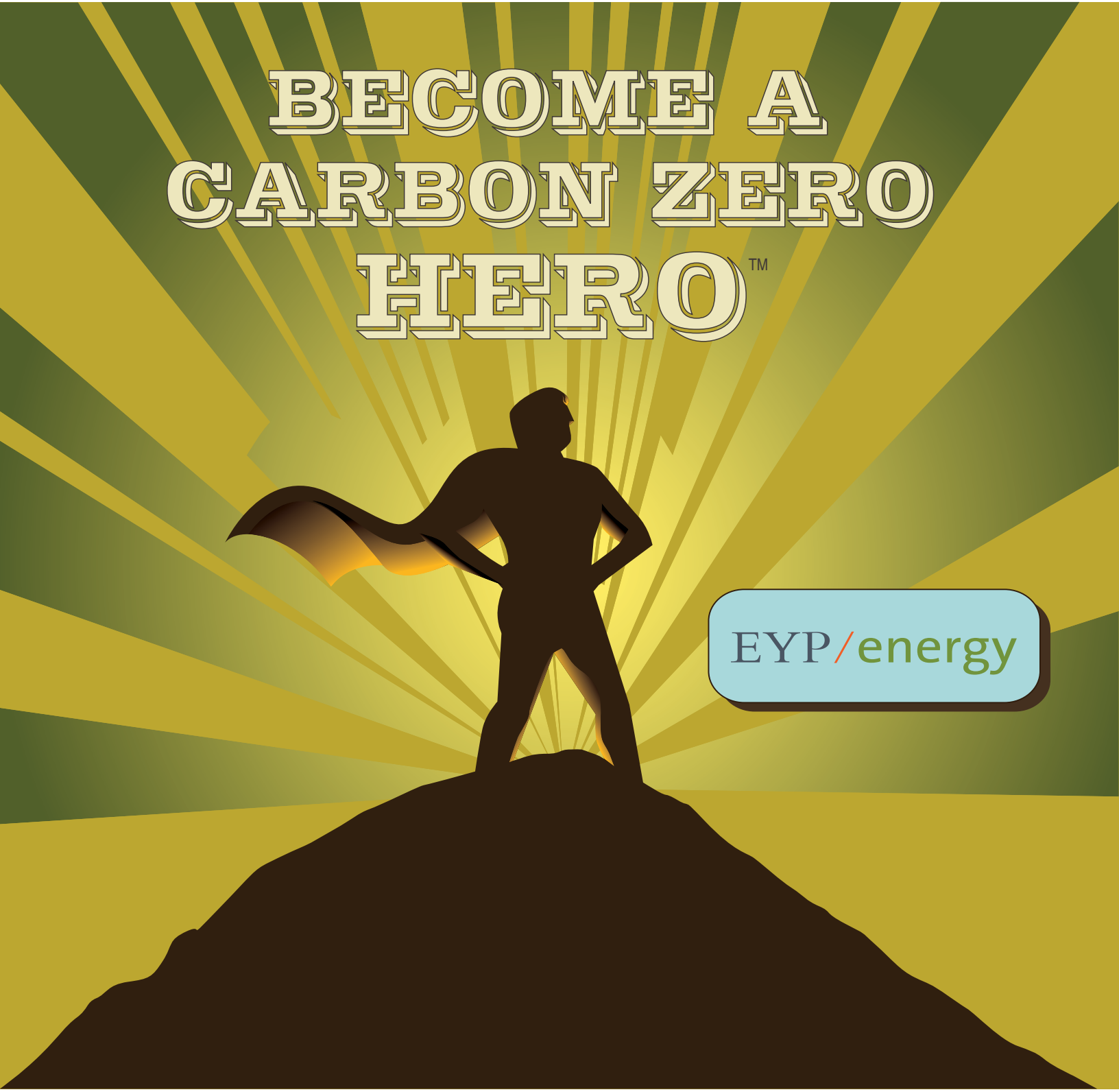
BECOME A CARBON ZERO HERO™



EYP/energy

Case Studies

ENERGY STAR® Residential Light Fixtures

for Colleges and Universities

Money Isn't All You're Saving

Cut School Costs

Light fixtures bearing the ENERGY STAR® label can help lower your school's energy bill significantly. They can be used in hallways, bathrooms, and dorm rooms—anywhere lights are on for long periods—at a much lower cost than traditional incandescent models. Because ENERGY STAR labeled fixtures use 50–70 percent less energy than incandescent or halogen lamps with an equivalent light output, they cost far less to operate. These savings more than offset the up-front costs.

Give Students, Faculty, and Staff the Best Lighting

ENERGY STAR residential light fixtures emit bright, steady light like incandescent models. They provide color rendering and color temperature that will meet the lighting needs of your entire campus. Their features are state of the art:

- Indoor models start without flickering and operate without the low-level hum typical of the older generation of fluorescent fixtures.
- More and more portable models feature dimming controls.
- Outdoor fixtures automatically shut off during daylight hours; some models also have motion sensors.

All ENERGY STAR labeled fixtures meet National Electric Code and ANSI/IEEE standards, so you can be sure that energy savings do not compromise safety or performance.

Save on Maintenance

Because the efficient lamps used in these fixtures last as much as 12-times longer than typical incandescent bulbs, they reduce time spent changing bulbs. Also, all ENERGY STAR labeled fixtures are "dedicated"—the new lamp sockets accept only energy-efficient compact fluorescent lamps with pin ends. Since the lamps cannot be used in other kinds of sockets, they are unlikely to be stolen.

One out of six universities have experienced fires caused by halogen torchieres. Two-thirds of the colleges in the country have banned their use in residence halls because of safety concerns.

source: www.lightsite.net

Safety

