

GREAT LAKES ENERGY SERVICE



Phone: 517.669.5389
www.greatlakesenergyservice.org

Home Energy Audits

A home energy audit is the first step to assess how much energy your home consumes, and to evaluate what measures you can take to make your home more energy efficient. An audit will show you problems that may, when corrected, save you significant amounts of money over time. During the audit, you can pinpoint where your house is losing energy. Audits also determine the efficiency of your home's heating and cooling systems. An audit may also show you ways to conserve hot water and electricity. You can perform a simple energy audit yourself, or have a professional energy auditor carry out a more thorough audit.

A professional auditor uses a variety of techniques and equipment to determine the energy efficiency of a structure. Thorough audits often use equipment such as blower doors, which measure the extent of leaks in the building envelope, and infrared cameras, which reveal hard-to-detect areas of air infiltration and missing insulation.

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Common Sense Energy Plans

Blower Door Tests

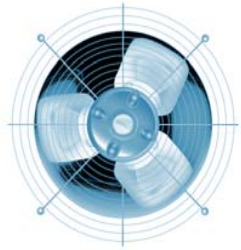


Professional energy auditors use blower door tests to help determine a home's airtightness. Reasons for establishing the proper building tightness are:

- *Reducing energy consumption due to air leakage*
- *Avoiding moisture condensation problems*
- *Avoiding uncomfortable drafts caused by cold air leaking in from the outdoors*
- *Making sure that the home's air quality is not too contaminated by indoor air pollution.*

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Blower Door Test and Home Energy Audit



How They Work

Blower door fan pulls air out of the house, lowering the air pressure inside

A blower door is a powerful fan that mounts into the frame of an exterior door. The fan pulls air out of the house, lowering the air pressure inside. The higher outside air pressure then flows in through all unsealed cracks and openings. The auditors may use a smoke pencil to detect air leaks. These tests determine the air infiltration rate of a building.

Blower doors consist of a frame and flexible panel that you can place in a doorway, a variable-speed fan, a pressure gauge to measure the pressure differences inside and outside the home, and an airflow manometer and hoses for measuring airflow.

There are two types of blower doors: calibrated and uncalibrated. It is important that auditors use a calibrated door. This type of blower

door has several gauges that measure the amount of air pulled out of the house by the fan. Uncalibrated blower doors can only locate leaks in homes. They provide no method for determining the overall tightness of a building.



Shut fireplace dampers, fireplace doors, and wood stove air intakes

The calibrated blower door's data allows the auditor to quantify the amount of air leakage and the effectiveness of any air-sealing job.

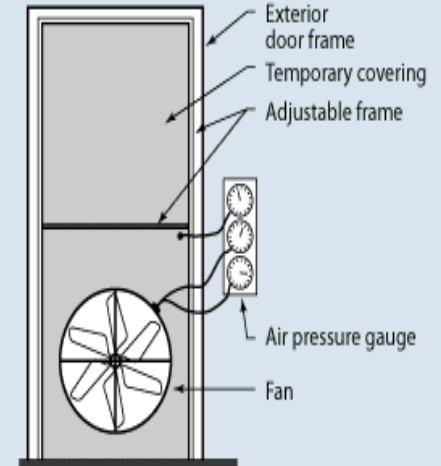
Preparing for a Blower Door Test

Take the following steps to prepare your home for a blower door test:

- Close windows and open interior doors
 - Turn down the thermostats on heaters and water heaters
 - Cover ashes in wood stoves and fireplaces with damp newspapers
- Shut fireplace dampers, fireplace doors, and wood stove air intakes.

Diagnostic Tools

Testing the airtightness of a home using a special fan called a blower door can help to ensure that air sealing work is effective. Often, energy efficiency incentive programs, such as the DOE/ EPA ENERGY STAR Program, require a blower door test (usually performed in less than an hour) to confirm the tightness of the house.



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Call to schedule your appointment today ! Blower door and certified energy audit start at \$425.00

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