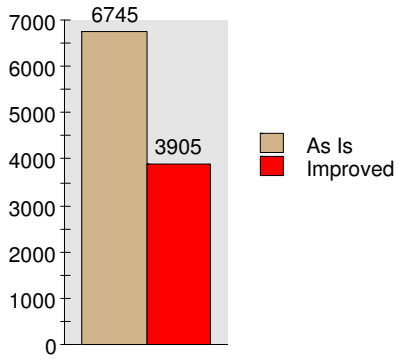
IMPROVEMENT ANALYSIS REPORT

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
Property	Any Street	Weather Site:	Lansing, MI
Address:	State of , MI	File Name:	Sample Bldg.blg

Energy Costs ($/yr)

End-Use	As Is	With All Improvements	Savings
Heating	4526	2170	2356
Cooling	342	310	32
Hot Water	572	348	224
Lights and Appliances	1079	851	228
Photovoltaics	0	0	0
Service Charge	228	228	0
TOTAL	6747	3907	2840

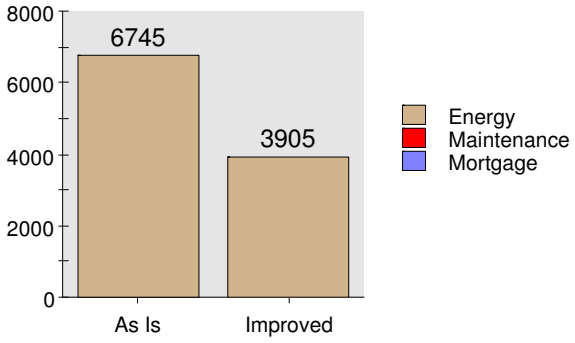
Total Costs ($/yr)



Information For Lenders and Appraisers

Installed Cost of Improvements ($)	28270
Cost Weighted Life of Measure (Years)	26
Mortgage Term (Years)	0
Discount/Mortgage Rate (%)	0.000
Present Value Factor	25.6
Expected Annual Energy Savings ($)	2840
Expected Annual Maintenance Costs ($)	0
Expected Annual Savings ($)	2840
Increased Annual Mortgage Costs ($)	0
Present Value of Savings ($)	72750
Expected Annual Cash Flow ($)	2840

Cost Comparison ($/yr)



Recommended Improvements

Component	Life	Cost	Yr Savings	SP	PV
1. Lights and Appliances: Light Fixture(s)	30	0	127	0.00	3806
Existing: 2921.5-3570.7 kWh/use					
Proposed: 2500.0 kBtuh					
Measure: No Cost					
2. Infiltration:	30	100	555	0.18	16541
Existing: 2348-3522/2348-3522 CFM50					
Proposed: 50.0/50.0 % Reduction					
Measure: DIY Air Sealing $100					
3. Equip 3: DHW:	30	500	224	2.24	6207
Existing: AO Smith 37 G/37K Pr					
Proposed: 50 gal. 0.94EF Elec					
Measure: New Water Heater $500					
4. Fnd Wall 1: FW1	30	4990	905	5.51	22161
Existing: Uninsulated					
Proposed: R-13 2x4 Finished					
Measure: Add Insulation					
5. Equip 1: HEAT:	20	3250	384	8.46	4436
Existing: 80.9 AFUE 89K Prop					
Proposed: Carrier 92 Propane					
Measure: Upgrade Furnace					
6. Fnd Wall 2: FW2	30	1152	90	12.77	1554
Existing: Uninsulated					
Proposed: R-13 2x4 Finished					
Measure: Add Insulation					
7. Window 3: East	25	6240	192	32.44	-1430
Existing: .38 U / .42 SHGC					
Proposed: Rivertown 3000 Case					
Measure: Replacement Windows					
8. Window 4: West	25	6659	205	32.52	-1540
Existing: .38 U / .42 SHGC					
Proposed: Rivertown 3000 Case					
Measure: Replacement Windows					
9. Window 1: North	25	1673	51	32.70	-394
Existing: .38 U / .42 SHGC					
Proposed: Rivertown 3000 Case					
Measure: Replacement Windows					
10. Window 5: West Walkout	25	1059	32	33.16	-261
Existing: .38 U / .42 SHGC					
Proposed: Rivertown 3000 Case					
Measure: Replacement Windows					

