



COMPREHENSIVE HOME ENERGY AUDIT REPORT



for

Daniel Hellerstein
1909 Franwall Avenue
Wheaton, MD

01/30/12

Prepared by Olu Olufunmilade, BPI Analyst #5035995



107-A West Edmonston Drive
Rockville, MD 20852
(240) 396-2141
www.ecobeco.com

February 17, 2012

Daniel Hellerstein
1909 Franwall Avenue
Wheaton, MD

Dear Daniel Hellerstein

Thank you for choosing ecobeco to provide you with the critical information that you need to improve the comfort, safety and energy efficiency of your home. This report provides you with recommendations related to health & safety, energy efficiency & comfort, appliance replacements, and additional opportunities.

For each recommendation, ecobeco provides a priority, an installer recommendation, and an implementation cost estimate, where possible. We used utility-approved BEACON modeling software to estimate the annual utility savings that you would receive from implementing these measures. Please note that the energy model provides a savings estimate based on performance of similar homes of similar configuration and when all behaviors and weather conditions are constant. ecobeco does not guarantee any specific energy savings.

This report then provides you information on applicable federal, state, local and utility programs that may provide incentives for you to make home improvements that save energy. Please note that as of January 2012, there are no longer any federal tax incentives for energy-efficiency improvements.

ASK ME ABOUT INCENTIVES BEFORE YOU BEGIN WORK. SOME INCENTIVES MAY REQUIRE PRE-APPROVAL. Part of my service includes a phone call to review your audit results. ecobeco's scheduler will reach out to you shortly to schedule our phone call. To make sure you have the necessary resources and information to get the work done, I have provided expert contractor referrals to companies who have expertise in implementing energy-efficiency solutions, and who are familiar with the rules of the incentive programs. If you need extra help, please call me or you can call ecobeco's main number for customer support.

TEST-OUTS ARE REQUIRED FOR MANY INCENTIVE PROGRAMS. After you have completed air sealing, insulation and weatherization work that will reduce the leakiness of your home's envelope, it is important to re-test your home with the blower door to ensure sufficient air exchange. Further, we want to ensure the safety of any combustion appliances in the home that are impacted by the change in air flows. Please call the ecobeco office to set up your follow-up visit.

Thank you for choosing ecobeco. We hope that you will consider us when recommending home energy audits to your friends by visiting www.ecobeco.com/friends.

Sincerely,

A handwritten signature in black ink, appearing to read "Olu Olufunmilade", is shown within a rectangular box.

Olu Olufunmilade
Certified Building Analyst



Comprehensive Home Energy Audit Report



107-A West Edmonston Dr., Rockville, MD

Phone: 240-396-2141x718 olu@ecobeco.com

Customer Name:	Daniel Hellerstein	Customer Phone Number 1:	(301) 649-4728
Customer Address:	1909 Franwall Avenue	Customer Phone Number 2:	
City, State, Zip:	Wheaton, MD	Customer Email:	danielh@crosslink.net
Inspection Date:	01/30/12	Home Performance Analyst:	Olu Olufunmilade

House History: Year Built: 1958 Remodeled: _____ Type: Ranch / Split Size(sqft): 2,607 # of bedrooms: 3

Customer Concerns

1. [Insulation of old house.](#)

Audits that comply with the Building Performance Institute (BPI) standard include blower door and combustion safety testing. The results of these tests, along with your concerns and our detailed visual inspection, determine our recommendations for you.

