

SAVE MONEY ■ SAVE TIME ■ SAVE ENERGY

Choosing and using  
**appliances**



Does your oven take forever to heat up? Do you wash your dishes *before* putting them in the dishwasher? Does the frost in your freezer take up more room than the food?

If you answered yes, you might be shopping for a new appliance soon. Or maybe you just need a few pointers on using your current appliances more efficiently. In either case, we're here to help!

In this booklet, you'll find great tips on:

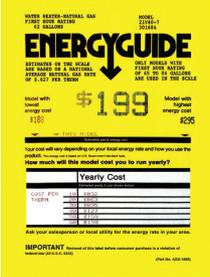
- Using the EnergyGuide label to compare appliances
- Finding the appliances that are right for your family
- Saving energy – and money – throughout your home

By asking the right questions before you buy, and remembering a few easy energy-saving ideas, your appliances will make your life a little easier for years to come – without making you pay for them again and again.



# The energy guide

Did you know that appliances account for about 20% of your household energy costs? That's why it's important to remember that the purchase price doesn't equal the total cost of owning the appliance. An inexpensive refrigerator that doesn't use energy efficiently won't seem like such a bargain when you get your electric bill.



Almost all home appliances, including refrigerators, dishwashers, water heaters, washers and dryers display a prominent yellow and black EnergyGuide label. The information on this label can help you determine how much you can expect to pay to use the appliance.

The largest number on the guide states the estimated annual operating cost of the appliance. When comparing appliances, be sure

to compare between models of similar size and capacity.

You can also look for the ENERGY STAR® logo from the U.S. Environmental Protection Agency and U.S. Department of Energy. This identifies appliances as being among the most energy-efficient products in their classes. They usually exceed minimum federal energy-use standards by a significant amount.



**The U.S. Department of Energy suggests thinking of an appliance purchase like buying a car or even a home. The purchase price is the down payment; the energy costs are the interest rate. The lower the energy consumption, the lower the total cost of owning the appliance.**



## Do your appliance homework

Before you set out to find the appliance of your dreams, remember that it pays to do your homework first. You'll find it much easier to compare models if you know exactly what you want.

Ask yourself these questions:

- *How often will my family use it?* If you use your oven only once or twice a week, you probably don't need a high-end convection unit.
- *How big is the space allotted for the appliance?* Be sure to measure carefully and consider how it will be installed before you go shopping.
- *What capacity will I need?* If you do 12 loads of laundry each week for your four kids, investing in a super-capacity washer and dryer will save you time and money.
- *What features would I use most?* If your kids open the refrigerator dozens of times a day to get soda or juice, a model with a pantry drawer might be a good option.



While you're doing your appliance homework, don't let flashy new technology or designer finishes be your only consideration. Most of the "restaurant-style" or "commercial-grade" stoves and refrigerators so popular today are huge energy-users, and they often require additional electrical, structural or ventilation upgrades.

Before you make your final decision, don't forget to ask the dealer about utility rebates, warranties, service contracts and delivery and installation costs. Visit [alliantenergy.com/dealerlocator](http://alliantenergy.com/dealerlocator) to find an energy-smart dealer near you.

## Gas appliance safety

- When purchasing a new gas appliance, it's best to have it professionally installed.
- Keep paints, papers, aerosol sprays and other flammables away from gas appliances.
- Never store or stack boxes, laundry or other materials around the base of a gas appliance.
- Make sure the vent hood, pipes and flues aren't blocked, cracked or corroded.
- Have a professional check older or brass connections on appliances, without moving the appliance to prevent the connector breaking and causing a leak.
- Never try to use a gas oven or range to heat a room.
- Check the manufacturer's installation instructions for a gas appliance's clearance requirements.
- Set your water heater at 120 degrees; any cooler allows bacteria to grow, any warmer increases risks for scalding.



## UTILITY REBATES

Visit [alliantenergy.com/rebates](http://alliantenergy.com/rebates) for information about rebates for customers in Iowa. Wisconsin residents, go to [focusenergy.com](http://focusenergy.com) for information about cash-back rewards.

# Laundry appliances

Did you know that up to 90% of the cost of washing clothes comes from heating the water? That's why it pays to choose an energy-efficient washer and use it wisely.

