

Conserving energy saves money and time



# 101 easy ways to save





## Every little bit helps: **101 easy ways to save energy**

On the surface, it may not seem as though using an LED light bulb or fixing a dripping faucet would make a difference in saving energy. Yet every year, American homes waste about \$13 billion in energy. That works out to about \$150 in lost energy per family. If every household practiced just a few conservation tips, we could reduce total annual energy use significantly.

That's why we're providing 101 low-cost or no-cost ways for you to lower your energy bills all year long. Many of these take only few minutes, and you'll notice the difference almost immediately.

When you see a dollar sign (\$), that project may qualify for a rebate from Alliant Energy.

## Heating

Statistics show that heating and cooling account for more than half the yearly energy use for a typical home. That's a good place to start when you're looking for ways to save.

1. **Get a Home Energy audit.** An audit analyzes your home's air tightness, insulation, heating and cooling equipment, and appliances. To learn more, call 1-866-ALLIANT (866-255-4268) or visit [alliantenergy.com/homeenergyassessment](http://alliantenergy.com/homeenergyassessment).<sup>\$</sup>
2. **Inspect your furnace filter every month.** If it's dirty, replace it. Dust and dirt slow down air flow. That makes your furnace work harder and less efficiently.
3. **Have your heating system inspected annually.** Simply investing \$50 – 100 in an annual tuneup could help reduce heating costs by up to 5%.<sup>\$</sup>
4. **Keep all heat registers and returns open if you have a forced-air furnace.** Your furnace is designed to heat your entire home, even spaces you don't use often. Your furnace also moves a specific amount of air, so closing off registers decreases its efficiency. Plus, cold air from unheated rooms can escape, leading to drafts and cold spots.



5. **Install a learning thermostat.** Lowering your home's temperature by 10 degrees for eight hours while you're asleep or away could reduce your heating bills by 10%. You can also control your home's temperature from your smartphone and some apps even track energy savings.<sup>5</sup>
6. **Set your thermostat to the temperature you actually want.** Setting it to a much higher temperature won't heat your home faster. It keeps your furnace running longer than necessary, which wastes energy.
7. **Vacuum registers and vents regularly.** Arrange furniture and draperies so air flows freely. Install plastic deflectors to direct air under tables and chairs, which helps prevent cold spots and drafts.
8. **Avoid blocking radiators with furniture if your home is heated by a boiler system.** Also, place a reflecting panel behind radiators, especially those against exterior walls. You can purchase reflectors at hardware stores, or make them yourself with plywood or cardboard and aluminum foil.
9. **Keep furniture and draperies away from electric baseboard heaters.** Leave at least a three-inch clearance above and below the heating units.
10. **During the winter, close curtains and blinds at night to keep cold air out.** Open them during the day to let sunlight warm the rooms.
11. **Don't use space heaters.** Electric space heaters are often more expensive to operate than just turning up your thermostat if you have a gas furnace. Kerosene or other petroleum-based space heaters produce carbon monoxide and require open windows – not very efficient and a safety concern!

12. **Use area rugs to keep your feet warm** on hardwood or tile floors.
13. **If you take a winter vacation, set your thermostat to 55 degrees.** This saves energy and money and prevents water pipes from freezing. If you installed a learning thermostat, use your phone to turn up the thermostat before you return home.<sup>\$</sup>

## Fireplace

Nothing's cozier in winter than a crackling, blazing fire. But, unless you're careful, it can also increase energy costs.

14. **Have your wood-burning fireplace inspected and cleaned regularly.** Burn only fully dried hardwood. That produces the most heat and keeps your chimney flue cleaner.
15. **Check the seal on the fireplace damper.** Close it and hold a piece of tissue paper inside the firebox. If drafts blow the tissue around, the damper should be repaired or replaced.
16. **Turn down your thermostat when using a fireplace.** Setting it all the way down to 55 degrees isn't too far. If you don't, air warmed by your furnace will escape up the chimney.
17. **Add fire-proof caulking.** Pay attention to where the chimney meets the wall, both inside and outside.
18. **Close the damper and glass doors when the fireplace is unused.** If you never use your fireplace, plug the chimney tightly with insulation stuffed in a heavy duty garbage bag and seal the fireplace doors.

