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Co-op, KVSD Partnership Honored

South Dakota's electric cooperatives received a National Community Service Award from the National Rural Electric Cooperative Association for the co-ops' partnership with Kids Voting South Dakota (KVSD) to educate South Dakota students about democratic participation – both as citizens and as co-op members.

Thousands of South Dakota school students are “voting” their views on current political issues while learning about the democratic process and also electric cooperative principles, through a civic education program supported by the state's electric cooperatives.

“This project uniquely combines three of the co-op principles – education, the democratic process and concern for community – to build strong, informed leadership for both our government and our cooperatives,” said NRECA CEO Glenn English when presenting the award March 20 in Las Vegas, Nevada.

More than 80,000 students participate in Kids Voting South Dakota, a nonprofit, non-partisan program that provides a hands-on experience intended to foster future generations of informed and engaged citizens and leaders.

Through a combination of classroom instruction, family dialogue and a mock election mirroring the federal election, Kids Voting South Dakota provides a comprehensive educational experience for students to learn about the democratic process and the importance of being active citizens.

SDREA and its members helped develop lesson materials on the not-profit purpose of electric cooperatives and their corporate structure, the co-ops' member focus and the role of member-owners.

“Our association with the rural electric cooperatives has been absolutely awesome,” said Patty Pearson, past director of Kids Voting South Dakota.

S.D. Governor Recognized

South Dakota Gov. M. Michael Rounds received the National Rural Electric Cooperative Association's President's Award at the organization's annual meeting held March 20-22 in Las Vegas, Nevada.

The award recognizes Gov. Rounds for paving the way for energy development and substantial contribution to the co-op community, including:

- Legislation to make installation of pollution control equipment easier;
- Tiered excise tax refunds for large power generation;
- New authority for the Public Utilities Commission to approve tariffs for transmission construction work in progress; and
- Creation of the State Office of Energy Development and the South Dakota Energy Infrastructure Authority.

Beyond these accomplishments, Gov. Rounds demonstrated a different kind of leadership when South Dakota suffered devastating ice storms in 2005 and 2006. After the storms hit, Gov. Rounds pledged to give cooperatives his full support – and he delivered on that pledge.

“The President's Award goes to individuals who play a substantial leadership role in responding to local crisis or disaster situations. After the disastrous ice storms, Gov. Rounds went beyond the call of duty to help the citizens of South Dakota and the cooperative members and employees in the recovery

effort,” said NRECA President Ron Bergh.

Under “Operation Pick Up Sticks,” the

Governor authorized substantial state resources to assist utilities in removing poles and debris from the roadways and ditches. The governor personally visited damaged areas and gave South Dakota cooperatives access to state equipment, manpower, helicopters, snow plows, snow mobiles and other equipment.

Audry Ricketts, South Dakota Rural Electric Association general manager, said, “As a true leader, Gov. Rounds has the courage to make tough decisions and the compassion to listen to the needs of others. After the ice storms, the Governor recognized the problems, envisioned a strategy, developed objectives and ensured those objectives were met. That's leadership.”

More than 9,800 representatives from cooperative electric utilities across the nation attended the meeting at the Las Vegas Convention Center.

NRECA is the national service organization that represents the nation's more than 900 private, not-for-profit, consumer-owned electric cooperatives, which provide service to 40 million people in 47 states.



Rural School Grants Available

Any rural K-12 classroom teacher whose school or community is served by a local rural electric cooperative, or whose students' homes are served by a local rural electric cooperative is eligible for one of 10 mini-grants to be awarded for the 2007-2008 school year through the National Rural Education Association and the National Rural Electric Cooperative Association.

An eligible project should feature an investigation of the science of energy or electricity. Project ideas could include a study of the local geology, the history of hydroelectric generation in your community or alternative sources of energy for the next generation. The project should be limited only by the imagination of your students and the resources you have available.

The National Rural Education Association has posted information about the 2007-2008 Mini-Grant program on its Web site, www.nrea.net.