Component	Life	Cost	Yr Savings	SP	PV
11. Window 2: South	25	2647	75	35.35	-775
Existing: .38 U / .42 SHGC					
Proposed: Rivertown 3000 Case					
Measure: Replacement Windows					

Criteria

Ranking Criteria: Simple Payback	Maximum $ Limit: No Limit
Cutoff: 99	Measures: Interactive

ACTION REPORT

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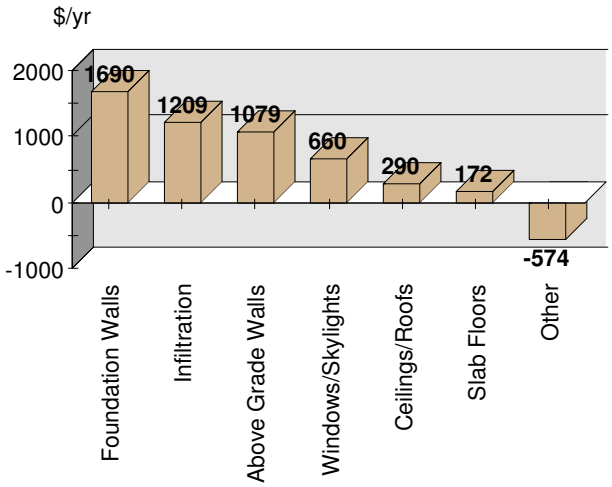
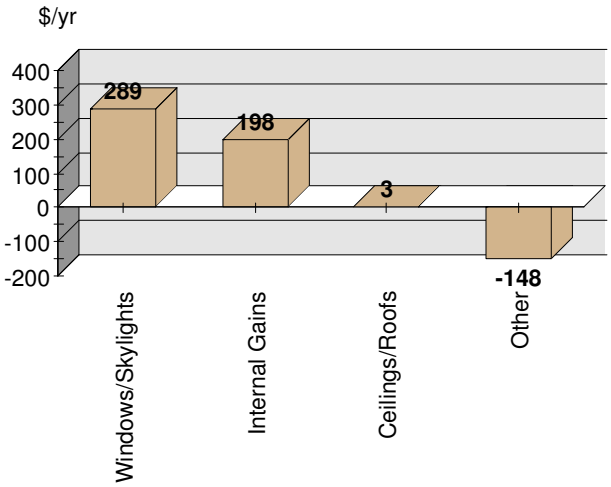
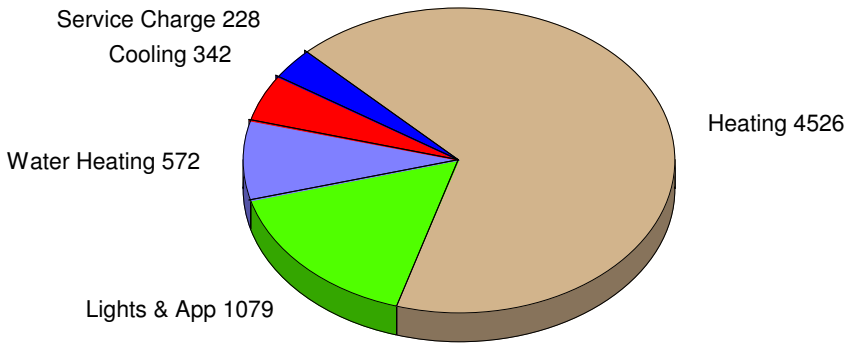
Heating Cost ($/yr)



Cooling Cost ($/yr)



Annual Energy Cost ($/yr)



Total 6747

AIR LEAKAGE REPORT

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
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Whole House Infiltration

	Blower door test	
	Heating	*Cooling*
Natural ACH:	0.29	0.22
ACH @ 50 Pascals:	4.57	4.57
CFM @ 25 Pascals:	1870	1870
CFM @ 50 Pascals:	2935	2935
Eff. Leakage Area:	161.1	161.1
Specific Leakage Area:	0.00039	0.00039
ELA/100 sf shell:	1.89	1.89