Air Exchange (at 50 cubic feet per minute)

Blower Door Test Results: 3,376
 Your Home's Building Airflow Standard: 2,272
 Your home is **148%** of standard
 70% of Building Airflow Standard: 1,590

Combustion Safety Tests

Results: **Failure, see page 14**

Recommendations Overview

- Health & Safety Concerns
- Air Sealing
- Duct Sealing
- HVAC Replace
- Water Heater Replace
- Major Appliance Replace
- Add CFLs
- Clean Currents Wind
- Insulation Augmentation
- HVAC Repair / Tune-Up
- Add Water Flow Restrictors
- Add Smart Power Strips
- Sungevity Solar Install

Your Actual Annual Utility Costs: \$3,052

Your Estimated Total Savings Are: \$1,217

Percentage of Savings: 40%

The pages that follow provide the prioritized list of measures broken into four areas:

- Health & Safety Recommendations - These should be done first!
- Energy Efficiency & Comfort Recommendations
- Appliance Replacement Recommendations - These appliances should be changed now because of the age or performance of your current appliance. Keep in mind that the energy savings are not meant to pay for the appliance. Instead, the savings pays for a higher efficiency model.
- Additional Opportunities - These items are either behavioral suggestions or are products that you can purchase that are not currently modeled in the energy software.

For each recommendation, we provide a priority, an installer recommendation (where appropriate) and a implementation cost estimate. We use the utility-approved BEACON modeling software, which estimates the annual utility savings that you would receive from implementing these measures. Please note that the energy model provides a savings estimate based on performance of similar homes of similar configuration and when all behaviors and weather conditions are constant. ecobeco does not guarantee any specific energy savings.

Priority	Improvement Description	Installer	Estimate
1	<p>APPLIANCE FAILED COMBUSTION TESTING Your water heater failed the “worst case scenario depressurization” draft combustion safety test. Please note that after reducing air leakage in your home, this problem may worsen. EXCESSIVELY HIGH CARBON MONOXIDE LEVELS AND FAILURES UNDER “NATURAL” CONDITIONS REQUIRE REPAIR BEFORE ANY AIR SEALING AND INSULATION WORK IS IMPLEMENTED AND MAY AFFECT ELIGIBILITY FOR ENERGY REBATES. See page 14 for full details.</p>	Presidential Heat & AC	
2	<p>CO (Carbon Monoxide) We recommend having smoke and CO detectors on all floors as well as in the utility room. Your home requires 3 new CO detectors on the 1st floor (install 2) and in the basement near the boiler. More information about purchasing carbon monoxide detectors can be found at ecobeco.com/shop. Smoke detectors can be found at your local hardware store for \$20 each.</p>	ecobeco store	\$150
3	<p>VAPOR BARRIER INSTALL NEW Install vapor barrier on crawlspace floor before proceeding with any air sealing and insulation work (137 SF).</p>	DeVere Insulation	\$89
4	<p>WATER HEATER TEMPERATURE TOO LOW Your hot water was measured at 115 degrees. It takes 125 degree water to kill common pathogens and bacteria. We recommend you increase the temperature to 125 degrees. This will cause a slight increase in energy usage, which is reflected on page 7 of this report.</p>	Do-It-Yourself	
5	<p>GUTTERS DIVERT Divert downspouts away from the house (at least 5 feet) to ensure proper drainage and to prevent moisture and structural issues in the home. You can purchase an extension for the downspout from your local hardware or home improvement store.</p>	Do-It-Yourself	
6	<p>RADON Have your home tested for Radon and implement remediation if levels are over 4 picocuries. More information about purchasing radon testing kits can be found at ecobeco.com/shop.</p>	ecobeco store	\$45
7		N/A	
Total Costs:			\$284

