

# 3 DAYS ONLY



United States  
Environmental Protection  
Agency

Air and Radiation  
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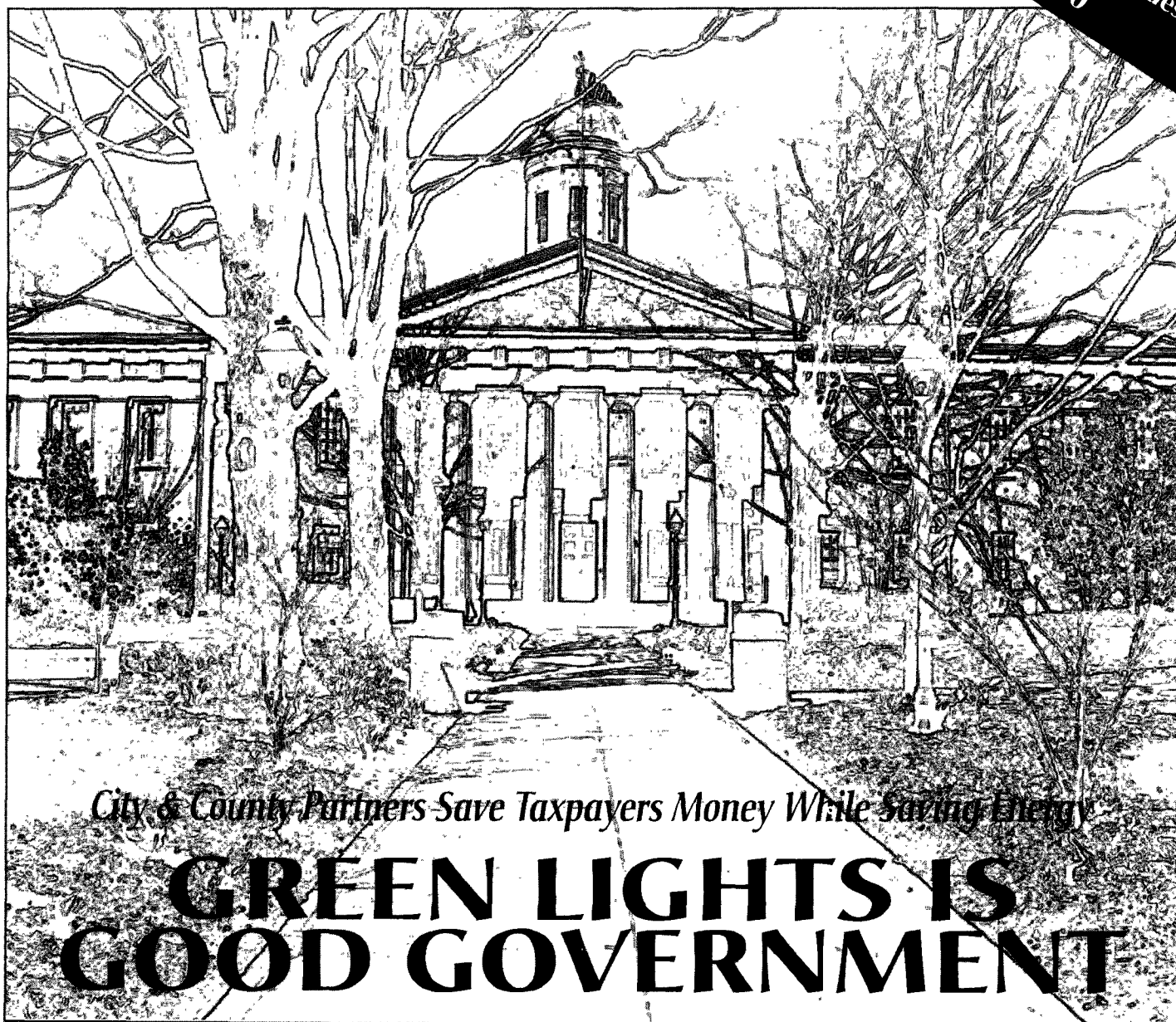
## Green Lights & Energy Star Update



Governments have to be concerned with spending taxpayer dollars wisely and saving where they can. Green Lights provides a profitable opportunity for local government Partners to upgrade their buildings and prevent pollution. This issue of the *Update* focuses on city and county participants who are committed to spending wisely and serving their constituencies while preventing pollution at a profit.

