

I won't do an Energy Visit or Audit Because

1) **We know what needs to be done but we can't afford to do it** or **We do not want to know what needs to be done because we can't afford to do it anyway**

The audit is performed by a professional using test equipment and experience to assess the home. The audit provides professional identification of the heat losses, the improvements needed and their costs, the payback period for each improvement, the suggested priority among the improvement steps and the monetary incentive available. For most homes and homeowners they will not know the nature and cost of improvements until the audit is complete. They will not know if there are simple/inexpensive improvements they can make right away to begin saving money.

In short, homeowners do not know whether they can afford any improvements until they find out the costs of improvements. Potential improvement costs should **not be a reason to not do the audit**. The audit is the basic document to define the needs and does not commit you to doing any improvements. It does however usually identify some low hanging fruit that can be corrected at small cost by you or another handy person so that savings begin immediately. It also allows you to plan some of the more expensive improvements over time in the order of the priorities (biggest bang for the buck). It provides a good base for making decisions.

Homeowners might consider implementing some of the more expensive improvements at a rate such that the expense of the improvement in any year is close to the savings projected for that year by making the improvement. Or, a homeowner could borrow the money for weatherization and pay the loan payments from the fuel savings.

2) **We don't need a professional to identify the problems and solutions, we know**

A limited number of homeowners know the basics of how buildings lose heat and how to effectively make the necessary improvements. Most homeowners do not have that knowledge. These homeowners may make costly mistakes by not a) accurately identifying all areas of heat loss and the reasons for those losses b) identifying the improvements that will best address the problems and provide the best return on investment and c) selecting efficient materials and effective installation techniques for the improvements. The results without an audit can be less effective heat loss reduction than getting an audit first and can lead to unhealthy inside air, moisture and mold problems.

One common mistake is continuing to use fiberglass insulation after it has been proven inferior to cellulose and other materials. In many instances fiberglass may have little insulating effect. Wouldn't it be better to pay a few bucks for a professional audit. Many of you do this for your car, your teeth, your health, your investments etc.

3) **We have already done our own weatherization, we do not need to do more**

As discussed above, many homeowners have completed some weatherization steps, but their effectiveness and the potential for moisture/mold/bad air may be a problem. On the other hand, some weatherization projects by homeowners have been effective and safe. Here are some of the items to check to confirm the effectiveness of the weatherization project.

- a) Any ice dam/icicle problems?
- b) Any moisture/mold problems? Have you looked throughout the house?

- c) Any draft/cold spot problems on windy days?
- d) Are all exterior cracks and holes air sealed?
- e) Are all doors and windows air sealed?
- f) Is there condensation on the inside of the window?
- g) How quickly does the house lose temperature when the stove is off?
- h) Is Heat Energy Use less than 40,000 BTUs/square foot/year?

The last item in the list is probably the most telling, as it is an objective overall indicator of how tight and insulated your home is compared to a fairly well air sealed and insulated house. A calculation sheet for this efficiency factor is included at the end of this list.

4) We do not need an audit. We heat with our own wood so we just cut more wood

Homeowners who heat solely with wood that they cut from their land and do not count their labor or equipment certainly have less financial incentive to weatherize their house. Discounting any fuel savings there are other reasons for weatherization. Ice dams and icicles can occur from heat being lost to the attic and heating the roof. Moisture can condense in the attic from the warm air rising, in some instances. The house can be uncomfortable from drafts and uneven temperatures (cold spots). Then there is “getting too old” to cut the wood and nobody else is available so you have to buy it. That changes the picture considerably.

The above case of heating solely with wood probably isn’t very common today. Many homeowners use wood as the primary source and have a back up fossil fueled based system. Depending on the actual use of the backup that could present some financial incentive to weatherize.

5) We do not want to tighten our house---it needs to breath -- a tight house will have moisture problems and bad air

Let’s assume a loose house is one that has significant flow of air through cracks/openings in the basement walls, the sidewalls and the attic floor and that heated air entering the attic from below is vented to the outside. Let’s assume a tight house is one that has only a small amount of air leakage through the basement and sidewalls and that warm air is sealed from entering the attic.

There is the potential for more moisture and bad air issues in the tight versus loose houses described above. In the loose house the warm air with its higher moisture content will escape into the attic and be removed to the outside by the vents (if they are designed properly). With the rapid changeover of air neither moisture nor bad air should develop in the house.

If you were not worried about the cost of heating fuel, you would leave your house loose. If you want to save money you might consider tightening the house to a degree that saves considerable fuel but does not leave moisture or bad air problems. A process to accomplish this balance:

- a) Perform the weatherization work
- b) Test the house tightness with a blower door and compare to standards established to maintain an adequate air turnover for provide healthy indoor air.
- c) If too tight, introduce a regulated amount of outside replacement air (using a window or small fan). This air exchange can include equipment to remove heat from the air exhausted from the house.
- d) Use the bathroom fans to expel moisture from bathing
- e) Make sure dirt basement floors are covered with plastic to reduce moisture release

Generally tightening the house as much as reasonably possible and introducing a small amount of outside air, if necessary, is the way to go in newer homes. In older homes weatherization seldom causes a too-tight house.

6) ***We have many improvements we need to make; weatherization isn't a priority***

In many houses weatherization should be a priority because this is a project that actually saves money, and normally provides a substantial monetary return on investment. In fact many homeowners have experienced over a 20% return on investment. Try to get that at a bank or on the stock market

Most homeowners always have a list of projects they need or want to complete. These projects normally range from "must do" projects to projects that improve the enjoyment or functioning of the house. The "must do" projects generally are the result of damage or deferred maintenance and failure to address these will result in safety issues and/or further deterioration of the house.

After these projects are implemented the projects that improve enjoyment or functioning should be compared with weatherization projects recommended in the professional audit report. The report will estimate the cost and payback period/rate of return for each weatherization project. Then you can decide whether you want to make an investment to save money each year into the future or proceed with the project that improves enjoyment or functioning but costs money that will have no monetary return

7) ***We do not have the time to deal with it.***

This is like saying you do not have time to save money.

8) ***We do not want to have strangers visit and inspect our home***

Committee members have visited about 60 homes. We have inspected all accessible areas of these homes. Most of these homes are not spotless. Some were quite cluttered. Members are discreet---we aren't going to tell stories. Homeowners have generally been more interested in the help we can provide than worrying about looks. There have been no issues with the homeowners we have visited.

If the homeowner proceeds to an audit, the professional auditor's business depends on him/her being discrete and confidential.

9) ***We do not want to tear up our home to weatherize***

Luckily, weatherization does not involve tearing apart the house. In fact the most significant weatherization steps occur in the attic and in the basement, both outside the normal living space. First and second floor outside walls and the upper ceiling are not opened in the process. Some caulking/foaming and weather strips on doors and windows might be applied along these walls and the upper ceiling

The weatherization job normally takes about two or three work-days. Scheduling and the amount of work involved at a particular home may stretch out the completion time.