At least two-thirds of U.S. colleges and universities have banned the use of the popular (but inefficient) halogen torchieres. According to Lawrence Berkeley Laboratories, halogen torchieres operate at between 700 and 1,000 degrees Fahrenheit and have been the cause of over 350 fires nationwide. ENERGY STAR labeled torchieres look the same and emit an equivalent amount of light, but typically operate at 100° to 250 degrees F. These lamps also can save your school more than $300 over the lifetime of the fixture.

For More Information

Call the toll-free hotline at 1-888-STAR-YES (1-888-782-7937); visit www.energystar.gov; or contact:

Peter Banwell
ENERGY STAR Residential Light Fixtures
U.S. EPA
501 Third Street NW, 5th Floor
Washington, DC 20001
202-564-9408
Banwell.Peter@epamail.epa.gov

ENERGY STAR labeled torchieres save about $30 to $60 apiece each year in energy bills, returning more money per dollar invested in their purchase than savings accounts, mutual funds, or the S&P 500 index.

source: www.lightsite.net

University at Buffalo

University at Buffalo Installs ENERGY STAR® Vending Machines

Buffalo, New York – Erie County

*"Thanks to the NYSERDA-supported **New York Energy $mart**SM Offices team, we were made aware that ENERGY STAR® vending machines were available. The team worked with university staff, encouraging them to specify these more efficient machines in our new vending contract. We resolved some initial problems associated with our on-line vending inventory system but the electric savings made the extra effort worthwhile."*

– Walter Simpson,
UB Energy Officer

Background

The New York State Energy and Research Development Authority (NYSERDA)'s **New York Energy $mart**SM Offices Project helped the University at Buffalo, State University of New York (UB), assess energy-efficiency options for vending machines. Vending machines provide significant revenues to the UB Campus, but consume an estimated $50,000 of electricity each year. Reducing the electric use of the vending machines without impacting product purchases would effectively reduce UB's energy bills and make more funding available for academic programs.

