

Your Home Energy Audit Report

Provided by

Aarons Home Improvement



Scenario Id: 26944

Jon Lopacki
12975 Pomona
Sterling Hieghts, MI 48312

Customer Phone Number: 586-596-6058
Inspection Date: 12/13/2011
Home Comfort Energy Advisors: Ryan R

Existing Home Description

House Type	Single-Family Detached
Conditioned Floor Area	3200 Sq.Ft.
Number of Bedrooms	3
Number of Occupants	4
Year Home was Built	Pre 1950
Stories Above Grade	1
Primary Foundation Type	Open Crawlspace

Existing Systems

Heating Systems	70 AFUE Natural Gas Furnace
Cooling Systems	10 SEER Central AC
Water Heating Systems	40 gallon Natural Gas Storage (Tank)

Your Home's Energy Consumption

We have analyzed your home's recent energy consumption history and broken it down by end use. The energy consumption estimate is based on how much your home would consume in an average year. The estimated costs are based on our estimate of current energy costs.

End Use Category	Fuel Type	Energy Usage	Cost	% of Cost
Space Heating	Natural Gas	794 Therms	\$834	74%
HVAC Auxiliary Electricity	Electricity	277 kWh	\$36	3%
Air Conditioning	Electricity	355 kWh	\$46	4%
Water Heating	Natural Gas	172 Therms	\$181	16%
Electric Baseload	Electricity	46 kWh	\$6	1%
Fuel Appliances	Natural Gas	29 Therms	\$31	3%

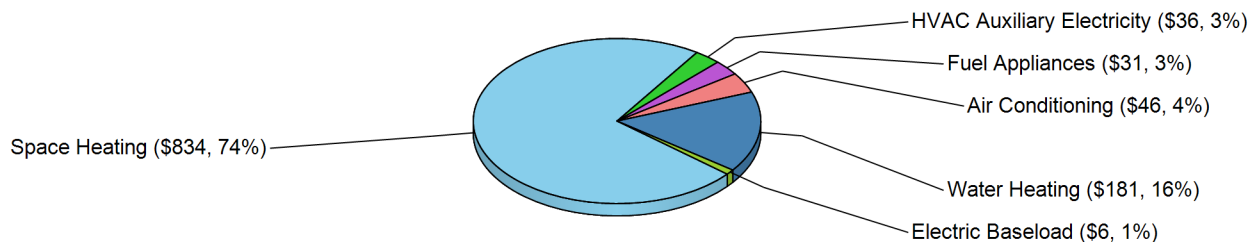
The total annual electricity costs for your home are currently \$88 or 8% of your annual energy costs.

The total annual natural gas costs for your home are currently \$1,046 or 92% of your annual energy costs.

The total annual energy costs for your home are currently \$1,134.

Your Electric Retail Energy Provider is dte and the rate used in this analysis is \$0.13 per kWh.

Estimated Utility Bill Disaggregation



Your Current ENERGY STAR® HOME Energy Yardstick

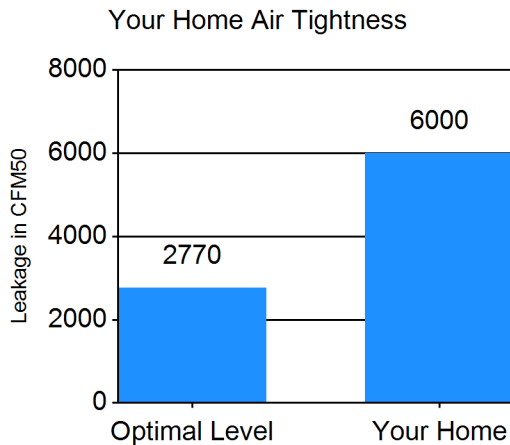
In order to help homeowners understand how their home energy usage compares to that of other households, the U.S. Environmental Protection Agency developed the ENERGY STAR® Home Energy Yardstick. The Home Energy Yardstick scores homes on a simple scale of 0 (worst) to 10 (best), with 5 being an average score. The Home Energy Yardstick Score adjusts for home size and number of occupants, for a consistent "apples-to-apples" comparison.

