



Home Energy Performance Audit - An Overview

Our analysis begins as soon as we get to your home, with a walk around and through your home. We will ask you to point out such things as:

- Where the gas meter is (if fueled with Natural Gas or Propane)
- Where fuel is delivered (if fueled by Fuel Oil)
- Where attic and crawl space access is located
- Where the HVAC and hot water appliances are located
- The kitchen, as well as all bathrooms with an exhaust fan
- Which rooms or areas seem cold (or hot in the summer)
- All fireplaces and wood stoves
- Any drafty rooms or areas

We will be:

- Taking dimensional measurements to determine the internal volume of your home
- Noting the insulation levels
- Assuring all flues are closed in preparation of the home's pressurization testing
- Assuring all windows and doors are closed for the home's "shell or envelope" testing
- Using detection instruments to check for any gas leaks

We will then:

- Check your HVAC system's distribution (ducting)
- Check your water heater's jacket and plumbing's physical integrity

Combustion Appliance Testing

For homes with combustion appliances (hot water heater, furnace, boiler) we first:

- perform combustion safety tests looking at three major concerns
- check the carbon monoxide levels of the gas and oil fired equipment
- check backdrafting of all vented appliances
- inspect for safety hazards such as gas leaks and cracked heat exchangers

The two major reasons for conducting combustion tests on your house are for your health (potential carbon monoxide exposure & poisoning) and your safety (fire prevention) for you and your family.



Carbon Monoxide

High levels of carbon monoxide are a sign that your combustion appliances are not operating efficiently and they are dangerous for you and your family. According to the Centers for Disease Control and Prevention, carbon monoxide poisoning needlessly takes more than 500 lives every year, so we take this check very seriously!

Backdraft/Venting Tests

We will make sure the combustion appliance(s) is/are exhausting properly. Backdrafting and poorly drafting appliances are commonly caused by improperly balanced ductwork, leaky return ductwork, exhaust fans (bath fans, kitchen hood, dryer, central vacuum system, whole-house fan), fireplaces, and other combustion appliances. It takes very little to cause venting problems.

Safety Hazard Examinations

Gas leaks pose a potential immediate threat of fire or explosion. Leaks are located by detection instruments. Flames unexpectedly coming out the front of the appliance ("roll-out") indicate serious combustion problems. We also check your appliance for black or rusted areas in front of the burners, burnt wires, and carbon deposits, as well as examining appliances for a breach in the heat exchanger. Checking for cracks is done by observing the flames for interference when the blower is operating and by direct inspection of the heat exchanger.

We then move on to the home's shell testing. We use a blower door test to monitor pressure differences between indoors and outdoors, as we search for any leaks in that insulated "shell".

The Report on our findings

We will review with you the findings of our investigation and analysis. We will want to show you where there are any leaks in the "shell" of your home, any concerns with the HVAC that would include the appliance(s) as well as the distribution (ducts) system, plumbing, fuel sources, water problems, and any other infiltration (leakage entering the building) or exfiltration (leakage leaving the building).

You can expect our detailed written report typically within two weeks. It will document our findings and provide you with the information necessary to direct your improvement activities, whether you attempt them as a DIY project or decide to hire a professional.