



HOME ENERGY SAVER™

HOME ENERGY SAVER
REPORT

Prepared by:
Terry R Miller

This report is generated by the Home Energy Saver
web-based energy audit tool, developed by
the U.S. Department of Energy's
Lawrence Berkeley National Laboratory,
and can be reached at <http://hes.lbl.gov>



HOUSE CONFIGURATION

General Information

Name or other identifier this home/session : **Energy Audit 5/28/2013**; User's email address : **trmiller@frontier.com**; Purpose of this assessment : **Energy audit of actual house**; Address : **560 Garfield St.**; City : **Cedarville**; State : **California**; City with most similar climate to modeled house : **Reno NV**; Year house was built : **1890**; People living in the house, by age - 0 to 5 years : **0**; People living in the house, by the age - 6-13 : **0**; People living in the house, by the age - 14-64 : **0**; People living in the house, by the age - 65 plus : **2**;

House Shape Size

Direction faced by front of house : **East**; Stories above ground level : **2**; Interior floor-to-ceiling height : **8 feet**; Rectangle : **rectangle**; Front door is on Right Side : **side2**; Length of the house (from front to back) : **30.00**; Width of the house (from left to right) : **38.00**;

Energy Prices

Energy Prices - Electricity : **0.133**; Energy Prices - Piped Natural Gas : **0.990**; Energy Prices - Liquid Propane Gas (LPG) : **2.950**; Energy Prices - Fuel Oil : **3.750**;

Exterior Shading

Extension of roof eaves or patios - Front : **1.00**; Extension of roof eaves or patios - Right : **1.00**; Extension of roof eaves or patios - Back : **1.00**; Extension of roof eaves or patios - Left : **1.00**; Height of large shade trees - Front : **30**; Height of large shade trees - Right : **0**; Height of large shade trees - Back : **0**; Height of large shade trees - Left : **0**; Height of neighboring houses stories - Front : **None**; Height of neighboring houses stories - Right : **One**; Height of neighboring houses stories - Back : **None**; Height of neighboring houses stories - Left : **One**;

Air Tightness

Does the house have weatherstripping : **Yes**; Enter the measured or estimated air leakage rate : **0.00**;

Foundation Floor

Foundation type : **Vented Crawlspace**; Foundation insulation level : **None**; Insulation level of the floor above the basement or crawlspace : **R-11 (3-5 inches)**;

Walls

Darkness of exterior wall surfaces : **medium**; Wall Construction : **Wood Siding ewwf07wo**;

Doors & Windows

Doors - Front of house - Number of doors each wall : **1**; Doors - Front of house - Door Type : **Insulated steel/metal/steel**; Doors - Right side of house - Number of doors each wall : **1**; Doors - Right side of house - Door Type : **Uninsulated wood/wood/wood**; Doors - Back of house - Number of doors each wall : **1**; Doors - Back of house - Door Type : **Uninsulated wood/wood/wood**; Doors - Left side of house - Number of doors each wall : **1**; Moveable Window Shades Right : **Interior Drapes**; Doors - Left side of house - Door Type : **Uninsulated wood/wood/wood**; Moveable Window Shades Back : **Interior Drapes**; Moveable Window Shades Left : **Interior Drapes**; Windows - Does the house have diff types of windows on each side : **Yes**; Moveable Window Shades Front : **Interior Drapes**; Window Type Front : **Single-pane, clear dpeaw**; Window Type Right : **Single-pane, clear dcaa**; Window Type Left : **Custom window dseaw**; Window Type Back : **Custom window dpeaw**; U-Factor (0.01:5.00) : **0.81**; Solar heat gain coefficient (0.00:1.00) : **0.67**; Window Area Front : **36.00**; Window Area Right : **48.00**; Window Area Back : **32.00**; Window Area Left : **72.00**; Movable Insulation Front : **0.00**; U-Factor (0.00:5.00) : **0.81**; Movable Insulation Right : **0.00**; Solar heat gain coefficient (0.00:1.00) : **0.67**; Movable Insulation Back : **0.00**; Movable Insulation Left : **0.00**; U-Factor (0.00:5.00) : **0.81**; Solar heat gain coefficient (0.00:1.00) : **0.67**; U-Factor (0.00:5.00) : **0.81**; Solar heat gain coefficient (0.00:1.00) : **0.67**;

Skylights

Single-pane, clear : **scna**; Skylight U-Factor : **1.98**; Skylight Solar heat gain coefficient : **0.00**; Enter the R-value of movable skylight insulation : **0.00**; Select the type of movable interior skylight shades : **None**; Skylight size : **0.00**;

Attic & Roof

Attic or ceiling type : **Unconditioned Attic**; Insulation level of the attic floor : **R-9 (3-4 inches)**; R-0 (no insulation) : **rfwf00co**;

Ducts Pipes

Duct location : **Unknown/not applicable**; Are the ducts insulated? : **No/Don't Know**; Are the ducts sealed? : **No/Don't Know**; Are the boiler pipes insulated? : **No/Don't Know**; Does the boiler also provide the hot tap water? : **No - I have a separate boiler and water heater.**;

