



Your Energy Audit



(800) 895-4999 • xcelenergy.com

Home

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Denver, CO 80000
303-555-1234
joe@homeowner.com

Audited Date

02-16-2014
08:00 AM

Audited By

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Thank you for having us conduct a Home Energy Audit on your home.

Our aim with this report is to inform you of what we found to have the potential for improvement. It is in no way a criticism of your home. Most homes in the United States have the same desire you have. That is to improve the Comfort, Health Safety, Durability and Energy Efficiency of your home!

Please let us know of any questions that you might have.

Inside Your Report

- Cover
- Concerns
- Solutions for your home
- Upgrade Details
- Safety Tests
- Additional Notes
- Rebates & Incentives
- Tech Specs
- Glossary



Concerns

We listened to you!

As our client, we want to make sure we are addressing all of your concerns for your home. If we have missed any concerns in this report, please let us know right away.



Solutions for your home

Call us today to ask a question or discuss the next step!

Estimated Totals

Approximate Cost

\$ 34,900

This is a ballpark guess. Ask your contractor for a detailed bid.

Estimated Savings

\$ 1,249/yr

This is an estimate of how much you could save starting in Year 1. Savings will only increase as energy prices rise over the years.

Impact of upgrades

Energy Reduction	58 %
Carbon (CO2) Savings	7 tons
Equivalent cars removed from the road	1.5/yr
Equivalent number of tree seedlings grown for 10 years	179

Details	Approximate installed cost	Approximate annual savings	SIR*
Reduce Water Heater Temperature	\$0	\$20	>100
Replace Lighting with CFLs or LEDs	\$100	\$170	14.7
Program(mable) Thermostat	\$200	\$70	6.8
Insulate Basement Walls	\$400	\$50	3.2
Replace Freezer	\$500	\$40	1.6
Add Attic Insulation	\$2,200	\$140	1.4
Upgrade Water Heater	\$1,300	\$90	1
Insulate Crawl Space	\$1,000	\$30	0.9
Replace Refrigerator	\$1,400	\$50	0.6
Upgrade Windows	\$14,000	\$320	0.5

* SIR is the Savings to Investment Ratio. Simply put, if the SIR is 1 or greater, then the energy savings from the item will pay for itself before it needs to be replaced again. This metric is used to help prioritize the recommendations by financial merit.



Solutions for your home

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Details	Approximate installed cost	Approximate annual savings	SIR*
Upgrade Your Cooling System	\$4,800	\$130	0.4
Upgrade Your Heating System	\$3,400	\$80	0.4
Seal Air Leaks	\$1,600	\$30	0.3
Replace Doors or Add Storm Doors	\$800	\$9	0.3
Seal Duct Work	\$3,200	\$20	0.1

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Lower Hot Water Temp

Benefits Estimate

Estimated Cost

\$0

Energy Savings

Approx. \$20

Why it matters

Set water heater to deliver at 122 F (use a cooking thermometer) or the lowest practical setting for your preferences. A good measure is if you can take a shower using only hot water (not adding cold water), but still above 122 F. This will reduce standby energy loss and risk of scalding.



Now & Goal

Details

DHW Temp

Now

150°F

Goal

122°F



Upgrade Lighting

Benefits Estimate

Estimated Cost

\$100

Energy Savings

Approx. \$170

Why it matters

Compact Florescent Lightbulbs (CFLs) use 25% of the energy of regular incandescent light bulbs and last 8 to 15 times as long. Light Emitting Diode (LED) bulbs use 12% of the energy of regular incandescent light bulbs and last up to 50 times as long. Replacing incandescent bulbs with CFLs or LEDs will save significant energy and replacement costs over time.



2 Story-
1 Story-
Basement-

Now & Goal

Details	Now	Goal
% CFLs or LED	12%	90%
Number of Light Fixtures	48#	



Program(mable) Thermostat

Benefits Estimate

Estimated Cost

\$200

Energy Savings

Approx. \$70

Why it matters

Installing a programmable thermostat (or correctly setting the one you currently have) will help you to use less energy when you're not at home or when you're sleeping.