Priority	Improvement Description	Installer	Estimate
1	<p>HEAVY AIR SEALING (lower energy bills, increase temperature consistency):</p> <ul style="list-style-type: none"> - Main Attic: Air seal all accessible top plates and all plumbing, electrical, wiring and duct penetrations. Insulate and weatherize the attic pull down stairs (with Thermodome). Seal framing void. Seal whole house fan. Move obstructions. Seal chimney penetration. - Basement: Seal rim joists (80 LF) and vertical wall/ceiling penetrations. <p>NOTE: In order to fully air seal and insulate this attic, the floor boards will need to be pulled up. If you desire to maintain this space, consult with contractor about building a platform. These costs are not included in estimate.</p>	DeVere Insulation	<p>Cost</p> <p style="text-align: right;">\$2,035</p> <hr/> <p>Ann. Savings</p> <p style="text-align: right;">\$73</p> <hr/>
2	<p>INSULATION (lower energy bills, increase temperature consistency):</p> <ul style="list-style-type: none"> - Main Attic (Insulated) : Add 12" of loose fill cellulose (412 SF). Bury duct work in insulation after sealing as feasible. - Main Attic (Uninsulated): Add 13" of loose fill cellulose (412 SF). Bury duct work in insulation after sealing as feasible.. - Main Attic (floored): Add dense pack cellulose to fill cavity (548 SF). - Crawlspace: Add spray foam to exterior walls as necessary (42 SF). (Some foam board already installed, which needs to be sealed) 	DeVere Insulation	<p>Cost</p> <p style="text-align: right;">\$3,630</p> <hr/> <p>Ann. Savings</p> <p style="text-align: right;">\$494</p> <hr/>
3	<p>WRAP WATER HEATER</p> <ul style="list-style-type: none"> - Wrap hot water tank with an insulation blanket to save energy. Keep clear of open flame at the bottom of the hot water tank. - Wrap accessible hot water pipes with insulating wrap (6 LF). - More information about these products can be found at ecobeco.com/shop 	ecobeco store	<p>Cost</p> <p style="text-align: right;">\$40</p> <hr/> <p>Ann. Savings</p> <p style="text-align: right;">\$15</p> <hr/>
4	<p>PROGRAMMABLE THERMOSTAT - Install a programmable thermostat for the heating & cooling systems. Then, make sure you set it to your schedule. Pepco installs a basic programmable thermostat for free in their Energy Wise Rewards Program, or you can visit ecobeco.com/shop for information about purchasing a more advanced product. See page 8 for additional program details.</p>	Do-It-Yourself	<p>Cost</p> <p style="text-align: right;">\$0</p> <hr/> <p>Ann. Savings</p> <p style="text-align: right;">\$78</p> <hr/>
5	<p>DIY AIR SEALING (in addition to Priority 1):</p> <ul style="list-style-type: none"> - Weatherize windows to limit air leakage. - Use a magnetic cover for the whole house fan when not in use to limit air leakage. -Install a door at the base of the stairwell for the hurricane door. 	Do-It-Yourself	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
6		N/A	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
7		N/A	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
<p>Total Estimated Costs: <u>\$5,705</u></p>		<p>Total Estimated Ann. Savings: <u>\$660</u></p>	

Priority	Improvement Description	Installer	Estimate
1	<p>GAS BOILER REPLACEMENT Your gas boiler is beyond what is considered its expected useful life of 20 years. We recommend you consult with a home performance HVAC professional to identify whether this system needs replacement. If you choose to replace this system, install a new, high efficiency, sealed-combustion, Energy Star unit with AFUE 95 rated efficiency. If you choose not to replace this appliance, make sure to have it tuned-up to maximize efficiency and ensure safe operation.</p>	Presidential Heat & AC	<p>Cost <u>\$5,000</u> Ann. Savings <u>\$97</u></p>
2	<p>AC UNIT REPLACEMENT Your cooling system is beyond what is considered its expected useful life of 12 years. We recommend you consult with a home performance HVAC professional to identify whether this system needs replacement. If you choose to replace this system, install a new, high efficiency (16 SEER) Energy Star unit. Projected savings for a replacement is shown to the right. If you choose not to replace this appliance, make sure to have it tuned-up to maximize efficiency and ensure safe operation. Through Pepco's HVAC Efficiency Program and Appliance Rebate Program, you can save \$300 on this purchase. Ask your installer how to obtain your rebate.</p>	Presidential Heat & AC	<p>Cost <u>\$4,500</u> Ann. Savings <u>\$180</u></p>
3	<p>CLOTHES WASHER Your clothes washer has reached its expected useful life of 13 years. We recommend you replace it with a new Energy Star approved unit.</p>	Do-It-Yourself	<p>Cost <u>\$500</u> Ann. Savings <u>\$44</u></p>
4	<p>REFRIGERATOR Your refrigerator has reached its expected useful life of 15 years . We recommend you replace it with a new Energy Star approved unit. Pepco has an appliance rebate program that provides a \$50 rebate for this purchase. See link on page 9 of this report.</p>	Do-It-Yourself	<p>Cost <u>\$750</u> Ann. Savings <u>\$79</u></p>
5		N/A	<p>Cost <u> </u> Ann. Savings <u> </u></p>
6		N/A	<p>Cost <u> </u> Ann. Savings <u> </u></p>
7		N/A	<p>Cost <u> </u> Ann. Savings <u> </u></p>
<p>Total Estimated Costs: <u>\$10,750</u></p>		<p>Total Estimated Ann. Savings: <u>\$400</u></p>	