Thermostat

Settings changed during the day and evening : **Change**; Standard or Programmable Thermostat : **standard**; Temperature setting - Heating temperature : **68**; Temperature setting - Cooling temperature : **72**; Weekdays Heating Day Degrees : **68**; Weekdays Heating Day Time : **8**; Weekdays Heating Night Degrees : **68**; Weekdays Heating Night Time : **17**; Weekdays Cooling Day Degrees : **72**; Weekdays Cooling Day Time : **8**; Weekdays Cooling Night Degrees : **72**; Weekdays Cooling Night Time : **17**; Weekend/Holiday Heating Day Degrees : **68**; Weekend/Holiday Heating Day Time : **8**; Weekend/Holiday Heating Night Degrees : **68**; Weekend/Holiday Heating Night Time : **17**; Weekend/Holiday Cooling Day Degrees : **72**; Weekend/Holiday Cooling Day Time : **8**; Weekend/Holiday Cooling Night Degrees : **72**; Weekend/Holiday Cooling Night Time : **17**; Temperature setting - Heating temperature : **8**; Temperature setting - Cooling temperature : **8**; Weekdays Heating Wake degrees : **68**; Weekdays Heating Wake Time : **7**; Weekdays Heating Away degrees : **64**; Weekdays Heating Away Time : **9**; Weekdays Heating Evening degrees : **68**; Weekdays Heating Evening Time : **19**; Weekdays Heating Sleep degrees : **64**; Weekdays Heating Sleep Time : **23**; Weekdays Cooling Wake degrees : **78**; Weekdays Cooling Wake Time : **7**; Weekdays Cooling Away degrees : **81**; Weekdays Cooling Away Time : **9**; Weekdays Cooling Evening degrees : **78**; Weekdays Cooling Evening Time : **19**; Weekdays Cooling Sleep degrees : **81**; Weekdays Cooling Sleep Time : **23**; Weekend/Holiday Heating Wake degrees : **68**; Weekend/Holiday Heating Wake Time : **8**; Weekend/Holiday Heating Away degrees : **64**; Weekend/Holiday Heating Away Time : **11**; Weekend/Holiday Heating Evening degrees : **68**; Weekend/Holiday Heating Evening Time : **19**; Weekend/Holiday Heating Sleep degrees : **64**; Weekend/Holiday Heating Sleep Time : **23**; Weekend/Holiday Cooling Wake degrees : **78**; Weekend/Holiday Cooling Wake Time : **8**; Weekend/Holiday Cooling Away degrees : **81**; Weekend/Holiday Cooling Away Time : **11**; Weekend/Holiday Cooling Evening degrees : **78**; Weekend/Holiday Cooling Evening Time : **19**; Weekend/Holiday Cooling Sleep degrees : **81**; Weekend/Holiday Cooling Sleep Time : **23**; Temperature setting - Heating temperature : **68**; Temperature setting - Cooling temperature : **72**;

Heating Equipment

Type of heating system : **Electric baseboard heater**; Heating system capacity : **0**; Heating system efficiency : **100.00**; Year heating system installed : **1992**; Percentage of

the house's floor area heated by a central or room heating system : **20**; Percentage of the house's heating needs supplied by a wood burning stove or portable heater : **80**;

Cooling Equipment

Type of cooling system : **Room air conditioner**; Cooling system capacity : **10000**; Cooling system efficiency : **9.93**; Year cooling system installed : **2011**; Percentage of the house's floor area cooled by the cooling system : **30**; Hours room air conditioner is on during an average day in the cooling season : **18**; Number of months room air conditioner is on during an average cooling season ? : **2 months**; Does the house have ceiling fans? : **Yes**; Number of ceiling fans : **1**; Does the house have a whole-house fan? : **No**; Hours per day the whole-house fan is used : **12**; Months per year the whole-house fan is used : **8**; Does the house have portable fans? : **Yes**; Number of portable fans : **3**;

Water Heating

Water heater fuel : **Electricity**; Year purchased : **1990**; Does occupant pay for water heater fuel? : **Yes**; Is an adult at home on weekdays? : **Yes**; Energy Factor : **0.83**; Recovery Efficiency : **0.98**; Rated Input : **4.50**; Storage tank capacity (gallons) : **104**; Temperature Setting : **Medium-Low**; Water heater location : **Indoors**;