New thermostats not only enable you to save energy but will learn your habits and work for you. Many can be accessed via smart phone or tablet for convenience.



Insulate Basement

Benefits Estimate

Estimated Cost

\$400

Energy Savings

Approx. \$50

Why it matters

Insulating your basement walls will increase the overall temperature of your basement and make the floors above more comfortable. The estimate cost shown here is for a contractor installing a fiberglass blanket with a vinyl backing along the basement walls. You could also frame out the walls, insulate them and add drywall to make a "finished basement".

Now & Goal

Details	Now	Goal
Modeled Basement Wall Area	652ft ²	
Cavity Insulation		13R Value
Continuous Insulation		



Freezer

Benefits Estimate

Estimated Cost

\$500

Energy Savings

Approx. \$40

Why it matters

Old freezers can easily cost twice as much to operate as a new freezers. Replace your old freezer with a new Energy Star model and be sure to recycle the old one (keeping it running in your garage or basement will use even more energy).

Now & Goal

Details	Now	Goal
Freezer Usage	756kWh/yr	354kWh/yr



Insulate Attic

Benefits Estimate

Estimated Cost

\$2,200

Energy Savings

Approx. \$140

Why it matters

Adding insulation to your attic can lead to a dramatic reduction in your utility bills. The estimated cost shown here is for a contractor adding cellulose throughout your attic space to increase the R-value to at least 49.



Now & Goal

Details	Now	Goal
Modeled Attic Area	1385ft ²	
Attic Insulation	5R Value	49R Value



Replace Water Heater

Benefits Estimate

Estimated Cost

\$1,300

Energy Savings

Approx. \$90

Why it matters

Replace your water heater with a tankless model to save energy and reduce the ability for dangerous Carbon Monoxide to leak into your home.



When looking to replace your current water heater do so with a high efficiency unit. On-Demand (Most Efficient) or Draft induced units work great and are also safer because flue gases are vented directly to the out doors.

Now & Goal

Details

DHW Energy Factor

Now

56EF

Goal

82EF



Insulate Crawl Space

Benefits Estimate

Estimated Cost

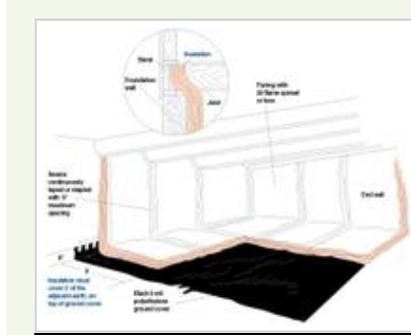
\$1,000

Energy Savings

Approx. \$30

Why it matters

Insulating and "conditioning" your crawl space will increase the overall temperature of your crawl space and make the floors above more comfortable. The estimated cost shown here is for converting your crawlspace from an unconditioned to a conditioned space which includes sealing off any vents to the outside, insulating the foundation walls, and installing a vapor barrier on top of the dirt floor. It often includes adding a jump vent to the main conditioned space in the house or ducting the furnace and/or A/C into the crawlspace as well.



Now & Goal

Details	Now	Goal
Crawlspace Type	Unconditioned Crawl	Conditioned Crawl
Wall Insulation	0R Value	11R Value
Floor Cavity Insulation	0R Value	19R Value
Modeled Crawl Wall Area	203ft ²	
Modeled Crawl Floor Area	554ft ²	



Refrigerators

Benefits Estimate

Estimated Cost

\$1,400

Energy Savings

Approx. \$50

Why it matters

Old refrigerators can easily cost twice as much to operate as a new refrigerator. Replace your old refrigerator with a new Energy Star model and be sure to recycle the old one (keeping it running in your garage or basement will use even more energy).



