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SAVE SOME GREEN  
BY GOING GREEN

GREEN.

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money.

A Guide to How Sustainable  
Living Can Save You Money



 **HAP**Housing™

# Floor Plan of Green Savings

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# Chapter 1: Defining Green

## Why Go Green?

Going green means protecting your family, your environment and yourself. “The Environment” is everywhere—it is your neighborhood, your city, the food you eat, the air you breathe and the water you drink. The environment directly affects your life and your health every single day.

According to the CDC, asthma rates have doubled since the 1980’s. This increase has been repeatedly linked to environmental factors such as chemical use both indoors and outdoors. We can minimize these impacts by using fewer chemicals, and reducing the amount of energy we use (power plants create air pollutants as well).

For more information, visit [www.cdc.gov/nchs/data/ad/ad381.pdf](http://www.cdc.gov/nchs/data/ad/ad381.pdf)

Luckily, there are lots of good ways to start “going green.” Any time you conserve water or energy, you also save money. A great place to start saving is right where you live.

## What do you mean when you say my home is “green”?

Green construction is the practice of increasing the efficiency with which buildings use resources — such as energy, water and materials — while reducing the building’s impact on human health and the environment. Green building is accomplished through better design, construction, operation, maintenance and removal — the complete building life cycle.



### What is black, white & read all over? Did you know?

If every American recycled his or her newspaper just one day a week, we would save about 36 million trees a year. You can save a tree for every four feet of paper you recycle. It takes half as much energy to make recycled newspaper as it takes to make fresh newsprint from trees. More recycling tips on page 7!

# Chapter 2: Kitchen

## Appliances

### **Refrigerator.**

When shopping for a new refrigerator/freezer unit, look for the Energy Star certification. Energy Star qualified refrigerators require about half as much energy as models manufactured before 1993. Top-freezer and bottom-freezer refrigerators are more energy efficient than “side-by-side” models, and they are less expensive.

Make sure your refrigerator and freezer doors close tightly. You can buy new sealing material at your local hardware store. To save, set your fridge as close to 37 degrees as possible, while setting your freezer as close to three degrees as possible. Make sure to clean the back and bottom coils of the fridge a couple times a year to increase efficiency.

Also, if your freezer isn't packed full, put in some plastic containers of water (covered/capped), these will keep the freezer from using so much energy, and come in handy in the case of a power outage!

### **Stove/Range.**

It is important for both energy use and home safety to use the right sized pot on stove burners. A 6” pot on an 8” burner wastes more than 40 percent of the burner's heat. Using the right sized pot on stove burners can save about \$36 annually for an electric range, or \$18 for gas. Covering your pots when cooking reduces the amount of energy used, keeps your kitchen cooler and cooks your food faster. Covering your pot also seals in more flavor. If you have a gas range, be certain to keep the burners clean to ensure maximum efficiency. Blue flames mean good combustion; yellow flames mean service may be needed to ensure the gas is burning efficiently.

### **Mircrowave Oven.**

If you need to warm up or defrost small amounts of food, use a microwave instead of the stove to save energy. Microwave ovens use around 50 percent less energy than conventional ovens do. For large meals, however, the stove is usually more efficient. In the summer, using a microwave causes less heat in the kitchen, which saves money on air conditioning.

For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances)

# The EnergyGuide Label

If you've shopped for appliances, you've seen the bright yellow EnergyGuide label. The Federal Trade Commission (FTC), the nation's consumer protection agency, wants you to know that the EnergyGuide label can help you compare the energy use of different models as you shop for an appliance. The more energy efficient an appliance is, the less it costs to run, and the lower your utility bills. Using less energy is good for the environment, too; it can reduce air pollution and help conserve natural resources.

**So where do you begin? Start by getting to know the EnergyGuide label shown here...**

**U.S. Government** Federal law prohibits removal of this label before consumer purchase.

# ENERGYGUIDE

Refrigerator-Freezer

- Automatic Defrost
- Side-Mounted Freezer
- Through-the-Door Ice

XYZ Corporation  
Model ABC-L  
Capacity 23 Cubic Feet

## Estimated Yearly Operating Cost

**\$67**

Cost Range of Similar Models: \$57 to \$74

## 630 kWh

Estimated Yearly Electricity Use

Your cost will depend on your utility rates and use.

- Cost range based only on models of similar capacity with automatic defrost, side-mounted freezer, and through-the-door ice.
- Estimated operating cost based on a 2007 national average electricity cost of 10.99 cents per kWh.
- For more information, visit [www.ftc.gov/appliances](http://www.ftc.gov/appliances).

**ENERGY STAR**

Lists key features of the appliance you're looking at and the similar models that make up the cost range below.

The maker, model, and size tell you exactly what product this label describes.

What you might pay to run the appliance for a year, based on its electricity use and the national average cost of energy. The cost appears on labels for all models and brands, so you can compare energy use just like you would price or other features.

The cost range helps you compare the energy use of different models by showing you the range of operating costs for models with similar features.

An estimate of how much electricity the appliance uses in a year based on typical use. Multiply this by your local electricity rate on your utility bill to better judge what your actual operating cost might be.

If you see the ENERGY STAR logo, it means the product is better for the environment because it uses less energy than standard models.