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**Expected Savings of Green  
Lights City & County Partners  
from Green Lights Upgrades:  
\$45,430,540**





City and County Building, Denver, Colorado

## City and County of Denver

The City and County of Denver is leading by example in taking an aggressive approach to energy efficiency. Denver has upgraded a variety of facilities including Denver General Hospital,

city and county jails, libraries and the City and County Building. The city has performed upgrades as well at cultural attractions, such as the Zoo, Botanic Gardens and the Museum of Natural History. By the end of 1994, Denver had upgraded 2.2 million square feet and so far this year has added another million to that total with an additional million expected by the end of 1995.

Much of Denver's success is due to the Public Service Company of Colorado's Demand Side Management program, which has provided thousands of dollars in rebates. Denver is now saving more than \$52,000 annually on energy costs, with an average internal rate of return of 50 percent. "Many of the conservation technologies we implemented realize payback—from energy savings alone—within the first budget year," said Darryl Winer, Denver's Implementation Director. "Then, the ongoing energy savings, reduced maintenance, improved working conditions, and reduced pollution become no-cost benefits!"

While hosting a conference on April 29 for Green Lights participants, Denver demonstrated to other Partners in the region what can be accomplished through Green Lights and ENERGY STAR Buildings. New lighting and building technologies were introduced, and the Public Service Company outlined its

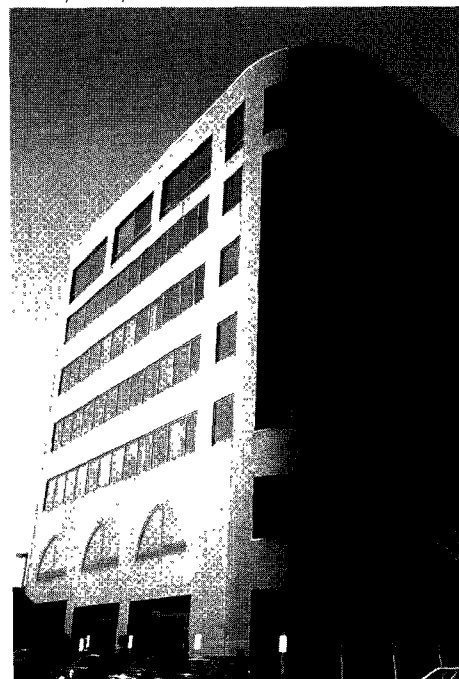
rebate program. "Protecting the environment, improving the workplace, and saving taxpayer dollars, while serving our constituency, is, simply good government," concluded Winer.

## Montgomery County, Maryland

When Paul Tseng, Chief, Engineering and Energy Services for Montgomery County, Maryland, pitched Green Lights to his County Executive two years ago, he described the opportunity in a compelling way. "I had calculated the energy savings Green Lights would produce for this county, and told the Executive that every week we delayed joining Green Lights we were losing another \$13,000 of energy savings. That statistic really helped get the decision made," said Tseng.

Since Montgomery County joined Green Lights in June of 1993, the County has moved ahead quickly to cap-

Hungerford Office Building in Montgomery County, Maryland



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The Green Lights & ENERGY STAR Update is a free monthly publication with a circulation of over 40,000. Recipients of the Update include: Green Lights participants, program prospects, members of Congress, and interested members of the general public.

**Receipt of this publication is not an indication that your organization is a participant.**

To add your name to the subscription list, or to find out how to join Green Lights, call the Green Lights/ENERGY STAR Hotline at 202 775-6650.