## Choosing a new washer and dryer

Be sure to check out all the new high-efficiency washers on the market today. Some are the traditional top-loading style and others are front-loaders (also known as horizontal-axis). High-efficiency washers use up to 60% less



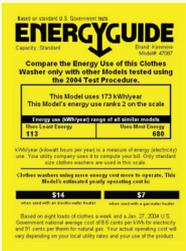
water, which can reduce water heating costs by more than \$100 a year. Make sure you look at the EnergyGuide label when considering washers.

The EnergyGuide label for clothes washers is based on estimated energy use for 416 loads of laundry per year. Front-loading washers do offer some advantages over top-loaders. Instead of a vertical agitator that turns back and forth, the

drum of a horizontal-axis washer rotates like that of a clothes dryer, rolling clothes through a small pool of water. This allows more room for larger loads, shorter and more efficient spin cycles, less detergent and fewer repairs.

Other new washing machine features available include:

- Dispenser trays that automatically dilute and add detergent, bleach and fabric softener
- Specialized settings for different fabrics
- Childproof door latches
- Improved out-of-balance handling
- Sensors that automatically set the water level
- Stain cycles that eliminate the need for pre-treating



No matter what features you choose, it generally pays to get the largest capacity washer you can afford. You'll fit more clothes into one load, saving time and energy. If you need a smaller load, you can adjust the water level accordingly.

Clothes dryers are also offering more specialized and energy-saving options. Look for a model with a moisture-sensing feature that shuts off the unit automatically when clothes are dry, rather than using a timer.

### Using your washer and dryer

- Wash and dry only full loads of clothes, and set the water level appropriately. But don't overload the washer – it can throw the tub off-balance, putting a strain on the motor.
- Only use hot water for very dirty loads, such as light-colored work clothes or underwear.
- Always use cold water during the rinse cycle. Cold water rinses clothes just as well as warm, and it reduces fading and fraying.
- Measure out the detergent every time to avoid having to wash or rinse items again.
- Remove clothes from the dryer while they're slightly damp and hang them up. It'll help reduce shrinkage, wrinkling and static electricity.
- Minimize heat loss (and energy consumption) by drying one load after another to reduce warm-up times.



## Maintaining your washer and dryer

Timely maintenance is the key to saving energy and keeping costs low.

- Check the water supply hoses once a year. If they're cracked or starting to harden, replace them with new ones (available at most home centers and hardware stores). Many manufacturers recommend using reinforced supply hoses to reduce the risk of a water leak.
- Clean the lint filter every time you use the dryer. A clogged lint screen can decrease your units drying power by 30% – and it's a potential fire hazard.
- Twice a year, check the dryer vent for cracks or tears, and clean out any accumulated lint. If you need to replace it, look for one made of aluminum or steel. Avoid using flexible plastic ducting, as it punctures easily and isn't fireproof.
- Make sure the outside dryer vent is clear, and keep it clear of snow during the winter.
- Check the gasket on the dryer door. A loose or brittle gasket will allow heated air to escape. To test the seal, hold a tissue near the door while the dryer is running – if the tissue is blown around, the gasket should be replaced.



# Dishwashers

Fact: An automatic dishwasher uses less hot water than doing dishes by hand. This means that automatic dishwashers use an average of six gallons fewer per wash than the average person would use while doing dishes the old fashioned way. That's more than 2,000 gallons of water per year that could be saved!



**An automatic dishwasher can save you an average of four hours of labor per week. That's 26 eight-hour working days each year.**

## Choosing a new dishwasher

The most important feature to look for in a new dishwasher is a booster water heater. Models with these built-in heaters bring the water temperature to the 140-160 degrees recommended by manufacturers. This allows you to keep your primary water heater at a safe and energy-saving 120 degrees and still get your dishes sparkling clean.

As with most appliances, it pays to look for the ENERGY STAR label. The efficiency of a dishwasher is measured by an "energy factor" which measures the cycles per kilowatt-hour of electricity. The U.S. Department of Energy recommends an energy factor of 0.58 – you'll find this number on the yellow-and-black EnergyGuide. Some high-efficiency models available have ratings of up to 1.16. The higher the energy factor number the better.

