

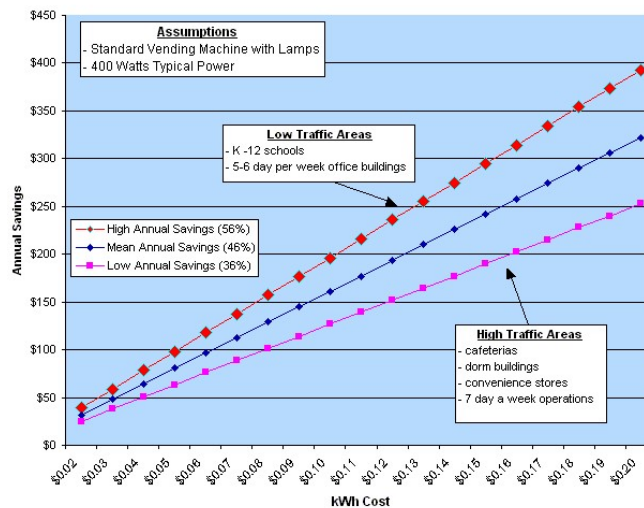
What is a VendingMi\$er™?

- VendingMi\$er™ is an occupancy-based energy control device for non-perishable beverage machines.
- Utilizing a passive infrared (PIR) sensor, the device powers down a vending machine when the area surrounding it is vacant.

What is a VendingMi\$er™?

- A cold beverage vending machine consumes an average of 400 Watts of electrical energy, costing approximately \$300 per year to operate at \$0.08 per kWh.
- Under the VendingMi\$er™ programming, powering down a vending machine when not in use provides a savings potential of \$150 or more per year.

What is a Vending Mi\$er?



BPA's Turnkey Initiative

- BPA's Goal was to acquire energy through the installation of an estimated 30,000 VendingMiSer™ control units within BPA's load-following utility service territories. (Utilities which BPA provides 100% service.)
- Initial estimates indicated more than 60,000 potential customer locations for this product within the BPA load-following service area. (Utilities which purchase a portion of their service from BPA.)

BPA's Turnkey Initiative

- The program was to be completed by October 2001.
- Installation was to be performed by the local and regional bottling companies under the direction of the manufacturer, Bayview Technology Group, Inc.
- 97 full service utilities signed up to participate in the initiative.

BPA's Turnkey Initiative

- Under the Conservation Augmentation program 11,070 units were installed, saving 1.33 average MWs.
- Under the Conservation & Renewables Discount, 762 installations were credited, saving 0.11 average MWs.

BPA's Turnkey Initiative

- 3,506 units were installed for an average 0.49 MWs in three non-load-following utilities as a direct result of the contract.
- 8,618 units were installed for an average 1.2 MWs in the NW investor-owned utilities.
- These units were paid for under the utilities' own programs.

BPA's Turnkey Initiative

Numerical Results:

- Total Program Costs: \$1.6 million
- ConAug Savings: 1.50 MWs/year
- C&RD Savings: 0.11 MWs/year

- Measure Life of VendingMiSer™ : 10 years

Problems

- The number of units available was probably over estimated.
- Even though the national corporate offices of Coca Cola® and Pepsi® approved the technology, several local bottlers were not supportive.
- Bottlers did not perform the installations as expected.
- The contractor sought other methods of locating and contacting potential customers such as telemarketing and cold calling.

Problems

- The anticipated ratio of 80 percent load-following and 20 percent non load-following was not met.
- During the first year, only 9,600 units were installed with the majority of those installations done in non-load-following and IOU areas.
- Only 1,600 were in load-following areas.

Problems

Major Concerns/Complaints:

- Compressor Life
- Lamp Life
- Product Temperature
- Advertising Exposure

Problems

- **Compressor life:**

The compressor life can actually be extended due to reduced operational time.

VendingMi\$er™ only turns the machines off during a down-cycle, so no additional startup load is placed on the system.

Problems

- **Lamp life:**

Lamp life may be extended due to the reduced on time.

There are incidences of lamp failure in machines where routine lamp replacement had not been conducted.

For lamps that are beyond their normal measure life, additional cycling can cause failure.

Is this premature failure?

Problems

- **Product Temperature:**

VendingMi\$er™ monitors the room's temperature and automatically re-powers the vending machine at one- to three-hour intervals, independent of occupancy, to ensure the product stays cold.

Problems

- **Advertising Exposure:**

Several bottlers would not allow outside installations. They wanted to have the lights showing their product at all times.

Our position was that on-cycling of a machine would actually draw attention to it under most situations. The result was, most outside units were left out of the program.

Lessons Learned

- The VendingMi\$er™ technology is sound.
- Many local bottlers are not supportive.
- Most complaints were unfounded and the result of customer or bottler misunderstanding of the technology.
- Telemarketing was not very effective.
- Penetration rate ranged from 0.0 percent to over 70 percent, depending on the cooperation of the local utility and bottlers.
- Bottlers had more of an influence than anticipated.

Lessons Learned

- A third third party turnkey program intended to be contractor-run still requires a substantial time commitment to manage.
- BPA customer policy and regional utility dynamics was a factor.
- Minimal interaction with the contractor was anticipated. This was not the case.

Conclusion

- The first year was full of turmoil and change.
- Once under new management, Bayview worked very hard to provide the services under contract with close BPA oversight and guidance.
- The program was successful in that over 23,000 units were installed region-wide with 11,832 in BPA service territory locations.