

**GEM Link™ Wireless Energy Management**

**PTAC Reduction Calculation in kWh - Baseline vs. Installed Usage**

**Property:** Country Inn & Suites

**Location:** Knoxville TN

**PTAC Brand and Model Number:** GE Zoneline AZ28E12DABM3 (12,000 BTU)

**PTAC Quantity:** 89

**Occupancy Rate:** 65%

<b>Baseline</b>	
<b>COOLING per PTAC</b>	
kW Cooling	1.02
kW Fan	0.25
kW to Cool per PTAC	1.27
kW to Cool per PTAC	1.27
hours per day usage	9.6
kWh per day	12.19
days in the month	30
kWh per month	365.76
# of months cooling	5
kWh per year to cool per PTAC	1,829
# of PTAC's Operating per day (Occupancy Rate)	58
<b>kWh per year to cool</b>	<b>105,796</b>
<b>HEATING per PTAC</b>	
kW Heating	3.45
kW Fan	0.25
kW to Heat per PTAC	3.70
kW to Heat per PTAC	3.70
hours per day usage	9.6
kWh per day	35.52
days in the month	30
kWh per month	1,066
# of months heating	3
kWh per year to heat per PTAC	3,197
# of PTAC's Operating per day (Occupancy Rate)	58
<b>kWh per year to heat</b>	<b>184,935</b>
kWh per year per to cool	105,796
kWh per year per to heat	184,935
<b>Baseline kWh to heat and cool for one year</b>	<b>290,731</b>

**Hours GEM Link™ Wireless will reduce usage per day** **4**

<b>Installed Usage</b>	
<b>COOLING per PTAC with GEM Link™ Wireless</b>	
kW to Cool per PTAC	1.27
hours per day usage (9.6 hrs - 4 hrs = 5.6 hrs)	5.6
kWh per day	7.11
days in the month	30
kWh per month	213.36
# of months cooling	5
kWh per year to cool per PTAC	1,067
# of PTAC's Operating per day (Occupancy Rate)	58
<b>kWh per year per to cool</b>	<b>61,714</b>
<b>HEATING per PTAC with GEM Link™ Wireless</b>	
kW to Heat per PTAC	3.70
hours per day usage (9.6 hrs - 4 hrs = 5.6 hrs)	5.6
kWh per day	20.72
days in the month	30
kWh per month	622
# of months heating	3
kWh per year to heat per PTAC	1,865
# of PTAC's Operating per day (Occupancy Rate)	58
<b>kWh per year to heat</b>	<b>107,879</b>
kWh per year to cool	61,714
kWh per year to heat	107,879
<b>Installed Usage kWh to heat and cool for one year</b>	<b>169,593</b>

<b>SUMMARY</b>	
Baseline kWh to heat and cool for one year	290,731
Installed Usage kWh to heat and cool for one year	169,593
<b>Total Reduced kWh for one year</b>	<b>121,138</b>

**Projected Annual Energy Savings (121,138kWh x \$0.10 = \$12,114) **\$12,114****