Many brands are equipped with "smart sensors" that detect the amount of food left on the dishes. The sensors automatically program the dishwasher to run the most appropriate cycle, eliminating the need for pre-rinsing. This can save even more water per load.

A few other features you might find helpful include:

- A built-in food disposer and secondary water filter to prevent food particles from re-depositing on dishes
- A built-in rinse aid dispenser – some models even come with a small window on the dispenser so you can easily see when a refill is needed
- Nylon-covered racks and extra padding on the tips of the tines
- A delayed-start feature to run the dishwasher at night when hot water isn't needed for showers, laundry, etc.
- A sanitizing cycle that kills germs and bacteria with super-heated water

Bonus: Investing in a new dishwasher is the noise level – a well-insulated tub will provide the benefit of quiet operation.



## Using your dishwasher

- Run the dishwasher only with full loads. If you need to wash a smaller load, use the “quick wash” feature.
- Take advantage of the “energy-saver” option, which allows dishes to air-dry instead of using the forced-air heater.
- If dishes are heavily soiled, scrape them with a rubber spatula instead of rinsing. If you must rinse, use cold water.
- Install pipe insulation on the hot water pipe going from the sink to the dishwasher.
- Avoid using the “rinse-hold” feature – it uses three to seven gallons of hot water each time.
- If your dishwasher doesn’t have a “booster” water heater, run hot water at the kitchen sink for one minute before starting the machine. This will ensure that the water reaching the dishwasher is hot enough to dissolve the detergent.



## Maintaining your dishwasher

- If mineral deposits are building up inside your dishwasher, place a small container with one cup vinegar in each rack and run the dishwasher empty through a cycle. Doing this once a month will help dissolve existing deposits and prevent future build-up.
- Cover any damaged tines with rubber tips (available from a home center or appliance dealer).

# Water heaters

Many homeowners consider only the size of the tank when choosing a new water heater – but ignoring the energy factor and other efficiency measures can cost a lot in the long run.

The first decision in purchasing a new water heater is usually fuel source. A natural gas unit will cost less to operate than an electric unit; the price difference (usually around \$50) can be paid back in energy savings in just a few months.

Even if you have four teenagers, you may not need a large capacity unit. Instead of concentrating on size, start by estimating how much hot water your family uses during the busiest hour – morning showers, for example. The chart below shows approximate consumption for some typical activities.

## Water usage for typical household activities

Use	Average gallons of hot water per use
Bath	20
Shower with low-flow showerhead	10
Automatic dishwasher *	8 / 15*
Hand dishwashing	10-20
Clothes washer *	14 / 40*
Hand washing – each time	2
Food preparation	5

\*non-ENERGY STAR qualified units

When you've considered this information, look for a water heater with a *first-hour rating* that meets your family's needs. A high-efficiency 40-gallon model might provide more hot water in one hour than an inefficient 50-gallon unit. The first-hour rating is shown on the top left corner of the EnergyGuide sticker on the water heater.



If your family uses hot water all day long – dishwashing, laundry, etc. – look for a water heater with a fast *recovery rate*. This will ensure that you never run out of hot water. A larger-capacity water heater will likely have a slower recovery rate; so again, a smaller unit might be a better choice.

Once you've narrowed down your choices, you can choose based on the cost and the *energy factor*. Although the purchase price will be higher for a higher-efficiency unit, your energy savings likely will pay for the difference in a few months; a high-

efficiency model can pay back the entire purchase price in just a few years. Your dealer can help you determine what your payback period will be on a particular model.

For a standard natural gas water heater, we recommend an efficiency of 0.67 for 40- or 50-gallon units. For tankless water heaters we recommend a 0.80 or greater energy factor. If natural gas service isn't available, look for a new "never leak" electric water heater with an energy factor of at least 0.93.

Don't forget to ask about rebates, warranties, delivery and installation charges and service contracts. Learn more about rebates at [alliantenergy.com/rebates](http://alliantenergy.com/rebates).

### Installing your new water heater

With homeowner safety in mind, we recommend having a water heater professionally installed. This is especially important with a natural gas unit, because all fittings and vents must be adjusted carefully to prevent gas leaks and carbon monoxide poisoning. It's also more convenient: a professional will remove and dispose of your old unit safely.

