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ENERGY EFFICIENCY

*Winter
Guide*



Questions Customers Ask

Theresa Drake, Senior Manager of Customer Relations and Energy Efficiency

Over the year, many of you contact Idaho Power with questions about your bills, our services and how you can reduce electricity use in your home. Recently, we've received several questions about hot tub use.

Since we agree that enjoying a nice, relaxing soak is a great way to unwind after a long day — especially in the winter, here are some answers to our most commonly asked hot tub questions.

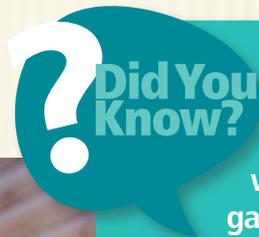
Q: What features can make a permanent hot tub more energy- and cost-efficient?

A: Having a separate pump for the jet system allows for less electricity use because a lower wattage pump can be used when the jets are off. Many eco-friendly hot tubs come with a setting that adjusts the heat down a bit when the hot tub is not in use. Hot tubs built out of a high-density polyurethane foam are better insulated against the outside temperature. Last, a good cover — without gaps — is critical.

Q: How do I calculate a hot tub's monthly energy cost?

A: This is a bit tricky as there are many variables, i.e., water volume, water temperature, ambient air temperatures, efficiency of the tub (insulation, cover, motor), amount of use per day, etc. Always consult the manufacturer for specific information. In our experience, costs in Idaho Power's service area typically range between \$1 and \$3 per day.

We all enjoy Idaho Power's low electrical rates. However, from an energy perspective, it's important to understand that hot tub ownership comes with a noticeable increase in your power bill — particularly in the colder months. For those that find the benefits outweigh the added expense, choosing an efficient model can help keep costs down.



Did You Know?

A typical covered hot tub will lose about a half a degree per hour with the heater off and gain about 4 degrees per hour with the heater on.

Hot Tips for Hot Tubs

Here are some helpful tips to keep your hot tub running efficiently:

1. Inspect your hot tub cover. Hot air rises, so make sure your lid is gap-free and has good insulation. Aging tub lids can crack and reduce the effectiveness of the insulation. The more heat you lose, the more money you spend on reheating the water.
2. Block the wind. Wind can significantly decrease the water temperature while the hot tub is being used.
3. Adjust the thermostat to 102° F when in use. Then, reduce energy costs by setting the hot tub to a lower temperature at other times. If your hot tub gets a lot of use, it may be more convenient to keep it closer to the desired temperature (i.e., 98°–100°F). In the hot summers when the tub isn't being used regularly, set the temperature to the lowest setting or turn off the heater.
4. Check the filters and plumbing. Clogged or worn out filters reduce the circulation of your water, placing more strain on the pump and reducing the efficiency of the heater element.
5. Understand your energy use. Track it by logging into My Account at idahopower.com/myaccount.
6. If your hot tub is old and you're unhappy with your energy use, it might be time for a new, more efficient model.





Programmable Pressure Cookers: fantastic or fad?

Pressure cookers have always been a fast, energy-efficient way to cook — your grandmother knew it, and now you can, too.

Once a popular way to cook in the U.S., pressure cooking fell out of favor in some circles due to stories of exploding pots and hot food catapulting to the ceiling.

As the trend toward busier lifestyles and healthier eating gained momentum, the pressure cooker turned tech and reinvented itself.

A quick internet search will confirm the new multi-function, safe, convenient phenomenon has cooks of all ages excited.

What's everyone talking about?

- Enhanced safety — insulated casing is only warm to the touch even during high-pressure cooking.
- Food cooks up to 70 percent faster.
- Pots are multi-functional — often replacing the need to store rice cookers, slow cookers, steamers, etc.
- Pressure functions self-regulate — no need to stand over, or even stay in the kitchen, while food cooks.
- Programmable features allow dinner to cook and stay warm until you are ready.
- Food retains more vitamins and minerals with less liquid and shorter cook times.

Shorter cook-times with minimal heat loss translate directly to energy savings. If you are an adventurous cook, open to new ideas and methods, you may want to give this reinvented gadget a try.



Did You Know?

Today's electric multi-cookers combine pressure-cooking, slow-cooking, sautéing, and other common cooking functions in a single appliance.

They are made with a group of sensors that keep the cooker from overheating or exploding under pressure.

From the Electric Kitchen



“Baked” Apples

INGREDIENTS

- 6 fresh apples, cored
- ¼ cup raisins
- 1 cup red wine
- ½ cup raw demerara or light brown sugar
- 1 tsp. ground cinnamon

INSTRUCTIONS

Add the apples to the base of the pressure cooker. Pour in wine, sprinkle raisins, sugar and cinnamon powder. Close and lock the lid of the pressure cooker.