Although publication of all submissions is not guaranteed, the Update encourages Partners, Allies, and Endorsers to submit articles of interest and to provide input for future issues. Please keep in mind that EPA seeks only to promote energy efficiency and does not endorse any particular product or service. If your organization would like to submit material for publication in the Green Lights & ENERGY STAR Update, please send materials to: Eric Carlson, Update Editor, EPA Green Lights (6202), 401 M Street, SW, Washington, DC 20460; or fax to 202 233-9578.

## ITY FOCUS

ture those savings. Tseng and his staff put together a five-year plan for upgrading 2,500,000 square feet of facility space. One principle guiding their upgrade priorities was maximizing the rebates received from their local utility, Green Lights Utility Ally Potomac Electric Power Company (PEPCo). Since PEPCo is phasing out a number of its rebate programs, Tseng focussed first on rebatable upgrades, such as LED exit signs which were installed last year in most of the county's buildings.

Another strategy that has worked well for Montgomery County has been procuring lighting equipment through the State of Maryland's existing purchase agreements with lighting suppliers. "Through the state contract, we can buy T8 lamps and electronic ballasts at discounts of up to 83 percent," Tseng said. "I recommend other Green Lights government Partners look into alternative purchase agreements already in place at sister agencies."

The results of Montgomery County's efforts speak for themselves. Annual savings from reported upgrades top \$270,000 per year, on their way to over \$700,000 once the county is fully upgraded. Average IRR is running a healthy 102 percent, which translates into a one-year payback.

### Louisville & Jefferson County Metropolitan Sewer District

In a time of slashing government spending, the Louisville & Jefferson County Metropolitan Sewer District (MSD) has surveyed over 90 percent of its building area. Lighting upgrades have been completed in five buildings and are in progress at three others. MSD has also created a Green Lights capital fund to pay

for future upgrades. Green Lights provided MSD with a systematic approach to examining one aspect of efficient facilities and improvements in lighting are visible and easy to explain to employees and the public.

"The general public always desires to see efficient government facilities," said James Hunt, MSD Physical Assets Director.

Based on its Green Lights success, MSD has decided to join the ENERGY STAR Buildings program and to explore the Department of Energy's Motor Challenge. Through Green Lights, MSD will utilize compact fluorescent task lighting in conjunction with T8 fluorescent ambient lighting. The ambient lighting will be controlled by occupancy sensors to reduce lighting consumption during evening and weekend hours when the building is only partially occupied.

### County of San Diego, California

Though relatively new to Green Lights, the County of San Diego has worked with its local utility to aggressively upgrade its facilities. Before installing energy-efficient lighting, County officials sat down with representatives from San Diego Gas & Electric (SDG&E) to devise an upgrade plan that would bene-

fit both parties. Since joining Green Lights, the County has upgraded 13 facilities covering over 1,549,000 square feet, with SDG&E providing \$515,000 in rebates. San Diego is saving almost \$375,000 annually as a result of its efforts, and it is planning additional upgrades in 1995.

Partnering with the local utility has worked well for San Diego. Mindy Tao, who works in the Facilities Services Division of the Department of General Services, monitors the progress of the upgrades. "The money from the local utility enabled us to do the upgrades," said Tao.

### City of Phoenix, Arizona

The City of Phoenix has maximized its energy savings in its latest new constructions. The new Central Library has been designed with one of the most energy-efficient interior lighting systems in the country. Through innovative design—stack-mounted lighting, five-foot T8 fluorescent lamps and electronic ballasts, and extensive day lighting—the building lighting load is only 1.14 watts per square foot. This lighting design reduces the lighting load by 207 kWh annually, when compared to other standard technologies, for an energy reduction of 845,960 kWh per

year. Green Lights Utility Ally Arizona Public Service, as part of its program to encourage energy-efficient lighting, will award Phoenix \$23,045 in recognition of the city's continuing dedication to energy conservation in the design of the new Library.