Now & Goal

Details

Kitchen Fridge - Refrigerator Usage

Now

896kWh/yr

Goal

427kWh/yr



Upgrade Windows

Benefits Estimate

Estimated Cost

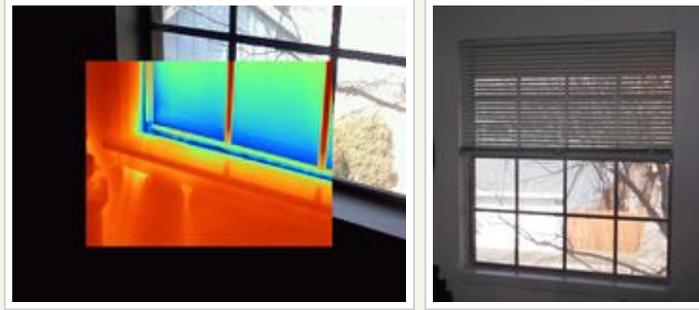
\$14,000

Energy Savings

Approx. \$320

Why it matters

Adding storm windows or replacing your current windows with new Energy Star windows will save energy and help reduce drafts. While typically not the most cost effective energy efficiency improvement, double or triple pane windows are more comfortable to sit next to on cold nights.



Now & Goal

Details	Now	Goal
Solar Gain Coefficient	0.75SHGC	0.31SHGC
Efficiency	1.27U Value	0.39U Value
Modeled Area: North	136ft ²	
Modeled Area: East	127ft ²	
Modeled Area: South	102ft ²	
Modeled Area: West	127ft ²	



Upgrade Cooling System

Benefits Estimate

Estimated Cost

\$4,800

Energy Savings

Approx. \$130

Why it matters

Install a more efficient air conditioner or evaporative cooler. Depending on the age of the unit, substantial savings may be gained by replacing it with an Energy Star rated appliance. If it doesn't quite make sense to replace your air conditioner now, be prepared to choose a high efficiency Energy Star unit (14 SEER or higher) when it finally wears out.



What to remember is that when replacing an A/C unit for each SEER that is increased the efficiency of the unit is increased by 100% over the last. New units (now up to 18 SEER) can have a significant savings over older units.

Myth- Conditioning costs are higher in

the winter.

Fact- Summer A/C costs make up a larger percentage of cost than heating does.

Now & Goal

Details	Now	Goal
System 1 - Equipment	furnace_ac	Central Air Conditioner
System 1 - Output Capacity		36kBTU/h
System 1 - Cooling System Efficiency	9.4SEER	14SEER
System 1 - Cooling Load Percentage		100



Upgrade Heating System

Benefits Estimate

Estimated Cost

\$3,400

Energy Savings

Approx. \$80

Why it matters

Install a more efficient furnace or boiler. Depending on the age of the unit, substantial savings may be gained by replacing it with an Energy Star rated appliance. Also, modern heaters are much safer as the exhaust from the unit is sealed and goes directly outside. If it doesn't quite make sense to replace your furnace or boiler now, be prepared to replace it with a high efficiency Energy Star unit (92 AFUE or higher) when it finally wears out.



Now & Goal

Details	Now	Goal
System 1 - Equipment	furnace_ac	Furnace
System 1 - Fuel Type	gas	Gas
System 1 - Heating System Efficiency	68AFUE	92AFUE
System 1 - Output Capacity		100kBTU/h
System 1 - Heating Load Percentage		100



Seal Air Leaks

Benefits Estimate

Estimated Cost

\$1,600

Energy Savings

Approx. \$30

Why it matters

Air sealing is typically the most cost effective improvement you can make to your home. To properly seal out air leaks, a contractor will use a large fan called a blower door to depressurize your house. When this happens, the contractor can easily find the air leaks and take corrective measures. A good air sealing job will dramatically increase the comfort of your home and help you save significant energy.