For electric pressure cookers: Cook for 10 minutes at high pressure.

For stove-top pressure cookers: Turn the heat up to high and when the cooker indicates it has reached high pressure, lower to the heat to maintain it and begin counting 10 minutes pressure cooking time.

When time is up, either remove from the stove top or unplug the unit. Be sure to let the pressure release naturally or you'll end up with runny applesauce.

Scoop the apples out of the pressure cooker and serve in a small bowl with lots of cooking liquid. Top with whipped cream or vanilla ice cream for a special treat.

Recipe courtesy of Laura Pazzaglia, Hip Pressure Cooking • hipcooking.com

The Case for Cold Water

It's a question all laundry-sorting Americans struggle with: do I wash in hot or cold water? It's a good question since heat, mechanical energy (in the form of agitation) and chemicals are the three main ingredients in cleaning clothes. The trick is, if you remove the heat, you need to improve the other ingredients. Cold-water-specific detergents, developed and improved in the last 10 to 20 years, do just that. According to Consumer Reports, new cleaning agents, chemically formulated for cold water, perform the same as or better than traditional detergents.

Washing clothes in cold water with cold-water detergents not only saves energy and money — it preserves fabric color, prevents shrinkage (particularly along the seams) and helps clothes last longer. Additionally, since heat has a tendency to set protein-based stains like sweat and blood, cold water can aid in stain removal.

Bottom line — unless you're dealing with oily stains, the age-old advice that hot water washes best is no longer the rule.



The average family does about 300 loads of laundry each year. Washing in cold water can save about 90 percent of the energy needed to run the washer.

Did You Know?

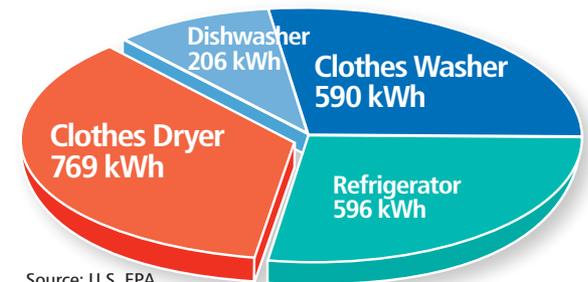


Laundry can account for 5 to 10 percent of an average home's overall energy use and makes up a large part of appliance energy use.

Idaho Power's online portal to your account gives you access to many resources, including your home's energy use by day, month and hour. Once you learn how much you're using, you can follow some easy tips so you can use less — and that can save you money.

Visit our website to log into My Account, find incentives and learn more tips to help you take control of your energy use.

Annual Energy Use of Typical Standard Household Appliances



Source: U.S. EPA

Ways to Save

- **Use cooler water to wash.** Switching temperature settings from hot to warm can cut a load's energy use in half.
- **Use an extra spin cycle on your washing machine.** Next to line drying, this is the single best method to reduce drying costs.
- **Sort clothes.** Lightweight synthetics dry faster than bath towels or denim. Similar materials dry at similar rates, so dry them together.
- **Take clothes out of the dryer while they are still slightly damp.** Over-drying causes shrinkage and static, and shortens fabric life. Removing clothes early also reduces the need for ironing.
- **Use your dryer's moisture sensor if it has one.**
- **Fill, but do not overload your dryer.** Clothes should dry in no more than 40 minutes to an hour.
- **Dry multiple loads back-to-back** to make the most of the dryer's heat. You can also set damp clothes on top of the warm dryer to finish.
- **Use the "perma press" (cool-down) cycle** to allow clothes to finish drying with the heat remaining in the dryer.
- **Clean the lint screen** after every load to improve air circulation and prevent fire hazards.



ENERGY STAR clothes washers clean clothes using 35 percent less water and 20 percent less energy than standard washers.

idahopower.com/save



Laundry Lowdown

Laundry has gotten a lot more fun and easy with new, game-changing features on washers and dryers.

In the past few years, laundry manufacturers have come out with cool new options including the following:

- Internet connectivity (so users can start/stop laundry from their phones, see when the laundry will be done, connect with voice platforms like Amazon's Alexa or download new cycles).
- Washers that feature built-in sinks to make laundry easier.
- Dryers with steam cleaning to sanitize and de-wrinkle clothes.
- Detachable drying racks that fit inside the dryer's drum.
- Automated maintenance notifications and diagnoses if something doesn't work correctly.
- The ability to have a dryer automatically order new dryer sheets when a user runs low.