Total Duct Leakage

CFM @ 25 Pascals:	80
CFM25 / CFMfan:	0.0415
CFM25 / CFA:	0.0277
CFM per Std 152:	N/A
CFM @ 50 Pascals:	126
Eff. Leakage Area:	6.89
Thermal Efficiency:	N/A

Ventilation

Mechanical:	None
Sensible Recovery Eff. (%):	0.0
Total Recovery Eff. (%):	0.0
Rate (cfm):	0
Hours/Day:	24.0
Fan Watts:	0.0
Cooling Ventilation:	No Ventilation

ASHRAE 62.2 - 2003 Ventilation Requirements

For this home to comply with ASHRAE Standard 62.2 - 2004 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings, a minimum of 59 cfm of mechanical ventilation must be provided continuously, 24 hours per day. Alternatively, an intermittently operating mechanical ventilation system may be used if the ventilation rate is adjusted accordingly. For example, a 118 cfm mechanical ventilation system would need to operate 12 hours per day, as long as the system operates to provide required average ventilaton once each hour.

COMPONENT CONSUMPTION SUMMARY

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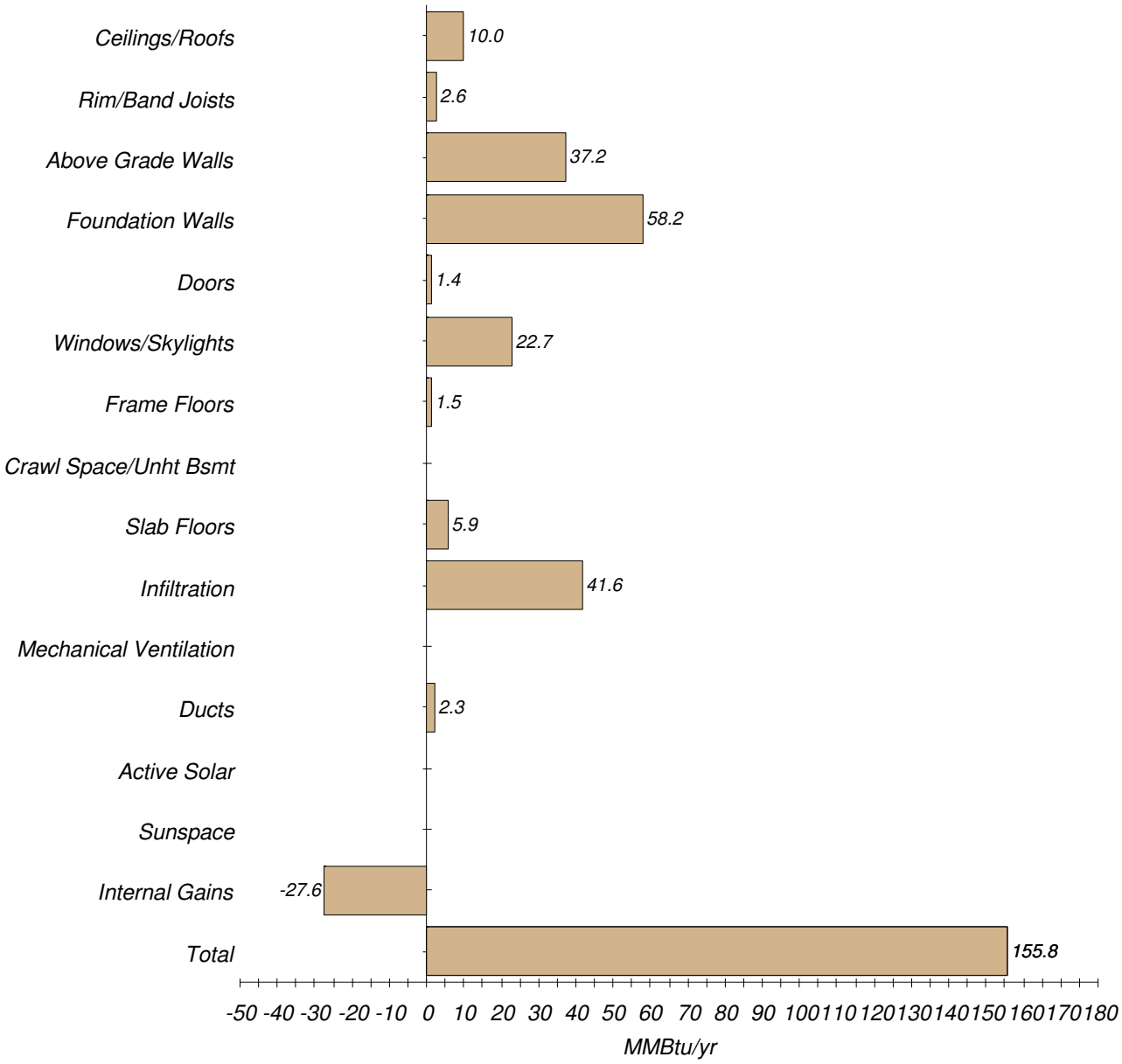
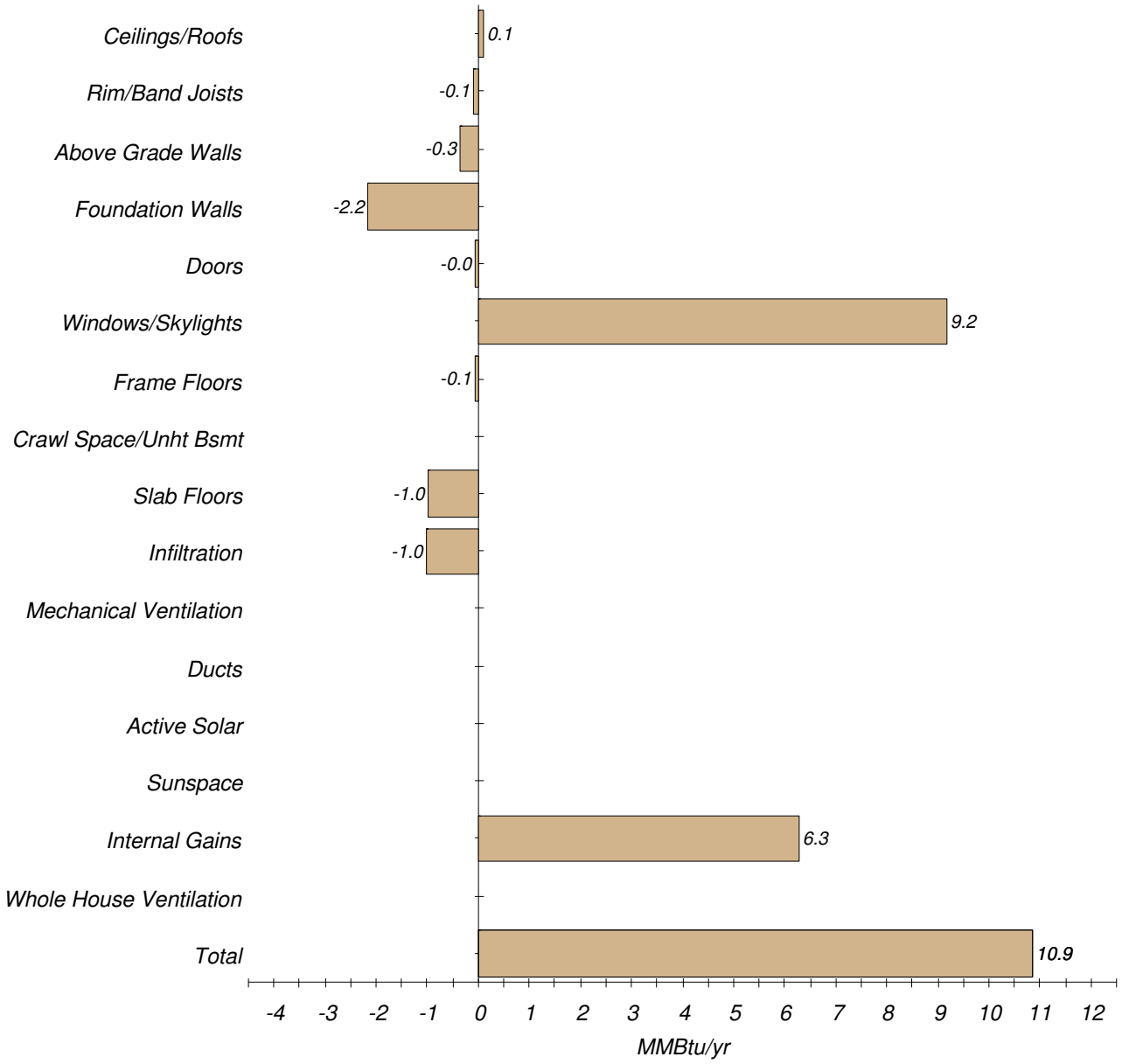
Heating Season