## Sealing and Insulating

Taking steps to reduce or eliminate unwanted air leaks in your home can make a big difference in comfort and energy use.

19. **Check insulation levels throughout your house.** Measure attic insulation with a ruler, and check behind switch plates and power outlets for sidewall insulation. You should have 16 – 20 inches of insulation in your attic, and wall cavities should be completely filled top to bottom.
20. **Air seal before you insulate.** Most common types of insulation, like fiberglass and cellulose, lose effectiveness if air can move through them. Before adding more insulation, pull back the old stuff and use mastic, caulk or spray foam to tightly seal all the holes between your living space and attic.
21. **Install more attic insulation.** Increasing from six inches to 18 inches after thoroughly air sealing can trim your annual heating and cooling costs by as much as 20%.
22. **Insulate between rim joists.** These are the spaces between joists where the top of your foundation meets the exterior walls. Cut rigid insulation to fit tightly, then use a can of spray foam or caulk to seal in the insulation. Don't use fiberglass batts here, as they will not insulate well if they are not properly air sealed.
23. **Insulate your foundation or crawl space walls.** Even though you aren't in them very often, the cold air from your basement will get into your ducts and circulate through the rest of your home.
24. **Feel free to mix type and form of insulation.** For example, you can blow loose fill cellulose over fiberglass batts or vice versa.

25. **Distribute loose-fill insulation evenly.** Thin spots will be less efficient and thick spots won't be cost-effective.
26. **R-value measures the capacity of insulation to resist heat flow.** So, the higher the R-value, the greater the insulating power. Remember this when shopping for insulation.<sup>5</sup>
27. **Don't block your attic ventilation with insulation and keep it away from recessed light fixtures.** A properly vented attic can prevent ice dams. Properly dam and air seal recessed light fixtures, chimneys and flues before insulating.
28. **Repair leaky roofs and waterproof your basement.** Leaks allow water to get into insulation. Wet insulation is worthless.
29. **There are steps you can take even when your home lacks sidewall insulation.** Block cold air by placing heavy furniture like bookshelves, armoires and sofas along exterior walls. You can also use hang decorative quilts on exterior walls. Better yet, sign up for a Home Energy Audit and you may receive rebates to insulate your sidewalls.



## Cooling your home

Those hazy, lazy summer days we all long for in the winter can get uncomfortable quickly. That's why it's a good idea to make sure your cooling appliances are operating efficiently.

30. **Keep your central air conditioner clean.** Hose down the outside compressor after shutting off the power to the air conditioner first. Also maintain adequate airflow by trimming plants at least a foot away from the air conditioner.
31. **When it's humid outside, close windows.** Dehumidifiers work non-stop when windows are continually opened and closed.
32. **Circulate air in your home with ceiling fans and box fans.** A ceiling fan should direct air toward the floor in summer, and box fans should be in rooms with people in them. Moving air makes people feel cooler, which allows you to turn up your thermostat a couple of degrees. Just be sure to turn off your fans when you leave a room – fans cool people, not stuff!
33. **Buy the proper-sized window air conditioner.** It's better to get one that's too small than too large. A large unit will turn on and off more frequently and won't be as effective at reducing humidity.<sup>\$</sup>





34. **Let your learning thermostat help you save money.** During the summer months, your programmable thermostat can automatically raise the temperature whenever you go to bed or leave the house. You can set it and forget it.<sup>\$</sup>
35. **No central air conditioning?** Try a whole-house attic fan. It removes hot air through attic vents, typically cooling your home by about five degrees in less than 10 minutes. Plus, attic fans cost less than 25 cents per day to operate.

## Weatherize everywhere you can

These tips are all about keeping warm air inside when it's cold outside and keeping cool air inside when it's hot out.