# The EnergyGuide Label Q&A

## **Do all appliances have EnergyGuide labels?**

**These do:** clothes washers, dishwashers, refrigerators, freezers, water heaters, window air conditioners, central air conditioners, furnaces, boilers, heat pumps & pool heaters.

**These don't:** ranges, ovens, clothes dryers, humidifiers & dehumidifiers.

## **Is it safe to assume the estimated operating cost is close to what I'll actually pay each year?**

No, it really is just an estimate. The cost on the label is based on a national average price for electricity, while your rate depends on where you live. And how much electricity the appliance uses depends on how you use the appliance.

## **What if there's no EnergyGuide label on an appliance?**

Check to see if it's hanging inside — some manufacturers display it that way. If a label is missing and the retailer can't help you, visit the manufacturer's website. Or, look to see if a retailer selling the appliance has posted the label online.

## **Are all EnergyGuide labels the same?**

No, EnergyGuide labels are a bit different for some appliances. For example, furnace labels don't have operating costs, and dishwasher labels have two costs — one for consumers who use an electric water heater, and one for those who use a natural gas water heater. Still, all EnergyGuide labels give you a way to compare the energy use of similar appliances.

## **Are the national average electricity cost & the cost range always up-to-date?**

Both are updated every five years. While this helps manufacturers to all base their estimated costs on the same electricity rate and usage patterns, it means that the rate used for EnergyGuide labels won't always reflect actual electricity prices at the time. It also means it's possible a newer model's operating cost won't be reflected in the cost range; however, the model would still have its own EnergyGuide label.

## **How can I find out more about the ENERGYSTAR program?**

To earn the ENERGYSTAR, a product must meet strict energy efficiency guidelines set by the Environmental Protection Agency and Department of Energy.

**To learn more, visit [www.energystar.gov](http://www.energystar.gov)**

# Recycling

## **Blue Bins.**

Blue bins are used to collect recyclable items. If you do not have a blue bin, and live in the City of Springfield, please call 413-736-3111.

## **What is Recyclable?**

For a waste reduction action plan for single stream cart recycling, there is no sorting needed. Recycling containers should be placed on the tree belt, not in the road, to better facilitate both street sweeping and snow plowing operations. To provide recycling guidance, there is a list of recycling dos and don'ts on-line at [www3.springfield-ma.gov/dpw/single-stream-plan.0.html](http://www3.springfield-ma.gov/dpw/single-stream-plan.0.html)

## **Recycling Tips: Get Creative!**

Many household items can be used over again, even if it is not in the same way that the item was designed for:

- Use glass jars/bottles with lids as a travel mug, or to store nuts and bolts in the garage. Those without lids can be used for vases, votive candle holders or other home decor.
- Instead of trashing old t-shirts, make them into rags instead of buying paper towels, which are not recyclable at all.
- Make a scrap-paper note pad. Gather pieces of used paper the same size with the blank side up. Find a piece of cardboard the same size and use it as the back. Staple the whole thing together, and use it as a place to write down grocery lists or things to do.

**More Details on where to bring miscellaneous recycling products can be found at [www3.springfield-ma.gov/dpw/index.php?id=solid\\_waste](http://www3.springfield-ma.gov/dpw/index.php?id=solid_waste)**

## Prevent Unwanted Mail

Due to the changes in the Federal Fair Credit Reporting Act, you can now be removed from credit card mailing lists by making a toll-free call. This call can remove your name from four major credit bureaus' mailing lists for two years.

When you call, you will need to confirm your identity, a recording will ask for personal information, including your Social Security Number (which they already have). You can also request a form that will wipe your name PERMANENTLY from their mailing lists if you want.



The National Waste Prevention Coalition states that stopping these mailings can really make a difference. If 500,000 people took advantage of the law, more than 12 million fewer pieces of mail would be sent in one year alone.

### **Here are a few ways to reduce credit card offers AND junk mail:**

- Call 1-888-5OPTOUT (1-888-567-8688) or visit [www.optoutprescreen.com](http://www.optoutprescreen.com) to be removed from the four major credit bureau mailing lists.
- Visit [www.dmchoice.org](http://www.dmchoice.org) and follow the steps to remove yourself from mailing lists.
- Check out [www.catalogchoice.org](http://www.catalogchoice.org) to opt out of paper catalog mailings.
- Visit the Yellow Pages website to remove yourself from phone book distributions.
- Contact the companies that have sent you unwanted mail and tell them to remove your name from their mailing lists. Many of them have 800 numbers you can call.

Be sure to provide all variations of the name under which you have been receiving junk mail. This process could take a few months so please, be patient! It is recommended you keep a copy of the information and repeat the process every few years or so. This will remove your name from any new mailing lists.

## Water Conservation

Conserving water is not only good for the environment, but can help you save money on utility bills, spend less time on home maintenance, and worry less about mold and mildew damage caused by leaking water.