Based on our analysis, your home earns 9.9 out of 10 on the Home Energy Yardstick, which means that your home out performs 99% of U.S. homes. However, there are still opportunities for improvement.

Your Home's Air Tightness

Air leakage is often a major source of energy loss in homes. On the other hand, homes that are too air-tight can have problems with indoor air quality and health and safety, especially if there are major combustion appliances present.

Using state-of-the-art equipment, we have measured your home and compared it to our industry's standard for air tightness, which is an indication of an optimal balance between energy efficiency, indoor air quality and health and safety:



Your home's air leakage rate is 2.17 times the optimal rate.

Like most homes, yours has a leakage rate that is substantially higher than the optimal rate. For such homes, air sealing measures to bring the home closer to the optimal level are usually very cost-effective.

Your Home's Combustion Safety Results

Testing major combustion appliances is a very important part of assessing home performance. How such equipment operates is important not only from the standpoint of energy efficiency; it's also very important from the standpoint of health and safety. The table below shows the results of any combustion-related tests that were required on your home. If any test results in a "Fail," they should be addressed in the following section of this report, "Recommendations for Improving Your Home." Please consult us if you have any questions or concerns about your test results or recommended actions.

	System 1 Test	System 2 Test	System 3 Test	System 4 Test
Heating System				
Spillage Test (Pass/Fail)	Pass			
Exhaust Flue Draft	Pass			
Carbon Monoxide (CO) Emissions	Pass - Recommend Service			
Domestic Hot Water (DHW) System				
Spillage Test (Pass/Fail)	Pass			
Exhaust Flue Draft	Pass			
Carbon Monoxide (CO) Emissions	Pass			
Combustion Appliance Zone (CAZ) Tests				
CAZ Depressurization	Pass			
Ambient CO in CAZ During Tests	Pass			
Gas Leaks Found	Pass			
Living Space Tests				
CO Level from Gas Oven	Pass			
Ambient CO in Living Space	Pass			

Home Improvement Recommendations

As a result of the Home Performance Assessment, we recommend the following Energy Conservation Measures and/or building performance measures for your home:

Measure Category	Recommendation Action	Quantity/Description
Air Sealing		
Air Sealing Level	Reduce Air Leakage from Living Space	Very Heavy level of effort
Insulation		
Attic Insulation - Attic	Insulate w/ Cellulose (wet spray): 10 inches	3200 square feet
Rim Joist	Insulate with Foam (high density)	400 linear feet
Heating Systems		
Heating System	Replace w/ 0.97 AFUE & High-Efficiency Blower Fan	1
Heating System ECM-type Blower Fan - System 1	High-Efficiency Blower Fan	1
Cooling Systems		
Central Air Conditioner	Replace w/ 18 SEER & High-Efficiency Blower Fan	1
Cooling System ECM-type Blower Fan - System 1	High-Efficiency Blower Fan	1
Ducts		
Duct System 1 - Sealing	Seal Ducts w/ Approved Materials	Accessible Ductwork
Domestic Hot Water System		
Water Heater Wrap	Wrap Water Heater	1
Lighting, Appliances & Smart Strips		
Replacement CFL's	Install Compact Fluorescent Lamps (CFLs)	20
Water Saving Measures		
Low-Flow Showerheads	Replace Showerheads	2 of 2 showerheads at 1 gpm
Low-Flow Faucet Aerators	Install low-flow aerators	3 of 3 aerators at 1 gpm