Cooling Season



FUEL SUMMARY

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
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Address:	State of , MI	File Name:	Sample Bldg.blg

Homeowner

Annual Energy Cost ($/yr)

Propane	$	5151
Electric	$	1347

Annual End-Use Cost ($/yr)

Heating	$	4526
Cooling	$	342
Water Heating	$	572
Lights & Appliances	$	1079
Photovoltaics	$	0
Service Charges	$	228
Total	$	6747

Annual End-Use Consumption

Heating (Gallons)	1669
Heating (kWh)	1007
Cooling (kWh)	3180
Water Heating (Gallons)	214
Lights & Appliances (Gallons)	49
Lights & Appliances (kWh)	10444

Utility Rates:

Electricity:	DTE Energy
Propane:	Propane 2.67

ENERGY COST AND FEATURE REPORT

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
Property	Any Street	Weather Site:	Lansing, MI
Address:	State of , MI	File Name:	Sample Bldg.blg

ANNUAL ENERGY COSTS

		Homeowner
Heating	$	4526
Cooling	$	342
Water Heating	$	572
Lights & Appliances	$	1079
Photovoltaics	$	0
Service Charges	$	228
Total	$	6747
Average Monthly	$	562

ENERGY FEATURES

Ceiling w/Attic:	R-48 Blown, Attic U=0.020
Vaulted Ceiling:	None
Above Grade Walls:	R-15 U=0.079
Foundation Walls (Cond):	Uninsulated
Found. Walls (Uncond):	None
Doors:	Steel-urth w/brk U=0.187
Windows:	.38 U / .42 SHGC U=0.380
Frame Floors:	R-19 U=0.049
Slab Floors:	Uninsulated U=0.285
Infiltration:	Htg: 2935 Clg: 2935 CFM50
Infilt. Measure:	Blower door test
Mechanical Ventilation:	None
Interior Mass:	None
Mech Equip List:	Heating: Fuel-fired air distribution, 89.0 kBtuh, 80.9 AFUE.
	Cooling: Air conditioner, 48.0 kBtuh, 10.0 SEER.
	Water Heating: Conventional, Prop, 0.62 EF.
Programmable Thermostat:	Heat=Yes; Cool=Yes
Ducts:	Uninsulated Conditioned basement
Duct Leakage:	80.00 CFM @ 25 Pascals
Lights/Appliances:	Detailed audit
Active Solar:	None
Photovoltaics:	None
Sunspace:	No

Notes: Where feature level varies in home, the dominant value is shown.

EQUIPMENT SIZING SUMMARY

Building Name:	Homeowner	Date:	September 10, 2008
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Property	Any Street	Weather Site:	Lansing, MI
Address:	State of , MI	File Name:	Sample Bldg.blg

	Homeowner
HEATING	
Calculated Peak Load (kBtu/hr)	68.5
Oversize Factor (%)	0.0
HEATING EQUIPMENT CAPACITY (kBtu/hr)	
Required	0.0
Specified	89.0
COOLING	
Calculated Peak Load (kBtu/hr)	30.7
Sensible	26.2
Latent	4.4
Oversize Factor (%)	0.0
COOLING EQUIPMENT CAPACITY (kBtu/hr)	
Required Total	0.0
Specified Total	48.0
Required Sensible	0.00
Specified Sensible	33.60
Required Latent	0.00
Specified Latent	14.40

Notes:

LIGHTS AND APPLIANCES SUMMARY

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
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Address:	State of , MI	File Name:	Sample Bldg.blg

Homeowner

Electric Consumption (kWh/yr)

Lighting	3795.7
Refrigerator	745.0
Freezer	0.0
Dishwasher	145.0
Oven/Range	547.5
Clothes Washer	90.0
Clothes Dryer	105.0
Ceiling Fan	0.0
Other	5019.1
Total	10447.4

Fossil Fuel Consumption (MMBtu/yr)

Dryer	4.5
Oven/Range	0.0
Total	4.5

Annual Energy Cost ($/yr)

Lighting	$	344
Refrigerator	$	68
Freezer	$	0
Dishwasher	$	13
Oven/Range	$	50
Clothes Washer	$	8
Clothes Dryer	$	141
Ceiling Fan	$	0
Other	$	455
Total	$	1079

PERFORMANCE SUMMARY

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
Property	Any Street	Weather Site:	Lansing, MI
Address:	State of , MI	File Name:	Sample Bldg.blg

Homeowner

Annual Load (MMBtu/yr)

Heating	123.3
Cooling	30.0
Water Heating	14.5

Annual Consumption (MMBtu/yr)

Heating	155.8
Cooling	10.9
Water Heating	19.6
Lights & Appliances	40.2
Photovoltaics	0.0
Total	226.4

Annual Energy Cost ($/yr)

Heating	$	4526
Cooling	$	342
Water Heating	$	572
Lights & Appliances	$	1079
Photovoltaics	$	0
Service Charges	$	228
Total	$	6747

Design Loads (kBtu/hr)

Space Heating	68.5
Space Cooling	30.7

Utility Rates:

Electricity:	DTE Energy
Propane:	Propane 2.67

EMISSIONS REPORT

Building Name:	Homeowner	Date:	September 10, 2008
Owner's Name:	Homeowner	Builder's Name:	
Property	Any Street	Weather Site:	Lansing, MI
Address:	State of , MI	File Name:	Sample Bldg.blg

Total Emissions (lbs/year)

	Homeowner
Type of Emissions	
Carbon Dioxide (CO2)	48491.4
Sulfur Dioxide (SO2)	146.2
Nitrogen Oxides (NOx)	110.8

Emissions By End-Use (lbs/year)

	Homeowner
Carbon Dioxide (CO2)	
Heating	20168.3
Cooling	5937.8
Water Heating	2346.6
Lights & Appliances	20038.7
Photovoltaics	0.0
Sulfur Dioxide (SO2)	
Heating	10.1
Cooling	31.8
Water Heating	0.0
Lights & Appliances	104.3
Photovoltaics	0.0
Nitrogen Oxide (NOx)	
Heating	28.7
Cooling	18.3
Water Heating	2.9
Lights & Appliances	60.9
Photovoltaics	0.0

SUMMARY OF SELECTED REPORTS

File Name: Sample Bldg.blg Date: September 10, 2008

ENERGY ANALYSIS

Action Report
Ranks the building elements with the largest energy consumption on a component basis.

Air Leakage Report
Displays infiltration in all available units (regardless of the user input). Displays duct leakage in all available units if other than the qualitative default is selected. Also displays the building ventilation information.

Component Consumption Summary
Presents the heating and cooling energy consumption of the building on a component basis.

Fuel Summary
Summarizes the end-use energy consumption by fuel type.

Energy Cost And Feature Report
Summarizes the annual heating, cooling, water heating and lights and appliance costs and the major energy design features of the home.

Equipment Sizing Summary
Provides information about sizing heating and cooling equipment to meet the peak loads and the minimum Sensible Heat Fraction (SHF).

Lights And Appliances Summary
Summarizes the annual lights and appliance costs of the home.

Performance Summary
Summarizes the annual loads, energy consumption, and energy costs for heating, cooling, water heating, and lights and appliances.

Emissions Report
Summarizes the absolute values for Carbon Dioxide (CO2), Sulfur Dioxide (SO2), and Nitrous Oxides (NOX) emissions produced by the currently loaded building. Use the 2-building report option to display a meaningful comparison between two buildings.