### Green Tips to Conserve H<sub>2</sub>O:

- Operate the dishwasher only when you have a full load.
- When purchasing a standard-size dishwasher, consider a model that uses 6.5 gallons of water per cycle or less. Compact models should use 4.0 gallons per cycle. Older models can use 11 gallons per load.
- When washing dishes by hand, fill one sink or basin with soapy water and fill the rinsing sink to one-third or one-half full. Avoid letting the water run continuously in the rinsing sink.
- Do not use running water to thaw meat or other frozen foods. Defrost food overnight in the refrigerator or by using the defrost setting on your microwave.
- Think about the water you drink! Plastic water bottles are expensive—anywhere between \$1 and \$4 per bottle. That's because one plastic water bottle takes 2000 times the energy to reach your house than the water from your tap. City water is usually better for you, less expensive and better for the planet.

Never put water down the drain when there may be another use for it such as watering a plant or cleaning. Store drinking water in the refrigerator instead of letting the tap run while you wait for cool water to flow.



### Recycle Your Newspaper! Did you know?

That recycling centers may want newspapers tied together or bagged?

Also, anything that comes with the newspaper can also be recycled (except magazines, which must be recycled separately).

## Cleaning

Many commercial cleaners contain substances that are toxic and can burn skin or eyes on contact. Without proper ventilation, their use can also cause injury from harmful fumes. Over 90% of poisonings happen inside the home, with bleach as the number one chemical involved. The average American uses 40lbs. of toxic cleaners every year. The fumes released from these cleaners lead to an increase in asthma diagnoses in children.

In most cases, non-toxic alternatives will do just as good a job cleaning as toxic ones. They cost less, and are better for your overall health. Bleach for example, costs slightly more than vinegar. The bleach warning label is 20 lines long, while vinegar does not have a warning label. Why not use vinegar when you can?

For more information, here's a great article about bleach vs. vinegar: [www.rodalepress.com/natural-disinfectant?page=0%2C0](http://www.rodalepress.com/natural-disinfectant?page=0%2C0)

To prevent exposure to harmful chemicals, try do-it-yourself alternative cleaning recipes instead. We have printed a number of these recipes for you, they can be found in your HHQ reusable grocery tote.



### Green “Dryer Sheets” & Static Cling! Did you know?

When drying your clothes, you can skip the dryer sheets which can contain many chemicals including: Benzyl Acetate, Benzyl Alcohol, Chloroform, camphor and limonene. To get your clothing smelling nice, make a sachet of natural cotton and fill it with dried organic lavender, or infuse rags with your favorite essential oil (let them dry) and toss it in with your laundry.

If your laundry has static electricity (in spite of the adding vinegar or baking soda to the wash cycle - page 15), use the dryer until clothes are damp, then hang them out to dry. This will save electricity and your clothes will not develop the static electricity generated by their being spun around in the heated dryer. If you must use the dryer, hang your clothes on a plastic hanger -- then take a metal hanger and reach up underneath the garment with the hanger and sweep it back and forth. The electricity will be attracted to the metal hanger and your clothes will not retain static.

# Chapter 3: Bathroom

## Water Conservation

### **Think about it.**

How long is your average shower? Now multiply it by the flow of your shower head. How many gallons is that? All that water goes into the sewer, and eventually goes into natural bodies of water. Conserving helps keep these natural bodies of water healthier, which means healthier overall communities.

Some people recommend cutting shower time to three minutes to save water. You can also turn the water on to get wet, turn off to lather up, then turn back on to rinse off. Here are some other, even easier ways to save.

### **Install low-flow showerheads.**

The older the showerhead, the more water it uses. Most new showerheads deliver 2.5 gallons of water per minute. Some new models deliver less than 2.0 gallons per minute. Older fixtures can deliver as high as 8 gallons per minute. Pressures have been adjusted to the low-flow fixtures to deliver as good a shower as the higher flow showerheads.

### **Check your showerhead for leaks.**

If your showerhead is leaking, make sure it is screwed tightly and check the washer for wear.

### **Fill bathtubs only one-third full.**

Use the minimum amount of water needed for a bath by closing the drain first and filling the tub only one-third full. The initial burst of cold water will be warmed by the hot water as the tub fills. When adjusting water temperatures, instead of turning the water flow up, try turning it down to balance the temperature.

### **Fix leaking toilets.**

Toilet leaks are often silent, allowing loss of water to go undetected for long periods of time. To detect silent leaks, remove the lid from the toilet tank, remove any colored cleaning agents, flush to clear water in the bowl, then add dye tablets, leak detector fluid or a few drops of food coloring to the tank. If the tank is leaking, color will appear in the bowl within 30 minutes. Flush as soon as the test is complete. Some toilets may produce a running water sound that is easy to hear. Some leaks are visible as a small trickle running from the rim to the water in the bowl. The average leaky toilet can waste about 200 gallons of water per day.

## Water Conservation (Continued)

### **Avoid flushing the toilet unnecessarily.**

Dispose of tissues, insects and other such waste in a trash can rather than in the toilet.

### **Check your toilet to see if it is low-flow.**

Since the mid-1990s, toilets have been redesigned to conserve water. Low-flow models use 1.6 gallons per flush and new, high-efficiency toilets use 1.0 to 1.28 gallons per flush. Older models use 4 gallons per flush. You may want to consider purchasing a newer model.

### **Turn off the faucet.**

Turn off the water as you brush your teeth, wash your face or shave. Faucets left in the open running position waste from several hundred to several thousand gallons of water per day.