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San Diego County Administration Center



Photo courtesy of San Diego County Photo

*continued from page 3*



*Baltimore County Courthouse*

## Baltimore County, Maryland

How can a Partner upgrade its facilities without spending any capital? Ask Baltimore County, Maryland. Through an agreement with Green Lights Utility Ally Baltimore Gas & Electric Company (BG&E), Baltimore County received rebates and was able to finance its upgrades, repay BG&E with the savings, and enjoy an immediate and continuing positive cash flow. Most of its projects paid off in less than two years. "We are committed to wisely spending taxpayer's dollars and achieving savings where we can," said Douglas Johnson, Baltimore's Implementation Director. "Green Lights has given us the opportunity to improve our employees' lighting, improve our air quality, and increase County revenue to projects that improve services to our residents."

Baltimore has upgraded over two million square feet including the County Courts Building, Public Safety Building, County Office Building, and Courthouse and is saving more than \$400,000 annually.

## Douglas County, Oregon

Douglas County, Oregon, the first county Partner to join Green Lights, has taken an aggressive attitude towards energy efficiency.

According to John Walker, Implementation Director for the County, almost 80 percent of profitable lighting upgrades have taken place already, with the remaining square footage surveyed and scheduled for upgrades later this year. Douglas County signed on as an ENERGY STAR Showcase Buildings Partner last year, and has since signed on the rest of its buildings into the ENERGY STAR Buildings program.

EPA helped the County highlight its showcase facility, the Justice Building, in a special recognition ceremony on June 26, 1995. Complete with new lighting, energy management system, HVAC system, VSDs, and chillers, the Justice Building has shown tremendous savings figures. "In 1990, our monthly energy bills at the Justice Building were as high as \$24,000," noted Walker. "After the showcase upgrades, we've knocked around \$16,000 off of that." Walker's enthusiasm for

ENERGY STAR Buildings and its goals is evident in his commitment to implementation as well as his eagerness to speak publicly about the merits of the program. Walker spoke about his County's experience with ENERGY STAR Buildings at EPA's Profitable Marketing Opportunities for Pollution Prevention Forum on April 10, 1995 and he will be addressing the American Institute of Plant Engineers (AIPE) at its conference on October 26, 1995 in Portland, Oregon.

## City of Portland, Oregon

The City of Portland, Oregon became one of the first city Partners when it joined Green Lights in January 1992. Green Lights was a natural fit and became an important part of Portland's "City Energy Challenge" program, a comprehensive program to increase energy efficiency in all sectors of the city by 10 percent by the year 2000.

The City has found some interesting and innovative solutions to common financial hurdles. David Tooze, Energy Program

*continued on page 5*

## Welcome New City and County Partners

New government Partners are continuing to show their commitment to preserving the environment by joining Green Lights. These new Partners are realizing significant energy and cost savings by implementing upgrades. For example, the City of Tucson will be saving an estimated \$230,000 annually, in addition to eliminating carbon dioxide emissions of more than 1,100 tons.

These city and county Partners recently joined Green Lights and started better serving their constituencies.

- |                          |                            |                           |
|--------------------------|----------------------------|---------------------------|
| ♣ Bucks County, PA       | ♣ City of Loma Linda, CA   | ♣ County of Chester, PA   |
| ♣ Cecil County, MD       | ♣ City of Lompoc, CA       | ♣ County of San Mateo, CA |
| ♣ City of Ada, OK        | ♣ City of San Jose, CA     | ♣ County of Nassau, NY    |
| ♣ City of Allentown, PA  | ♣ City of Santa Monica, CA | ♣ County of Rockland, NY  |
| ♣ City of Chesapeake, VA | ♣ City of St. Paul, MN     | ♣ New Castle County, DE   |
| ♣ City of Chicago, IL    | ♣ City of Tucson, AZ       | ♣ Town of Conway, NH      |
| ♣ City of Duluth, MN     | ♣ City of White Plains, NY |                           |