Another recent manufacturer trend is to create two-in-one systems that add a smaller washer or dryer to a larger standard model, enabling users to clean small loads or to dry delicates at the same time as regular clothes on a different cycle setting.

You can be sure ENERGY STAR® is keeping up with the innovations and watching out for your interest. Dryers with the ENERGY STAR label use about 20 percent less energy without sacrificing features or performance.

If you're in the market for a new washer or dryer, now is a great time to figure out what features fit your budget and lifestyle. There is no shortage of options!



Did You Know?

A full-size electric ENERGY STAR® certified dryer can save \$200 in energy bills over the life of the product.

Did You Know?

Beware of high efficiency claims associated with this label.



This designation is intended to match certain washer types (e.g., front load) with specially designed laundry detergent. There are no standards for energy efficiency behind it. Only products that have earned the ENERGY STAR® rating are independently certified to save energy.

How Can My Appliances and Electronics Use Less Energy?

According to the U.S. ENERGY STAR® program, appliances and electronics account for 17 percent or more of the average home's energy use. Do you know how your home compares? Home electronics frequently draw power even when you aren't using them. Simple changes and quick fixes can combat these invisible energy wasters. And, when it's time to purchase a replacement, shop smart and purchase ENERGY STAR qualified products.

Look for the ENERGY STAR logo

To find the most efficient appliances on the market, look for the ENERGY STAR logo.



While all appliances sold in the U.S. must meet minimum standards for efficiency, the ENERGY STAR logo appears only on appliances and home electronics that meet the strictest energy efficiency criteria established by the U.S. Department of Energy and U.S. Environmental Protection Agency.

The Scoop On Portable Heaters

Portable heaters (often referred to as space heaters) are not an efficient way to heat a home. They can, however, be a good way to provide additional heat to small problem areas.



Space heaters can save energy and money — but only when heating a single room allows you to significantly reduce the overall temperature in the rest of the house.

How much space can I heat?

As a general rule, you'll need roughly 10 watts of heating power for every square foot of floor space. So, a 1,500-watt heater (most common) would heat about 150 square feet (a 10'x15' room). Most heaters come with sizing guidelines.



How much will it cost?

To determine the cost, you'll need to know two things: 1) how many watts your space heater uses and 2) how many hours it will run.

This is the formula to determine how many kilowatt-hours (kWh) it will use:

$$\frac{\text{watts} \times \text{hours}}{1,000} = \text{kWh}$$

Here's an example:

A 1,500-watt electric space heater runs eight hours each day. Using the formula, multiply 1,500 watts by 8 hours to learn the space heater would use 12,000 watt-hours. Now, divide 12,000 by 1,000 to convert watt-hours to kWh. In this example, the space heater would use 12 kWh each day. At about 10 cents per kWh, this would cost \$1.20 per day or \$36 per month.

If you use a space heater without reducing your thermostat temperature, it's important to remember these charges are in addition to your normal bill.

Are they safe?

The U.S. Consumer Product Safety Commission estimates that more than 25,000 residential fires every year are associated with the use of space heaters, resulting in more than 300 deaths. In addition, an estimated 6,000 people receive hospital emergency room care for burn injuries associated with contacting the hot surfaces of room heaters, mostly in non-fire situations.

Follow these guidelines to stay safe:

- If you choose to use a portable heater, purchase a newer model that has a tip-over safety switch and the Underwriter's Laboratory (UL) label.
- Place the heater on a level surface and keep children and pets away.
- Plug the heater directly into the wall outlet — avoid extension cords.
- Never leave a portable heater unattended.

Space heaters can be an effective way to create a warm and comfortable environment and heat up a small space; but remember, they won't efficiently replace a central heating system and can pose a serious safety hazard if not used correctly.

TECH CORNER



ENERGY STAR® Smart Thermostats

Smart thermostats feature internet connectivity and make it easier and more convenient to control heating and cooling systems effectively and efficiently. They have become increasingly popular over the past few years. However, it can be difficult to decide which products work best. Until recently, there hasn't been a third-party evaluation to ensure a given product delivers on its energy-saving promises.

That has changed! Now that smart thermostats can automatically adjust the temperature (through a variety of strategies) and report in-depth data, ENERGY STAR can gauge the energy savings a given thermostat can provide and assess how well it actually performs.

ENERGY STAR certified smart thermostats meet these standards:

- Use uniform data privacy standards to protect customers
- Ensure customers can view data on their heating and cooling system runtime and energy consumption
- Include features to enhance future management of the electrical grid

So far, a handful of smart thermostats have qualified for the ENERGY STAR label, including those made by Nest, ecobee, EcoFactor and Bryant. Over the coming years, we expect to see the number of ENERGY STAR certified thermostats increase. For an up-to-date list of certified products, go to energystar.gov.