### **Check faucets for leaks.**

A leak at the rate of one drop per second can waste up to 2,700 gallons per year. Check faucets regularly for leaks at the faucet head and seepage at the base and its connections. Repair leaking faucets by replacing washers and by tightening or repacking the faucet stem.



### **Workin' at the Car Wash! Helpful Green Hint.**

Consider using a commercial car wash that recycles water. If you wash your own car, park on the grass, use a gentle non-phosphate dish detergent and use a hose with a spray nozzle.

# Chapter 4: Living Room

## Getting the Most From Your Ceiling Fan

Ceiling fans are one of the most popular of all home energy efficiency features. They are a very practical way to cut summer electricity bills while also offering a decorative alternative to typical light fixtures. It should come as no surprise that nearly two-thirds of American households now have ceiling fans.

But while ceiling fans can help cut summer energy use, they can also be substantial energy users depending on their use and what kind of lights, if any, are put in them. Since ceiling fan lights tend to be the brightest, most centrally located and most conveniently switched fixtures in the room, they get used about four hours per day. And since ceiling lights aren't very efficient, they can use more energy than the fan motor itself, even though the fan motor runs for more hours per day.

Here are some tips to get the most out of your ceiling fan:

### **Compare fan models.**

Purchase ENERGY STAR labeled models which save energy, are more efficient and are quieter than other models.

### **Switch fan direction every season.**

During the summer, ceiling fans increase comfort by blowing air downward on people in the room. However, this same cooling effect can actually feel like a draft in the winter. This is why fan motors should be reversed in the winter so that they blow air up instead of down. This helps disperse warm air trapped near the ceiling and creates a more even room temperature. Fan direction is normally controlled by a switch located on the side of the fan motor. This may be a little inconvenient to reach, but throwing that switch twice a year will pay for itself in improved comfort and energy savings.



# Chapter 6: Laundry

## Water Conservation

### **Set clothes washers for the appropriate-sized load.**

For washing machines with variable settings for water volume, select the minimum amount required per load. If load size cannot be set, operate the washer with full loads only. Check hoses regularly for leaks.

### **Use the shortest wash cycle for lightly soiled loads.**

Normal and permanent press wash cycles use more water. Pretreat stains to avoid rewashing.

### **Use water efficient clothes washers.**

When you replace your washer, consider a water-efficient model that uses an average of 18–25 gallons of water per load or a front loader that uses 15–25 gallons per load. Older and non-water efficient washing machines can use as much as 40 gallons of water per load.

### **Washer and Dryers.**

It is true that front loader washers and dryers save energy and make clothes cleaner while using less water -- but they cost more --- much more. Some of the front loader washers require you use specially formulated detergent and this also costs more. Consider your family's habits when purchasing a washer and dryer. Do you always open the washer mid-wash to throw in a dirty sock? If so, a front loader is not for you (they can't be opened mid-cycle).

When washing clothes, add a 1/4 cup of baking soda to the water. Baking soda is slightly alkaline and will soften the water, reducing the amount of laundry detergent you need to use, it will also help to reduce static electricity in your clothing. Adding a 1/2 cup of vinegar to the wash will also reduce static electricity - if you use vinegar --- DO NOT USE BLEACH! Bleach and vinegar mixed together cause a chemical reaction that produces a toxic gas.

### **Do not overload your washer.**

Overloading will not allow the water to flow through your clothes to clean them. Overloading also restricts the agitator and can overheat the system.

### **Clean your lint trap every time you dry clothes.**

A dirty lint trap can cause your dryer to overheat. The long, metal tube that shunts the dryer exhaust outside should be removed and cleaned every six months.

# Chapter 7: Lawn & Garden

## Lawn Care

### **Mowing.**

If your lawn is small, you can use a “push mower.” These lawn mowers are inexpensive in more ways than one. They cost far less than gas or electric powered mowers, they are easy to maintain, require only a yearly blade sharpening and a light spray of oil before putting it away for the winter. Plus no gas or utility payment to mow your lawn!

### **Don't bag your trimmings.**

Be certain to cut your lawn at least once a week to prevent the grass from becoming too long. Then just leave the trimmings on the lawn. The trimmings will decay and supply your lawn with nitrogen, a natural “fertilizer”.

### **Fertilize only as needed.**

When fertilizing, using the correct amount of fertilizer can save water and result in a healthier landscape. Overfertilizing will aggravate pest problems, stimulate excessive plant growth, and demand frequent irrigation. Use fertilizers only when specific nutrient deficiency symptoms are evident. These deficiencies can be determined by conducting a soil test or analysis.

### **Apply fertilizers sparingly.**

The amount of fertilizer to apply depends on a number of factors, such as grass species, soil type and permeability, and your location in the state. Follow the manufacturer's directions on the bag, in terms of the amount per application. Know exactly the square footage of your lawn that the bag of fertilizer is intended to cover.

### **Use a “slow-release” fertilizer.**

The best fertilizers for healthy landscapes and the environment are those that contain a high percentage of slow-release, water-insoluble nitrogen. Slow-release products stay in the soil to supply nutrients to plants over a longer period of time. The product label will identify organic, slow-release or controlled release, water-insoluble nitrogen, sulfur-coated, IBDU (15N-isobutylidene divrea), or resin-coated.

