















# Do-It-Yourself Home Energy Audit Checklist



**This energy audit checklist is a simple procedure that will allow you to appraise the energy efficiency of your home. By completing the energy audit checklist you will be able to spot areas that need improvement in the way you use energy.**

1. Before you start the energy audit make sure you understand the terms used in the energy audit checklist.
2. Make sure you understand any safety and health issues.
3. Plan to spend two hours to complete your energy audit.
4. Fill in your checklist as you go by circling the answer that describes the way that you use energy.
5. When you are finished, add up your symbols (☺=good energy performance, ☹= medium energy performance, ☺= poor energy performance) and enter them into table.
6. Review each item that may need improvement in terms of energy efficiency (Sections 1-8). Estimate how much you need to spend for each conservation measure. You can speak to a professional or your utility service to estimate the payback time of each upgrade.
7. Evaluate your habits/daily activities to determine what you can do to improve them (Section 9). Consider simple changes that have little or no-cost to make a meaningful impact on your overall energy performance. Commit to energy-saving changes and write them down.

| <b>1. AIR LEAKAGE</b>                                      |   |   |  |   |
|--|---|---|--|---|
| Do you prevent air leakage? (by weatherstripping, sealing) |   |   | <b>COMMENT</b>   |   |
|  |                                |    | You will reduce your heating and cooling costs and make your more comfortable and healthy if you use appropriate sealing and weatherstripping. Sealing and weatherstripping will complement your insulation.   |   |
| Windows  | No  | Yes   |  |   |
| Doors  | No  | Yes   |  |   |
| Light switches/ Electrical outlets                         | No  | Yes   |  |   |
| Exhaust fans   | No  | Yes   |  |   |
| Pipe & wire penetration                                    | No  | Yes   |  |   |
| Basement/Attic/Crawl space                                 | No  | Yes   |  |   |
| Fireplace & duct penetrations                              | No  | Yes   |  |   |
| Wall/Window a/c units                                      | No  | Yes   |  |   |
| Living areas   | No  | Yes   |  |   |
| <b>2. INSULATION</b>                                       |   |   |  |   |
| Is your home insulated?                                    |   |   | <b>COMMENT</b>   |   |
|  |                                |    | Insulation may cut your cooling and heating costs 20 – 30 percent and increase comfort of your home. Learn about insulation tailored to your zip code at <a href="http://www.ornl.gov/~roofs/Zip/ZipHome.html">http://www.ornl.gov/~roofs/Zip/ZipHome.html</a> |   |
| Living Areas   | No  | Yes,<br>R-Value _____   |  |   |
| Attic  | No  | Yes,<br>R-Value _____   |  |   |
| Basement   | No  | Yes,<br>R-Value _____   |  |   |
| Floor  | No  | Yes,<br>R-Value _____   |  |   |
| <b>3. HOUSE HEATING SYSTEM</b>                             |   |   |  |   |
|  |                              |    |   | <b>COMMENT</b>  |
| How efficient is your house heating system?                | 68–72 percent AFUE/Natural draft creates a flow of combustion gases/Continuous pilot light/Heavy heat exchanger | 80–83 percent AFUE/Exhaust fan controls the flow of combustion air and combustion gases precisely/Electronic ignition/Compact size and lighter weight | 90–97 percent AFUE/Condensing flue gases in a second heat exchanger for extra efficiency/Sealed combustion   | An efficient heat system could save you up to 30 percent on your energy cost. |