Notes to Contractors

Now & Goal

2nd Floor-
Main Floor-
Basement-
Volume-

Details	Now	Goal
Air Infiltration	4568CFM50	3426CFM50
Modeled Conditioned Air Volume	32400ft ³	
Effective Leakage Area	237in ²	178in ²
Equivalent NACH	0.56NACH	0.42NACH
Equivalent ACH50	8.5ACH50	6.3ACH50
Eligible for Xcel Air Sealing Rebate	Not Calculated	



Replace Doors

Benefits Estimate

Estimated Cost

\$800

Energy Savings

Approx. \$9

Why it matters

Adding storm door(s) or replacing your current exterior door(s) with insulated ones will help you save energy and help reduce drafts.



Seals and sweeps need to be replaced.

Now & Goal

Details	Now	Goal
Door 1 - U Value	0.46U Value	0.21U Value
Door 2 - U Value	0.46U Value	0.21U Value



Seal Duct Work

Benefits Estimate

Estimated Cost

\$3,200

Energy Savings

Approx. \$20

Why it matters

If you have a forced air system for heating or cooling, a contractor will seal the connections and penetrations with mastic. This increases the efficiency of your heating and cooling system and ensures that more of the air actually gets to where it was designed to go. If you have a boiler system for heating, insulating the pipes will increase the effectiveness of the system.



Duct tape is not a proper seal for duct work. Mastic or metal tape should be used.

Now & Goal

Details

System 1 - Duct System Efficiency

Now

Goal

88%

95%



Health & Safety

What's This?

These tests are recommended by the Building Performance Institute (BPI). They can help identify potential health and safety concerns in your home.

Test Summary

- Ambient Carbon Monoxide ✓
- Natural Condition Spillage ✓
- Worst Case Depressurization ✓
- Worst Case Spillage ✓
- Undiluted Flue CO ✓
- Draft Pressure ✓
- Gas Leak ✓
- Venting ✓

✓ Passed | ✗ Failed | ⚠ Warning



Carbon monoxide detectors should be installed inside the home within 15 feet of any combustion appliance (Furnace, Water Heater, Kitchen Stove, Fireplace, Etc.) This will ensure you and your family are safe in the case of a malfunction.



Additional Notes

Insulate Walls





Rebates



Xcel Energy 2013 Rebate Schedule: CO Residential Energy Efficiency Programs

Check with your local jurisdiction for additional rebates, financing, and incentives you may qualify for beyond the stated Utility Rebates. Rebates and incentives are not guaranteed. Programs are subject to change. Rebates subject to change under pending PUC filings. Current information is located at xcelenergy.com/HomeRebates.

Code	Rebate Area	Qualifiers	Rebate	More Information	
Cooling					
🔥	Evaporative Coolers	Standard unit 2500 CFM	First time install Replacement	\$250 \$100	
		Premium unit — 85% media efficiency, w purge control and thermostat	First time install Replacement	\$600 \$500	Must select a qualified unit from the list on xcelenergy.com/HomeRebates
		Whole house system — Same equipment as Tier 2 but w ducts covering the w hole house. Minimum of four supply ducts.	First time install and replacement	\$1,000	
			New	\$0	
	SEER 14/EER 12 or less	Trade-in Maximum rebate	\$500 \$500	In order to receive an AC rebate, customers must use a contractor w ho is approved by Xcel Energy, as listed on http://hvacreduction.net/xcel-co/public_search.cfm .	
🔥 📦	High Efficiency Cooling (AC or ASHP)		New	\$250	Contractors must have at least one NATE-certified technician, perform a load calculation for proper sizing, and use Quality Installation techniques during installation.
			Trade-in	\$500	
			Maximum rebate	\$750	
		SEER 14.5/EER 12 (Tier 1)	New	\$350	
			Trade-in	\$500	
			Maximum rebate	\$850	
	SEER 15/EER 12.5 (Tier 2)	New	\$500	Only new equipment located on ahridirectory.org qualify for a rebate.	
	Trade-in	\$500			
	Maximum rebate	\$1,000			
🔥	Ground Source Heat Pump	ENERGY STAR®-Qualified equals 3.3 COP, 14.1 EER	Per ton Maximum rebate	\$300 \$1,500	Special contractor requirements: to offer GSHP, one IGSHPA certified or NATE installation certified tech is required per contractor
		Heating			
🔥	Boilers	85% AFUE	\$100		
🔥	Furnaces	92% AFUE	\$80		
		94% AFUE	\$120		
Water Heating					
🔥	Standard Tank	.62 EF	\$25	List of qualifying units can be found on www.energystar.gov or www.ahridirectory.org	
		.65 EF	\$70		
		.67 EF	\$90		
🔥	Tankless	.82 EF	\$100		
🔥	Electric Heat Pump Water Heater		\$450		
Insulation and Air Sealing*					
🔥 🔥	Insulation and air sealing, w weather stripping and/or air sealing		As % of invoice, labor included	20%	Wall insulation brought to R-13. Attic insulation that's currently R-19 needs to go to R-40. Attic insulation currently at R-20+ gets <i>additional</i> R-25.
		Maximum rebate	\$300		