Priority	Improvement Description	Installer	Estimate
1	<p>SMARTSTRIP Consider using Smart Power strips to reduce phantom power drain in the house. More information about purchasing these products can be found at ecobeco.com/shop. They typically pay for themselves in 1 year. We recommend 4 smart power strips for your home’s consumer electronics (TVs, computers, etc...).</p>	ecobeco store	<p>Cost \$120</p> <hr/> <p>Ann. Savings \$120</p> <hr/>
2	<p>CLEAN CURRENTS WIND ENERGY Switch to Clean Currents wind power for your home and get a \$50 rebate for your energy audit. Clean Currents is Maryland’s only sustainably certified green energy company. Enroll with Clean Currents and lock in competitive rates, protect your family budget, and help protect the environment. Visit www.ecobeco.com/cleancurrents for more information.</p>	Clean Currents	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
3	<p>SUNGEVITY SOLAR \$0 DOWN LEASE - The Sungevity team is comprised of experts dedicated to providing financed solar photovoltaic solutions that save you money on the first day. Their model allows you to lease a photovoltaic system for no money down and no maintenance costs. Discuss with your auditor and visit http://www.ecobeco.com/solar for more details.</p>	Sungevity	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
4	<p>ATTIC SEALING (SLOPE & GABLE ENDS) Consider bringing the main attic into your home's thermal envelope by treating the slope and gable ends with spray foam insulation. This will reduce your home's leakage and improve the attic space as a storage space. Consult with DeVere for an estimate. You may want to have them do a site visit to your home for further treatment details.</p>	DeVere Insulation	<p>Cost</p> <hr/> <p>Ann. Savings</p> <hr/>
5	<p>GAS WATER HEATER REPLACEMENT- Because your gas water heater failed worst case scenario depressurization testing & it is approaching its useful life of 12 years, you may want to consider replacing it with a power vented, high efficiency Energy Star unit (Energy factor 0.90). A power vented unit will nearly eliminate safety issues. Consult with Presidential for pricing.</p>	Presidential Heat & AC	<p>Cost</p> <hr/> <p>Ann. Savings \$71</p> <hr/>
6	<p>RAISE HOT WATER TEMPERATURE As part of our health and safety recommendations, we recommended raising your water heater set-point to 125 degrees. This will cause a slight rise in running costs for your hot water.</p>	Do-It-Yourself	<p>Cost \$0</p> <hr/> <p>Ann. Savings -\$34</p> <hr/>
7	<p>CLOSE AND LOCK WINDOWS AND DOORS Make sure to properly close all windows and doors in the house to reduce air leakage.</p>	Do-It-Yourself	<p>Cost \$0</p> <hr/> <p>Ann. Savings</p> <hr/>
<p>Total Estimated Costs: <u>\$120</u></p>		<p>Total Estimated Ann. Savings: <u>\$157</u></p>	