## COUNTY SNAPSHOT

## Preserving Our Planet's Resources


*Leon County Prevents Pollution  
and Educates the Community*

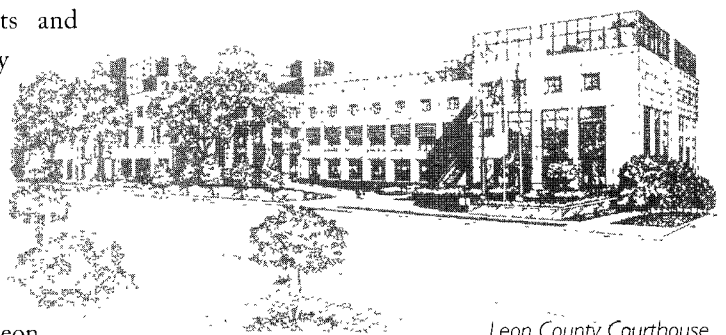
Leon County, Florida is a perfect example of how government Partners can be successful in Green Lights. Since joining the program in 1992, the County has made great progress and shown its commitment to preserving our planet's resources by upgrading its lighting.

To efficiently implement Green Lights, Leon County formed an internal implementation team upon joining the program. This team helped Leon County upgrade 48 percent of its square footage, including the County Courthouse in Tallahassee, during its first two years in the program. "The reason we joined Green Lights is that we felt that the program would provide our employees and

the people of Leon County with a higher level of light while at the same time lowering the cooling load of the Courthouse," said Tom Brantly, Facilities Management Director for the Leon County. "The program has proved to provide a service to our citizens while saving the taxpayer money." The County is now saving over \$90,000 in annual energy costs and reducing electricity by almost 680,000 kWh per year.

To publicize its Green Lights progress and educate the public about energy efficiency, Leon

County participated in Earth Day celebrations. As part of this event, the County set up an energy meter display at the Courthouse demonstrating how much less energy is consumed by a energy-efficient light bulb versus a regular incandescent light bulb. 




Leon County Courthouse

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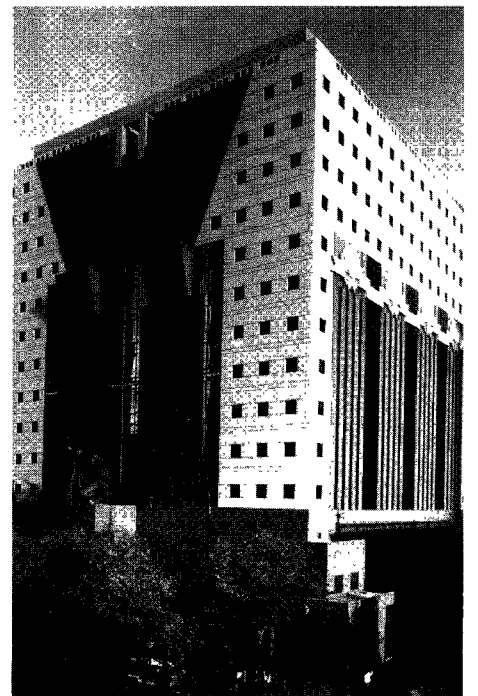
Manager in the Portland Energy Office, said, "Selling the concept of a coordinated effort for energy savings was easy. The difficulty came in convincing the City Council to approve a new energy manager position at a time when police and fire services faced budget cuts." The city's solution was to assess each of eight city bureaus one percent of its annual energy bill, with a cap of \$15,000. This assessment was relatively easy for the bureaus to absorb, and it generated an annual program budget of \$70,000. No direct funding from the city's general fund was required. In turn, a variety of services are provided to help the individual bureaus reduce energy bills, including an annual energy use report and energy audit assistance.