| <b>4. WATER HEATING</b>                        |   |  |  |   |
|--|---|--|--|---|
|  |    |   |                         | <b>COMMENT</b>  |
| How efficient is your water heating system?    | My water heater is over 15 years old and not insulated                              | My water heater is over 15 years old, properly insulated with a water heater blanket. My hot water pipes are covered with sleeve insulation. | My hot water heater is Energy Star® rated/I have a tankless hot water heater/I have a solar thermal system | Water heating makes up 13 percent of your utility bill. Consider upgrading if your water heater is more than 15 years old.  |
| My showerhead has flow rate of                 | 5.5 gpm   | 2.5 gpm -5.5 gmp   | less than 2.5 gpm  | Low-flow fixtures save water by 25-60 percent.  |
| My hot water heater thermostat is set          | at 120° F   | between 120 ° F and 240° F   | above 140° F   | You can save 3–5 percent in energy costs for each 10° F reduction in water temperature.   |
| <b>5. APPLIANCES</b>                           |   |  |  |   |
|  |    |   |  | <b>COMMENT</b>  |
| My refrigerator is Energy Star® rated          | False   | True   |  | Efficient models use 20 percent less energy than conventional models  |
| My A/C Unit is Energy Star® rated              | False   | True   |  | Energy Star® a/c central units have 14% more efficiency than standard models and can save 30 percent in cooling costs. Energy Star® a/c room units use 10 percent less energy than conventional models. |
| My dishwasher is Energy Star® rated            | False   | True   |  | Efficient units save 1,300 gallons of water over its lifetime.  |
| My freezer is Energy Star® rated               | False   | True   |  | Efficient models use 10 percent less energy than conventional models  |
| My clothes washer is Energy Star® rated        | False   | True   |  | Efficient models use 50 percent less water per load and use 270 kWh of electricity per annum. Choose a unit with a cold water option. For best performance choose front loaders.                        |
| My cooktop/oven is                             | Gas burner/<br>traditional electric   | Induction cooktop/solar oven/<br>hybrid solar oven   |  |   |
| <b>6.COMPUTER/ELECTRONICS</b>                  |   |  |  |   |
|  |  |   |  | <b>COMMENT</b>  |
| My computer/display is Energy Star® rated      | False   | True   |  | Efficient models use up to 65 percent less energy than conventional models.   |
| My imaging equipment is Energy Star® rated     | False   | True   |  | Efficient models use 40 percent less energy than conventional models.   |
| My audio/video equipment is Energy Star® rated | False   | True   |  | Efficient models use up to 60 percent less energy than conventional models.   |

|   |                                    |  |   |   |
|---|------------------------------------|--|---|---|
| My television is Energy Star® rated                               | False                              | True   | Efficient models use 40 percent less energy than conventional models.                   |   |
| <b>7. DOORS AND WINDOWS</b>                                       |                                    |  |   |   |
|   | ☹                                  | ☺  | <b>COMMENT</b>  |   |
| My windows are Energy Star® rated                                 | False                              | True   | To save up to 30 percent on your cooling and heating consider energy-efficient windows. |   |
| My doors are Energy Star® rated                                   | False                              | True   |   |   |
| <b>8. LIGHTING</b>  |                                    |  |   |   |
|   | ☹                                  | ☺  | ☺   | <b>COMMENT</b>  |
| For indoor lighting I use mostly                                  | Traditional Incandescent           | Energy-Saving Incandescent compact                                   | fluorescent lamps light emitting diodes (LED)   | Fluorescent lights use much less energy than traditional incandescent lights.   |
| For outdoor lighting I use mostly                                 | Traditional Incandescent           | Efficient, with motion sensor  | Solar   | Solar lights do not need electricity to operate.  |
| <b>9. HABITS</b>  |                                    |  |   |   |
|   | ☹                                  | ☺  | ☺   | <b>COMMENT</b>  |
| How do you regulate the temperature at home?                      | I do not regulate the temperature. | I manually regulate the temperature                                  | I use a programmable thermostat to automatically regulate the temperature               | To meaningfully improve your energy performance combine energy efficiency with energy sufficiency and smart habits.<br><br>A programmable thermostat can save up to 10 percent per annum on your total costs. |
| When I am <b>at home</b> in winter, my living room temperature is | 75° F/higher                       | 72° F  | 68° F/lower   | Lower the thermostat of heaters by 1° F in winter to reduce energy use by 5 percent.  |
| When I am <b>at home</b> in summer, my living room temperature is | 70° F/lower                        | 74° F  | 78° F/higher  | Raise the thermostat of a/c units by 1° F in summer to reduce energy use by 5 percent.  |
| I heat and cool   | Whole house                        | Living spaces  | Rooms that people are in  | Heat and cool only rooms that you are using.  |
| What do you use for cooling?                                      | A/C system                         | Single room air conditioner  | Ceiling fans and night breezes  | Ceiling fans improve comfort substantially and complement a/c units. Do not forget to reverse the fan direction in winter.  |
| Do you have a second fridge/freezer?                              | Yes, always running                | Yes, running only when needed  | No second fridge or freezer   |   |
| Do you have a pool?   | Yes, heated, filter always running | Yes, solar/not heated/ filter runs for 6hrs daily/ cleaned regularly | No  | Think about a solar pool blanket & heater. Salt water chlorinators use twice as much energy to run. Keep your filters clean.  |

