

**RESNET HVAC Test Suite Results:****Software Name:** EnergyGauge USA 6.0

User input data fields indicated by pale yellow

Test result fields indicated by pale green

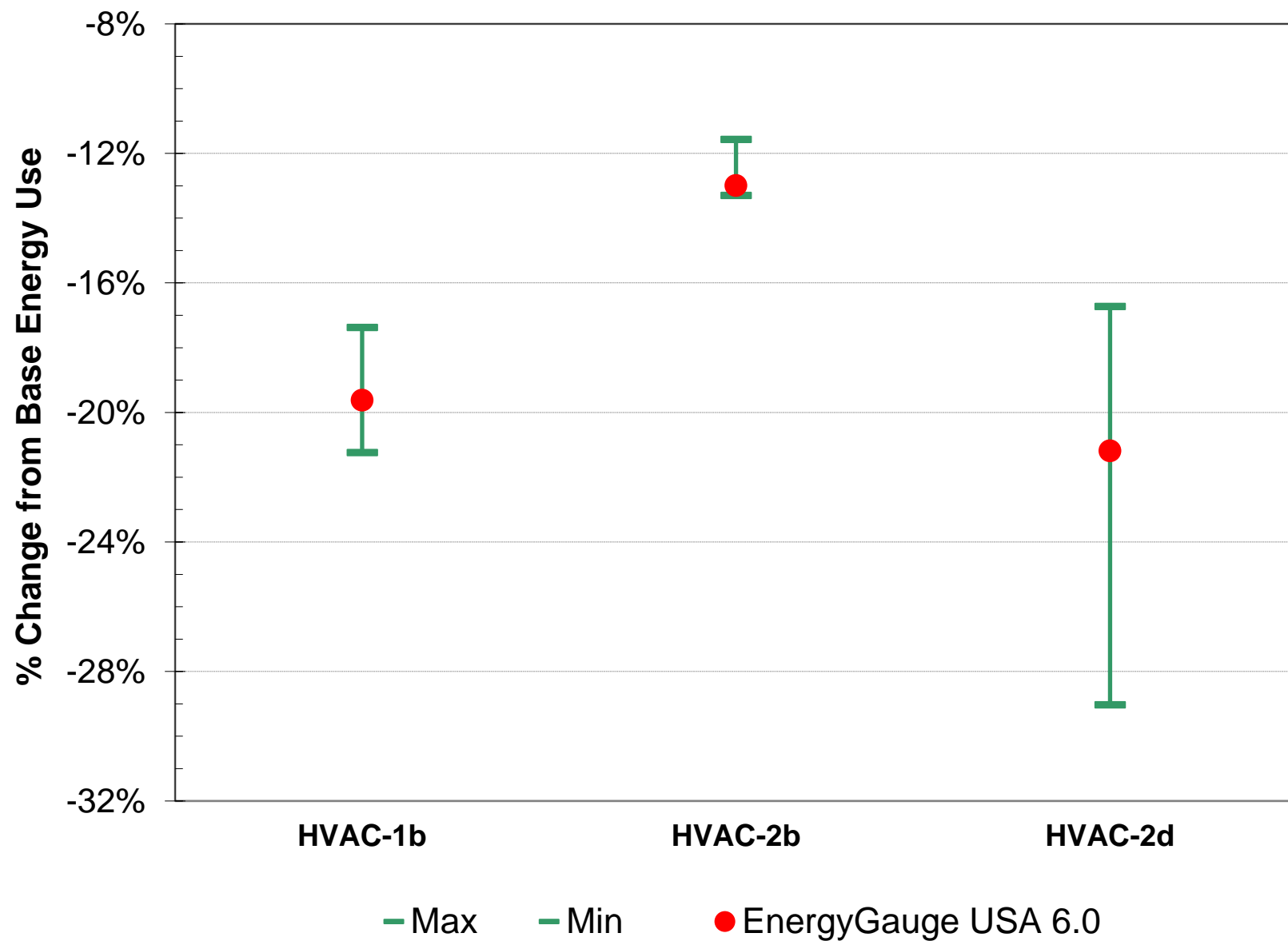
**Results**

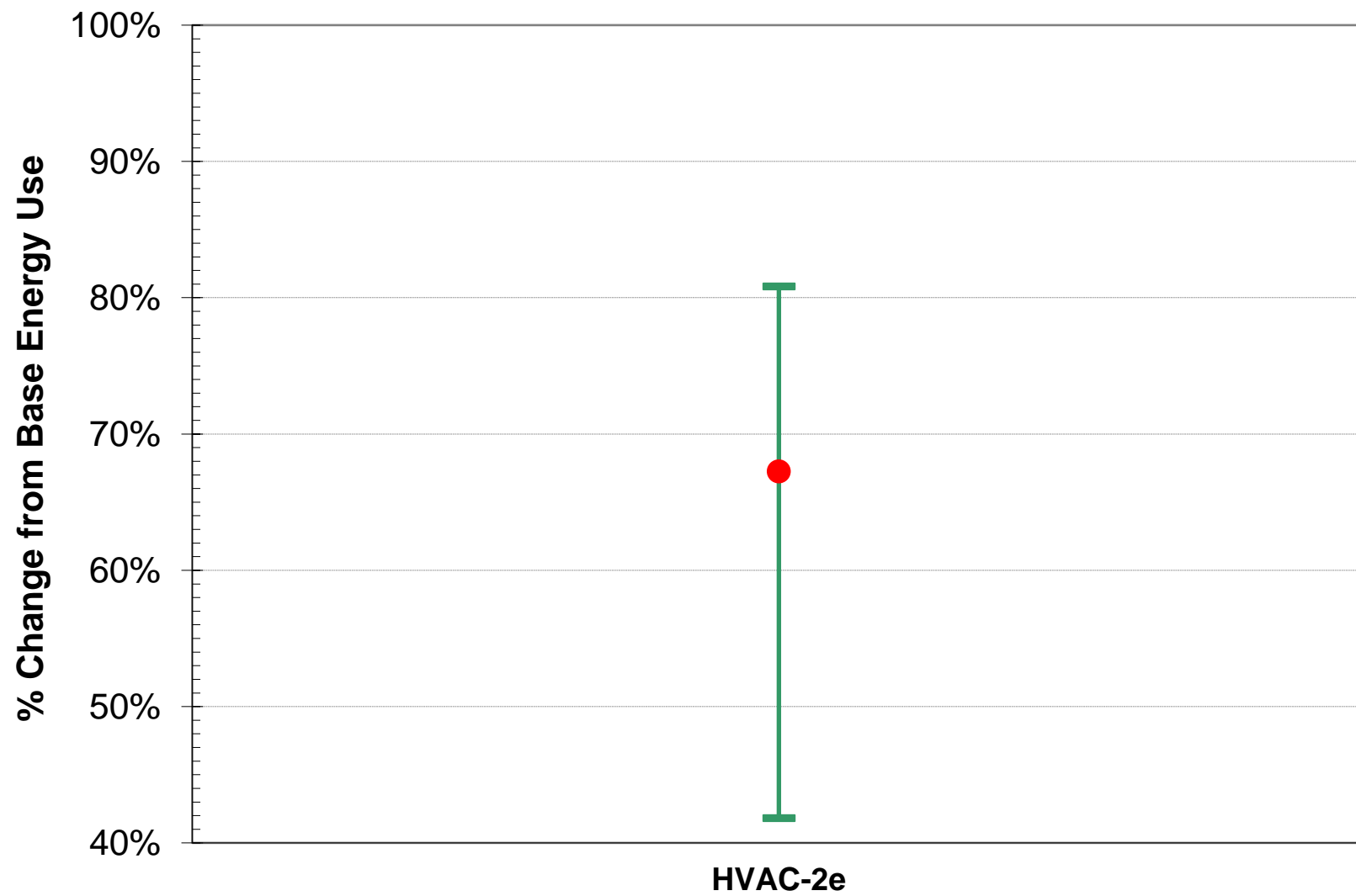
## Cooling tests:

Case	Cool	Cool Fan	Cool Tot	% change	Criteria		
					min	max	
HVAC-1a	5522	975	6497	---			
HVAC-1b	4247	975	5222	-19.62%	-21.24%	-17.38%	pass

## Heating tests:

Case	Heat	Heat Fan	Heat Tot	% change	Criteria		
					min	max	
HVAC-2a	845.1	659	86.76	---			
HVAC-2b	732.4	659	75.49	-12.99%	-13.30%	-11.57%	pass
Case	Heat	Heat Fan	Heat Tot	% change			
HVAC-2c	9996	1407	11403	---			
HVAC-2d	7911	1076	8987	-21.19%	-29.03%	-16.73%	pass
HVAC-2e	18083	989	19072	67.25%	41.81%	80.81%	pass





— Max — Min ● EnergyGauge USA 6.0

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Las Vegas, NV

Project Title:  
HVAC\_TestCase-1a  
Building Type: User  
RESNET HVAC test suite

TMY\_City:NV\_LASVEGAS  
Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling Electric	5522 kWh	\$656
Cooling Fan	975 kWh	\$116
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>6497 kWh</b>	<b>\$772</b>
Heating		
Heating Fan/Pump	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>		<b>\$0</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	11628 kWh	\$1381
Total (Therms)	0.0 Therms	\$0
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$1381

### **Emissions** (Calculated as Total - PV Produced)

SO2 = 4.99 Lbs NOX = 9.58 Lbs CO2 = 6.17 Tons

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Las Vegas, NV

Project Title:  
HVAC\_TestCase-1b  
Building Type: User  
RESNET HVAC test suite

TMY\_City:NV\_LASVEGAS  
Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling Electric	4247 kWh	\$505
Cooling Fan	975 kWh	\$116
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>5222 kWh</b>	<b>\$620</b>
Heating		
Heating Fan/Pump	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>		<b>\$0</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	10354 kWh	\$1230
Total (Therms)	0.0 Therms	\$0
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$1230