Rebates



Xcel Energy 2013 Rebate Schedule Continued...

Power	Rebate Area	Qualifiers	Rebate	More Information
Home Energy Audit By Xcel Energy				
  	Infrared Audit	Maximum rebate	\$200	Rebate is 60% of audit cost, up to maximum allowable rebate. Customers can only get rebates if using an auditor approved by Xcel Energy. Approved auditor list can be found at http://hvacreduction.net/xcel-co/public_search.cfm
  	Blower door audit	Maximum rebate	\$160	
  	Standard audit	Maximum rebate	\$100	
Home Performance With Energy Star®. Gas and electric use or electric heat only customers. Begins with a Home Energy Audit by Xcel Energy. Customers should specify that they want the higher, bundled rebates before any work is performed by a contractor.				
	Attic insulation*	R40 or higher		20% of the invoice cost up to \$350
	Air Sealing and Weather Stripping*	25%-32.9% reduction		20% of the invoice cost up to \$100
		33% reduction or higher		20% of the invoice cost up to \$160
	High Efficiency lighting*	\$2 per bulb, up to 20 CFLs or LEDs		\$40
	Wall insulation	R13 or higher		\$800
		Tier 1 (first time install)		\$275
		Tier 1 (replacement)		\$125
	Evaporative Cooling	Tier 2 (first time install)		\$625
		Tier 2 (replacement)		\$525
		Tier 3		\$1,000
		14.5 SEER/EER 12		\$300
	Central AC/ASHP	15 SEER/EER 12.5		\$400
		16 SEER/EER 13		\$550
  		Trade-in		\$550
	Ground Source Heat Pump	Energy Star Qualified equals 3.3 COP, 14.1 EER, 5 ton maximum	Per ton Maximum rebate	\$300 \$1,500
	Electric Heat Pump Water Heater			\$550
	Set Back thermostat	Programmable		\$25
	High Efficiency Furnace	.92 AFUE, new		\$170
		.94 AFUE or higher, new		\$200
	High Efficiency Boiler	.85 AFUE or higher		\$160
	Electrically Efficient Furnace	ECM furnace fan motor		\$200
	Tankless Water Heater	.82 EF or higher		\$200
	Power Vented Water Heater	.67 EF or higher		\$100
	New ENERGY STAR® Refrigerator	Primary ES refrigerator		\$15
	Dishwasher (Gas or electric DHW)	ENERGY STAR®		\$15
	Clothes Washer (Gas or electric DHW)	ENERGY STAR® CW		\$70

*If any of these three measures are a recommended improvement from the energy audit, they must be completed in order to successfully earn the Home Performance rebates.

KEY:  **Natural Gas:** This symbol indicates a program designed for our natural gas customers.  **Electric:** This symbol indicates a program designed for our electricity customers.

 **Participating contractor:** This symbol indicates a program that requires you use an Xcel Energy participating contractor to install the equipment or make the improvement.