### **Use a “no phosphate” fertilizer.**

A “no phosphate” fertilizer is fine for most mature lawns. Apply a phosphate fertilizer only if a soil test demonstrates the need. For information specific to your area, contact the local County Cooperative Extension Service.

**Cut your grass at the right height.**

Cut your grass at the highest recommended height for your turf species or the highest setting on your lawn mower. Cut no more than one-third of the grass length at one time to encourage grass roots to grow deeper.

**Keep mower blades sharp for a clean cut.**

Dull blades tear grass, opening it to disease and increasing its need for water.

**Plan your landscape and choose the proper plants.**

Evaluate the conditions in your yard, such as sunny and shady areas, how you will use sections of the yard and how large you want mature plants to be. Choose the proper plants. Determine each plant's need for sun, shade, soil and water, and its tolerance for cold or salt. Match the plant's needs to the appropriate spot in your landscape.

**Use grass wisely.**

Grass is often your yard's biggest water user. Save grass for areas where children or pets will play. In other areas, consider alternative ground covers or mulch.

**Use mulch.**

Mulch helps retain soil moisture and moderates temperature. Mulching also helps to control weeds that compete with plants for water. Spread several inches of mulch, such as wood chips, pine straw or leaves, around shrubs, trees and flowerbeds.

**Compost.**

You can cut down on how much garbage your house makes by composting vegetable scraps, coffee grounds, egg shells, and yard waste and in turn help your garden flourish the natural way. Most people are afraid to compost because they either don't know how or think it will smell or attract pests. Composting properly is easy, affordable and clean. Designate a small area in your yard as a compost pile by driving four tall stakes into the ground and wrapping them with chicken wire, making about a 3'x3' area. This should be a shady area at least 2 feet from any wooden structures. Add a shovel full of soil, some "brown waste" like vegetable scraps and fruit peelings from your kitchen, and just a little "green waste" like cut grass or leaves to the pile and, let the magic happen. Turn the compost using a shovel once or twice a week to aid decomposition. Do not add milk or meat products to the pile, or it will smell. Use your finished compost to fertilize your garden.

**For more information on composting, go to:**

[www.learn2grow.com/gardeningguides/soilmulchcompost/application/quickeasycomposting.aspx](http://www.learn2grow.com/gardeningguides/soilmulchcompost/application/quickeasycomposting.aspx)

# Water Conservation

## **Water your lawn only when it needs it.**

The amount of rainfall your area receives should dictate how often you water your lawn and how much water you apply. A hearty rain eliminates the need for watering for as long as two weeks. Overwatering your lawn results in shallow root systems, which means your lawn is less drought- and stress-tolerant. Overwatering also promotes weed growth, disease and fungus.

## **Water your lawn only when it shows signs of stress.**

Signs of stress include the lawn turning a bluish-gray color and lingering tire tracks or footprints. Leaf blades folded in half lengthwise is another sign. The soil around the root zone may feel dry.

## **Water lawns before 10 a.m. or after 4 p.m.**

Watering during the early morning or early evening hours reduces losses from evaporation and wind that can occur during the middle of the day. This also allows the water to seep into the ground to the grass and plant roots, promoting healthier plants with deep root systems.

## **Position sprinklers to water the lawn, not the street or driveway.**

Position the sprinkler so that you water only the lawn and shrubs, not paved areas.

## **Use the appropriate sprinkler head for the irrigated area.**

Install sprinklers that are the most water-efficient for each use. Rotors or spray heads are good for turf areas, but don't use both in the same zone. For even distribution, flow rates must be consistent throughout the zone. In planting beds, use microirrigation, which includes drip and soaker hoses. Also, use spray heads designed for planting beds.

## **Collect water in a rain barrel to use to water your plants.**

Rainwater is free and is better for your plants because it doesn't contain hard minerals. Planter beds, vegetable or flower gardens and potted plants can easily be irrigated with water from a rain barrel.

## **Pay attention to your hose.**

Left unattended, a garden hose can pour out hundreds of gallons of water in an hour. Check all hoses, connectors and spigots regularly to make sure they are in good working order. Use hose washers between spigots and water hoses to eliminate leaks. Replace or repair damaged or leaking hoses, nozzles, spigots and connectors.

## **Use a broom to clean leaves & debris from sidewalks & driveways.**

Using a hose can waste hundreds of gallons of water.

# Chapter 8: Whole House

## Heating and Cooling

### **Air Conditioners.**

When buying new heating and cooling equipment such as a central air conditioning unit, proper sizing and quality installation are critical to your home's energy efficiency and comfort. Remember: bigger doesn't always mean better. Oversized equipment can cause reduced comfort and excessive noise. Oversizing also can shorten the life of the equipment by causing it to cycle on and off more frequently than a properly sized unit. However, undersized equipment can reduce the efficiency and accelerate wear on system components, leading to early failure

### **Changing your furnace filter.**

A major part of maintaining that efficiency is allowing your furnace to "breathe". A clean furnace filter is imperative. Depending on the kind of filter you have, it may need to be changed each month or every three months. Some HEPA filters can be washed clean every month. If your filter needs to be changed or cleaned monthly—change the filter when you send out your mortgage payment each month. If your filter needs to be changed every three months—change it when you pay your quarterly water bill.

