

Your Home Performance Energy Savings Report

Prepared for

Joe Homeowner
400 W Canal St
Milwaukee, WI 53203-3208

Prepared by

Nat Peplinski

Assessment Date

11.11.2013



Assessment Summary

Joe Homeowner
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Milwaukee, WI 53203-3208

11/11/2013

About Your Home

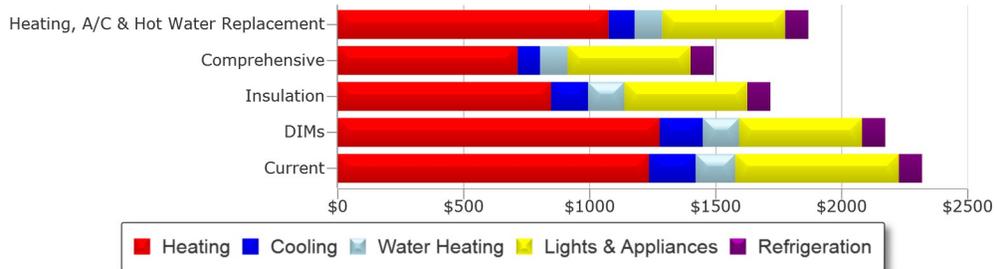
Year Built: 1957
Bedrooms: 3
Floors: 2
Conditioned Area: 1,296 ft²
Building Volume: 17,064 ft³
Heating: 1998 NaturalGas Furnace
Cooling: 1998 Electricity CentralAC
DHW: 2004 NaturalGas 50 gal

Congratulations on taking the first important step toward making your home more energy efficient with Focus on Energy's Home Performance with ENERGY STAR® Program! An inefficient home wastes both energy and money. By reducing the amount of energy you waste, you will:

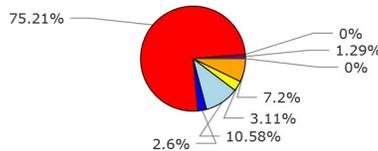
- Enjoy a more comfortable home.
- Save money for years to come.
- Help make our environment cleaner now and for future generations.
- Improve your home's market value.

Your assessment included a comprehensive evaluation of your home, including its physical structure, heating and/or cooling systems, appliances, and more. This report summarizes those findings, and presents one or more combinations of recommendations to help you improve your home's efficiency, as well as guide you in developing your energy action plan. As you review the material, if you have any questions, please call your Trade Ally.

Estimated Annual Usage



Your Home's Estimated Energy Use Breakdown



You can reduce energy waste by as much as 36%

Your home's annual energy usage is shown above. As you can see, some components use more energy than others. The amount of energy used to heat or cool your home may be the largest part of your energy bill. You can improve your home's energy performance by:

- Reducing air leaks to the outside (air sealing)
- Increasing the amount of insulation you have
- Improving or replacing your heating and/or cooling system

Other equipment and appliances in your home, such as water heating, lighting, refrigerators and TVs/computers, may also use large amounts of energy. Improving these should be part of your overall energy plan.

Questions? Call 800.762.7077.

Energy Efficiency Measures Installed Today

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Following are the measures that were completed during your home assessment:

Description	Location	Quantity	Cost	Estimated Annual Savings
1.5 gpm Showerhead	Bathroom	1	\$0.00	\$16.19
Faucet Aerator	Kitchen	1	\$0.00	\$1.70
Faucet Aerator	Bathroom	1	\$0.00	\$1.70
14W CFL Bulb	Hallway	4	\$0.00	\$36.72
23w CFL Bulb	Family Room	4	\$0.00	\$36.67
23w CFL Bulb	Kitchen	4	\$0.00	\$61.26
Totals			\$0.00	\$154.24

Quick Improvements for Savings

Got a minute? There's a lot you can do to improve the energy performance of your home in just a few minutes and for just a few pennies. The ideas below won't cost you much, but the savings will add up big.