**Emissions** (Calculated as Total - PV Produced)  
SO2 = 4.44 Lbs NOX = 8.53 Lbs CO2 = 5.49 Tons

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Colorado Springs, CO

Project Title: TMY\_City:CO\_COLORADOSPRINGS  
HVAC\_TestCase-2a  
Building Type: User  
HERS BESTEST basecase home

Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling		
Cooling Fan	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>0 kWh</b>	<b>\$0</b>
Heating		
Therms	845.1 Therms	\$1437
Heating Fan/Pump	659 kWh	\$78
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>		<b>\$1515</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	5790 kWh	\$688
Total (Therms)	845.1 Therms	\$1437
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$2125

**Emissions** (Calculated as Total - PV Produced)  
SO2 = 11.02 Lbs    NOX = 7874.09 Lbs    CO2 = 10.00 Tons

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Colorado Springs, CO

Project Title: TMY\_City:CO\_COLORADOSPRINGS  
HVAC\_TestCase-2b  
Building Type: User  
HERS BESTEST basecase home

Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling		
Cooling Fan	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>0 kWh</b>	<b>\$0</b>
Heating		
Therms	732.4 Therms	\$1245
Heating Fan/Pump	659 kWh	\$78
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>		<b>\$1323</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	5790 kWh	\$688
Total (Therms)	732.4 Therms	\$1245
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$1933

**Emissions** (Calculated as Total - PV Produced)  
SO2 = 11.02 Lbs NOX = 6825.98 Lbs CO2 = 9.33 Tons

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Colorado Springs, CO

Project Title:  
HVAC\_TestCase-2c  
Building Type: User  
HERS BESTEST basecase home

TMY\_City:CO\_COLORADOSPRINGS  
Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling		
Cooling Fan	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>0 kWh</b>	<b>\$0</b>
Heating Electric	9996 kWh	\$1188
Heating Fan/Pump	1407 kWh	\$167
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>	<b>11403 kWh</b>	<b>\$1355</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	16534 kWh	\$1964
Total (Therms)	0.0 Therms	\$0
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$1964

### **Emissions** (Calculated as Total - PV Produced)

SO2 = 31.48 Lbs    NOX = 41.86 Lbs    CO2 = 14.36 Tons



# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Colorado Springs, CO

Project Title:  
HVAC\_TestCase-2d  
Building Type: User  
HERS BESTEST basecase home

TMY\_City:CO\_COLORADOSPRINGS  
Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling		
Cooling Fan	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>0 kWh</b>	<b>\$0</b>
Heating Electric	7911 kWh	\$940
Heating Fan/Pump	1076 kWh	\$128
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>	<b>8987 kWh</b>	<b>\$1068</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	14118 kWh	\$1677
Total (Therms)	0.0 Therms	\$0
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$1677

**Emissions** (Calculated as Total - PV Produced)  
SO2 = 26.88 Lbs NOX = 35.75 Lbs CO2 = 12.26 Tons

# Annual Energy Summary

## Wholehouse Summary

FSEC  
111 Anywhere Lane  
Colorado Springs, CO

Project Title:  
HVAC\_TestCase-2e  
Building Type: User  
HERS BESTEST basecase home

TMY\_City:CO\_COLORADOSPRINGS  
Elec Util: EnergyGauge Default  
Gas Util: Florida 2012  
2/16/2018

End-Use	Energy Consumption	Annual Cost
Cooling		
Cooling Fan	0 kWh	\$0
Mechanical Vent Fan	0 kWh	\$0
<b>Total Cooling</b>	<b>0 kWh</b>	<b>\$0</b>
Heating Electric	18083 kWh	\$2148
Heating Fan/Pump	989 kWh	\$117
Mechanical Vent Fan	0 kWh	\$0
<b>Total Heating</b>	<b>19072 kWh</b>	<b>\$2266</b>
Hot Water	0 kWh	\$0
Hot Water Pump	0 kWh	\$0
<b>Total Hot Water</b>	<b>0 kWh</b>	<b>\$0</b>
Ceiling Fans	0 kWh	\$0
Clothes Washer	37 kWh	\$4
Dehumidifier	0 kWh	\$0
Dishwasher	78 kWh	\$9
Dryer Electric	372 kWh	\$44
Lighting	1863 kWh	\$221
Miscellaneous	1401 kWh	\$166
Pool Pump	0 kWh	\$0
Range Electric	331 kWh	\$39
Refrigerator	637 kWh	\$76
Television	413 kWh	\$49
Total (kWh)	24204 kWh	\$2875
Total (Therms)	0.0 Therms	\$0
Total (Oil Gallons)	0 Gallons	\$0
Total (Propane Gallons)	0 Gallons	\$0
PV Produced (kWh)	0 kWh	\$0
Assumes net metering		
Total Cost		\$2875

**Emissions** (Calculated as Total - PV Produced)  
SO2 = 46.08 Lbs NOX = 61.28 Lbs CO2 = 21.02 Tons