### **Don't block your air return vents.**

Not only do furnaces need clean filters to breathe, they also need clean air to circulate through their systems. Just because it's not blowing out heat, doesn't mean you can cover it up. Don't cover air return vents with pictures, posters, pieces of furniture or drapes. These vents which are located near your ceiling need to provide fresh air to your furnace.

### **Consider purchasing a programmable thermostat.**

You can program the thermostat to reduce the heat in your home when you're at work, and turn it back up right before you get home. This way, you are not paying to heat an empty house. You can also program your thermostat to reduce the heat during the night when you sleep. If you are a National Grid customer, you may be eligible for a \$25 rebate on the purchase of a new programmable thermostat.

**For more information, visit** [www.powerofaction.com/efficiency/](http://www.powerofaction.com/efficiency/)

### **Turn off the lights in empty rooms.**

It always pays to turn out the lights when no one is in the room.

## Cleaning

Keeping your home clean is an important way to keep your family healthy, extend the life of your homes materials, prevent pests and just plain keep your home looking terrific! Unfortunately, many cleaning products have harmful ingredients that can produce toxic fumes or even produce hazardous reactions if mixed together. There are many products on the market now that are non-toxic, such as Simple Green®. Look for products that are phosphate free and do not have petroleum, nonylphenol ethoxylate or chlorine.

**You can go to the following website to get a list of cleaning products that are environmentally friendly:** [www.greenseal.org/findaproduct/index.cfm](http://www.greenseal.org/findaproduct/index.cfm)

A Green Cleaner is:  
non-toxic • hypoallergenic • biodegradable  
chlorine free • phosphate free • natural

Ounce-for-ounce, a homemade green cleaner is 1/10 the price of its corresponding commercial product.

You also probably have some items in your pantry right now that make great, natural and cheap cleaning products such as:

### **Baking Soda.**

It's cheap, it's green and it's effective! Baking soda can be used to prevent odors when kept in an open box in your refrigerator and freezer. Sprinkling some baking soda on your refrigerators plastic shelves, rubbing it in with a sponge and wiping it clean with plenty of warm water, will make your refrigerator sparkle and smell terrific! Baking soda can also be made into a paste to clean pots and pans, clothing and your bathtub.

### **Vinegar.**

Although it smells bad—it cleans great! After it dries, the smell evaporates too. Vinegar is a terrific glass cleaner. Pour vinegar in a spray bottle and clean your windows until they let the sun shine in!

### **Vinegar and Lemon.**

Squeeze half a lemon into a bucket of water with a quarter cup of vinegar and mop your linoleum or tile floors. It will pick up the dirt, and leave a fresh lemon scent behind.

## More Cleaning

### **“Super-Clean” that toilet.**

It's tempting, and so easy to use those “hang-in-the-bowl” flush cleaners but they are not only very bad for the environment, they will damage the rubber plugs in your toilet tank. The chemicals from the flush cleaners will disintegrate the rubber stopper that helps your tank to fill with flushing water. If the stopper doesn't fit properly, your tank will never quite fill to the recommended amount. Fresh water will continue to “run” inside your tank, wasting gallons of water and increasing your water bill. Instead of using the flush cleaner, try this method to keep your toilet clean and fresh, easily and cheaply. Take a bucket of warm soapy water and pour it down your toilet. This will flush all of the toilet water down, leaving a clean porcelain surface for you to scrub clean. Use baking soda and a sponge dedicated to just cleaning your toilet, to get in there and “super-clean” your toilet. You will be amazed at how fresh and clean your toilet will be.

### **Sweep, sweep, sweep.**

Before vacuuming, sweep under carpets, along baseboards and over rugs. The broom will dislodge ground in dirt and gather dust together for easy vacuuming. And since the broom is powered by you—you burn calories and don't increase your electricity bill. Sweeping first will cut your vacuuming time in half and make your room cleaner.

### **Vacuum, vacuum, vacuum.**

A vacuum cleaner with attachments is an excellent way to get rid of that deep, down dirt. Dirt imbedded in carpet fibers will shorten the use and attractiveness of your carpet. Sprinkle a little baking soda on your carpets. Allow it to sink in and vacuum it up. Odors will attach themselves to the baking soda particles and be vacuumed away. Vacuum the dust off of light shades, window sills and other surfaces.

### **Scenting your home.**

Nothing makes a home seem so clean, as a fresh scent as soon as you walk in the door. No need to buy expensive sprays. Use the soil from your compost heap to grow beautiful flowers for your “cutting garden”. All of these beautiful flowers will scent your entire house when cut in placed in vases inside your home. Unfortunately, spring and summer can't last forever, so during the winter months you can create your own natural “scents” with crushed cinnamon sticks in sachet bags; poke fresh cloves into an orange and hang from a ribbon; place several lemons in a bowl.

## Interior Pest Control

Let's face it, pests love to bug humans! Whether it's ants, mice, roaches, rats or bats, pests may try to invade your home. Don't poison your family in an attempt to get rid of pests. There are plenty of natural methods that can be used to discourage pests from making your home their home.

Boric acid (borax) is a low-toxicity mineral with insecticidal, fungicidal, and herbicidal properties. It may be used either in a bait formulation containing a feed attractant or as a dry powder. The powder may be injected into cracks and crevices, where it forms a fine layer of dust. Insects travel through the boric acid, which adheres to their legs. When the insects groom themselves, they then ingest the poison, which causes death three to ten days later.