Lighting

Kitchen number of light fixtures : **3**; Kitchen Bulb Type : **1: Incandescent;2: Incandescent;3: Incandescent**; Kitchen Number of bulbs in fixture : **1: 1; 2: 1; 3: 1**; ; Kitchen Sum of wattages for all bulbs in fixture : **1: 95; 2: 95; 3: 95**; ; Kitchen Usage (Hrs/day) : **1: 3.00;2: 3.00;3: 3.00**; Dining Room number of light fixtures : **5**; Dining Room Bulb Type : **1: Incandescent;2: Incandescent;3: Incandescent;4: Incandescent;5: Incandescent**; Dining Room Number of bulbs in fixture : **1: 1; 2: 1; 3: 1; 4: 1; 5: 1**; ; Dining Room Sum of wattages for all bulbs in fixture : **1: 165; 2: 165; 3: 165; 4: 165; 5: 165**; ; Dining Room Usage (Hrs/day) : **1: 2.00;2: 2.00;3: 2.00;4: 2.00;5: 2.00**; Living Room number of light fixtures : **4**; Living Room Bulb Type : **1: Incandescent;2: Incandescent;3: Incandescent;4: Incandescent**; Living Room Number of bulbs in fixture : **1: 1; 2: 1; 3: 1; 4: 1**; ; Living Room Sum of wattages for all bulbs in fixture : **1: 124; 2: 124; 3: 124; 4: 124**; ; Living Room Usage (Hrs/day) : **1: 2.00;2: 2.00;3: 2.00;4: 2.00**; Family Room number of light fixtures : **0**; Family Room Bulb Type : ; Family Room Usage (Hrs/day) : ; Master Bedroom number of light fixtures : **2**; Master Bedroom Bulb Type : **1: Incandescent;2: Incandescent**; Master Bedroom Number of bulbs in fixture : **1: 1; 2: 1**; ; Master Bedroom Sum of wattages for all bulbs in fixture : **1: 93; 2: 93**; ; Master Bedroom Usage (Hrs/day) : **1: 1.00;2: 1.00**; Hall number of light fixtures : **1**; Hall Bulb Type : **1: Incandescent**; Hall Number of bulbs in fixture : **1: 1**; ; Hall Sum of wattages for all bulbs in fixture : **1: 78**; ; Hall Usage (Hrs/day) : **1: 2.00**; All Bedrooms number of light fixtures : **1**; All Bedrooms Bulb Type : **1: Incandescent**; All Bedrooms Number of bulbs in fixture : **1: 1**; ; All Bedrooms Sum of wattages for all bulbs in fixture : **1: 94**; ; All Bedrooms Usage (Hrs/day) : **1: 1.00**; All Bathrooms number of light fixtures : **2**; All Bathrooms Bulb Type : **1: Incandescent;2: Incandescent**; All Bathrooms Number of bulbs in fixture : **1: 1; 2: 1**; ; All Bathrooms Sum of wattages for all bulbs in fixture : **1: 138; 2: 138**; ; All Bathrooms Usage (Hrs/day) : **1: 2.00;2: 2.00**; All Closets number of light fixtures : **0**; All Closets Bulb Type : ; All Closets Usage (Hrs/day) : ; Utility Room number of light fixtures : **0**; Utility Room Bulb Type : ; Utility Room Usage (Hrs/day) : ; Garage number of light fixtures : **5**; Garage Bulb Type : **1: Incandescent;2: Incandescent;3: Incandescent;4: Incandescent;5: Incandescent**; Garage Number of bulbs in fixture : **1: 1; 2: 1; 3: 1; 4: 1; 5: 1**; ; Garage Sum of wattages for all bulbs in fixture : **1: 103; 2: 103; 3: 103; 4: 103; 5: 103**; ; Garage Usage (Hrs/day) : **1: 2.00;2: 2.00;3: 2.00;4: 2.00;5: 2.00**; Outdoor Lighting number of light fixtures : **0**; Outdoor Lighting Bulb Type : ; Outdoor Lighting Usage (Hrs/day) : ; Other number of light fixtures : **0**; Other Bulb Type : ; Other Usage (Hrs/day) : ;

Refrigerators Freezers

Year made : **1999**; Size : **17**; Type : **RefAT**; Energy Star : **0**; Year made : **1992**; Size : **17**; Type : **RefAT**; Energy Star : **0**; Year made : **2003**; Size : **17**; Type : **RefAT**; Energy Star : **RefAT**; Year made : **1973**; Size : **20**; Type : **FRCM**;

Cooking Dishwashing

Stove fuel : **Natural Gas or Propane**; hours per day stove used : **1 hour**; Pilot Light : **No**; Oven fuel : **Natural Gas or Propane**; Hours per week oven used : **2 hours**; Pilot Light : **No**; Does house have/use a dishwasher : **No**; Energy Start Qualified : **No**; Loads washed per week : **3**;

Laundry

Does house have/use a clothes washer? : **Yes**; ENERGY STAR Qualified : **Yes**; Hot/Warm : **0**; Hot/Cold : **0**; Warm/Warm : **5**; Warm/Cold : **0**; Cold/Cold : **0**; Dryer fuel : **Electricity**; Number of loads dried per week : **5**;

HotTubs Spas Pumps

How many hours/day does the pool pump run? : **House doesn't have a pool pump**; How many months of the year does the pool pump run? : **0**; Is there a pool heater? : **No**; How is the spa heated? : **Spa/hot tub is heated 24 hours a day with electricity**; If spa is heated only when it is being used, how many hours per week is it used?" **6** major_appliance_input sumpPumpSize Detailed HotTubs-Spas-Pumps sumpPumpSize sump-pump-size 0 values:1-4 What is the size of the sump pump? **7** major_appliance_input : **0**; What is the size of the sump pump? : **0**; How many hours/year does the sump operate? : **5 hours/year**; Indicate the vertical distance that water is lifted. : **5 hours/year**; Combined pump and motor efficiency : **Typical - 40%**; Is house water pressure provided by gravity or pump? : **Gravity**; How much water is used outdoors? : **Roughly 5 min/day with garden hose**;