Tech Specs

Property Details

Year Built:	1959
Conditioned Area:	3600 ft ²
House Volume:	32400 ft ³
# of Stories:	2
# of Occupants:	3
Home Style:	
Tuck Under Garage:	No
# of Cars:	2

Insulation & Air Leakage

Attic Insulation Type:	Fiberglass or Rockwool (batts or blown)
Attic Insulation Amount:	1-3
Foundation Type:	
Basement:	60 %
Crawlspace:	40 %
Slab on Grade:	%
Basement Wall Insulation:	None or Bare Walls
Crawlspace Insulation:	Crawlspace is uninsulated, open, or vented
Exterior Wall Construction:	Frame
Exterior Wall Cladding:	Metal/vinyl siding
Wall Insulation:	Yes
Air Leakage:	4568 CFM50

Heating & Cooling Equipment

Details:	System 1
Type:	Both (Heating / Cooling)
Primary Energy Source:	Natural Gas
% of Total Load:	% / %
Equipment:	Furnace / Central AC
Age:	16-40 yrs / 21-25 yrs
Capacity:	kBTU/h / kBTU/h
Duct Location:	50/50 Basement (unconditioned) - Conditioned Space
Duct Leakage:	30% - Very leaky
Duct Leakage Value:	CFM25
Duct Insulation:	None

Water Heating

Energy Source:	Natural Gas
Type:	Standard tank
Age:	11-15
Location:	Indoors and within heated area
Temperature:	Very High (150+ F)

Doors

Door 1 Type:	Wood
Door 2 Type:	

Windows

Window Glazing:	Single pane
Window Frames:	Metal
North Window Area:	20 %
East Window Area:	25 %
South Window Area:	15 %
West Window Area:	25 %
North Overhang:	1 ft
East Overhang:	1 ft
South Overhang:	1 ft
West Overhang:	1 ft
Skylight Area:	24 ft ²



Tech Specs (cont)

Refrigerators

Kitchen Fridge:	
Size:	22+ ft ³
Age:	16-20 years old

Appliances

Number of Freezers:	1
Cooking Range Fuel:	Electric
Dryer Fuel:	Electric

Lighting

Percent CFLs or LEDs:	1-25%
Approx # of light fixtures:	48

Thermostat Setpoints

Programmable	No
Thermostat Installed?:	
High Heating Setpoint:	°F
Low Heating Setpoint:	°F
High Cooling Setpoint:	°F
Low Cooling Setpoint:	°F

Utility Details

Electric Utility Name:	Xcel Energy
Electric Utility Account Number:	—
Fuel Utility Name:	Xcel Energy
Fuel Utility Account Number:	—

Utility Bills

Primary Heating Fuel:	Natural Gas
Highest monthly summer electric bill:	\$
Lowest monthly summer electric bill:	\$
Highest monthly winter natural gas bill:	\$
Lowest monthly natural gas bill:	\$

Auditor's Contact Information

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Glossary

Annual Fuel Utilization Efficiency (AFUE) The measure of seasonal or annual efficiency of a residential heating furnace or boiler. It takes into account the cyclic on/off operation and associated energy losses of the heating unit as it responds to changes in the load, which in turn is affected by changes in weather and occupant controls.

Annualized Return The return an investment provides over a period of time, expressed as a time-weighted annual percentage. This is the equivalent annual interest rate you would get if you put the same amount of money spent on the energy upgrade into a savings account.

Asbestos Asbestos is a mineral fiber that has been used commonly in a variety of building construction materials for insulation and as a fire-retardant, but is no longer used in homes. When asbestos-containing materials are damaged or disturbed by repair, remodeling or demolition activities, microscopic fibers become airborne and can be inhaled into the lungs, where they can cause significant health problems.

British Thermal Unit (Btu) The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit; equal to 252 calories.