The location of your water heater can affect its efficiency. Placing it in an unheated area forces it to work harder during cold weather – if it can't be moved, make sure it's wrapped tightly with an insulating blanket. If your natural gas water heater is placed in the garage, it should be installed at least 18 inches off the floor to prevent gasoline fumes from igniting.

Distance matters too: The farther the hot water must travel through the pipe, the more heat it will lose. If you're building a large new home, make sure the water heater isn't placed on the opposite side of the house from the kitchen or main bathroom.

### Setting your water heater

One of the easiest ways to reduce your water heating costs is to lower the thermostat – for every degree it's lowered, you'll save 1%. We recommend setting the water heater at 120 degrees to prevent scalding injuries.

Before you reach for the knob, keep these tips in mind:

- Don't set the thermostat lower than 120 degrees. Water temperatures below this point allow unhealthy bacteria to develop in the tank.
- Most dishwasher manufacturers recommend a water temperature of at least 140 degrees; some dish detergents won't dissolve properly at lower temperatures. Many new dishwashers have the option of a "booster" heater; this allows you to wash dishes at 140 degrees but maintain your primary water heater at 120 degrees.
- Please pay special attention to the water heater temperature if you have children. Temperatures above 110 degrees can quickly scald a child, so it's a good idea to invest in "anti-scald" faucets. Never let small children turn on hot water faucets by themselves.



## Insulating your water heater

Your attic isn't the only thing that needs insulation. If you have an older water heater, wrapping the tank and hot water pipes with insulation can significantly reduce the amount of "standby" heat loss, saving you money on your energy costs. You can find water heater insulation kits at your hardware store or home center for about \$20.



The tank wrap is a thick fiberglass blanket, secured around the tank by waterproof tape. Before installing any water heater insulation, shut off the power to the unit. When installing tank wrap, follow the manufacturer's directions exactly to ensure maximum efficiency, and be sure to leave these areas uncovered:

- Pressure relief valve
- Control panel
- Drain

On a natural gas water heater, you also need to avoid covering the pilot light access, air intake and draft diverter.

On newer water heaters, a tank wrap isn't necessary, but you can still add pipe insulation. Before installing any water heater insulation, shut off the power to the unit.

Pipe insulation comes as either a foam tube split lengthwise or as fiberglass wrap. Install the insulation on both the cold and hot water pipes connecting to your water heater, and on any hot water pipes accessible throughout the house.

## Maintaining your water heater

1. Once every three months, **drain one gallon of water** from the tank. If you have hard water, do this every month. This reduces the amount of sediment collecting in the bottom of the tank, which can make the burner or heating coils work harder. Note: The water may be rusty or brown in color.
2. Once every two or three years, have a service technician **replace the anode rod**. This small metal device sacrifices itself for the good of the entire unit: instead of attacking the tank itself, the corrosive chemicals in the water are drawn to the anode rod. Failing to replace the anode rod can drastically reduce the life of your water heater.
3. Whenever you pass by your natural gas water heater, check the color of the **pilot light**. The flame should be at least 80 percent blue. If it's mostly yellow, the natural gas isn't combusting properly, putting you at risk for carbon monoxide poisoning. If so, have the unit checked by a professional as soon as possible.

Before doing any maintenance work on your water heater, be sure to turn off power to the unit.



## Cooking appliances

The choices available in cooktops and ovens is almost overwhelming – gas or electric, coils or smooth-top, convection or quartz-halogen, dials or digital, slide-in or wall-mounted. And don't forget about the dozens of built-in features to choose from. But while you're considering all those options, don't forget about energy efficiency and safety.

### Choosing new cooking appliances

The first decision you'll need to make is fuel preference. Keep in mind that natural gas appliances cost less to operate than electric models, but there is a greater safety risk because of the open flame. If your budget allows, some manufacturers offer a combination unit with gas burners and an electric oven.