36. **Remove window air conditioners in winter.** Also, seal window frames with caulk and weatherstripping, but don't caulk them permanently shut.
37. **Seal doors and windows with caulk, weatherstripping and plastic film.** Careful sealing of your home's windows, doors, vents and any other external openings can save you up to \$150 per year in energy costs.<sup>\$</sup>
38. **Outlets are common sources of cold outside air leaking into the house.** Add foam gaskets behind outlet covers and switch plates and insert safety plugs in unused outlets. As always, whenever doing work like this, shut off power to the affected outlets and switches before you start the task.
39. **Make your house as airtight as you can.** Look at its rim joist (see tip 22) and identify pipes that go to the outside. Examples of this include furnace vents, electric mains or hose spigots. Then, use caulk or expanding foam to seal the leaks.

40. **Block cold air drafts from coming through window frames with heavy, lined drapes.**
41. **Low-E storm windows reduce heat gain during the summer and improve the air sealing on original windows.** It also reduces solar-fading impact on furniture and carpets.
42. **Check window panes to ensure they're sound.** If you discover loose glass, replace the putty (glazing) holding the pane in place.
43. **Replace door sweeps and weatherstripping on doors when drafts are sneaking in.** One temporary low-cost option is a rolled-up towel or blanket at the bottom of the door.
44. **Seal windows or doors you never use.** Use rope caulk to seal the edges. Don't seal them shut permanently – you might need quick ventilation or escape during an emergency. Rope caulk is available at any home improvement or hardware store.
45. **Choose the right kind of caulk for the job.** Use latex or acrylic caulk for inside jobs because they're easy to clean up and more forgiving if you're a beginner. Silicone caulk is great for outside use because it lasts longer and seals virtually all types of surfaces. Just be sure the surfaces are clean and dry or the caulk won't stick.
46. **Remember to weatherize attic access.** Use white glue to secure 10 – 12 inches of rigid insulation to the back of the access and weatherstripping to seal the opening.

## Water heating

A little effort combined with small changes in behavior can make a big difference in the amount of water used and energy saved.

47. **Take showers, not baths.** A five-minute shower uses about 12.5 gallons of hot water. Filling a bathtub can use up to 20 gallons.
48. **Install a high-efficiency showerhead.** New showerheads reduce water volume while maintaining water pressure. Typical showerhead flow is about 2.5 gallons per minute. A high-efficiency showerhead can reduce flow to about 1.5 gallons per minute with no noticeable change in performance. A typical family of four can save \$30 a year in water heating costs by making the switch.
49. **Fix leaky faucets.** A one-drop-per-second leak adds up to more than 1,000 gallons down the drain in just one year.
50. **Use aerators on kitchen and bathroom sink faucets.** Soak your aerators and showerheads overnight in vinegar to eliminate mineral deposits and keep them working like new.
51. **Set your water heater temperature to 120 degrees.** Test it with an inexpensive thermometer from a hardware store. Run your hot water for five minutes, fill a coffee cup and take the temperature of the water. Then, if needed, adjust your water heater temperature up or down, wait a few hours and test it again. The correct temperature will save energy, prevent scalding and keep unhealthy bacteria from growing.



52. **Insulate hot water pipes where accessible.** Plumbing on older homes is usually copper or cast iron and both transmit heat very well. Wrapping hot water pipes keeps the heat in the water and allows you to turn down your water heater temperature (see number 51).

## In the kitchen

These tips provide a great recipe to cook up big energy savings in your kitchen!

53. **Check the seal on your refrigerator door.** Close your refrigerator door on a dollar bill. If you can pull the bill out easily, replace the gasket. Appliance dealers and hardware stores sell replacement gasket kits.
54. **Keep the refrigerator door closed as much as possible.** Every time it's opened and held open, up to 30% of the cooled air inside escapes.
55. **Maintain refrigerator temperature at 36 to 38 degrees.** Maintain your freezer temperature between 0 and 5 degrees.