You may be eligible to receive a \$75 smart thermostat incentive. Learn more online: idahopower.com/heatingcooling

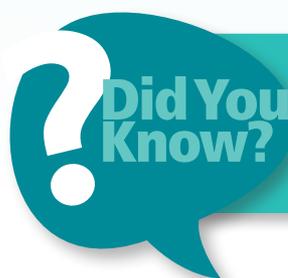


Electric Vehicle Chargers

Electric vehicles, including plug-in hybrids, receive energy from the grid through EV chargers. These chargers are efficient when in use, but in standby mode (about 85 percent of the time), they can waste a lot of energy.

ENERGY STAR certifies both Level 1 chargers (120 volt [V], providing 2 to 5 miles of range per hour of charging time) and Level 2 chargers (240 V, providing 10 to 60 miles of range per hour of charging time). Most of the energy waste in a charging system occurs when it's in standby mode. Choosing a charger with the ENERGY STAR label cuts standby losses by 40 percent.

Some ENERGY STAR certified EV chargers have Wi-Fi technology to allow for remote monitoring and control of the charging of the connected vehicles.



Sales of EVs in the U.S. are estimated to reach over 1 million by 2020.



KILL A WATT™ Save Energy

Have you ever wondered how much energy it takes to run your TV, computer or kitchen appliance? Now you can find out.

Idaho Power has teamed up with libraries throughout Idaho to bring you an easy-to-use tool that can help. Now, you can check out an Energy Efficiency Kit from your local library. The kit features a Kill A Watt meter, a device that can measure the energy consumption of appliances in your home, instructions for using the Kill A Watt meter and tips for saving energy.

Simply plug the Kill A Watt meter into a standard, three-prong electrical outlet, then plug your appliance into the meter. The meter will measure the amount of power being used, helping you identify potential savings by either unplugging items when not in use or replacing the item with a more energy-efficient model. For instance, if you frequently leave your TV on all day for background noise, but no one is watching it, you can measure how much power it uses in a set period. From there, you can multiply the power used by the current electricity rate (about 10 cents per kWh) to see how much money you can save by turning it off when it's not being watched.

To learn more about the Energy Efficiency Kits or to find a library near you, visit lili.org/energy.





Be an Energy-smart Family

A Fun Activity for the Whole Family

People can do many things to reduce energy use and save money on their monthly bills. However, some actions are more impactful than others. In the chart below, we've identified some behaviors and attitudes with the highest potential payoff.

As you read the behaviors, color in the "smileys" to indicate how well you are doing. You may want to consider setting some goals for your family. Behaviors are listed in priority order based on expected savings over time.

Actions of an Energy-smart Family – In the Winter

☺ ☺ ☺ ☹	Keeps furnace filter clean (checks and cleans or replaces every two months)
☺ ☺ ☺ ☹	Concentrates on occupant comfort vs. house temperature (weather-appropriate at-home clothing, electric blankets, etc.)
☺ ☺ ☺ ☹	Opens drapes to let daylight sun warm house and closes at night to keep cold out
☺ ☺ ☺ ☹	Turns lights off when not in use
☺ ☺ ☺ ☹	Washes full loads of laundry in cool water
☺ ☺ ☺ ☹	Plugs electronics into power strips and switches off when not in use
☺ ☺ ☺ ☹	Prepares meals using most efficient cooking method for task
☺ ☺ ☺ ☹	Hangs clothing to dry when possible
☺ ☺ ☺ ☹	Uses fans appropriately when room is occupied
☺ ☺ ☺ ☹	Enables power-save features on computers, gaming and entertainment systems

Average Lifespan of Appliances

Knowing the average lifespan of various appliances can help homeowners plan and prepare for unexpected failures. When you take time to compare features, upfront costs and operating expenses such as energy use before an appliance fails, you will be prepared to make the best decision possible when the time comes.

Remember that ENERGY STAR® certified products always provide the top energy savings in their class. And, of course, an appliance may last a longer or shorter period than shown depending on the manufacturing quality, maintenance and how heavily it's used.

Heating and Cooling Systems

Furnace (gas and electric)	21 years
Heat pump	19 years
Central A/C	19 years
Water heater	12 years

Kitchen

Dishwasher	15 years
Garbage disposal	9 years
Refrigerator	15 years
Microwave	11 years
Oven/Range (electric)	16 years
Oven/Range (gas)	13 years

Laundry

Washer	14 years
Dryer	12 years