The latest technology is greatly improving the energy efficiency of cooking appliances – more than 60% in some cases. A few examples include:

- Convection ovens use fans to circulate heated air around the food. This reduces cooking times and temperatures, and allows food to be cooked on several racks at the same time.
- Quartz-halogen ovens use high-heat light bulbs to cook food fast.
- Instead of electric coils, induction cooktops use magnetic heat. This is very energy-efficient, but may require special cookware.
- Rapid-cook appliances combine several types of heating elements, including convection, quartz-halogen and microwave. These new units can cook in about one-fourth the time – lasagna in 10 minutes or a fruit cobbler in eight minutes – with no preheating.





Note: These appliances will have a higher purchase price, but the energy savings can pay back the difference depending on how often you use the appliance.

It's easy to save energy with standard models too. Look for an oven with a self-cleaning feature – the

added insulation helps hold heat in. Sealed burners and electronic ignitions help keep gas ranges operating safely and efficiently. Smooth-top electric ranges heat faster and more evenly than traditional coils, but may require special cleansers to prevent surface scratches.

### Energy costs of various methods of cooking

Appliance	Temp**	Time	Energy	Cost*
Electric oven	350	1 hr.	2.0 kWh	30¢
Convection oven	325	45 min.	1.39 kWh	21¢
Gas oven	350	1 hr.	.112 therm	11¢
Frying pan	420	1 hr.	.9 kWh	13¢
Toaster oven	425	50 min.	.95 kWh	14¢
Crockpot	200	7 hrs.	.7 kWh	11¢
Microwave oven	“High”	15 min.	.36 kWh	5¢

\* Assumes 15¢ / kWh for electricity and 99¢ /therm for gas

\*\*Degrees Fahrenheit

## Using your cooking appliances

- Use smaller countertop appliances such as microwave, toaster ovens and slow cookers whenever possible. These can use 75% less energy than a large electric oven.
- Don't put a small pot on a large burner – this can waste 40% of the energy.
- Use lids on pots and pans to reduce cooking times and minimize splatters.
- Keep the metal grease plates under burners clean to reflect heat evenly.
- Don't cover oven racks with foil – it decreases air flow and increases cooking times.
- Use the self-cleaning feature immediately after using the oven, to minimize a lengthy warm-up time.
- If you have an electric cooktop or oven, turn the unit off a few minutes before cooking time is done.
- During the summer, use an outdoor grill or wait to use the oven until late evening to lessen the strain on your air conditioner.



## Maintaining your cooking appliances

- Have your natural gas stove inspected by a professional every two years. If the pilot light or burner flames appear more yellow than blue, have it checked immediately.
- Clean your oven and range burners often. Baked-on messes can increase energy use and shorten the life of the heating element.
- If a spillover occurs on your gas stove, clean the holes in the burner port with a straight pin. Avoid using a toothpick, which can break off inside the port.
- Replace the heating elements on electric ranges and ovens every ten years.
- Check the gasket that seals the oven door – if it's cracked, brittle or falling off, replace it.

# Refrigerators and freezers

Nationwide, home refrigerators use the output of 25 large power plants every year. You can reduce your energy costs by replacing an old refrigerator with a new ENERGY STAR model – the current average energy use is 40% less than conventional models sold in 2001.

## Choosing a new refrigerator

The first step is to determine what size your family needs. According to the Home Appliance Manufacturer's Association, a good rule is eight to 10 cubic feet for two people, and one cubic foot for each additional family member (this measure is for refrigerator space only, not the combined refrigerator/freezer). If you freeze large quantities or entertain frequently, add a few more cubic feet.



**Look for the EnergyGuide and the ENERGY STAR label to find the most energy-efficient model. An ENERGY STAR-qualified refrigerator can cut your energy bills by \$80 over the lifetime of the appliance.**

Door style is another important factor. Side-by-side models use more energy than top/bottom doors, but can be more convenient in a small kitchen and easier for children and wheelchair users. Many manufacturers are now offering bottom-freezer units. This arrangement places the more-used refrigerator foods in clear view, reducing the amount of time the refrigerator door is open. Many bottom-freezer models also feature pullout drawers, which prevents food from falling out.

Optional features can also help reduce energy use. Pantry drawers allow easy access to items like juice and soda. Another good feature is solid glass shelves, which hold spills better and prevent cold air from escaping when the door is open.