56. **A full refrigerator runs more efficiently than an empty one.** But this efficiency ends if you block its cooling ventilation. Resist the urge to stuff the refrigerator by cramming in everything you possibly can.
57. **Get a new refrigerator.** A new ENERGY STAR® unit will use 40% less energy than a 30-year-old refrigerator.
58. **Don't preheat your oven for items taking hours to roast or bake.**
59. **It's OK to place hot leftovers in the refrigerator.** It won't affect energy use significantly. Besides, cooling food down may increase the risk of food-borne illnesses.
60. **Use microwaves, toaster ovens and slow-cookers when possible.** They use 50% less energy than full-sized electric ovens.
61. **Use the self-cleaning feature of your oven immediately after cooking while it is still hot.**
62. **Use lids on pots and pans to reduce cooking times.**
63. **Keep the grease plates under range burners clean.** They'll reflect heat more efficiently.
64. **Run your dishwasher only when you have a full load.** Use its air-dry cycle. If your dishwasher has a "booster" water heater, use it. It will heat the water to the 140 degrees recommended by manufacturers, while maintaining an energy-saving 120 degrees on your primary water heater.
65. **Use the right size burner on your stove.** Putting a six-inch pot on an eight-inch burner wastes 40% of that burner's heat. Always put a small pot on a small burner and a large pot on a large burner.

## In the laundry room

Paying attention to how you can save energy in your laundry room is a great way to clean up – in more ways than one!



66. **Wash only full loads.** And, use the appropriate water level for the amount of clothes.
67. **Use hot water only with heavily soiled loads.** Wash in cold water and use a cold-water detergent for other types of loads. Always use cold water for the rinse cycle.
68. **Clean the lint screen on the dryer before every use.** A clogged lint screen can decrease dryer efficiency and, in extreme cases, become a fire hazard.
69. **In the summer, dry clothes on an outside clothesline.** It's free, and your clothes will smell wonderful. During winter, you can hang clothes to dry on a rack inside your house. Alternatively, dry your clothes on radiators, if you have them.
70. **Use a high-speed spin option if your washing machine has it.** The more water you can remove from your clothes in the washing machine, the less work your dryer needs to do.



# Lighting

See the light! Take a few easy steps and turn on big energy savings.

- 71. **Turn off lights every time you leave a room.** One common myth is that lights, especially fluorescent lights, use more electricity when turning them on than if they were left on. This isn't true. Turning LED lights off and on actually extends their life.
- 72. **Invest in LED (light emitting diode) bulbs.** They use 80% less energy than incandescent lights and last up to 20 times longer.<sup>\$</sup>
- 73. **Learn to read lighting guides.** A light that produces 800 lumens and has a color temperature of 2700K will look and perform like a 60-watt incandescent bulb – whether it's a CFL, LED or halogen.

Lighting Facts Per Bulb	
<b>Brightness</b>	800 lumens
<b>Estimated Yearly Energy Cost \$1.08</b>	
Based on 3 hrs/day, 11¢/kWh Cost depends on rates and use	
<b>Life</b>	22.8 years
Based on 3 hrs/day	
<b>Light Appearance</b>	<div style="display: flex; justify-content: space-between;"> <span>Warm</span> <span>Cool</span> </div> <div style="text-align: center;">  <p>2700 K</p> </div>
<b>Energy Used</b>	9 watts

- 74. **Use controls to provide light only when you need it.** Devices like dimmers, motion detectors, occupancy sensors, photocells and timers can help you save energy and money inside and outside.<sup>\$</sup>
- 75. **Keep lamps away from thermostats.** The heat produced by incandescent lights can trick your furnace into running less than needed or your air conditioner more than needed.
- 76. **Dust light fixtures regularly.** A heavy coat of dust can block up to 50% of the light output.
- 77. **Use a single bulb in a multi-socket fixture.** Before you take this step, remember to check the maximum wattage the fixture allows so you don't accidentally exceed it.

78. **Light your sidewalks and driveways with solar-powered landscape lighting.**
79. **Decorate walls, ceilings and floors with pale colors.** Soft tones reflect more light and increase ambient lighting, reducing the need for additional lights.
80. **Read light bulb packages carefully.** Watts describe the amount of energy needed to power the bulb; lumens describe how much light the bulb produces. Energy-saving bulbs produce more lumens per watt of electricity used.

## Landscaping and outdoor tips

You'll enjoy the great outdoors even more when you follow these money-saving tips.

81. **Plant a tree.** One well-placed shade tree can reduce your home cooling costs by as much as 25%. Place leafy shade trees to the south and west of your home and evergreens to the north.
82. **Give your air conditioner room to breathe.** Allow at least one foot of clearance from any shrubs or structures.