Carbon Monoxide (CO) A colorless, odorless but poisonous combustible gas with the formula CO. Carbon monoxide is produced in the incomplete combustion of carbon and carbon compounds such as fossil fuels (i.e. coal, petroleum) and their products (e.g. liquefied petroleum gas, gasoline), and biomass.

Cashflow When financing energy efficiency improvements, cashflow is the difference between the average monthly energy savings and the monthly loan payment.

Combustion Appliance Zone (CAZ) A contiguous air volume within a building that contains a combustion appliance such as furnaces, boilers, and water heaters; the zone may include, but is not limited to, a mechanical closet, mechanical room, or the main body of a house, as applicable.

Compact Fluorescent Light bulb (CFL) A smaller version of standard fluorescent lamps which can directly replace standard incandescent lights. These highly efficient lights consist of a gas filled tube, and a magnetic or electronic ballast.

Cubic Feet per Minute (CFM) A measurement of airflow that indicates how many cubic feet of air pass by a stationary point in one minute.

Carbon Dioxide (CO₂) A colorless, odorless noncombustible gas that is present in the atmosphere. It is formed by the combustion of carbon and carbon compounds (such as fossil fuels and biomass). It acts as a greenhouse gas which plays a major role in global warming and climate change.

Energy Efficiency Ratio (EER) The measure of the energy efficiency of room air conditioners: cooling capacity in Btu/hr divided by the watts consumed at a specific outdoor temperature.

Energy Factor (EF) The measure of efficiency for a variety of appliances. For water heaters, the energy factor is based on three factors: 1) the recovery efficiency, or how efficiently the heat from the energy source is transferred to the water; 2) stand-by losses, or the percentage of heat lost per hour from the stored water compared to the content of the water; and 3) cycling losses. For dishwashers, the energy factor is the number of cycles per kWh of input power. For clothes washers, the energy factor is the cubic foot capacity per kWh of input power per cycle. For clothes dryers, the energy factor is the number of pounds of clothes dried per kWh of power consumed.

Heating Seasonal Performance Factor (HSPF) The measure of seasonal efficiency of a heat pump operating in the heating mode. It takes into account the variations in temperature that can occur within a season and is the average number of Btu of heat delivered for every watt-hour of electricity used.

Heat Recovery Ventilator (HRV) / Energy Recovery Ventilator (ERV)

A device that captures the heat or energy from the exhaust air from a building and transfers it to the supply/fresh air entering the building to preheat the air and increase overall heating efficiency while providing consistent fresh air.

Light Emitting Diode (LED) Lighting An extremely efficient semiconductor light source. LEDs present many advantages over incandescent light sources including lower energy consumption, longer lifetime, improved physical robustness, and smaller size.

N-Factor A factor of how susceptible your house is to wind, influenced by weather patterns, location, and the number of floors in the home. Used in the calculation of NACH.

Natural Air Changes per Hour (NACH) The number of times in one hour the entire volume of air inside the building leaks to the outside naturally.

Payback Period The amount of time required before the savings resulting from your system equal the system cost.

R-Value A measure of the capacity of a material to resist heat transfer. The R-Value is the reciprocal of the conductivity of a material (U-Value). The larger the R-Value of a material, the greater its insulating properties.

Radon A naturally occurring radioactive gas found in the U.S. in nearly all types of soil, rock, and water. It can migrate into most buildings. Studies have linked high concentrations of radon to lung cancer.

Rim Joist In the framing of a deck or building, a rim joist is the final joist that caps the end of the row of joists that support a floor or ceiling. A rim joist makes up the end of the box that comprises the floor system.

Seasonal Energy Efficiency Ratio (SEER) A measure of seasonal or annual efficiency of a central air conditioner or air conditioning heat pump. It takes into account the variations in temperature that can occur within a season and is the average number of Btu of cooling delivered for every watt-hour of electricity used by the heat pump over a cooling season.

Savings to Investment Ratio (SIR) A ratio used to determine whether a project that aims to save money in the future is worth doing. The ratio compares the investment that is put in now with the amount of savings from the project.