An ounce of prevention is worth a pound of cure. This old saying is certainly true with keeping pests out of your home. Keep your home clean. Remove trash regularly. Don't leave dirty dishes in your sink. Sweep and mop your floors and keep them "crumb free".

If you have a dog or a cat - remove their pet feces immediately—rats LOVE to eat pet feces (it is gross, but true). Use a flea control method on your pet. If your pet gets fleas, so will your carpets and furniture. Some pests (such as squirrels, mice and bats) can be very persistent and gnaw a new entry point to your home. Keep your eyes open for any new activity and use a foam sealer to close the entry. Sprinkling some cayenne pepper on the hardening foam can help prevent more chewing. If the hole is large, stuff it with copper mesh (do not use steel wool) and then spray the foam. Sprinkling boric acid (available at your hardware store) will prevent roaches and other bugs from entering your home.

If your attic gets squirrels or bats, try purchasing a small strobe light. Allow the strobe light to operate day and night for one week. If the strobe light doesn't work, contact a pest removal firm that uses humane or green methods of removal.

For more information on pest control, check out:  
[www.doyourownpestcontrol.com](http://www.doyourownpestcontrol.com)



### Forget about pesticides. Did You Know?

To prevent insects from eating your plants and flowers, simply spray them with an easy to prepare mixture of one gallon of water, one tablespoon hot sauce and one tablespoon dish soap.

# Appendix I: Savings Checklists

Do you know how much money you can save by improving the energy efficiency of your home? Use the savings checklist below to find out. The littlest things can make a big difference and won't take up a lot of your time!

## General Savings

### Appliances:

- |  |                             |
|--|-----------------------------|
| <input type="checkbox"/> Turn off computer when not in use                     | Annual Savings: up to \$120 |
| <input type="checkbox"/> Set sleep mode on computer & monitor                  | up to \$100                 |
| <input type="checkbox"/> Turn off TV when not in use                           | \$25-\$45                   |
| <input type="checkbox"/> Wash clothes in cold water                            | up to \$75                  |
| <input type="checkbox"/> Line dry clothes                                      | up to \$200                 |
| <input type="checkbox"/> Use a spin dryer to "pre-dry" clothes                 | up to \$100                 |
| <input type="checkbox"/> Dry multiple loads back-to-back (while dryer is warm) | \$5                         |
| <input type="checkbox"/> Separate quick drying from slow drying clothes        | up to \$10                  |
| <input type="checkbox"/> Don't use "heated dry" setting on dishwasher          | \$60                        |
| <input type="checkbox"/> Turn off 2nd refrigerator                             | \$150-\$250                 |
| <input type="checkbox"/> Clean seals on refrigerator door                      | \$3-\$5                     |
| <input type="checkbox"/> Clean coils in back of refrigerator                   | \$3-\$10                    |
| <input type="checkbox"/> Turn off biggest phantom power users                  | up to \$150                 |
| <input type="checkbox"/> Operate appliances during off-peak rates              | up to \$220                 |

### Hot Water:

- |  |                           |
|--|---------------------------|
| <input type="checkbox"/> Insulate hot water pipes                                | Annual Savings: \$10-\$20 |
| <input type="checkbox"/> Insulate hot water heater                               | up to \$50                |
| <input type="checkbox"/> Reduce hot water temperature on water heater to 120°F   | \$20-\$60                 |
| <input type="checkbox"/> Install aerators on faucets                             | \$3-\$5                   |
| <input type="checkbox"/> Install low-flow showerheads                            | \$10-\$40                 |
| <input type="checkbox"/> Don't pre-rinse dishes before putting in dishwasher     | \$40                      |
| <input type="checkbox"/> Install water heater timer—use only with off peak rates | up to \$150               |

### Lighting:

- |  |                               |
|--|-------------------------------|
| <input type="checkbox"/> Replace incandescents with compact fluorescent lights | Annual Savings: \$5-\$10/bulb |
| <input type="checkbox"/> Replace incandescents with night lights               | \$25/bulb                     |
| <input type="checkbox"/> Replace halogen torchiere with CFL torchiere          | \$35/torchiere                |

## General Savings Continued

### Building Envelope:

<input type="checkbox"/> Sealing air leaks: If you do all on list	Annual Savings: up to \$300
<input type="checkbox"/> Seal openings into attic and from basement	
<input type="checkbox"/> Seal attic hatch door	up to \$20
<input type="checkbox"/> Seal cracks, gaps in foundation	up to \$50
<input type="checkbox"/> Seal around windows and doors	
<input type="checkbox"/> Close damper on fireplace when not in use	\$60-\$75
<input type="checkbox"/> Install fireplace doors (or seal fireplace if not used)	\$45-\$60
<input type="checkbox"/> Insulate attic and foundation	up to 20%
<input type="checkbox"/> Insulate crawlspace or basement	up to \$150
<input type="checkbox"/> Insulate attic hatch door	up to \$20
<input type="checkbox"/> Weatherstrip and door sweeps on doors	\$15-\$20
<input type="checkbox"/> Seal and insulate heating ducts	\$75-\$200
<input type="checkbox"/> Install foam gaskets on electrical outlets	up to \$15
<input type="checkbox"/> Seal off unused or little-used rooms	up to \$200
<input type="checkbox"/> Turn off bathroom/kitchen fans when not needed	up to \$30
<input type="checkbox"/> Windows: if you do all on list	up to \$150
<input type="checkbox"/> Latch windows securely	
<input type="checkbox"/> Install storm windows if you have them	
<input type="checkbox"/> Repair broken windows	
<input type="checkbox"/> Install plastic sheeting on the interiors of single pane windows	
<input type="checkbox"/> Close drapes or blinds on windows	
<input type="checkbox"/> Open drapes or blinds on sunny days	

