

ANCHORAGE, AK

SUSTAINABILITY IN ACTION

4 Vending
Machines

\$782 Potential
Annual
Savings

5.5 tons Potential
Annual CO2
Reduction



Energy Savings for Vending Machines

Typical vending machines consume power 24 hours a day, seven days a week, as lights are constantly on and compressor cycles for refrigeration run frequently. VendingMisers are designed to reduce the energy consumption of refrigerated vending machines by reducing the amount of time that the lights are on and the compressor runs. Using an occupancy sensor, VendingMisers turn vending machines off when people are not near. When the occupancy sensor detects movement, the vending machine powers back up for 15 minutes, lights come on and a compressor cycle runs. VendingMisers also measure ambient air temperature. If the vending machine has been turned off for too long, the VendingMiser returns power to the vending machine for a short period of time to run a full compressor cycle. The company that designed VendingMisers has designed similar products for snack machines, glass-front coolers and normal electronic devices that could benefit from using an occupancy sensor. The manufacturer finds national averages of energy savings to be approximately 46%.

**HAWTHORN
SUITES
ANCHORAGE**

**ANCHORAGE,
ALASKA**

2008

GREEN STAR®

The logo for Green Star, featuring the words 'GREEN STAR' in a bold, serif font. The 'S' in 'STAR' is replaced by a green star. Below the star are four diagonal lines.

MAINTAINING SERVICE, SAVING MONEY

Evaluating VendingMisers at Hawthorn Suites

Hawthorn Suites staff and Green Star worked together to evaluate the energy usage of vending machines and to install two test VendingMisers at the Hawthorn Suites. The crew tracked the energy use of the vending machines with a watt meter for one week, installed the VendingMisers and tracked the energy use of the vending machines for another week. The Hawthorn Suites experienced significant savings on its 3rd floor vending machine, which experiences little foot traffic, and minimal savings on its lobby machine, which experiences frequent traffic. The Hawthorn Suites experienced an average energy savings of 51% overall.

Saving Energy and Money at Hawthorn Suites

At the Hawthorn Suites, the vending machine on the third floor is in a separate room, shared with ice and snack machines. This means the occupancy sensor is only triggered when people enter the room to purchase a beverage, a snack or to retrieve ice. The manufacturer's expected savings reflect machines that are in the open, with day-time passer-by traffic triggering the occupancy sensor. Therefore, the hotel is experiencing much higher energy savings on this machine. On the first floor, the vending machine occupancy sensor catches almost all walk-by traffic. Because the lobby is open 24/7, this machine experienced much lower savings. However, since the test period, staff repositioned the occupancy sensor so that passers-by must be much closer to trigger the sensor. The calculations in the table below depict the savings on both the 1st and 3rd floors, based on an electricity rate of \$0.0757.

VendingMisers Installed	kWh Saved Annually	\$\$ Saved Annually	CO2 Saved Annually
1st floor	301.2	\$22.82	424.69 lbs
2nd Floor	2,506.8	\$189.92	3,534.59 lbs

Payback Period

Using the 3rd floor estimates and extrapolating to the other three similarly placed vending machines, plus the lobby (1st floor) machine, the Hawthorn Suites would save approximately \$782.50 per year with an upfront cost of about \$895. The payback period would be approximately 1.2 years - a strong investment.



Green Star is an Anchorage-based non-profit organization dedicated to assisting, certifying and recognizing businesses committed to resource efficiency and environmental leadership.

To learn more about Green Star, visit www.greenstarinc.org.



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