- Turn down the furnace thermostat to at or below 68 degrees during the day and 58-60 degrees at night during cooler months.
- If you have a heat pump, turn the thermostat down no more than 10 degrees at night.
- Replace furnace or heat pump filters before and after the heating season.
- Turn off your computer, printer, TV and other electronics when you're not using them.
- Put gaming console on a switchable power strip and use that switch to shut down console when done.
- Run only full loads in your dishwasher.
- Fix leaky faucets.

Explore ways that you can invest in home improvements that will start paying off immediately, and you will continue to save wasted money year after year. Plus, by improving your home's energy efficiency, you will:

- Make your home more comfortable.
- Help reduce your carbon footprint, improving the environment and reducing our dependence on fossil fuels.

Don't wait, start saving now with Focus on Energy!

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Recommendations

Your Energy Efficiency Recommendations

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Following are some recommendations for improving the energy efficiency of your home. When considering energy efficiency, it is important to think of your home as one large interactive system. Each part works individually but also in concert with the other parts of your home. This is known as the Whole House Approach.

Packages

Description	Estimated Cost (\$)	Estimated Instant Discount (\$)	Estimated Annual Savings (\$)
Insulation			
Perform Air Sealing at Estimated 200 CFM50 Per Hour	\$1,000.00	\$321.39	\$97.84
Attic Floor Open Blow Cellulose 10"	\$192.24	\$61.78	\$16.34
Kneewall Floor Enclosed Cellulose Dense Pack 8"	\$486.00	\$156.19	\$74.93
Insulate Open Kneewall w/ 2" Two-Part Foam	\$367.20	\$118.01	\$11.35
Install 3" Fiberglass Batts in Open Gable Wall	\$42.72	\$13.73	\$15.11
Insulate Gable Wall w/ 2" Closed Cell Foam	\$122.40	\$39.34	\$4.00
Insulate Open Kneewall Slope w/ 6" Two-Part Foam	\$1,468.80	\$472.05	\$157.02
Attic Slope Enclosed Cellulose Dense Pack 6"	\$457.92	\$147.17	\$36.54
Insulate Rim Joist With 2" Two-Part Foam	\$330.00	\$106.06	\$24.19
Insulate Attic Hatch: 7" Polyisocyanurate	\$200.00	\$64.28	\$18.31
Total	\$4,667.28	\$1,500.00	\$455.63
Comprehensive			
Perform Air Sealing at Estimated 200 CFM50 Per Hour	\$1,000.00	\$321.39	\$97.84
Attic Floor Open Blow Cellulose 10"	\$192.24	\$61.78	\$16.34
Kneewall Floor Enclosed Cellulose Dense Pack 8"	\$486.00	\$156.19	\$74.93
Insulate Open Kneewall w/ 2" Two-Part Foam	\$367.20	\$118.01	\$11.35
Install 3" Fiberglass Batts in Open Gable Wall	\$42.72	\$13.73	\$15.11
Insulate Gable Wall w/ 2" Closed Cell Foam	\$122.40	\$39.34	\$4.00
Insulate Open Kneewall Slope w/ 6" Two-Part Foam	\$1,468.80	\$472.05	\$157.02

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Recommendations

Description	Estimated Cost (\$)	Estimated Instant Discount (\$)	Estimated Annual Savings (\$)
Attic Slope Enclosed Cellulose Dense Pack 6"	\$457.92	\$147.17	\$36.54
Insulate Rim Joist With 2" Two-Part Foam	\$330.00	\$106.06	\$24.19
16 SEER Central AC	\$3,500.00	\$0.00	\$55.73
Insulate Attic Hatch: 7" Polyisocyanurate	\$200.00	\$64.28	\$18.46
Gas Furnace 96% AFUE	\$3,500.00	\$0.00	\$141.05
High Efficiency Tank - Gas 0.67 EF	\$1,600.00	\$0.00	\$28.11
Total	\$13,267.28	\$1,500.00	\$680.67