Entertainment

Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Energy Star? : **No**; Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **2**; Average Per-unit Use : **6**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **1**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Energy Star? : **Yes**; Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Energy Star? : **No**; Number of Units : **0**; Average Per-unit Use : **90**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : **1**; Average Per-unit Use : **6**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **0**; Average Per-unit Use : **30**; Unit of Time : **Minutes**; Unit of Calendar : **Week**; Number of Units : **0**; Average Per-unit Use : **30**; Unit of Time : **Minutes**; Unit of Calendar : **Week**; Energy Star : **No**; Number of Units : **0**; Average Per-unit Use : **2**; Unit of Time : **Hours**; Unit of Calendar : **Week**;

Home Office

Number of Units : **4**; Average Per-unit Use : **5**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **4**; Average Per-unit Use : **5**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **0**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **1**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **1**; Average Per-unit Use : **24**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **4**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Energy Star : **No**; Number of Units : **0**; Average Per-unit Use : **4**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **30**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Average Per-unit Use : **0**; Unit of Time : **Hours**; Unit of Calendar : **Day**;

Miscellaneous Kitchen Equipment

Bottled Water (With heating or chilling ability) : **No**; Energy Star Qualified : **No**; Instant Hot Water : **No**; Number of Units : **0**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **0**; Average Per-unit Use : **30**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **30**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **25**; Unit of Time : **Minutes**; Unit of Calendar : **Week**; Number of Units : **0**; Average Per-unit Use : **15**; Unit of Time : **Hours**; Unit of Calendar : **Month**; Number of Units : **1**; Average Per-unit Use : **1**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **1**; Average Per-unit Use : **15**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : **0**; Average Per-unit Use : **15**; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : **0**; Average Per-unit Use : **6**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : **1**; Average Per-unit Use : **10**; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Average Per-unit Use : **10**; Unit of Time : **Minutes**; Unit of Calendar : **Day**;

Other Appliances

Number of Units : 0; Number of Units : 0; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : 1; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : 0; Average Per-unit Use : 24; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in the year : 5; Number of Units : 2; Number of Units : 0; Average Per-unit Use : 24; Unit of Time : **Hours**; Unit of Calendar : **Day**; Energy Star : **No**; Number of Units : 0; Number of Units : 1; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in year : 4; Number of Units : 0; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in year : 4; Number of Units : 1; Average Per-unit Use : 8; Unit of Time : **Hours**; Unit of Calendar : **Day**; Energy Star : **No**; Number of Units : 0; Average Per-unit Use : 8; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 7; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in year : 4; Number of Units : 0; Average Per-unit Use : 24; Unit of Time : **Hours**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 45; Unit of Time : **Minutes**; Unit of Calendar : **Week**; Number of Units : 0; Average Per-unit Use : 2; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in year : 4; Number of Units : 0; Number of Units : 0; Average Per-unit Use : 1; Unit of Time : **Hours**; Unit of Calendar : **Day**; Months in year : 4; Number of Units : 0; Average Per-unit Use : 6; Unit of Time : **Hours**; Unit of Calendar : **Week**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**; Number of Units : 0; Average Per-unit Use : 0; Unit of Time : **Minutes**; Unit of Calendar : **Day**;



HOME ENERGY SAVER™

YEARLY ENERGY COSTS

Providing more details will make your results more accurate.



	Total	Heating	Cooling	Hot Water	Large Appliances	Small Appliances	Lighting
Existing Home	\$2,047	\$96	\$145	\$194	\$697	\$647	\$268
With Upgrades	\$1,562	\$96	\$135	\$79	\$541	\$647	\$64
Savings	\$485	\$0	\$10	\$115	\$156	\$0	\$204

Important Note: These are initial estimates only, and results may vary. If the owner has not already done so, we strongly recommend that they retain a professional energy auditor to develop a detailed work scope and budget for improving the home. We also recommend the Home Performance with ENERGY STAR program when considering home improvements.

[Comparing Results to Home's Utility Bill](#)



