

Everyday Environmental Stewardship

Home Energy Audit

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Key issue

What do I need to do in my own home?

Stewardship Opportunity

Making use of the utility company energy audit & incentives

Keeping a one's home, a house of worship, business, or any other building as energy efficient as possible is important for environmental as well as economic reasons. Energy efficient buildings use less electricity, oil, gas, and water. A home energy audit is the easiest, most effective way to identify which appliances, equipment and parts of a building need to be upgraded or replaced.

Stewardship Opportunity #1: Getting a Home Energy Audit

Home energy audits help identify inefficient and outdated heating/cooling equipment, ceiling/window insulation, appliances (e.g. refrigerator, washer/dryer), lighting, and more. These audits are completely free of cost and take roughly 1 1/2 hours. If you buy electricity from NStar or NationalGrid, call 1.800.632.8300 to schedule an energy audit through *MassSave*. Each electricity company (municipal and private) does energy audits for its own customers regardless of the currently installed heating system (electricity, oil, gas).

Number to call: 1.800.632.8300

On-line access: www.masssave.com

If you live in a condominium or in multi-family housing with four or more family units, have the Owner or Condo Assn call and schedule the audit for the building. People living in triple family condominiums can have their own audit. *MassSave* offers programs for just about everyone and every living organization. Be sure to call for a direct audit for any utility bill you pay directly — electricity and/or gas.

During the audit, the auditor will look at the domestic hot water (“DHW”) heater, heat generation (boiler or furnace), electrical equipment, radiators and/or ducts, windows, and insulation in the basement, walls and attic areas. Be prepared to specific questions about your home. For example, a corner of the house that is much colder in the winter compared to the rest of the house. After five minutes of inspecting the basement, the

auditor found the problem, absence insulation leaving cold air to circulate throughout the inner wall, and recommended installation of foam board insulation to stop the air flow. A general assessment of the building's efficiency is made through such observations; the auditor makes recommendations on actions needed to raise efficiency.

The auditor will also give up to 12 CFLs depending on how the house is lighted and what kind of light bulbs are used. If the first floor is light primarily by dimmable flood lights, then the auditor may give dimmable flood CFLs. If a home is primarily lit by three way lamps, then the auditor will give three way CFLs. The auditor will not give CFLs to a house which already has many installed.

After the audit, the auditor writes down all recommendations and explains what is worth repairing and replacing, how to do this, and who gives the rebates. A packet is provided explaining all available rebates and loans, including amounts. Incentives include 50% off insulation upgrades and air sealing (\$700 job minimum, \$1,500 maximum rebate), \$150-\$800 rebates on high efficiency heating systems (the higher the efficiency, the higher the rebate), \$300 rebates for indirect water heaters, and additional rebates on *EnergyStar* labeled thermostats, windows, and appliances, notably refrigerators. A maximum \$15,000 loan for replacing windows is also available with 0%-3% financing.

Windows are the most expensive energy saving devices with the longest payback. The standard window lifetime is 50. The cost of new, triple-paned windows insulated with argon gas is approximately \$30/sqr ft. With respect to R values, the standard measurement of insulation ability, new windows have a value of 3, while old windows have a value of 1.5, and 2 x 6 insulated walls have values of 19.

Stewardship Opportunity #2: Getting a Rebate

Though many rebates are abatable through the *MassSave* home energy audit, obtaining rebates for buying natural gas boilers/furnaces and indirect DHW heaters do not require a home energy audit. These are available directly from gas companies. Also, *MassSave* does not include conversion (i.e. oil to gas) as part of the program as it serves many types of energy.

A heating professional must install the gas boiler/furnace or indirect DHW heater and sign the rebate request form. It is then submitted to the utility. The members of the Association of Gas Networks all have the same rebate options. The members are Bay State Gas, Berkshire Gas, Blackstone Gas, Holyoke Gas, KeySpan, Middleborough Gas, New England Gas, Nstar, Unitil, Wakefield Municipal Gas, Westfield Gas. Check with your gas company for specifics. For example, the KeySpan gas rebate form can be downloaded from the KeySpan web site.

http://www.keyspanenergy.com/pshome/energy/heating_program_ma_kedma.jsp.

If the auditor sees that your refrigerator is inefficient (uses 1100 or more kwh) and past its useful life, then he will give you a \$150 mail-in rebate to buy an energy efficient model.

NStar and NationalGrid offer a \$300 rebate for replacing or installing new central cooling systems through the CoolSmart program. See <http://www.mycoolsmart.com/html/rebate-info.html> for details and qualifications. Electric companies also offer rebates for home appliances. Go to <http://www.myenergystar.com/ProductsAndDiscounts.aspx> to find rebates on CFLs, lighting fixtures, clothes washers, room air conditioners, refrigerators, dishwashers, and dehumidifiers. You can also call 877.378.2748 and talk to an EnergyStar representative. The rebates from EnergyStar are updated once a week or as needed. These rebates change often, so act quickly. One rebate offered one month may disappear the next.