Cost Analysis For Health & Safety

Total Spent: \$284

Cost Analysis For Energy Efficiency & Comfort

Total Spent before incentives: \$5,705
 ESTIMATED ANNUAL SAVINGS (Modeled)¥: \$660
 Simple Payback Period (in years): 8.64
 Rate of Return: 11.57%

Cost Analysis For Appliance Replacement

Total Spent before incentives: \$10,750
 ESTIMATED ANNUAL SAVINGS (Modeled)¥: \$400
 Simple Payback Period (in years): 26.88
 Rate of Return: 3.72%

Your Modeled Energy Analysis Describes \$1,060 of Annual Savings For \$16,455 Spent

¥ We use the utility-approved BEACON modeling software, which estimates the annual utility savings that you would receive from implementing these measures. Please note that the energy model provides a savings estimate based on performance of similar homes of similar configuration and when all behaviors and weather conditions are constant. ecobeco does not guarantee any specific energy savings.

Page 7 also identifies how you can save an additional: \$157 These estimates are based on information provided by the Department of Energy, ACEEE, and manufacturers statements

Estimated Annual Utility Cost Savings (Modeled)¥

Actual Total Annual Energy Utility Costs Before Improvements: \$3,052
 Estimated Energy Utility Costs After Improvement (Modeled)¥: \$1,835
Your Estimated Total Savings Are: \$1,217
 Percentage of Savings: 40%

Additional Notes

If you participate in the Energy Wise Rewards program, you can receive credits up to \$80 on your annual utility bills. In this program you allow Pepco to remotely reduce the output of your AC unit during designated "conservation events" throughout the summer. You retain control of your thermostat at all times and Pepco gives you a credit toward your bill. Visit <https://energywiserewards.pepco.com> for details.

CLEAR REGISTERS - Move furniture away from registers to facilitate delivery of conditioned air.

ADJUST DUCT LEVERS - Adjust levers on duct lines seasonally in order to improve delivery to all rooms.

Your current EPA Home Energy Yardstick score puts you in the 31st percentile today (your household uses less energy than 31% of other similarly sized homes), and after making these changes, you would be in the 82nd percentile. This is a great improvement!



The Database of State Incentives for Renewable Energy (DSIRE) tracks both energy efficiency and renewable energy incentives at the federal, state, local and utility levels around the country. For tax credits, please consult the IRS or your tax advisor to determine whether these incentives apply to you.

<http://www.dsireusa.org>

Federal Incentives

As of January 1, 2012, there are no federal tax credits for energy-efficiency improvements. However, there are bipartisan efforts underway to create federal incentives. To stay up to date, visit the ENERGY STAR website and click on "Tax Credits for Energy Efficiency" at the bottom of the page.

<http://www.energystar.gov>

Utility Incentives Pepco of Maryland

Pepco Maryland's Home Energy Savings Program has many elements that will save you money. First, you can get a rebate for 50% up to \$2,000 from Pepco when you implement select items described in your report. Second, you can get a free programmable thermostat from EnergyWise Rewards. Third, you can also save on HVAC appliance replacements. Visit Pepco's consumer site for more information at:

<http://www.ecobeco.com/pepco>



State Incentives State of Maryland

As of January 1, 2012, all consumer incentives in Maryland are being handled by the utilities directly. You can learn about the Maryland Energy Administration's other programs by visiting:

<http://energy.maryland.gov/homeperformance>

Local Incentives None

ecobeco knows of no energy efficiency improvement incentives in your local area at this time.

Greening Your Lifestyle

You can also learn about how to "Green" your lifestyle by downloading our "Ten Ways to Live Sustainably", and the Chesapeake Bay Foundation's "Detoxify Your Home" and "Ten Things You Can Do To Save the Bay" by visiting ecobeco's "sustain" website at: <http://www.ecobeco.com/sustain>

ecobeco's service partners are committed to eco-friendly solutions to your energy and comfort problems. All of our partners have taken energy auditing courses and have a strong understanding of the home as a system and how to fix complex energy and comfort issues. Therefore, you'll get a higher level of expertise from our partners than you might receive from other contractors.