HOME ENERGY SAVER™

YEARLY WHOLE HOUSE RESULTS

		Existing Home	With Upgrades	Savings	Percentage Reductions
Whole House	Energy Bill	\$2,047	\$1,562	\$485	24%
	Electricity	15,053 kWh	11,375 kWh	3,678 kWh	24%
	Natural Gas	44 Therms	44 Therms	0 Therms	0%
	Emissions	10,430 CO ₂	8,007 CO ₂	2,423 lb. CO₂	23%
Heating	Energy Bill	\$96	\$96	\$0	0%
	Electricity	722 kWh	722 kWh	0 kWh	0%
	Emissions	476 lb. CO ₂	476 lb. CO ₂	0 lb. CO₂	0%
Cooling	Energy Bill	\$145	\$135	\$10	7%
	Electricity	1,088 kWh	984 kWh	104 kWh	10%
	Emissions	717 lb. CO ₂	648 lb. CO ₂	69 lb. CO₂	10%
Hot Water	Energy Bill	\$194	\$79	\$115	59%
	Electricity	1,456 kWh	591 kWh	865 kWh	59%
	Emissions	959 lb. CO ₂	389 lb. CO ₂	570 lb. CO₂	59%
Large Appliances	Energy Bill	\$697	\$541	\$156	22%
	Electricity	4,912 kWh	3,737 kWh	1,175 kWh	24%
	Natural Gas	44 Therms	44 Therms	0 Therms	0%
	Emissions	3,750 lb. CO ₂	2,976 lb. CO ₂	774 lb. CO₂	21%
Small Appliances	Energy Bill	\$647	\$647	\$0	0%
	Electricity	4,863 kWh	4,863 kWh	0 kWh	0%
	Emissions	3,203 lb. CO ₂	3,203 lb. CO ₂	0 lb. CO₂	0%
Lighting	Energy Bill	\$268	\$64	\$204	76%
	Electricity	2,012 kWh	478 kWh	1,534 kWh	76%
	Emissions	1,325 lb. CO ₂	315 lb. CO ₂	1,010 lb. CO₂	76%

Heating electricity values include fan or pumping energy for homes that have forced-air or water-based heating systems powered by circulation pumps. The values for Hot Water include taps and faucets only; the energy consumed by the water heater to supply hot water for appliances such as clothes washers and dishwashers is included instead in the rows for those appliances.



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YEARLY HEATING AND COOLING RESULTS

[Show Details](#)

Total Cost	
Cost	\$241
Heating	\$96
Cooling	\$145

Total Energy	
Energy Use	1,810 kWh
Heating	722 kWh
Cooling	1,088 kWh

Notes: this house is 80% heated by wood fuel.
20% of the floor area is heated and 30% cooled.

Heating electricity values include fan or pumping energy for homes that have forced-air or water-based heating systems powered by circulation pumps.

[What if my results don't match my energy bill?](#)



HOME ENERGY SAVER™

YEARLY LARGE APPLIANCES AND WATER HEATING RESULTS

[Show Details](#)

Appliance	Total Cost
First Refrigerator	\$93
Second Refrigerator	\$106
Third Refrigerator	\$63
First Freezer	\$181
Stove	\$33
Oven	\$11
Clothesdryer	\$112
Clotheswasher	\$99
Hot Water: Taps and Faucets	\$194
Spa/Hot Tub	\$306
Totals	\$1,198

Equipment energy is the energy used by motors, heating elements, and burners inside your appliances. This number excludes the energy consumed by your water heater to supply hot water for appliances such as clothes washers and dishwashers (which is included instead in the rows for those appliances).

[What if my results don't match my energy bill?](#)



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YEARLY SMALL APPLIANCES RESULTS

[Show Details](#) ?

Category	Energy Use	Energy Costs
Entertainment	883 kWh	\$117
Home Office	1,289 kWh	\$171
Miscellaneous Kitchen	254 kWh	\$34
Other Appliances	137 kWh	\$18

[What if my results don't match my energy bill?](#)



HOME ENERGY SAVER™

YEARLY LIGHTING RESULTS

Here is the calculated Yearly lighting bill based on the inputs you provided:

[Show Details](#) ?

Room	Energy Use	Energy Costs
All Bathrooms	202 kwh	\$27
All Bedrooms	34 kwh	\$5
Dining Room	600 kwh	\$80
Garage	375 kwh	\$50
Hall	57 kwh	\$8
Kitchen	312 kwh	\$41
Living Room	364 kwh	\$48
Master Bedroom	68 kwh	\$9

[What if my results don't match my energy bill?](#)



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UPGRADE RECOMMENDATIONS SUMMARY

Visit [Recommendations](#) to see more information on each upgrade.

	<u>Yearly Savings</u>	<u>Estimated Added Cost</u>	<u>How Much is Too Much?</u>	<u>Simple Payback Time</u>	<u>Estimated ROI</u>	<u>Avoided Emissions (lbs. CO₂)</u>
Total for recommended upgrades	\$485	\$389	\$4,850	1	98%	2,423

Important Note: These are initial estimates only, and results may vary. If the owner has not already done so, we strongly recommend that they retain a professional energy auditor to develop a detailed work scope and budget for improving the home. We also recommend the Home Performance with ENERGY STAR program when considering home improvements.

Upgrades Requiring Investment

1. First Freezer
2. Electric water heater
3. Clothes washer
4. Indoor lights
5. Room air conditioner

Other benefits that often come along with these energy-saving upgrades

- Energy-efficient freezers are quieter, run less often, release less heat into your kitchen, and keep their contents cool longer during power outages.
- Efficient gas-fired water heaters may hold their temperature longer following power interruptions and operate more safely.
- ENERGY STAR® clothes washers can reduce water use significantly, leave the clothes drier thus reducing drying time and energy consumption, and reduce wear and tear on clothes.
- Fluorescent lamps last several times longer than ordinary incandescent bulbs, which saves you the time and expense of replacing bulbs when they burn out.
- ENERGY STAR® room air conditioners may operate more quietly, be more visually appealing, and provide better humidity and/or temperature control than minimum-efficiency units.