Several manufacturers are offering refrigerators with special drawers for keeping food at different temperatures. For example, one drawer holds meats at 31 degrees, another holds fruits at 39 degrees. Food stays fresher longer – in some cases, up to two weeks longer.

If you're building a new home or remodeling your kitchen, refrigerator drawers are another option. They fit into standard cabinets; drawers can be placed vertically or horizontally. This new technology frees up space in the rest of the kitchen, puts food items in clear view and, because food is contained in several smaller units, loses less cold air when opened.

Once you've chosen your new refrigerator, be sure to dispose of your old one properly. Check with your utility to see if they offer a refrigerator recycling program. They'll recycle the usable parts and dispose of the refrigerant safely.

Avoid operating a spare refrigerator in your basement or garage – it can add more than \$115 to your electricity bill. And never leave an old refrigerator or freezer where kids might get at it – they can climb inside and quickly suffocate.

**In Iowa you can receive a rebate for recycling some appliances. Visit [alliantenergy.com/appliancerecycling](http://alliantenergy.com/appliancerecycling) for more information. Wisconsin customers can visit [focusonenergy.com](http://focusonenergy.com) for information on their recycling program.**

## Using your refrigerator and freezer

- According to ENERGY STAR, you should keep the internal refrigerator temperature between 35-38 degrees F, and zero degrees F or below for the freezer.
- Don't worry about placing hot leftovers in the fridge – it won't significantly increase energy use, and cooling food to room temperature first can increase the risk of food-borne illnesses.
- If the power goes out, don't open the refrigerator door unless absolutely necessary. Food in the refrigerator will stay cold up to 8 hours; frozen food for up to 48 hours.
- Make sure the unit is on a level surface, so the doors swing shut instead of open. If the floor isn't level, use shims to raise the front a few fractions of an inch.
- Use the "energy-saver" settings. Newer models have enough insulation to prevent the condensation or "sweating" common on older models.
- Keep at least a one-inch air space around the refrigerator. If it's placed next to an oven or dishwasher, add a thin sheet of rigid foam insulation between the two.



## Maintaining your refrigerator/freezer

- Vacuum the condenser coils at least once a year to remove dust and debris. If you have pets, two or three cleanings a year will help keep it running efficiently. Coils will be in the back on older models, underneath on newer models.
- Check the seal on the gaskets by closing the door on a dollar bill. If you can pull the bill out easily, replace the gaskets. To keep gaskets pliable, rub them with cooking oil or petroleum jelly occasionally.
- If you have a manual-defrost model, don't let the frost build up more than a quarter inch.
- If you have a built-in icemaker or water dispenser, replace the filter every six months. Be sure to turn off the water source before disconnecting the line.

## Outdoor appliances

Homeowners these days no longer have just a backyard – it's an outdoor living space. Here are a few tips on making your outdoor space comfortable and getting the most from your outdoor equipment.

### Electric and natural gas grills

Most people stick with the old standby grills using charcoal or liquid propane tanks. But both of these types can be inconvenient and expensive. Another drawback you might not realize is the pollutants that charcoal and propane grills put into the air. Both types, especially charcoal, produce carbon dioxide and carbon monoxide, as well as other harmful emissions. For your safety, never use a gas grill indoors.



A different option is an **electric grill**. It's much safer to use, with no open flames or flammable liquids, and it's very convenient – no charcoal to buy or gas tanks to fill. Electric grills also cook food more evenly; the coils maintain a constant temperature that's easy



to control, so you won't get hot spots or flare-ups. Electric grills are easy to clean – they cool down quickly and the cooking grid is removable and dishwasher safe.

Electric grills are also much safer for the environment, emitting 99% less carbon monoxide than charcoal grills, and they reduce carbon dioxide by 91% over charcoal and 21% over propane. Before buying an electric grill, be sure to take into consideration the length of the cord and where you'll be using it. You should never use an extension cord with an electric grill, and always use an outlet with a ground fault circuit interrupter.

If you have **natural gas** service to your home, you can use it to fuel your grill. A natural gas grill offers all the benefits of propane: it's easy to start, it reaches cooking temperatures quickly and it's easy to shut down and clean when you're finished.

But a natural gas grill offers a few distinct advantages over propane. With a natural gas grill, you'll never have to lug around a 20-pound cylinder, and you'll never have to worry about running out of fuel. Natural gas is also more economical – the annual operating cost is usually less than half of propane grills.

And like electric grills, natural gas models are eco-friendly. Natural gas is the cleanest-burning fossil fuel, so you won't be putting harmful pollutants into the air around your home.

You can find natural gas grills at many fireplace dealers. The professionals there will install it for you and make sure it's operating safely. Be sure to remember all your natural gas safety rules, and as with any grill, it's important to keep kids and pets away to prevent accidents, and never use a grill of any kind to heat a home, garage or any room.

## Hot tubs

You might have heard that a hot tub can make your energy bills skyrocket, but if you choose your system carefully and know how to use it efficiently, you can relax and enjoy it.

When you're shopping for a hot tub, the best choice is one with full foam closed-cell insulation. This will help hold the heat in and hold your energy bills down.

An insulated spa will cost about \$20-25 a month to operate, compared to more than \$100 a month for one that's not insulated. A reputable dealer will be able to give you an energy guarantee that states how much your hot tub will cost to operate. It's also a good idea to look for a model with a sealed heating element. This prevents the water from touching the actual element, so the heater will last longer and run more efficiently.

A hot tub circulation system should be left on continuously to keep the water clean and ready go to whenever you need to relax. It will also prevent the motor from stopping and starting over and over – which is a big energy-waster.



## Vacation tips

When you're getting ready to go on vacation, include your furnace, water heater and refrigerator in your vacation plans.

### Furnace and air conditioner

Your thermostat should be an important part of your vacation preparations. If you'll be taking a winter vacation, set the thermostat at 55 degrees, but don't go any lower. This will prevent your water pipes from freezing and bursting.

If you own a smart thermostat, also known as a learning thermostat, you can use it to monitor your house temperature while you are away. Use your phone to set your thermostat and then adjust the temperature to where you want it before you return home.

On top of saving 8-12% on your annual energy bill, you can also earn rebates up to \$100 when you switch to a learning thermostat!

Go to the "Rebates for energy-efficient improvements" tab on [alliantenergy.com/waystosave](http://alliantenergy.com/waystosave) to learn more!



## Water heater

Many homeowners wonder about how to adjust their water heater while they're away. If you have a gas water heater, set the temperature dial to the VAC or "vacation" setting. If you don't have this setting, turn the thermostat as low as it will go, but don't turn it completely off. If you do, you'll have to relight the pilot light when you get home, and with most water heaters this requires a service call from a professional.

If you have an electric water heater, cut the power at the breaker or fuse in the service panel.

With either type of water heater, it's not necessary to drain out the water from the tank, but when you come home, be sure to let the water reach at least 120 degrees before using it.



## Refrigerator

A refrigerator is one of the biggest energy wasters while you're on vacation. If you'll be gone for several weeks, empty out the food and unplug it. If that's not practical, get rid of easily spoiled items like milk and yogurt, and turn up the thermostat a notch or two. You can raise the internal temperature up to 38 degrees and still keep your food safe.



The same advice applies to the freezer. Remove fast-melting foods like ice cream, and raise the temperature a few degrees. Meats and vegetables will remain solidly frozen if the freezer temperature is five degrees or below.

Alliant Energy is committed to helping its customers use energy safely and efficiently.

If you'd like to learn more, visit our website at **[alliantenergy.com](http://alliantenergy.com)** and check out our other booklets:

- 101 Easy Ways to Save Energy
- Electrical & Natural Gas Safety
- Energy-Efficient Landscaping
- Heating & Cooling Your Home
- Insulating & Weatherizing Your Home
- Lighting Your Home
- Powering Your Plug-ins

You can also find great energy efficiency tips at **[powerhousetv.com](http://powerhousetv.com)**.

In Iowa, you can find more information about rebates and energy efficiency programs available for Alliant Energy customers at 1-866-ALLIANT (1-866-255-4268) or visit **[alliantenergy.com/rebates](http://alliantenergy.com/rebates)**.

In Wisconsin, call Focus on Energy, Wisconsin's statewide program for energy efficiency and renewable energy, at 1-800-762-7077 or visit **[focusonenergy.com](http://focusonenergy.com)**.

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