| <b>HABITS, CONTINUED</b>  |   |   |   |
|---|---|---|---|
|   |  |  | <b>COMMENTS</b>   |
| I close the doors when I leave the room during the cooling and heating season.  | False   | True  |   |
| My furnace and A/C filters are clean; I replace filters monthly during the heating and cooling season.  | False   | True  |   |
| I turn the lights off when not in the room.   | False   | True  |   |
| I take 2-minute showers   | False   | True  | Take short showers instead of baths and long showers.   |
| My refrigerator coils are cleaned at least once a year.   | False   | True  | Lint buildup on coils, makes the engine works hard thus utilizing more energy.  |
| My appliances are unplugged when not in use.  | False   | True  | When you are gone, even for a few hours, unplug your appliances to save energy.   |
| I wash my clothes in cold water   | False   | True  | Most of the energy used in washing clothes comes from heating the water. By washing your clothes in cold water you can save up to \$63 annually.  |
| I dry my clothes on a clothes line or drying rack   | False   | True  | If you do not use your dryer 6 months/year you can prevent 1,000 pounds of CO2/year. If you are considering a new dryer choose an energy efficient unit with a moisture sensor.   |
| The dishwasher and washer are run only when they are fully loaded   | False   | True  |   |
| Trees, vines and shrubs provide shade to my house/I have the Energy Star roof   | False   | True  | Plants that provide shade can cool down your home by 3-6 degrees and save you up to 25 percent of household energy use. You can lower the temperature of your roof by installing sheet covering, reflective paint or reflective shingles. |
| The fresh food compartment of my refrigerator temperature is set to 37-40°F. The freezer section is set to 5°F.   | False   | True  |   |
| I close and seal the fireplace damper when I am not using it  | False   | True  | Closing the damper prevents heat/cold air from escaping.  |
| I have installed blinds/thermal drapes on my windows. In winter, I open the drapes/blinds to use the solar passive heating. In summer, I close the drapes to insulate my windows from the warm summer heat. | False   | True  |   |
| I air dry dishes instead of using my dishwasher's drying cycle  | False   | True  | Dishwashers use 80 percent of its energy to generate heat.  |
| I harness the power of the wind/and/or sun to generate electricity in my home   | False   | True  |   |
| I recycle/donate my old appliances as appropriate   | False   | True  |   |

| 10. SUMMARY AND ACTIONS | Your results   | What can you do? | By when? | How much do you need to spend? |
|-------------------------|----------------|------------------|----------|--------------------------------|
| 1. AIR LEAKAGE          | ☹=<br>☺=       |                  |          |                                |
| 2. INSULATION           | ☹=<br>☺=       |                  |          |                                |
| 3. HOUSE HEATING SYSTEM | ☹=<br>☺=<br>☺= |                  |          |                                |
| 4. WATER HEATING        | ☹=<br>☺=<br>☺= |                  |          |                                |
| 5. APPLIANCES           | ☹=<br>☺=       |                  |          |                                |
| 5.COMPUTER/ ELECTRONICS | ☹=<br>☺=       |                  |          |                                |
| 6. DOORS AND WINDOWS    | ☹=<br>☺=       |                  |          |                                |
| 7. LIGHTING             | ☹=<br>☺=<br>☺= |                  |          |                                |
| 8. HABITS               | ☹=<br>☺=<br>☺= |                  |          |                                |

**NOTES:**