HOME ENERGY SAVER™

UPGRADE RECOMMENDATIONS ?

What efficiency level would you like to model for the initial selection of upgrades? ?

EnergyStar

What simple payback period would you like to use for selecting upgrades?

10

RECALCULATE Rows that are dimmed are not included in the calculated values for the retrofit package. To include them check their boxes and recalculate.

Add/Remove	Upgrade	Upgrade Choice & Description	Yearly Savings	Estimated Added Cost	How Much is Too Much?	Simple Payback Time	Estimated Return on Investment	Avoided Emissions (lbs. CO ₂)
<input type="checkbox"/>	Check/Uncheck All Upgrades	Total for Selected Upgrades:	\$485	\$389	\$4,850	1	98%	2,423
<input checked="" type="checkbox"/>	First Freezer	10% better than standa	\$8	\$	\$80	0	NCE	40
<input checked="" type="checkbox"/>	Electric water heater	EF=0.95	\$55	\$ 90	\$550	2	61%	271
<input checked="" type="checkbox"/>	Clothes washer	MEF=1.42 WF=9.5 EN	\$46	\$ 90	\$460	2	51%	165
<input checked="" type="checkbox"/>	Indoor lights	CFLs in high-use fixtur	\$64	\$ 146	\$640	2	34%	1,010
<input checked="" type="checkbox"/>	Room air conditioner	EER=10.7 ENERGY S	\$14	\$ 63	\$140	5	20%	69
<input type="checkbox"/>	Refrigerator	15% better than standa	\$8	\$ 244	\$80	31	NCE	41
<input type="checkbox"/>	Second Refrigerator	15% better than standa	\$8	\$ 244	\$80	31	NCE	41
<input type="checkbox"/>	Third Refrigerator	15% better than standa	\$8	\$ 244	\$80	31	NCE	41
<input type="checkbox"/>	Heat pump	SEER=14 HSPF=8.2 E	\$10	\$ 107	\$100	108	NCE	52
<input type="checkbox"/>	Attic insulation	R-49	(\$301)	\$ 153	\$0	upgrade increases energy use		-1,489
<input type="checkbox"/>	Ceiling fan	ENERGY STAR-label	\$0	\$ 30	\$0	9,999	NCE	0
<input type="checkbox"/>	Cool roof	Solar reflectance = 0.5	(\$384)	\$ 143	\$0	upgrade increases energy use		-1,902
<input type="checkbox"/>	Floor insulation	R-25	(\$369)	\$ 925	\$0	upgrade increases energy use		-1,825
<input type="checkbox"/>	Air sealing	25% air leakage reduci	(\$336)	\$ 850	\$0	upgrade increases energy use		-1,663
<input type="checkbox"/>	Thermostat	ENERGY STAR-label	(\$165)	\$ 85	\$0	upgrade increases energy use		-817
<input type="checkbox"/>	Wall insulation	R-11 wall + R-5 exter	(\$307)	\$ 181	\$0	upgrade increases energy use		-1,520
<input type="checkbox"/>	Well pump	60% combined pump a	\$0	\$ 190	\$0	9,999	NCE	0
<input type="checkbox"/>	Windows	2-pane/solar-control lo	(\$372)	\$ 112	\$0	upgrade increases energy use		-1,844

Important Note: These are initial estimates only, and results may vary. If the owner has not already done so, we strongly recommend that they retain a professional energy auditor to develop a detailed work scope and budget for improving the home. We also recommend the Home Performance with ENERGY STAR program when considering home improvements.

NCE = Not Cost Effective. This upgrade will not pay for itself in your situation. There may be other reasons, such as improved comfort, to implement the upgrade, or it could be made more cost-effective if the investment cost is reduced.

Note: Each of the upgrades in the table above are evaluated in isolation from the others. If the efficiency level is changed for one upgrade, its potential impact on other upgrades will not be counted in the row-by-row estimates. However, these kinds of interactions are included in the "package" totals associated with the whole-house totals and chart at the top of the page, for the upgrades selected as part of the package. For example, if the furnace efficiencies are raised, the energy savings from wall insulation will not change in the row estimate, but the incremental savings from including insulation in the package will be less due to the more efficient furnace's impact on reducing the energy required to make up heat losses through the wall (there is less energy being used, so less to save).



DETAILED UPGRADE RECOMMENDATIONS REPORT

This is a printable report of the upgrades selected for the home. These upgrades have the potential to save \$485 each year on the utility bill.

Upgrade Package Summary:

Estimate Yearly Bill Savings:	\$485 ?
Estimated Lifetime Energy Savings:	\$4,365 ?
Estimated Added Cost:	\$389 ?
Maximum Price for 10 Year Payback:	\$389 ?
Return on Investment:	98% ?
Upgrade Pays for Itself in:	1 years ?