In February 2004, a meeting was set up between the NYSERDA project team and UB staff responsible for managing vending operations at UB. They indicated that the beverage and vending contract would be rebid during the Summer of 2004 and they wanted more information on energy-efficient equipment. The NYSERDA project team, led by PA Government Services, Inc., agreed to assess the various options for the UB campus including the availability of energy-efficient machines, current experience at similar facilities, incremental costs, and potential energy and financial benefits.

NYSERDA project team members summarized the benefits of various retrofit and replacement technologies, and reported on the U.S. Environmental Protection Agency (EPA) ENERGY STAR® Vending Machine specification that went into effect April 2004. They also discussed availability and recent installations with the two leading manufacturers of energy efficient vending technologies. The summary of findings by the project team members included recommendations and an estimate of potential energy savings.

Recommendations

The project team estimated that UB could save between 92,000 and 290,000 kWh per year by replacing 126 vending machines with ENERGY STAR models. The higher end of the range was based on using the most efficient ENERGY STAR model. They recommended that UB:

- specify ENERGY STAR qualified beverage vending machines in upcoming contracts
- test the impact of turning off vending machine lights in some buildings for periods when they are typically unoccupied

Results

As of October 2004, UB had replaced 77 beverage machines with energy-efficient ENERGY STAR machines. These machines will save an estimated 133,000 kWh per year, reducing electricity costs by about $9,000 annually. UB is also exploring the possibility of retrofitting a number of non-ENERGY STAR machines to produce additional savings.

New York Energy $martSM

All **New York Energy $mart**SM programs are funded by a System Benefits Charge (SBC) paid by electric distribution customers of Central Hudson, Con Edison, NYSEG, Niagara Mohawk, Orange and Rockland, and Rochester Gas and Electric. NYSERDA, a public benefit corporation established by law in 1975, administers SBC funds and programs under an agreement with the Public Service Commission.

New York Energy $martSM programs are designed to lower electricity costs by encouraging energy efficiency as the State's electric utilities move to competition. The programs are available to electric distribution customers (residential, commercial, institutional, and industrial) who pay into the SBC.

NYSERDA

For more information about these services, contact NYSERDA
toll free 1-866-NYSERDA, locally (518) 862-1090,
or e-mail: **info@nyserda.org**

New York Energy $mart SM
Public Service Commission — NYSERDA

ENERGY STAR® Teaches Universities and Schools to Save Energy and Money
A Case Study

Energy wasted by computers and monitors costs organizations, such as colleges and universities and K-12 schools, about $1.5 billion every year. Universities' computers and monitors use more electricity than all other forms of office equipment combined. More than half of this energy is wasted because 60 percent of computers and monitors are left on at night and 40 percent of monitors are not enabled for power management.

ENERGY STAR, a program managed by the U.S. Environmental Protection Agency to promote energy efficiency, is helping colleges and universities, and schools eliminate costly waste through the "Million Monitor Drive" –the campaign to activate monitor power management on at least 1 million computer monitors. The Harvard University Kennedy School of Government, Penn State University, and Tulane University are among the leaders in higher education that have joined the Million Monitor Drive. Watt Watchers of Texas, a non-profit devoted to promoting energy efficiency in Texas schools, has also joined.

Power management, when enabled, allows computer monitors to go into a low-power sleep mode during periods of inactivity. Then, instead of paying utility bills for computer monitors that are kept on all day and night, schools and universities pay only for the time that the computers are in use. For large organizations, this single step leads to annual savings of thousands of kilowatt-hours and dollars. A university, for example, can expect to save 200,000 kilowatt-hours per year, or about $17,000 in energy bills, for every 1,000 university monitors.

To make implementation of power management simple, ENERGY STAR created EZ Save, software that allows IT professionals to enable entire networks of computer monitors from a central location, and EZ Wizard, a tool that helps individuals to enable their own desktops. Both can be downloaded from the ENERGY STAR website at no cost.