The second significant hurdle the City

overcame was identifying capital outside of the city budget and gaining approval to use it for energy efficiency projects. The solution was a Fiscal Office offer to "piggy-back" unfunded energy projects onto a scheduled debt sale. This \$750,000 "loan," at 3.86 percent, is currently funding 46 projects which will save over \$130,000 annually.

Highly visible projects have offered a prime opportunity to promote the success of the city's energy savings program. For example, the Bureau of General Services completed a major lighting upgrade at one of the city's most visible facilities—the Portland Building. This upgrade will save the City about \$40,000 per year and generate an IRR of over 25 percent and a simple payback of 3.8 years. 

The Portland Building, Portland, Oregon



## Top of the World

*Con Edison's Clock Tower  
Utilizes Revolutionary Technology*

### Performance characteristics of the xenon metal halide lamp.

Initial Lumens:	2000
Mean Lumens:	1500
Average Rated Life	4000 hrs
CRI	65
Color Temperature	4000K
Warm up Time to 50%	20 sec.
Hot Restrike Time	1 sec.

Top left, Con Edison's Clock Tower atop its New York City headquarters; below right, fiber optics at the back of the clock face



Consolidated Edison Company of New York (Con Edison) has taken its lighting upgrades all the way to the top, to the top of its New York City headquarters clock tower that is. Con Edison has used a new type of lighting system which uses a xenon metal halide lamp and a fiberoptic distribution system, also known as the light engine.


Con Edison was the first organization in the world to use this type of lighting system in a commercial real estate application. Although the system was originally designed for other uses, the engineers at Con Edison were able to specify a custom system for the needs of the clock tower, and through maintenance and energy savings were able to recognize a three-year payback.

The faces of the clock tower were originally lit with 860 incandescent lamps. Besides the headaches associated with the routine replacement, the lamps are changed almost every holiday season to reflect the traditional colors of the specific holiday, a task that typically takes over two days. The light is now generated by the xenon metal halide lamp and distributed

by the use of fiberoptics. Color filters can be used to change the colors of the light without requiring maintenance personnel to change all the lamps on the face of the clock. In addition, the xenon metal halide lamp is located on the interior of building where it is easier to access.

For Con Edison, a Green Lights Partner, the largest savings was in maintenance. However, the demand savings were also significant. The new system is brighter than the old incandescent lamps, but has reduced demand by more than 80 percent—from over 22 kW to less than 4 kW.

Through its clock tower, Con Edison has found a unique use for the xenon metal halide lamp and fiberoptic system. Other uses for this new lighting system are egress, decorative, underwater, neon replacement, and sign lighting. Another excellent application of this type of system is in hazardous locations where the light sources need to be remotely located, such as laboratory areas where explosive gases are present in the air.

The xenon metal halide lamp is an energy-efficient alternative to incandescent and halogen lamps for use in fiberoptic systems. This is a great example of how utilities and trade Allies work together to promote new technology. 

*Con Edison has taken a  
revolutionary lighting  
technology and custom designed  
it for its own use—and still  
realized a payback of three years.*

## TIP OF THE MONTH

## Selecting and Applying Occupancy Sensors

*Occupancy sensors can significantly reduce energy costs.  
Follow these tips for proper installation.*

Properly applied, occupancy sensors offer the potential to reduce energy costs by as much as 75 percent. The key to achieving these savings is proper application. For reliable operation and maximum profits from your occupancy sensor installation, consider the following application tips:

**Work with experienced occupancy sensor professionals.** Successful occupancy sensor applications require a complete understanding of the technology's operation, performance limits, and compatibility issues. Occupancy sensor vendors are willing to help participants apply the tips that follow for selecting and using appropriate technologies for specific applications. And vendors can assist in arranging trial installations for demonstrating performance and gaining user acceptance. By working with a professional, occupancy sensors can easily lead to big savings.