Air Sealing and Insulation

DeVere Insulation

www.devereinsulation.com

Michelle Griffith

410-766-7408

mgriffith@devereinsulation.com

HVAC, Water Heating and Gas System Services

Presidential Heating and Air Conditioning

www.presidentialheat.com

Wendell Nixon

301-670-0851

wnixon@presidentialheat.com

Alternative Energy Supplier

Clean Currents

www.ecobeco.com/cleancurrents

301-754-0430

Solar Energy Systems

Sungevity - Solar Home Specialists

Introducing the \$0 down solar lease

Save money in the first month. Get a free, no-hassle iQuote

Visit: www.ecobeco.com/solar

Service Partner Notes:

Additionally, ecobeco recommends that you enroll in a seasonal maintenance plan with Presidential Heating and Air Conditioning to ensure that your HVAC appliances continue to run safely and efficiently year after year. Presidential will provide a \$25 discount on your first seasonal service if you mention the coupon code "ecobeco" when you book the appointment!



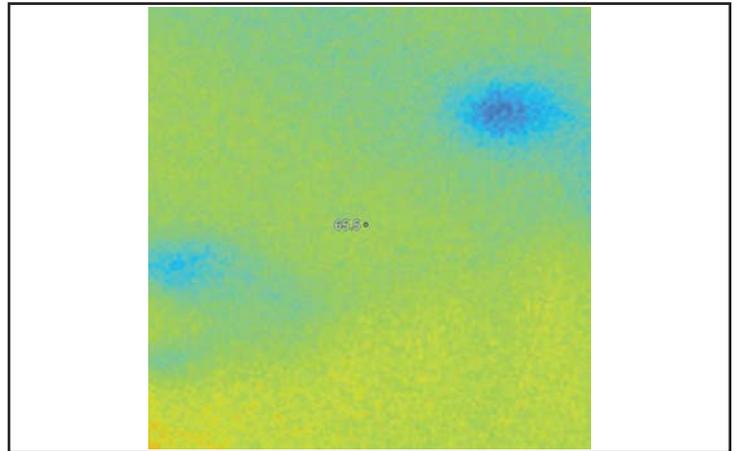
The existing attic insulation is only 6". Add an additional 12" of insulation to the attic to bring level to R-49. Obstructions will need to be removed.



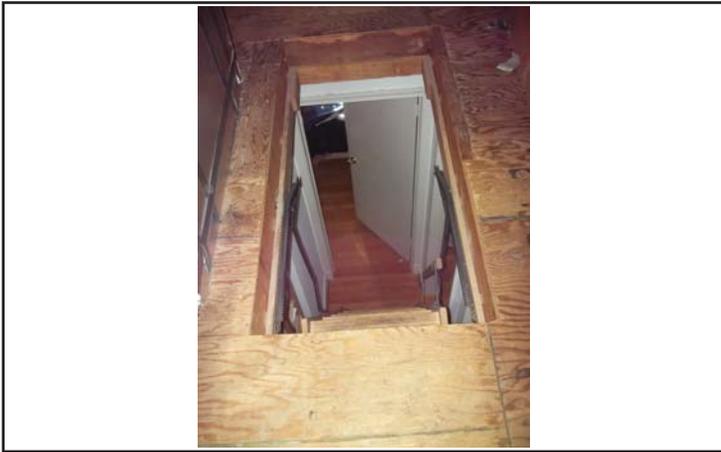
Floor boards cover 40% of your attic. Add dense pack cellulose to fill cavity under the floor boards.