### Heating System:

<input type="checkbox"/> Add heat exchanger to fireplace to supplement heat	Annual Savings: up to \$500
<input type="checkbox"/> Change furnace filters regularly	up to \$100
<input type="checkbox"/> Annual maintenance on furnace	up to \$200
<input type="checkbox"/> Insulate water pipes in homes with hot water heating systems	up to \$100
<input type="checkbox"/> Install radiator reflectors between radiators and walls	up to \$200
<input type="checkbox"/> Turn down thermostat	up to \$300
<input type="checkbox"/> Install programmable thermostat	up to \$300

# Appendix II: Home Maintenance

Prevent problems with this month-by-month home maintenance guide.

## Monthly:

- Fire Extinguisher: Check that it's fully charged; recharge/replace if needed.
- Sink/Tub Stoppers & Drain Holes: Clean out debris.
- Garbage Disposal: Flush with hot water and baking soda.
- Water Softener: Check salt drum and replenish salt if necessary.
- Forced-Air Heating System: Change filters monthly if user's manual recommends fiberglass filters.

## Every 2 Months:

- Wall Furnace: Clean grills.
- Range Hood: Clean grease filter.

## Every 3 Months:

- Faucet: Clean aerator.
- Tub Drain Assembly: Clean out debris; inspect rubber seal/replace if needed.
- Floor and Outdoor Drain Grates: Clean out debris.

## Every 6 Months:

- Smoke Detector: Test batteries and replace if needed.
- Toilet: Check for leaks and water run-on.
- Interior Caulking: Inspect caulking around tubs, showers, and sinks; replace any if it is deteriorating.
- Forced-Air Heating System: Change semi-annually if user's manual recommends high efficiency pleated or HEPA-style filters.
- Garbage Disposal: Tighten drain connections and fasteners.
- Clothes Washer: Clean water inlet filters; check hoses and replace them if they are leaking.
- Clothes Dryer: Vacuum lint from ducts and surrounding areas.
- Wiring: Check for frayed cords and wires; repair or replace them as needed.
- Range Hood: Wash fan blades and housing.

## Every Spring:

- Roof: Inspect roof surface, flashing, eaves and soffits; repair if needed.
- Gutters and Downspouts: Clean them out or install no-clean version. Inspect and repair weak areas; check for proper drainage and make repairs if needed.

### Every Spring (continued):

- Siding: Inspect and clean siding and repair if needed.
- Exterior Caulking: Inspect caulking and replace any that is deteriorating.
- Windowsills, Doorsills, and Thresholds: Fill cracks, caulk edges, repaint; replace if needed.
- Window and Door Screens: Clean screening and repair or replace if needed; tighten or repair any loose or damaged frames and repaint if needed; replace broken, worn, or missing hardware; tighten and lubricate door hinges and closers.

### Every Fall:

- Siding: Inspect and clean siding and repair if needed.
- Roof: Inspect roof surface, flashing, eaves, and soffits; repair if needed.
- Gutters and Downspouts: Clean out. Inspect and repair weak points; check for proper slope.
- Chimney or Stovepipe: Clean flue (more frequently if needed); repair any cracks in flue or any loose or crumbling mortar.
- Siding: Inspect and clean siding and repair if needed.
- Exterior Caulking: Inspect caulking and replace any that is deteriorating.
- Storm Windows and Doors: Replace any cracked or broken glass; tighten or repair any loose or damaged frames and repaint if needed. Replace damaged hardware; tighten and lubricate door hinges and closers.
- Window and Door Weather Stripping: Inspect and repair or replace if it is deteriorating or if it does not seal.
- Thermostat: Clean heat sensor, contact points, and contacts; check accuracy and replace thermostat if it is not functioning properly.
- Outdoor Faucets: If you live in an area with freezing winters, shut off valves to outdoor faucets. Open spigots and drain, store hoses.

### Annually:

- Septic Tank: Have a professional check the tank. In many areas, it is recommended that the tank be pumped every year.
- Main Cleanout Drain: Have a "roofer" professional clean out the main line, particularly if there are mature trees in your yard whose roots could have cracked the pipe in their search for moisture.
- Water Heater: Drain water until it is clear of sediment; test temperature pressure relief valve; clean burner and ports (gas heater).
- HVAC System: Have a professional tune up your HVAC system.

# Appendix III: Resources

## Websites

Home Energy Saver.

Enter some basic information about your home and this online calculator will make customized energy saving recommendations.

<http://hes.lbl.gov/consumer/>

Home Maintenance and Repair Information.

**Click on the month for a detailed list of home maintenance tasks.**

<http://www.demesne.info/Home-Maintenance/>

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