**Select products that provide adequate coverage.** Specifiers should pay particular attention to the published size and shape of the coverage area that defines the physical limits of the sensor's ability to detect motion. Note that this coverage area may be reduced based on reduced physical activity, lower ceiling heights, the use of partitions, or reduced sensitivity settings. In some cases, more than one occupancy sensor may be required in a space to provide adequate motion-sensing coverage, as in the case of a large, open office area.

### Select mounting locations and technologies based on room geometry and activities.

#### *Infrared (IR) Sensors*

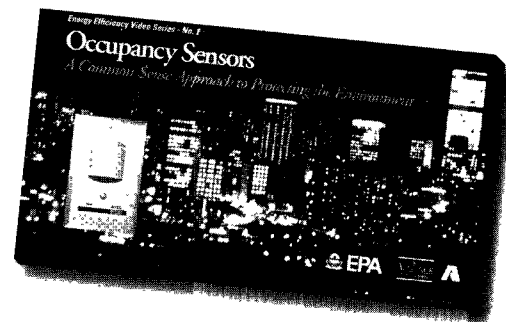
- IR sensors require line-of-sight between the sensor and the motion. Wallbox-mounted IR sensors may not work well where partitions, walls, or furniture may block direct viewing of occupant movement.
- IR sensors are most sensitive to motion lateral to the sensor.
- The magnitude of required occupant motion is directly proportional to the distance from the occupant to the sensor.
- IR sensors do not require an enclosed space; they work well outdoors and in high-ceiling areas.

#### *Ultrasonic (US) Sensors*

- US sensors do not require line-of-sight to sense motion in spaces that are enclosed with hard surfaces (such as in rest rooms). However, US sensors may require line-of-sight to sense motion in large, open office areas with fabric-covered partitions.
- US sensors are most sensitive to motion toward and away from the sensor.
- The magnitude of required occupant motion increases with distance from the sensor.
- US sensors require an enclosed space; they should not be used outdoors or in high-bay areas.

### Design sensor installations to avoid false signals.

*Infrared Sensors:* IR sensors may be



Occupancy sensors video available by calling the Green Lights/ENERGY STAR Hotline

located in positions that allow the sensor to have line-of-sight into an adjacent corridor, which could result in keeping the lights on unnecessarily. By applying a masking material to the appropriate portion of the IR sensor's lens, this potential problem can be avoided.

*Ultrasonic Sensors:* US sensors can be activated by vibrations (which, for example, may be caused by the starting of an air conditioner). Also, some ultrasonic sensors can be activated by moving air and should not be used in areas where strong air currents exist.

**After installation, tune the sensor based on the type of motion expected in the space.** The sensor's *sensitivity setting* should be adjusted based on the activities that are expected to occur in the space. A proper sensitivity setting will ensure that normal occupant motion is detected without triggering responses to extraneous signals.

A proper time delay setting will prevent the lights from switching off during intervals when people are actually in the room, but move too little or too slowly to be detected by the sensor.

For additional information and training, attend a Lighting Upgrade Workshop or call the Green Lights/ENERGY STAR Hotline 202 775-6650. ☐





## Profitable Investments in Building Upgrades

### Stage 4: Improved Fans and Air-Handling Systems

To help Green Lights participants follow EPA's ENERGY STAR Buildings initiative, the Update is documenting the results of the Showcase Buildings participants as they implement each stage of the program. This article, the fifth in a series, describes Stage 4: Improved Fans and Air-Handling Systems.

Fan motors in air handlers can account for as much as 20 percent of the energy usage in commercial buildings. There are several opportunities that can significantly reduce energy consumption by increasing fan system efficiency. Improving fan systems and air distribution is often one of the most profitable investments a building owner can make when upgrading the performance of a building.

In this fourth stage of the ENERGY STAR Buildings process, the payoffs of implementing Stages 1, 2, and 3 are evident. Building tuneups (Stage 2) assure that equipment upgrades in Stages 4 and 5 are applied to properly functioning equipment. Also, by implementing Green Lights (Stage 1), tuning up the building systems (Stage 2), and reducing additional building HVAC loads (Stage 3), building owners can significantly reduce the size and cost of mechanical equipment upgrades in Stages 4 and 5.