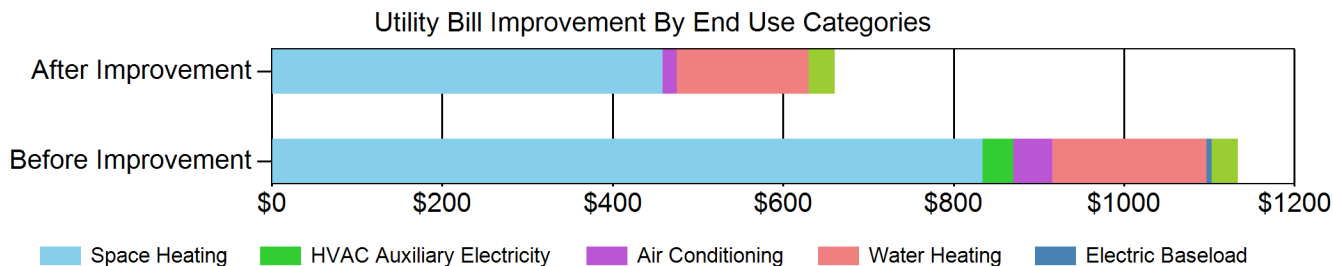
Your Estimated Annual Energy Savings

The following table shows the projected energy savings from the proposed measures, broken into the same major categories of use in your home as shown in the analysis of current energy usage on Page 1. For each category, the table provides the projected annual dollar savings, breakdown of the savings by fuel type, and percentage of energy saved relative to your existing usage:

End Use Category	Cost Savings	Percent Energy Savings	Electricity kWh	Natural Gas Therms
Space Heating Savings	\$375	45.0%		357
Air Conditioning Savings	\$30	64.8%	230	
Water Heating Savings	\$26	14.4%		25
Electric Baseload Savings	\$661	11012.4%	5,081	
HVAC Auxiliary Electricity Savings	\$290	804.5%	2,231	
Total Project Savings	\$1,382		7,542	382
Total Percent Savings	121.9%	62.7%	1112.1%	38.4%

Projected Annual Utility Bill Improvement by End Use Category

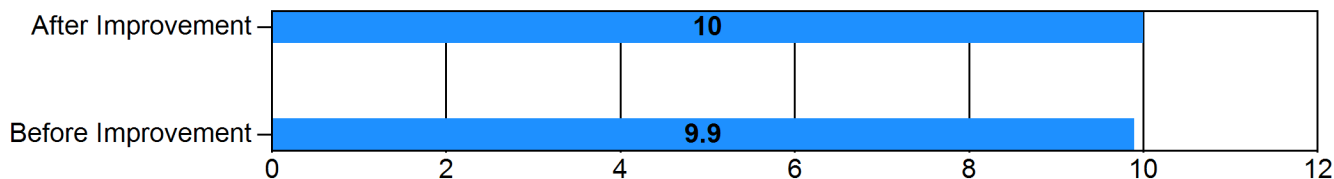
If you install all of the measures recommended above, your annual energy cost savings would be \$1,382 and would change as follows by end use category:



End Use Category	Before Improvement	After Improvement
Space Heating	\$834	\$459
HVAC Auxiliary Electricity	\$36	-\$254
Air Conditioning	\$46	\$16
Water Heating	\$181	\$155
Electric Baseload	\$6	-\$655
Fuel Appliances	\$31	\$31
Total Cost	\$1134	-\$248

Projected Home Energy Yardstick Score

If you install all of the measures recommended above, you will improve your ENERGY STAR® Home Energy Yardstick score from 9.9 to 10 and your home will then out perform 100% of similar U.S. households:



Financial Analysis

The projected energy savings from your home performance project will help it pay for itself. There are a few different ways to look at energy savings. Simple Payback is calculated by dividing the Net Package Price by the Annual Projected Savings, a simple way of calculating how many years it would take for savings to cover the investment. A more sophisticated measure is the Annual After-Tax Rate of Return, which shows the energy savings as an annual percentage return on the net project investment, so that it can be compared to other investments you might make. The Lifetime Savings-to-Investment Ratio (SIR) measures overall lifetime cost-effectiveness by comparing the present value of all energy savings over the life of the installed measures to the Net Package Price. An SIR of over 1 is an indicator that the project will pay for itself through energy savings over time.

Simple Payback and Annual After-Tax Rate of Return	
Energy Saving Measures	\$0.00
Total Package Price	\$8,000.00
Rebate (subject to approval)	\$2,000.00
Other Incentives	\$0.00
Net Package Price	\$6,000.00
Annual Projected Savings	\$1,381.60
Simple Payback (yrs)	4.3
Annual Rate of Return	23.03%
Lifetime Savings-to-Investment Ratio	2.35

Financing Cash Flow Analysis	
Loan on Energy Saving Measures	\$6,000.00
Term in Years	10
Annual Interest Rate	19.900%
Loan Pmt/Month	\$115.56
Projected Monthly Energy Savings	\$115.13
Net Monthly Cash Flow (Net Cost)	(\$0.42)