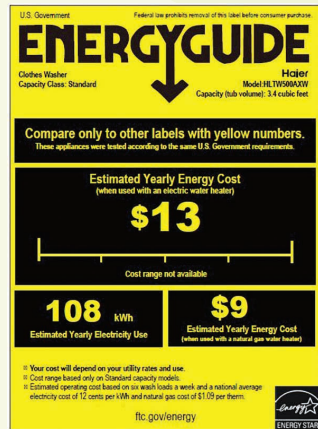


## Appliances and amenities

These “extras” help make our lives easier and more pleasant. Saving energy and money along the way makes them even better.

83. **Recycle that second refrigerator or freezer.** Do you really need it? A spare refrigerator can add more than \$100 to your energy bills every year.<sup>5</sup>
84. **Cover your outdoor hot tub when you’re not using it.** If you have a pool, use a solar cover to help heat the water.
85. **Keep waterbeds covered with quilts or blankets to help retain heat.** Insulate the waterbed mattress with a sheet of rigid foam insulation underneath it.
86. **Forget the screen saver.** Let your computer monitor go to sleep mode or just turn it off. That saves the most money.
87. **Consider going electric the next time you buy a lawn mower.** They cost less to operate (about three cents of electricity per use) are about 75% quieter than gas mowers and have significantly reduced emissions.
88. **Replace charcoal or propane grills with an electric or natural gas model.** They’re inexpensive to operate, don’t generate air pollution and are more convenient – you’ll never run out of fuel.
89. **Turn off or unplug any unused electrical devices.** Many appliances, especially computers, television, cable or satellite boxes, use power even when turned off. A smart power strip can also automatically power down devices that aren’t in use.
90. **Keep humidifiers and dehumidifiers away from walls and bulky furniture.** They work best when air circulates freely around them.

91. **Help your humidifier work not as hard during winter.** When you shower, only run the fan when needed. If your home is vented properly, the steam from your shower naturally humidifies the rest of the house.
92. **Give your appliances a rest when you go on vacation.** Turn off and unplug everything you can, including cable boxes, internet modems and wireless routers. Set your water heater to its lowest setting (but not below 120 degrees) or place it on vacation mode, if it has one.
93. **Use energy when it's less expensive.** Check out a different energy rate plan, where you'll pay less for energy during set hours at night and all weekend because overall demand is lower. However, with this plan, you'll pay more for energy use during the day, when demand is higher. Find out more details or sign up at [alliantenergy.com](http://alliantenergy.com).
94. **Use a less expensive device for background noise.** If you're in the habit of leaving a TV on for background noise, consider using a radio instead. A small radio creates similar pink noise but uses a lot less energy.
95. **Read EnergyGuide labels carefully.** Be sure you're comparing apples to apples. Energy use can vary significantly, even within a single brand of devices or appliances. Remember, just because an appliance has an Energy Guide doesn't mean it is ENERGY STAR® rated. Look for the ENERGY STAR® logo.



96. **Choose an appliance that fits your family and your lifestyle.** Whether it's a furnace, refrigerator or water heater, it's wasteful to purchase a unit that's too large or too small.
97. **With appliances, choose natural gas over electric when you can.** For example, use a natural gas clothes dryer instead of an electric one. The \$50 – 75 extra you might pay for a natural gas appliance is easily paid back in less than a year from the energy you'll save.
98. **It may be time to replace an appliance even if it's still running.** An old water heater or refrigerator could be costing you much more than you think. Replacing an electric resistance water heater with an electric heat pump water heater can save \$300 a year in electric costs.<sup>5</sup>
99. **Shop for furnaces or air conditioners during the off-season.** Heating and cooling manufacturers often offer significant rebates during seasonal sales promotions, and dealers may charge less for installation.
100. **Investigate trendy new technology carefully.** Some innovations, such as convection ovens and argon-filled windows, may save energy and make life somewhat more convenient. Other items, such as commercial-grade kitchen appliances, might amount to little more than expensive cosmetic additions.
101. **Look for the ENERGY STAR® logo.** This assures you that the appliance exceeds energy-use standards, typically by a significant amount.



Look for the  
**ENERGY STAR** label

**For additional information  
and answers to your  
questions, please contact  
us directly.**

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