Procedures used to make these estimates are consistent with criteria established by the United States Department of Energy for residential assessments. The costs and rewards detailed in the Packages table above have been estimated by your home energy advisor or Trade Ally under the program for which you may be eligible. The intent of the table is to illustrate the measures which, based on your home assessment, will yield the greatest results, and to show the impact that program rewards can have on the cost of improvements you choose to make. Measures eligible for rewards will show an amount under Estimated Instant Discount (\$). In some cases your Trade Ally may recommend measures that are not eligible for rewards within this program. These measures will show an instant discount of \$0.00. Such measures will have no impact on reward calculations.

Payback years are the number of years estimated for a package of improvements to pay for itself in energy savings. Payback estimates do not account for future price fluctuations, nor do they incorporate benefits of possible tax credits. A cost effective measure will typically pay for itself within its expected lifetime. The assessment is based upon a Whole House Approach and measures often work in conjunction with one another to maximize your savings. Remember that payback estimates are indeed estimates. You are advised not to select recommendations or packages solely on the basis of estimated payback, but also to consider failing equipment, health and safety risks, and other non-energy factors, such as comfort.

Rewards – At least 50% of your heat must be supplied by a participating utility for you to receive the full reward amounts. The instant discounts shown above are the standard instant discounts. They are calculated as a percentage of the cost and thus the amount may change if the project cost changes. You will receive them as a reduction on the Trade Ally invoice to you. There are also savings bonuses for your completed project if the estimated savings from discounted measures and the measures installed at the audit reach 15% or 25% of your total energy usage as estimated by the energy audit software. This calculation can only be done after all work is completed. You will receive a Final Report within 30 days of project completion that will show the final estimate used in determining if you are eligible for the savings bonuses. Customers who are eligible for rewards based upon their heating fuel and who achieve 15% savings will receive a \$200 savings bonus. Customers who meet the heating fuel requirement and achieve 25% savings will receive an additional \$500 for a total savings bonus of \$700. Should the standard instant discount plus the calculated savings bonus exceed the total cost of the work, the savings bonus will be reduced so that total reward paid does not exceed the total cost. The above measures and rewards expire within 24 months of the date of the assessment.

Detailed information on the recommendations for your home follows on the next page(s).

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Air Sealing



Air infiltrating the home through small cracks and gaps can result in as much as 20% of the typical home's heating and cooling costs. In the winter, cold dry air leaks into the home while the heated air exits. In the summer, the hot outside air enters the home and brings unwanted humidity. Outside air can leak in around window and door frames, floor and ceiling joints, electrical and plumbing access points, wall joints, exhaust fans, etc. While any one of these small leaks may be minor, collectively they can have the same effect as leaving a window open all year long. Air infiltration can also cause water vapor to condense inside walls and ceilings, causing insulation to become wet and ineffective and resulting in the growth of mildew and structural damage. While it is possible to make a home too air tight without proper ventilation, the vast majority of homes are much too drafty. The Energy Advisor has determined your home probably has excessive air infiltration and could benefit from professional air sealing services.

Blower door assisted air sealing is an effective and accurate method to measure air tightness and identify areas where air infiltration is occurring. Using the blower door, a contractor measures overall leakage and identifies specific locations. Those locations are then treated using a variety of methods (caulk, spray foam, weather stripping, etc.). Leakage is measured periodically during the process to ensure that the home is not sealed too tightly. Safety testing of any combustion appliances in your home should be conducted before and after any air sealing is done. This is the only method to accurately and safely perform air sealing on a home.

Attic Insulation



Attic/ceiling insulation prevents conductive heat transfer between your home, the attic space, and the outside. Like all insulation, ceiling insulation helps keep the home warm in the winter and cool in the summer. Attic insulation is often the easiest and most cost-effective place to insulate because most attics provide easy access for the installations. The ready access and lower installation cost often makes this a very cost-effective measure. This is not to say ceiling insulation is necessarily more important than wall or floor insulation. Attic insulation is most effective when the ceiling plane between the home and the attic space is tightly sealed, so air sealing should be performed before attic insulation is installed.