You selected the following upgrades:

- [Freezer: Replace your freezer. Pick a new one with an ENERGY STAR label.](#)
- [Water heater: Replace your water heater. Pick an one that says energy efficient.](#)
- [Clothes washer: Replace your washer. Pick a new one with an ENERGY STAR label.](#)
- [Lights: Replace the incandescent lights that you use most with compact florescent bulbs \(CFLs\)](#)
- [Air conditioner: Replace your air conditioner. Pick a new one with an ENERGY STAR label.](#)

Note: The economic benefits for each of the upgrades below are evaluated in isolation from the other upgrades. If the efficiency level is changed for one upgrade, its potential impact on other upgrades will not be counted in the individual upgrade estimates. However, these kinds of interactions are included in the "package" totals associated with the whole-house totals and chart at the top of the page (above). For example, if the furnace efficiency is increased, the energy savings from wall insulation will not change in the table below, but the incremental savings from including insulation in the package will be less due to the more efficient furnace's impact on reducing the energy required to make up heat losses through the wall (there is less energy being used, so less to save).

Freezer: Replace your freezer. Pick a new one with an ENERGY STAR label.

Economic Benefits:

Estimate Yearly Bill Savings:	\$8
Estimated Lifetime Energy Savings:	\$72
Estimated Added Cost:	\$0
Maximum Price for 10 Year Payback:	\$80
Return on Investment:	0%
Upgrade Pays for Itself in:	Under 1 year

Additional Benefits:

Energy-efficient freezers are quieter, run less often, release less heat into your kitchen, and keep their contents cool longer during power outages.

Upgrade Description:

When replacing your freezer, choose an ENERGY STAR-labeled model. ENERGY STAR freezers must exceed federal efficiency standards by at least 15%. Models that are up to 40% more efficient than the federal standards are available.

Note: Our calculations bill savings, typical upgrade costs, and cost-effectiveness are for a model with the lowest efficiency that qualifies for the ENERGY STAR label.

Purchasing Tips:

- Chest-type freezers are more efficient than upright models.
- Too large a freezer wastes space and energy. One that is too small can mean extra trips to the grocery store. Decide which size fits your needs, then compare the [EnergyGuide](#) yellow and black label on each so you can purchase the most energy efficient make and model.

More Information:

- [ENERGY STAR freezer product list](#)

- [Consortium for Energy Efficiency freezer product list](#)
- [Top-Rated Freezers from ACEEE](#)
- [Energy Saving Tips for Freezers from "Energy Savers"](#)

[\[Return to upgrades list\]](#)

Water heater: Replace your water heater. Pick an one that says energy efficient.

Economic Benefits:

Estimate Yearly Bill Savings:	\$55
Estimated Lifetime Energy Savings:	\$495
Estimated Added Cost:	\$90
Maximum Price for 10 Year Payback:	\$550
Return on Investment:	61%
Upgrade Pays for Itself in:	2 years

Additional Benefits:

Efficient gas-fired water heaters may hold their temperature longer following power interruptions and operate more safely.

Upgrade Description:

When replacing your electric water heater, choose an energy-efficient model with an Energy Factor of 0.95.

Note: Our calculations bill savings, typical upgrade costs, and cost-effectiveness assume the efficient water heater has an energy factor of 0.95 and recovery efficiency of 0.98.

Purchasing Tips:

- The most important measure of efficiency for water heaters is the Energy Factor EF. The higher the EF, the more efficient the water heater.
- Purchase a water heater whose tank is internally insulated with at least R-16. [5](#)
- A water heater that is too large for your home not only has a higher purchase cost but will increase your energy costs due to excessive cycling and standby losses. The resources below provide good, simple guidance on proper sizing of water heaters. The size, or "capacity", of a water heater should be judged by its first hour rating FHR, not its tank size.
- If you have natural gas or propane service at your home, consider switching to a gas-fired water heater to reduce your water heating bills.
- Many types of water heaters are now available, such as "demand" tankless, "indirect" or "integrated", and solar-assisted water heaters. [More Information](#)

More Information:

- [General Information from DOE](#)
- [DOE Water Heating fact sheet](#)
- [Top-Rated Energy-Efficient Water Heaters from ACEEE](#)
- [GAMA consumer's directory click on "Consumers"](#)
- [How to prevent health and safety problems with combustion equipment](#)

[\[Return to upgrades list\]](#)

Clothes washer: Replace your washer. Pick a new one with an ENERGY STAR label.

Economic Benefits:

Estimate Yearly Bill Savings:	\$46
Estimated Lifetime Energy Savings:	\$414
Estimated Added Cost:	\$90
Maximum Price for 10 Year Payback:	\$460
Return on Investment:	51%
Upgrade Pays for Itself in:	2 years

Additional Benefits:

ENERGY STAR® clothes washers can reduce water use significantly, leave the clothes drier thus reducing drying time and energy consumption, and reduce wear and tear on clothes.

Upgrade Description:

When replacing your clothes washer, choose an ENERGY STAR-labeled model. ENERGY STAR clothes washers can reduce energy consumption by up to 70% and are available in top-loading and front-loading designs. Some ENERGY STAR models use up to 50% less

water in addition to saving energy.