HARVARD UNIVERSITY JOHN F. KENNEDY SCHOOL OF GOVERNMENT
To prepare leaders for service to democratic societies
To contribute to the solution of public problems

The Crimson Green Their Computers

The Harvard University Kennedy School of Government (KSG), in partnership with ENERGY STAR, is saving more than $14,000 a year on its energy bills by enabling 800 computer monitors to power down to sleep mode when not in use. Using EZ Save software developed by ENERGY STAR, the entire enabling process was carried out in less than four hours. Without the software, the changeover would have been impractical because of the staff time required to enable individual workstations, according to Stewart Uretsky, Associate Dean and Chief Financial Officer at KSG.

KSG is also helping the environment. By putting their monitors to sleep, the school has reduced energy consumption by 160,000 kilowatt-hours per year, enough electricity to power more than 180 U.S. homes for one month. This single step eliminates the same amount of air pollution that would be associated with burning 7,000 gallons of gas. Efforts have expanded to the Harvard undergraduates as well. The Harvard Computer Energy Reduction Program employs the ENERGY STAR EZ Wizard software tool to allow students, often not hooked up to a network, to activate monitor power management on their computers quickly and easily by clicking on an icon located at their web site.

Penn State Saves a Lion's Share of Energy and Money
A survey of the Penn State Physical Plant office building found that only four percent of the building's 268 computer monitors were set to go to sleep after the desired period of 10 minutes of inactivity. Doug Donovan, Penn State's Energy Program Engineer, used ENERGY STAR'S EZ Save software to perform a survey of monitor power management status and then, with a few simple steps, enabled all 268 computer monitors for power management. Donovan is now expanding the program within Finance and Business, Penn State's main administrative unit. Extrapolating the results over the entire University Park campus, the university can expect to save about 740,000 kWh per year or more than $17,000 a year in energy bills at 2.3 cents/kWh energy costs. Receiving their electricity from a coal-fired utility, these savings are equivalent to removing 780 tons of carbon dioxide emissions each year.

Tulane University Students Like to Sleep
At Tulane University, energy management is not just university administrators' job. For three sophomore students who reside in a two-bedroom ENERGY STAR dorm suite, energy efficiency is a way of life. During January, these students began promoting their own "Sleep is Good" campaign to raise students' awareness about putting computer monitors to sleep.

The students are encouraging the campus-wide use of ENERGY STAR EZ Wizard, an ideal tool for college students that are usually not hooked up to a conventional network. Students simply click on an EZ Wizard link located on the Tulane Web-site, http://green.tulane.edu/energysmart/Computers.html to enable power management on their computer in seconds. For each computer monitor put to sleep with EZ Wizard, about $13 per year can be saved. If all 6,000 campus computers were activated for power management using EZ Wizard, the university would reduce energy bills by more than $78,000.

Watt Watchers of Texas Watch Out for Energy Savings
A non-profit program designed to help save Texas school districts' energy dollars, Watt Watchers of Texas has pledged 100,000 computer monitors to the ENERGY STAR Million Monitor Drive by May 2003. Working alongside energy managers at 162 school districts in Texas, Watt Watchers hopes to enable monitor power management features in at least 100,000 of the approximately 269,000 or more computers in the school districts.

Enabling monitor power management and switching these monitors into low-power sleep mode during periods of inactivity will provide a great energy savings for these districts. Watt Watchers of Texas initiated the student-led campaign with the Texas Energy Education Development (TEED) Project. Through this campaign, 1,000 disks with the Energy Star EZ Wizard program will be distributed to schools across Texas, helping them reduce energy usage by utilizing power management features on their individual classrooms' monitors. The Watt Watchers staff will also deliver workshops to student councils throughout the school year to emphasize the importance and ease of implementing power management. In all, an estimated $1.6 million in energy costs can be saved when the monitors switch into sleep mode. These dollars will go toward projects and activities that enhance the students' scholastic experience.