

Energy Audit Report

Homeowner(s): Morrie Newell

Address: 29 May Tom Road, Cranberry Isles Maine, 04625

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Date: August 23 2024

We conducted an energy assessment of your home on 7/3/2024. 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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Summary of your Audit

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.

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.

Basement

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

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.

Combustion Appliance Safety

We assessed combustion appliances that burn fossil fuels such as propane, heating oil, or kerosene. These include furnaces, boilers, water heaters, and gas ovens. We visually inspected the combustion appliance(s) in your home, but we were unable to perform combustion safety tests. We also performed gas leak detection tests on your propane appliance(s).

Summary of Recommendations

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

Recommendation	Description
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.
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.
Furnace/Boiler 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.
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
Heat Pump Water Heater	Install a heat pump water heater to provide your hot water for cooking and bathing. This is the most efficient way to heat water and will save hundreds of dollars a year compared to electric resistance, heating oil or propane hot water. It will also help to dehumidify while it's running. If your current water heater burns oil or propane, this will also remove a source of combustion gases from your home.
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.
Bathroom exhaust fan(s)	Bathroom exhaust fans should be rated for at least 50 cubic feet per minute (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. A fan can also help with moisture concerns.

Solar	Rooftop solar can provide most or all of your home electrical usage. Contact a solar company for pricing and details specific to your home.
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What We Found

Basics

Info	Values
Date Built	2008
Attic	Batts of Fiberglass , 6 inches
Number of floors	2
Square footage of conditioned space	NA
Volume of conditioned space (cubic feet)	NA

Exterior

Info	Values
Roof age:	16
Orientation:	North/South
Roof type:	Asphalt Shingles in fair condition. NA
Moisture control:	Current moisture control strategies: gutters, ground slopes away from foundation. These were in fair condition .The gutters aren't on all sides of the house.
Siding:	wood siding in excellent condition. NA

Interior/Living space

Info	Values
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Walls:

The framing type of the home is platform framing, which means that wall cavities do not extend the full height of the building and are instead separated by floors. There is Batts of Fiberglass insulation 6 inches thick in fair condition.

Living room:

NA

Bathroom(s):

NA

Some had bathroom vent fans, and some didn't.

Kitchen:

Downstairs
fridge used
0.03 kWh in
87 minutes.
NA used
NA kWh in
NA
minutes.
No fan,
under con-
struction
due to
water
damage.

Blower Door / Air Leakage Test

A blower door test simulates a 20mph wind hitting your house from all sides.

To run the test, we used a large fan in an exterior door to depressurize your house. As air is pulled out through the fan, an equal volume of air is pulled in through all of the gaps, cracks, and air leaks throughout the 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.

Info	Values	Description
CFM50:	4244	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.

ACH50:	NA	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:	NA under natural conditions.	This is the area (in square inches) equivalent to all of the air leaks in the house combined.
ACH _{natural} :	NA	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

Attic

Info Values

Area 0

(sq
ft):

Insulation of
type:Fiberglass

Insulation
condition:
tion:

Air There is
seal- NAair
ing: sealing.
NA

OtherNA No

ob- NA

ser-

va-

tions:

Ventilation:

Duct\$No

Basement

Info	Values
Area (sq ft):	NA
Insulation type:	Batts of Fiberglass
Insulation condition:	FairNA
Insulation of appliances:	Appliances insulated, Ducts/pipes partially insulated
Moisture Control:	NAin NAcondition. The gutters aren't on all sides of the house.
Ducts:	NoNA
Other observations:	There is NANA

Electrical and Mechanical Systems

Info	Values
Electrical panel:	The electrical panel has an amperage of 200. There are 15 unused breaker spaces. NA

Energy Bills

Type	kWh/gallons/cords/tonns	Cost (USD)
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Recommendations

Furnace/Boiler Tune up

Problem

Recommendation

Have the furnace and flue inspected and adjusted by a licensed professional. This should be available from your oil or propane delivery company.

Estimated Cost/Benefit

High efficiency shower head(s)

Problem

Recommendation

Estimated Cost/Benefit

LEDs

Problem

Recommendation

Estimated Cost/Benefit

Window Dressers

Problem

Recommendation

Estimated Cost/Benefit

Heat Pump Water Heater

Problem

Recommendation

Estimated Cost/Benefit

Gutters

Problem

Recommendation

Estimated Cost/Benefit

Bathroom exhaust fan(s)

Problem

Recommendation

Estimated Cost/Benefit

Kitchen exhaust fan(s)

Problem

Recommendation

Estimated Cost/Benefit

Solar

Problem

Recommendation

Estimated Cost/Benefit