Adding insulation above your ceiling can be very cost effective. The energy savings gained will usually pay for the cost of installing the additional insulation in only a few years. It is recommended ceilings be insulated to R-49 or greater. This amounts to 11 to 15 inches of blown-in fiberglass or cellulose insulation. If the thickness of your existing insulation is 6 inches or less, you should realize significant savings in your heating and cooling costs after bringing the level to R-49. We strongly recommend air sealing the home before installing any insulation in the attic. Attic hatches in particular can be an area of unrestricted heat transfer. They should be insulated with rigid insulation board and air sealed with weather-stripping.

Rim Joist Insulation



Rim joist insulation prevents conductive heat transfer through your home's floor system into a conditioned basement. In terms of comfort, adding rim joist insulation will make a noticeable difference in how warm your floor feels, especially in homes with wood or tile floors and for those who prefer not to wear shoes at home. At a minimum, the outer perimeter of the floor system, the rim joist, should be insulated to prevent heat transfer between the floor space and the outside.

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Air Conditioner Replacement



New, high-efficiency air conditioners (AC) save significant amounts of energy in cooling your home. Recently, there have been considerable energy efficiency improvements made in the design of AC's. AC efficiency is rated by the Seasonal Energy Efficiency Rating (SEER); and the higher the SEER, the more energy efficient the AC. Typical AC's manufactured today have a SEER ranging from 13 to 18, while a 12-year-old AC might have a SEER of 11. ENERGY STAR® labeled AC's have a SEER of 14 or higher. In general, a SEER 16 AC will use 25% less energy than an AC with a SEER of 12. Be aware that the efficiency of an AC degrades over time. A 15-year-old AC with an initial SEER of 12 might actually be operating as inefficiently as a SEER of 10 or less.

Proper selection, sizing, and installation of new AC's are essential to achieving the greatest savings from the replacement. The estimated savings in the audit report are based on the recommended SEER rating of the new AC. It is important to first improve the overall energy efficiency of your home by: air-sealing the home to reduce hot air and humidity infiltration; insulating walls, ceilings, and floors to recommended R-values; and sealing any ductwork located in attics and crawl spaces. These improvements will probably allow the home to use a smaller AC, saving you money on the initial cost of the AC and your utility bills for years to come. Remember: an oversized AC wastes energy and costs you money. A trained AC contractor should recalculate your cooling needs, after the home efficiency upgrades, to determine the proper size equipment for your home.

Heating System Replacement



New, high-efficiency gas furnaces and boilers save significant amounts of energy in heating your home. Older types of gas furnaces and boilers allow more than 25% of the heat from gas combustion to exit through the flue exhaust stack or chimney. ENERGY STAR® labeled furnaces and boilers are designed to allow less than 10% of the heat to escape. More than 90% of the heat is used to warm your home. The advanced features of these new furnaces and boilers reduce energy waste and save you money.

Proper selection, sizing, and installation of new furnaces and boilers are essential to achieving the greatest savings from the replacement. It is important to first improve the overall energy efficiency of your home by: air sealing the home to reduce cold air infiltration; insulating walls, ceilings, and floors to recommended R-values; and sealing any ductwork located in unheated spaces. These energy efficiency improvements may allow the home to use smaller heating equipment, saving you money on the initial cost of the equipment and your utility bills for years to come. Remember: an oversized furnace or boiler wastes energy and costs you money. A trained heating contractor should recalculate your heating needs, after the home efficiency upgrades, to determine the proper size equipment for your home. It is important when buying new heating equipment to look for an ENERGY STAR® label and an Annual Fuel Utilization Efficiency (AFUE) rating of 90% or better. The estimated savings are based on the recommended AFUE rating.

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