Note: Our calculations bill savings, typical upgrade costs, and cost-effectiveness are for a model with the lowest efficiency that qualifies for the ENERGY STAR label.

Purchasing Tips:

- Choose a clothes washer with high-speed spin cycles. This feature removes more water from clothes, which reduces the energy and time required for drying.
- Select a low water-use, high efficiency washer. Front-loading tumble-action washers can cut energy use by up to 70 percent, reduce water consumption significantly, and may actually get clothes cleaner. ¹
- Look for pre-soaking and/or "suds saver" options which conserve energy.
- Clothes washers come with [EnergyGuide](#) yellow and black labels. Use these labels to select the most efficient model for the capacity you have chosen.

More Information:

- [ENERGY STAR clothes washer product list](#)
- [General Information from DOE](#)
- [Top-Rated Energy-Efficient Clothes Washers from ACEEE](#)

[\[Return to upgrades list\]](#)

Lights: Replace the incandescent lights that you use most with compact florescent bulbs (CFLs)

Economic Benefits:

Estimate Yearly Bill Savings:	\$64
Estimated Lifetime Energy Savings:	\$576
Estimated Added Cost:	\$146
Maximum Price for 10 Year Payback:	\$640
Return on Investment:	34%
Upgrade Pays for Itself in:	2 years

Additional Benefits:

Fluorescent lamps last several times longer than ordinary incandescent bulbs, which saves you the time and expense of replacing bulbs when they burn out.

Upgrade Description:

Replace high-use incandescent lamps with compact fluorescent lamps. These units can save up to 75% of the energy used by an ordinary incandescent bulb.

Purchasing Tips:

- Compare the light output in Lumens of the bulb you are replacing to ensure you are using the appropriate CFL. Most CFLs list their light output and equivalent incandescent wattage on their package.
- CFLs are available in many shapes and sizes, which will allow replacing nearly any incandescent bulb.
- When buying new light fixtures, look for ENERGY STAR qualified models.
- CFLs are a good investment for lights that are used 2-3 hours per day on average or more.

More Information:

- [ENERGY STAR qualifying lighting product list](#)
- [General information about lighting from DOE](#)

[\[Return to upgrades list\]](#)

Air conditioner: Replace your air conditioner. Pick a new one with an ENERGY STAR label.

Economic Benefits:

Estimate Yearly Bill Savings:	\$14
Estimated Lifetime Energy Savings:	\$126
Estimated Added Cost:	\$63
Maximum Price for 10 Year Payback:	\$140
Return on Investment:	20%
Upgrade Pays for Itself in:	5 years

Additional Benefits:

ENERGY STAR® room air conditioners may operate more quietly, be more visually appealing, and provide better humidity and/or temperature control than minimum-efficiency units.

Upgrade Description:

When replacing your room A/C, choose an ENERGY STAR-labeled model. These units can save 15-30% of your cooling bill. Note: Our calculations bill savings, typical upgrade costs, and cost-effectiveness are for a model with the lowest efficiency that qualifies for the ENERGY STAR® label around 10.7 EER, depending on capacity. Higher efficiency models are available, which would provide additional bill savings.

Purchasing Tips:

- All new room air conditioners are labeled with an Energy Efficiency Ratio EER rating. Use the EER to compare different models. The higher the EER, the more efficient the unit.
- An air conditioner that is too large for your home wastes energy and provides poor humidity control due to excessive on-off cycling. Determine the size of air conditioner you need by using the Air Conditioning Contractors of America ACCA's [Manual J guide](#). Consumer Reports' free online [calculation worksheet](#), or a [simple calculation](#) provided by the ENERGY STAR program.

More Information:

- [ENERGY STAR room air conditioner product list](#)
- [Top-Rated Energy-Efficient Room A/Cs from ACEEE](#)
- [General Information from DOE](#)

[\[Return to upgrades list\]](#)



HOME ENERGY SAVER™

ROADMAP TO RESULTS

Ease into the process of making your home more efficient. If you're new to this, or you're on a very tight budget, start with the [lowest-hanging fruit](#) like double-checking your water heater's temperature setting.

The next easy steps are simple things that will fit into your shopping basket: maybe a few compact fluorescent lamps or a roll of weatherstripping.

When it's time to replace that old fridge, or other appliances, take time to shop smart. At a minimum, look for the ENERGY STAR rating. There are detailed lists of products that will take you even farther. Remember: you're not simply spending money, you're [investing for profit and comfort](#).

Redoing your kitchen? New roof? Finally adding that in-law unit? [Creating successful projects](#) can take some work. Take the time to find a home performance specialist to help you think thru all the options ahead of time, and then [find the right contractor](#) with the skills to do the job right.

Not only will these upgrades pay for themselves many times over, there are all kinds of [financial incentives](#) to help you trim the cost. And many of the "[non-energy benefits](#)" will be worth more than money can buy.

And, don't forget about saving [water](#) (which also saves energy).

Stumped? [Ask an expert](#).



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