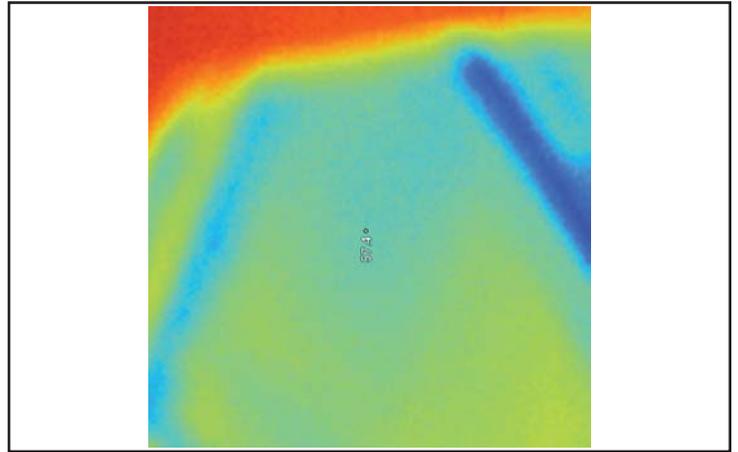
Bury all accessible duct work in cellulose when adding insulation.



This infrared image shows a ceiling area where visible temperature differences indicate patches in the attic that were lacking insulation. The blue color indicates cold air infiltration.



Insulate and weatherize the attic pull down stairs (with Thermodome).



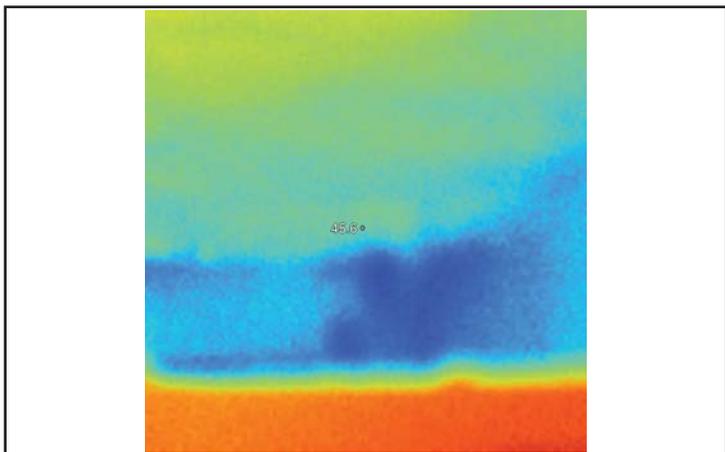
This infrared image of the attic hatch shows heat loss due to lack of insulation. The blue color indicates cold air infiltration.



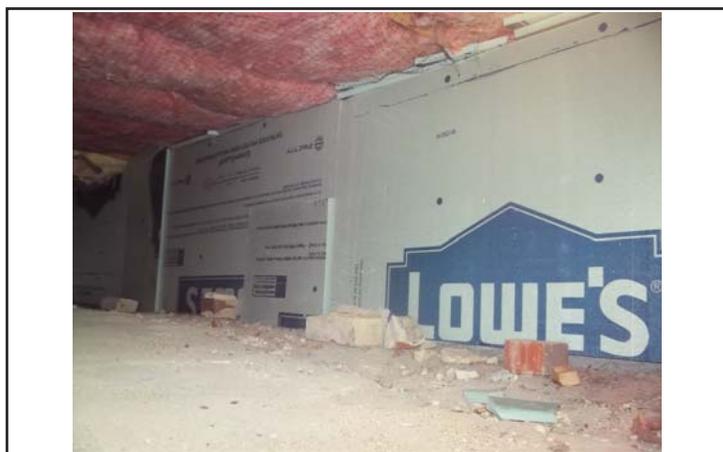
Seal the duct penetrations in the attic.



Seal this framing void in the attic.



This infrared image of the basement rim joists shows heat loss. Air seal the rim joists to limit air leakage/infiltration. The blue color shows cooler temperatures.



Enclose your crawlspace by applying spray foam to the exterior walls.



Add a vapor barrier to the crawlspace floor before proceeding with any air sealing and insulation work.



Divert downspouts away from the house (at least 5 feet) to ensure proper drainage and to prevent moisture and structural issues in the home.

