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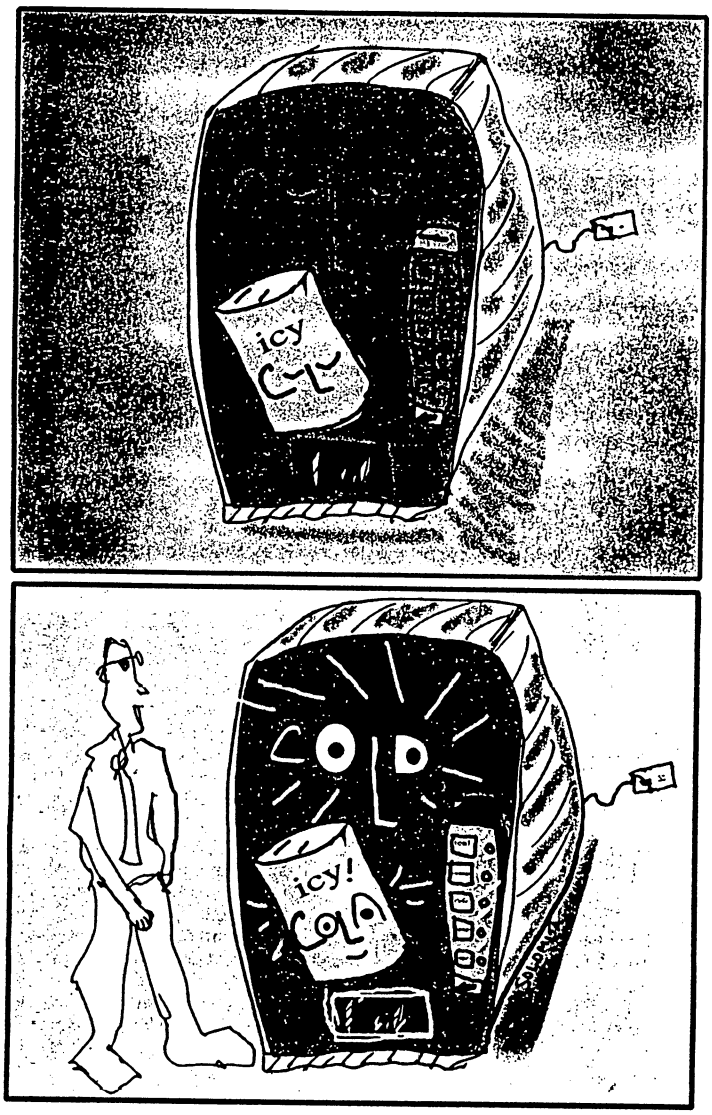

Illustration by Alec Solomita

Smart machines save energy

Vending machine innovations slake thirst for savings

By Alvin Powell
Gazette Staff

The vending machines in Holyoke Center won't pour your soda for you, but they know you're there.

The machines aren't equipped with a new kind of artificial intelligence. Instead, they're coupled with a new energy-saving device that tells the vending machines to turn on and off depending on whether people are in the room.

The device, called VendingMiser, was initially installed by Holyoke Center building manager Sharon Lembo and assistant building manager Camille Staco in a single sixth-floor vending machine during a trial run that began last May. By August, the device proved successful enough that the program was extended to other vending machines in Holyoke Center, according to Harvard Planning and Real Estate's (HPRE) Sustainable Buildings Program Coordinator Elizabeth Cordero.

Vending machines use about 3,468 kilowatt-hours (kWh) of electricity annually, compared with between 450 and 800 kWh for a regular household refrigerator. That means it costs roughly $381 to operate one machine for a year. Generating that electricity results in 2.26 tons of carbon dioxide being released into the atmosphere.

Cordero

With the VendingMiser, electricity consumption is cut in half, to 1,716 kWh, with resulting cuts in the electric consumption and carbon dioxide generation. The vending machine program is part of an overall effort by HPRE to save energy in its buildings. Larry McNeil, a facilities engineer with HPRE, said energy efficiency programs last year in just four buildings resulted in $200,000 in energy savings, plus an additional $200,000 energy company rebate for efficiency programs. Most of those savings came from lighting efficiency programs.

McNeil said he plans to talk about this and other energy-saving programs with other facilities personnel across the University. With more participation, he said, the savings could really add up.

"HPRE has done a lot of work on energy efficiency. We've gotten a lot of savings," McNeil said.

The device works by essentially coupling an on/off switch with a motion sensor. The sensor is put on the wall above the vending machine and, when it hasn't detected any motion for 15 minutes, shuts off the vending machine's compressor, lights, and other electronics. This saves energy by shutting the machine off at night and during weekends, when the buildings are largely unoccupied.

"[The program] takes a machine we all take for granted — a vending machine, which is a huge energy hog — and allows us to have our convenient cold drinks with much less harm to the environment," Cordero said.

CCM-101

City of Cambridge

O-2.

IN CITY COUNCIL

January 13, 2003

VICE MAYOR DAVIS
COUNCILLOR DECKER
COUNCILLOR GALLUCCIO
COUNCILLOR MAHER
COUNCILLOR MURPHY
COUNCILLOR REEVES
COUNCILLOR SIMMONS
MAYOR SULLIVAN
COUNCILLOR TOOMEY

WHEREAS: The City Council recently passed a Climate Protection Plan with a goal of reducing greenhouse gas (GHG) emissions by twenty percent below recorded 1990 levels; and

WHEREAS: The success of the Climate Protection Plan is dependent upon the efforts of the City, along with its university neighbors, businesses, and residents; and

WHEREAS: Energy conservation is one of the actions that the Plan takes to meet the goal of reducing GHG emissions; and

WHEREAS: Harvard University is realizing significant energy savings by equipping their vending machines with a new energy-saving device that activates the machine through motion detection (see attached article); now therefore be it

ORDERED: That the City Manager be and hereby is requested to report back to the City Council on equipping all vending machines in City buildings and at City facilities with this energy-saving device, looking toward meeting the goals of the Climate Protection Plan.

In City Council January 13, 2003.
Adopted by the affirmative vote of nine members.
Attest:- D. Margaret Drury, City Clerk.

A true copy; D. Margaret Drury

ATTEST:-

D. Margaret Drury
City Clerk

CM-14

ORDER #2

Requesting the City Manager to report back to the City Council on equipping all vending machines in City buildings and at City facilities with this energy saving device, looking toward meeting the goals of the Climate Protection Plan.
Vice Mayor Davis

In City Council January 13, 2003

ORDER ADOPTED.