

Energy Audit Report

Homeowner(s): Wendy Todd, Micheal Todd

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We conducted an energy assessment of your home on . This report will tell you what we did, what we found, and what we suggest for your home. These suggestions include information on incentives and financing to make improvements more affordable.



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1. Summary of your Audit

1.1 Visual Inspection and Measurements

We started with a tour and visual inspection of the inside and outside of the home. We identified any visible damage to the building, moisture control strategies, major appliances, and insulation. We measured square footage and volume of the home, as well as the area of all exterior windows and doors. We used a kill-a-watt meter to measure the electricity use of some appliances. During your audit, we used a carbon monoxide meter to measure the ambient carbon monoxide levels throughout the home.

1.2 Attic

We entered the attic to check for insulation, air sealing, ventilation, and potential hazards such as mold. Additionally, we visually inspected the attic ventilation and any duct and pipework passing through the attic.

1.3 Basement

We visually inspected any appliances in the basement and noted insulation levels, moisture, rodents, and any other concerns.

[1] " 1.4 Combustion Appliance Safety"

We visually inspected the combustion appliance(s) in your home, La LA la

1.5 Blower Door / Air Leakage Test

We used a large fan in an exterior door to depressurize your house. This allows us to determine the volume of air leakage into the house and to locate bigger air leaks. To find leaks, we used an infrared camera to check for unusually hot and cold spots. We also checked the pressure differences of the rooms to help determine major air leak locations.

2. Summary of Recommendations

We recommend the following upgrades for your home. Detailed information about these recommendations and financial resources can be found in other sections of this report.

Recommendation	Description
Vapor Barrier	Install a vapor barrier on the basement floor to stop moisture from entering the basement and house.
Spray Foam	Install spray foam on the basement walls.
Gutters	Install gutters and downspouts that divert water at least six feet away from the foundation and to where the ground slopes away from the house.

Window Dressers	Getting insulating window inserts that help air-seal windows and reduce heat loss and gain. There will be a Window Dresser build on Great Cranberry Island September 28th-October 2nd. Sign up at https://windowdressers.org/sign-up-for-inserts/ There will be a Window Dressers build in Eastport November 18 to 25. Contact Pete to sign up: 207-214-4751 or EastportMEEnergy@gmail.com
High efficiency shower head(s)	Install high efficiency low flow shower heads to reduce the amount of water and energy to heat this water used when showering. This will save a typical home more than \$200/year.
LEDs	Switch your light bulbs to LED light bulbs. LEDs use 80% less energy than incandescent light bulbs which can significantly reduce your electricity bill. We provide free LED light bulbs, contact us for some if we did not give you any during the audit.
Bathroom exhaust fan(s)	Replace bathroom exhaust fans with new exhaust fans rated at least 50 CFM. We recommend Panasonic WhisperQuiet or similar fans that don't create excess noise.
Kitchen exhaust fan	We recommend a kitchen exhaust fan to remove harmful combustion gases from your home.
Air Source Heat Pump	Install # air source heat pumps and whole-house surge protection.
Furnace Tune-up	Have the furnace and flue inspected and adjusted by a licensed professional. This should be available from your oil or propane delivery company.
Attic Insulation	Air seal the attic and insulate it to at least R-60 (18" of loose-fill cellulose insulation).
Continuous exterior wall insulation	Add a continuous layer of insulation and potentially replacing the air and moisture barrier once it becomes time to replace the siding.

3. What We Found

3.1 Basics

Date Built	1916
Attic	Loose Fiberglass , Fair installation, 6 inches
Number of floors	2

Square footage of conditioned space	1248
Volume of conditioned space (cubic feet)	21216

3.2 Exterior

Roof type:	Asphalt Shingles in fair condition. NA
Moisture control:	gutters, ground slopes away from foundation in Poor condition . The gutters were full of debris and broken or nonexistent on much of the house, the ground slopes away in some spots but the water is splashed back onto the house.
Siding:	wood shingles in fair condition . moss growing on back of back house.
Exterior doors:	2 Insulated door. Totaling 449 square feet.
Windows:	5 NA metal NA Excellent Recently installed 50

3.3 Interior/Living space

3.4 Blower Door / Air Leakage Test

A blower door test simulates a 20mph wind hitting your house. To run the test, we used a large fan in an exterior door to depressurize your house. This allows us to determine the volume of air leakage into the house and to locate bigger air leaks. To find leaks, we used an infrared camera to check for unusually hot and cold spots. We also checked the pressure differences of the rooms to help determine major air leak locations. Air leaks are a big source of heat gain in warm weather and heat loss in cold weather. They also allow moisture to get into the home. Below are some numbers, pictures, and descriptions explaining what we found.

CFM50:	2883	CFM50 describes how many cubic feet per minute of air are leaving the house at 50 pascals of pressure difference (while the blower door is running). For every cubic foot of air that leaves the house, a cubic foot of air enters the house as well. The higher the number, the leakier the house.
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ACH50:	8.15	ACH50 tells us how many air changes per hour are taking place in the house at 50 pascals of pressure difference. This value is normalized for the volume of the house and thus allows for comparison between different houses. The higher the number, the leakier the house.
Equivalent leakage area:	288.3 under natural conditions, NA under CFM50.	This is the area equivalent to all of the air leaks in the house combined.
ACHnatural:	0.61	Accounting for the volume of the home, this means that the house exchanges –% of its air every hour. Over one day, the house goes through – complete air changes.

Using a thermal imaging camera, we looked for major air leakage locations and thermal bridging, where heat is bypassing the insulation. There was evidence of

3.5 Attic

Attic Area	550	
Thickness of the attic insulation (inches), at the thinnest location	6	
Does attic have air sealing?	No	
Comment about air sealing	NA	
Any additional comments on attic insulation, e.g., is the entire attic insulated?	insulation was only in the ceiling joists, there was none in the rafter bays.	
Any hazards or mold/moisture/asbestos present in the attic?	No	
Describe the hazards or mold/moisture	NA	
Is there ductwork in the attic?	No	

Comment about condition of the ducktwork in the attic	NA
Are bathroom and kitchen exhaust fans being vented to outside?	No
Attic ventilation type?	Soffit
Quality of attic insulation's installation?	Fair
Assess worst part of installation.	
Attic insulation type	Loose Fiberglass

3.6 Basement

3.7 Electrical and Mechanical Systems

3.8 Energy Bills

4. Recommendations