COMBUSTION SAFETY TESTING

Combustion safety testing is a critical component of an energy audit. These tests are aimed to determine if your fossil fueled appliances such as your water heater, furnace, boiler, or oven are operating properly as well as venting hazardous exhaust gas out of your home. These appliances produce an array of exhaust gases including carbon monoxide (CO), which can be very dangerous because it is an odorless, colorless gas that can cause sudden illness and death. According to the Center for Disease Control (CDC), there are 15,000 CO poisoning related visits to U.S. hospitals and 500 deaths each year. The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, and loss of consciousness.

Appliances that are burning fuel incorrectly or are vented improperly can cause exhaust gas to spill into the house and cause interior air quality concerns. During your Comprehensive Energy Audit, we ran a series of tests on your combustion appliances to determine if they are correctly burning fuel and properly sending exhaust gases out of the home through their flue pipes. We test combustion appliances under two conditions as needed: "Worst Case Scenario Test" and "Natural Condition Test". The Worst Case is when all your exhaust fans are on, which creates the most likely chance of failure. Natural Condition is your home under normal operations.

Under these conditions we measured the following:

Draft pressure – This measures the strength of the pressure in an appliance's flue pipe. The more negative the number, the stronger the draft pressure. A positive number means exhaust gas is entering your living space.

Spillage - This identifies whether any exhaust gas is flowing into the living space 1 minute after the appliance turns on.

Carbon Monoxide – We use CO detectors to see if your appliances operate within BPI's accepted levels.

Combustion Appliance Zone (CAZ) Pressure – This identifies whether the room where your furnace, boiler or water heater are located is properly pressurized.

COMBUSTION SAFETY TEST FAILURES SHOULD BE ADDRESSED PROMPTLY. SOME FAILURES REQUIRE REPAIR BEFORE ANY AIR SEALING OR INSULATION WORK IS PERFORMED. COMBUSTION FAILURES MAY AFFECT ELIGIBILITY FOR ENERGY REBATES. IF YOU HAVE A FAILURE, DISCUSS WITH YOUR AUDITOR AND YOUR WEATHERIZATION CONTRACTOR BEFORE YOU BEGIN WORK.

Here are the findings from the combustion safety testing in your home:

APPLIANCE FAILED COMBUSTION TESTING

Your water heater failed the "worst case scenario depressurization" draft combustion safety test. Please note that after reducing air leakage in your home, this problem may worsen. EXCESSIVELY HIGH CARBON MONOXIDE LEVELS AND FAILURES UNDER "NATURAL" CONDITIONS REQUIRE REPAIR BEFORE ANY AIR SEALING AND INSULATION WORK IS IMPLEMENTED AND MAY AFFECT ELIGIBILITY FOR ENERGY REBATES. Solutions include: 1) seal all return ducts in furnace room (leave supply ducts unsealed) and install a supply vent in the furnace room, 2) install a liner insert in chimney to strengthen draft pressure on water heater (Cost is ~\$1,200), 3) replace w/power vented or tankless unit (Cost is ~\$2,700 - 3,700), 4) install louvers on the door of the CAZ for air vents, 5) Install an outside air ventilation system such as an ERV. Discuss these solutions with a Home Performance HVAC professional. An estimate is not provided given that the extent of the work is unknown.

CONTRACTOR TECHNICAL INFORMATION

Warning-Only Failures

Worst Case Scenario: DHW Spillage: Pass DHW Draft: -0.8
Furn/Boiler Spillage: Pass Furn/Boiler Draft: -8.1

Stop Work Failures

Natural Condition: DHW Spillage: Pass DHW Draft: Pass
Furn/Boiler Spillage: n/a Furn/Boiler Draft: n/a

CAZ Depressurization Swing: 2.1 CAZ Depressurization Limit: 5

Outdoor Temperature: 44

Carbon Monoxide: DHW: 1 Furnace/Boiler: 1 Oven: n/a

Notes: