

# ELECTRIC IDEAS



WAYS TO  
SAVE ENERGY



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USE ENERGY WISELY

# WATER HEATING

*Heating water is one of your largest annual energy expenses. A water heater can consume approximately 600 kilowatt hours per month.*

## 1

### Consider high efficiency water heaters

If you are in the market for a new water heater, consider buying a high efficiency model. It may cost you a little more up front but it lasts longer, so you will save over the life of the unit. As a bonus, you can also save on your water heater by fastening it to the studs in the wall.

## 2

### Set the thermostat properly

To operate most efficiently, your water heater should be set between 120°F and 130°F. If you have a dishwasher, you may need to increase the temperature setting to 140°F. Refer to the owner's manual for the proper temperature settings for your dishwasher.

## 3

### Keep it warm

If your water heater is located in an unheated space and does not have a water heater blanket on it, you may want to get one. It can save as much as 9% on your water heating costs. Before you install a blanket check the caution label on your water heater. Some newer models come with adequate insulation levels and may prohibit installing a blanket. There is also an energy savings associated with insulating your water heater if it is located in a heated space.

## 4

### Fix those drips

If you have a leaky faucet, you're pouring money down the drain. A slow drip can waste up to 450 gallons of water a month. If it's hot water, you are not only paying to heat the water, but you are paying for the water, and may be paying for the disposal as well. If you have a domestic well, pumping costs are also a factor.

## 5

### Reduce the flow

Install low-flow showerheads and faucet aerators in your bathrooms and kitchen. They can cut up to 11% of your water use, which will reduce your energy use and water bills. Water efficient devices are usually available at local hardware stores or your electric utility. Also consider taking short showers rather than baths. A shower typically uses less hot water than a bath (especially if you limit your showers to five minutes or less). If you just need a shampoo, try using the sink rather than taking a shower.

## 6

### Use cold water when you can

Use cold water instead of hot to wash dishes, the laundry, and to brush your teeth. Hot water for dishes uses about 2 kilowatt hours and washing a load of clothes uses about 5 kilowatt hours.

## 7

### Turn the tap

Turn the water off when you're brushing your teeth, lathering your hands with soap, or scrubbing dishes.

## 8

### Run your dishwasher

That's right... run your dishwasher. Only wash full loads and use the energy saving setting which eliminates the drying cycle, saving energy on each load. If you have an electric water heater, use your dishwasher's booster heater. This booster heats the water used in the dishwasher to 140°F, allowing you to reduce the temperature of your water heater.

# LIGHTING

*A single light doesn't use a whole lot of energy. But when you add up all the lights in your home, and think about how long they are usually on during the month, it can really add up. In fact, lighting is about 12% of your monthly bill.*

**9**

## Let the sun shine in

Why use the lights when you can use the sun? Open blinds and curtains during the day to take advantage of natural light.

**10**

## Dim the lights

Consider purchasing dimmer switches. They can increase bulb life while reducing electric consumption and operating cost. But don't use them with compact fluorescent bulbs because they're not compatible.

**11**

## Use compact fluorescent bulbs

Compared to regular light bulbs, compact fluorescent bulbs use 75% less energy and last ten times longer. Although they cost more they are worth the investment.

**12**

## Motion sensors make sense

Are you tired of asking everyone to turn off the lights when they leave the room? If so, try replacing light switches with motion or occupancy sensors. These make the lights go on or off when someone enters or leaves the room. The garage is the perfect place for one. They're also good for exterior lighting. Your lights will only come on when motion is detected.

# 13

## Let timers take on the task

If you forget to turn off lights, think about buying a timer. It turns lights on and off automatically and helps your day-to-day home security too. Best of all, you can set it and forget it.

# 14

## Save watts wherever you can

Use watt-saving bulbs in incandescent fixtures. They give out the same amount of light as regular bulbs, but use 10% less energy. Just remember, the higher the wattage the more it costs to have your lights on.

# 15

## Try photocells

Photocells automatically turn on lights when it gets dark. Then, when it's bright enough, the photocell turns the lights off. They're great for outdoor or security lighting because you don't have to remember to turn them off in the morning. The sun will do it for you.

# 16

## Decorate in light colors

If you plan to redecorate, think about lighter colors. Dark colors absorb light, so you'll use more watts to light the room.

# 17

## Let the light through

Lamp shades can make a big difference. A lamp with a light colored shade, especially one that's lined in white, will give the best light. Tall, narrow shades or short, dark-colored shades let less light through. You'll probably need to turn on another light to see properly, which means you'll use more electricity.

# 18

## Keep them clean

Dirty or dusty light bulbs don't put out as much light as clean bulbs, because dirt and dust absorb light.

## 19

### Consider low voltage outdoor lighting

If you're planning to light up your landscaping, install low voltage lighting whenever possible. A string of six low voltage lights, which can light a large area, use about 108 watts, compared to a single 150-watt flood light.

## 20

### Plan for that vacation

If you're going away, you'll probably want to leave some lights on for security reasons. If so, consider buying timers to turn your lights on and off instead of leaving them on 24 hours a day. The money you save on lighting could easily pay for the timers.

## 21

### Use only what you need

Do you ever go into a room and turn on all the lights? Or leave landscaping lighting on all night? Inside and outside, use only as much light as you need.

## HEATING

*In the winter your heating system is probably your biggest energy user, accounting for between 35% and 65% of your total monthly bill.*

## 22

### Don't touch it

Before bedtime turn down your thermostat for more energy savings. If you don't want to wake up to a cold house, let a programmable thermostat turn the heat up an hour before you wake up.

If you have a heat pump, raising the thermostat more than 2°-4°F at a time could cause the electric heating strips to come on, significantly increasing your heating costs.

## 23

### Don't let heat escape

Keep windows and doors closed during cool periods. Weatherstrip and caulk your doors and windows. It can save you as much as 6% on your heating costs. When you're not using your fireplace, close the damper.

## 24

### Close them at night

Closing blinds and drapes at night will help keep the cold out and the warmth in. In cooler months be sure to open them in the morning so the warmth of the sun can help heat your home.

## 25

### Insulate your home properly

A large portion of your energy is lost through your ceiling, walls, and floor. That means you're paying for heat that you're not keeping. Proper insulation will keep your home warmer in the winter and cooler in the summer. The higher the R-value, the greater the insulating power. Installing R-38 ceiling insulation will cut heating costs. In some areas in the Northwest, R-49 insulation is recommended. Your attic must also be adequately ventilated to prevent heat build-up in the summer. You can install insulation yourself or have a licensed contractor assist you. Call your utility for program information.

## 26

### Keep it clean

A furnace with a dirty filter has to work harder to heat air for your home. Check filters at least twice during the heating season, and either clean or replace them. Also, check to see that heating vents are unobstructed so your system doesn't overwork itself trying to get heat into your home. It's also a good idea to have your entire system checked every year by a qualified heating contractor.

## 27

### Wear the layered look

Consider wearing layers of clothing inside the house. It will keep your body heat in and you won't need to turn up the thermostat.

# AIR CONDITIONING

*To make your home comfortable in the summer you have several options ranging from simply opening windows to installing a central air conditioning system.*

## 28

### Install insulation

Installing insulation is generally one of the best things you can do to reduce your home's cooling costs. That's because up to 20% of your home's air conditioning can be lost to the great outdoors. If you plan to insulate your home, check with your local utility for the recommended insulation levels.

## 29

### Do your homework

Important factors to consider when shopping for a new air conditioner are: size of the area that needs to be cooled, climate, your home's construction, sun exposure, insulation, and the number and location of windows. Once you have this information you should consider all the types available and determine which can cool your home for the lowest cost. The SEER rating on the EnergyGuide label can also help you. SEER stands for Seasonal Energy Efficiency Ratio. All new central air conditioners have a minimum SEER rating of 10. Consider buying a high efficiency model with a SEER rating of 11 or higher. (A SEER of 16 can save up to 40% on your cooling costs.) Whole house fans, evaporative coolers, heat pumps, room air conditioners, and central air conditioning systems all have their pros and cons, so do a little research before buying.

## 30

### Shade your house

Use landscaping, awnings, and overhangs to provide shade around the outside of your home. A shaded house is easier to cool than one in direct sunlight. There are even white reflective roof paints available that can reduce air conditioning costs.

## **31** Set and leave it

The best temperature for your air conditioner's thermostat is 78°F or higher. If you don't want to come home to a hot house, consider purchasing a programmable thermostat.

## **32** Use fans instead

A central air conditioning system can use up to 10 kilowatts per hour to operate. In contrast, a fan (ceiling or portable) may use one kilowatt per hour to operate. That's a potential savings of up to 90% on the days when fans will do the trick.

## **33** Turn it off

If you plan to leave for a few minutes or more, turn your fan off. Running it while you're not home is a definite energy waster.

## **34** Maintain it

Proper maintenance helps your air conditioner run more efficiently. Replace disposable filters or clean permanent filters every few months during the cooling season. It's a good idea to have your entire system checked on a yearly basis by a qualified air conditioning contractor.

## **35** Clean the coils

Clean the outside condenser coils with diluted detergent and rinse thoroughly at the beginning and the end of the air conditioning season.

## **36** Watch those windows

During the cooler morning and evening hours, open your windows and use the outside air to cool your home. During the heat of the day, close the draperies and blinds to keep the warm sun out. Consider installing reflective films or solar shade screens on windows with the greatest exposure to the summer sun (this can help keep your furniture and carpet from fading too).

# 37

## Keep it as cool as possible

Install your air conditioner out of the direct sunlight.

# 38

## Keep vents clear

An obstructed vent wastes both energy and money.

# 39

## Keep it in

First, keep your doors and windows closed when you use the air conditioner on. Second, weatherstrip and caulk your doors and windows to seal in cool air.

# REFRIGERATORS AND FREEZERS

*If you're like most people, chances are your refrigerator/freezer is one of the largest energy users in your home, gobbling up about 8% of your household's annual energy costs. Why? Because it requires electricity to operate, and it's on 24 hours a day using between 100 and 200 kilowatt hours a month.*

# 40

## Keep it maintained

A refrigerator works best when it has been properly maintained. Check the door seals and if one is cracked, or cold air is leaking out, the seal should be replaced.

**41****Unplug it**

Some people keep their old refrigerator or freezer in the garage, but if it isn't filled to capacity you could be wasting as much as 2,400 kilowatt hours a year for an extra refrigerator, or up to 1,200 kilowatt hours a year for an extra freezer.

**42****Use the proper temperature settings**

Check your thermostat controls. To work most efficiently, your refrigerator should be set between 38°F and 40°F and the freezer at 0°F.

**43****Go for high efficiency**

Newer more efficient refrigerators use less energy than many older models of the same size, and they cost less to operate. Be sure to compare cubic footage and purchase prices as well as estimated operating costs. An older 19-cubic-foot refrigerator with a top freezer uses approximately 450 kilowatt hours per month, while a new high efficiency model may reduce that consumption by 50%. The EnergyGuide label can help you in your decision.

**44****Defrost regularly**

If you have a manual defrost freezer don't forget to defrost it regularly. More than ¾ inch of frost makes your freezer work harder to keep your food, and the frost, frozen.

**45****Keep it clean**

Dirty condenser coils could lead to higher operating costs. Coils, found on the back or bottom of the refrigerator, should be vacuumed and checked at least twice a year.

**46****Keep it level**

A refrigerator that's not level may cause the door gasket to seal improperly letting the cold air leak out. Set a glass of water on the top and adjust the legs until the unit looks level.

## 47

### Keep it cool

Refrigerators should be kept in a well ventilated, dry, and cool place. Refrigerators and freezers near ovens, stoves, water heaters, clothes dryers, or other crowded or warm places work harder to keep things cold.

## 48

### Keep it closed

A refrigerator works more efficiently when you open the door as frequently as possible. So make your decisions before you open the door and get everything you need quickly and at one time.

## 49

### Keep food covered

Covering foods will reduce moisture build-up on the inside of the refrigerator. Also, wipe moisture from bottles and other containers before placing them in the refrigerator.

## 50

### Keep the heat out of your refrigerator

Before you store leftovers in the refrigerator or freezer allow them to cool slightly. Your refrigerator or freezer won't have to work as hard to cool them.

## 51

### Flip that switch

You can save energy by keeping the EnergySaver Switch turned on (which actually turns the anti-sweat heater off). Anti-sweat heaters prevent moisture build-up on the outside of a refrigerator. Check your owner's manual for directions on your model's switch.

## 52

### Keep it full

Refrigerators operate most efficiently when they are full, but not overloaded. It's true that frozen foods help to keep the air cool, but too much food in either compartment can prevent cold air from circulating properly. Refer to your owner's manual for the correct capacity.

# 53

## Don't cool it if you aren't going to save it

Why cool something you'll probably throw out anyway? If you're going away for a few days, get rid of foods that are likely to spoil. If you are going to be gone for more than a month, consider cleaning out your refrigerator, unplugging it and leaving the doors open. Some older models are impossible to open from the inside and are a hazard for children and pets. Also, older models may have difficulty restarting.

# WASHERS AND DRYERS

*Your washing machine may use up to 10 kilowatt hours per load, and your dryer can use as much as 5 kilowatt hours per load. This means that you could be using 15 kilowatt hours of electricity with every load of laundry.*

# 54

## Wash full loads

Over 70% of the cost of washing a load of clothes is in heating the water. With an electric water heater a load of clothes uses about 10 kilowatt hours. Set the water levels appropriately and make every effort to wash full loads.

# 55

## Consider energy efficient models

If you're in the market for a new washing machine, consider purchasing a new front loading model. The new model uses 33% less water than a conventional top loading machine so you can save as much as 6,000 gallons of water per year as well as the costs associated with heating that water. They also remove more moisture from clothing which reduces drying time and cost.

**56****Don't overwork your clothes**

Most clothes need only a 10 to 15 minute wash cycle to get clean. Over drying will make them stiff, wrinkled, and nearly impossible to iron. They'll wear out faster too! Wash and dry for only as long as necessary.

**57****Dry full loads**

A load dried for 30 minutes can use up to 5 kilowatt hours. Since you're going to use that much electricity, you might as well do a full load. Consider purchasing a dryer with a moisture sensor.

**58****Use cold water whenever possible**

Washing in cold water gets your clothes just as clean. Besides, they'll fade less and have fewer wrinkles. You may even save on ironing. Save washing in warm water for stains or hard-to-clean items. At least consider rinsing in cold water.

**59****Get the lint out**

Clean your dryer's lint screen after every use. Besides keeping your clothes looking good, a lint-free dryer works much more efficiently.

**60****Do it for free**

Use the sun to dry your clothes. It's free, and the only energy it requires is your own energy to hang them on the line.

**61****Check your hose and faucet connections**

Check for hose cracks and leaky faucet connections. Both can cause you to lose hot water every time you wash a load of clothes.

# OVENS AND RANGES

*Your food budget doesn't stop at the checkout counter. Here are some suggestions to help you save energy and money when cooking.*

**62**

## **Don't preheat if you don't have to**

If you're baking breads and cakes, preheating your oven may be necessary. But for most foods (casseroles and broiled meats), preheating simply isn't necessary. It's an energy and money waster. Remember, every time you open your oven door you lose approximately 25% of the heat.

**63**

## **Smaller, but still efficient**

Smaller meat casseroles cook in an electric skillet, broiler, or toaster oven. They use half the energy of a full-size electric counterpart, and won't heat up your kitchen.

**64**

## **Use your microwave oven**

Your microwave requires about the same amount of energy per hour to operate as your electric oven. But, since it cooks food so much more quickly, it saves you time, energy, and money.

**65**

## **Boil until boiling and not a minute longer**

Once water or other liquids reach a state of boiling, they won't get any hotter. If you need to bring something to a boil, turn the burner down or off when it starts to boil.

**66**

## **Think smart... plan your meals**

A meal like roasted chicken, green bean casserole, and brownies can all be cooked at the same time because they cook at the same temperature. It is easier on you and your oven too.

**67**

### **Cover it up**

Covers and lids on your pots and pans trap steam to help cook food faster.

**68**

### **Keep the heat inside the oven**

Every time you open the oven door, you lose about 25°F of heat. This means your food will take longer to cook and your oven needs to work that much harder to keep the temperature consistent.

**69**

### **Pay attention to pot and pan types**

Pans with flared sides or bottoms that are smaller than your burner let heat escape. If pots and pans are too big, they have exposed bottoms, food will not cook evenly. For most foods a medium-sized aluminum pan cooks faster and more efficiently than larger types. Use heavy pots and pans for foods that require slow and steady cooking.

**70**

### **Use your leftovers**

Your oven and range have leftovers too. An electric oven can stay hot for up to 30 minutes. Even your electric range top burner can stay hot for an extra 3 to 5 minutes. Take advantage of this extra heat by warming up desserts or rolls. After all, you've already paid for it.

**71**

### **Keep your oven clean**

An oven that's free of grease and baked-on residue will work more efficiently.

**72**

### **Thaw first, then cook**

If you thaw your foods completely before cooking, your oven won't have to work so hard to cook your meal.

# POOLS AND SPAS

*If you have a swimming pool or spa, you'll have higher than average energy bills. That's because pools and spas cost a significant amount to operate. An electric spa can use approximately 90 kilowatt hours to warm up (from 70°F to 100°F) and almost 5 kilowatt hours per hour to heat thereafter. Add 3 kilowatt hours per hour for the pump motor and another 2 kilowatt hours per hour for the pool cleaner.*

## 73

### Use the optimal temperature settings

A sufficient temperature for spas is 102°F or lower. Higher temperature water can be a safety hazard and cost you a lot more money to maintain that temperature. Check on the accuracy of your pool or spa thermostat. An inaccurate thermostat can increase consumption needlessly.

## 74

### Consider a timer

A timer gives you day-to-day, automatic control of your filter and heater which will reduce your operating costs.

## 75

### Do not over-filter

Filtering is a major cost of owning a pool or spa. The average spa requires a minimum of one hour of filtering a day—just enough to maintain water clarity. An average swimming pool often requires approximately 4 to 5 hours of filtering each day in the summer.

Generally, one complete water exchange every 24 hours will provide adequate filtering. If you use a pool maintenance service, ask about reducing the hours of filtration. For extra savings, when you replace your filter pump motor consider purchasing an energy efficient model.

# 76

## Protect your pool or spa

Wind has the same effect on your pool or spa as blowing on hot soup. It will cool it off and increase evaporation. Well-trimmed hedges, trees and shrubs, gazebos, and fencing can all provide a nice windbreak.

# 77

## Invest in a pool or spa cover

You can save as much as 90% of your summer pool heating costs by using a solar cover. Not only does it help minimize nighttime heat loss (up to 2°F), but it will also prevent chemical loss and water evaporation (hundreds of dollars per month). When shopping for a cover keep these factors in mind: durability, price, warranty, transparency of material, insulation value, and safety.

# 78

## Go solar

Solar pool heating systems are especially effective during the summer months and can replace a regular pool heater in the spring and fall. A solar pool heating system can be a significant investment, so make sure the savings have a payback period of less than or equal to the useful life of the equipment.

# 79

## Turn off those bubbles

The device that adds bubbles to your spa uses up to 4 kilowatt hours per hour to operate. Bubbles may be soothing, but they cool down the water, making the heater run longer to keep the water warm.

# 80

## Help us help the environment

Unless it's solar heated, avoid filtering your pool during "on-peak" periods. You'll be helping everyone. When the demand for electricity is at its highest level, early morning and early evening, we must use a large percentage of our capacity to meet that demand. The less energy you use, the less energy we have to supply, which is a benefit to all, including Mother Earth.

# WATERBEDS

*If you have a water bed, knowing what it costs to operate can be a real eye opener. It uses from 100 to 150 kilowatt hours a month (depending on whether you make your bed or not). A water bed can easily be one of the largest energy consumers in your home. And if you have two, it could be double trouble. Taking some steps to control these costs can help you have a more restful (and inexpensive) night's sleep.*

**81**

## **Buy the best**

If you're in the market for a new water bed or mattress, research the different types. Some offer greater insulation properties which can save money on your energy bill.

**82**

## **Make your bed**

A king-size water bed set at 90°F (with a room temperature of 65°F), with a comforter, uses only 100 kilowatt hours per month to keep warm. On the other hand, the same bed unmade uses about 175 kilowatt hours each month to keep it warm. That means that by making your bed, you can save about 75 kilowatt hours per month.

**83**

## **Invest in a thicker pad**

Covering your water bed mattress with a one-inch foam pad will save energy. That's because you can turn down the water bed heater temperature. The foam pad will keep your body away from the cold water in the bed and retain body heat, keeping you toasty all night long. Available at home improvement stores, one-inch foam pads can save you money.

**84**

### **Monitor your bedroom temperature**

If your bedroom temperature drops, you may spend more on your water bed heater than you would spend on your furnace heating the air in your room.

**85**

### **Don't turn it off**

If you're gone for a week or longer, lower your waterbed's thermostat setting but don't turn it off. It is less expensive to maintain the lower temperature than to reheat it.

## **SMALL APPLIANCES**

*It makes sense to focus on the appliances and equipment that are covered in this brochure, because combined they make up an estimated 90% of your monthly energy bill. Most of the remaining appliances in your home are relatively inexpensive to operate.*

**86**

### **Give your home an energy check-up**

Contact your local electric utility to see what services are available. If available, have their representative provide your home with an "energy check-up." They will survey your appliances and estimate how much energy they use and then recommend low-cost or no-cost saving measures that are just right for your home.





## USE ENERGY WISELY!

This publication was compiled from information provided by the Northwest Regional Group, a group of electric utilities in the Northwest. For additional information contact your local utility.

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