After Stages 1, 2, and 3, many of the fans will be larger than necessary to handle the reduced loads. Excessively "oversized" fan systems not only waste energy, but also increase noise levels, and cause greater wear on equipment. Oversized fans are ideal candidates for variable speed drives and motor downsizing. This is a powerful

example of the ENERGY STAR Buildings approach, which is to maximize energy savings and lower the costs to perform upgrades. Four actions should be considered to save energy and correct fan oversizing:

1. Larger fan pulleys: An existing fan pulley often can be replaced with a larger fan pulley, which will reduce air flow by reducing the fan speed. Reducing a fan's speed by 20 percent reduces its energy requirements by about 50 percent.

2. Energy-efficient motors: Compared to standard motors, energy-efficient motors use 3-8 percent less energy, are more reliable, and generally have longer warranties. Replacing existing motors with new energy-efficient motors can reduce maintenance costs and can postpone or eliminate the need to expand electrical supply systems.

3. Variable speed drives: Variable speed drives (VSDs) save energy by electronically controlling the speed and torque of the motor to satisfy changing system loads.

The only power consumed is the power required to meet the load. Under part-load conditions, a VSD will reduce air flow by reducing fan speed, which is far more efficient than running the fan at full speed and reducing air flow by partially closing

a damper. VSDs save energy since the power consumed is proportional to the cube of the air flow. For example, if the air flow is reduced by half (a factor of two), the fan power consumption is reduced by approximately a factor of eight.

ENERGY STAR Showcase Building participant Mobil Corporation installed 21 variable speed drives in its research and development facility in Dallas, TX. These upgrades were very profitable, saving approximately \$105,000 annually, with an internal rate of return (IRR) of better than 40 percent. This IRR translates into a simple payback of slightly more than two years. The table below shows the results of selected ENERGY STAR Showcase Buildings participants.

4. Duct static pressure: The duct static pressure of a fan system is based on 100 percent design air flow. After load reductions in Stages 1 through 3, the fan system may never reach 100 percent design air flow, and the design static pressure can be

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Variable Speed Drive Results

Showcase Participant	Mobil Research and Development	Mobil/Reston
Square Feet	340,000	285,000
Fan Upgrade Cost	\$221,000	\$130,000
Annual Cost Savings	\$105,000	\$33,000
IRR	48%	25%
Net Present Value (NPV)	\$563,245	\$116,477
Annual Energy Savings (kWh)	550,000	550,000
Electricity Load Reduction (kW)	150	140



## ALLY CORNER

## IllumElex Lends a Hand

*Lighting management company helps Partners finance and complete their upgrades*



IllumElex, a company that helped establish the Lighting Management Company arm of the Green Lights Ally program, is an ardent supporter of energy efficiency. In 1995, while IllumElex Green Lights Surveyor Allies were helping the company meet its Green Lights lighting upgrade goals, the company formed its IllumElex Financial Services Corporation to help its customers finance lighting upgrade projects.

The group developed Energy Solution\$, a program that provides a full range of funding alternatives for customers "who can't divert capital into lighting improvements," said IllumElex's Green Lights Coordinator Steve Strom. The program "allows the customer to use the savings on its monthly electric bill resulting from the lighting improvements to pay for the project's materials and labor. Therefore, there is no capital outlay," explained Strom. IllumElex's first Energy Solution\$ customer saw a \$200 per month positive cash flow because its utility cost savings exceeded its monthly payments for the lighting upgrade.

As for IllumElex's own upgrades, five more facilities throughout the country have been completed to bring the company's upgrade to 100 percent. These pro-

jects are saving the company nearly \$4,000 in energy costs annually. F-40 lamps have been replaced by energy-saving T8s with electronic ballasts, incandescent lamps and exit signs have been replaced with compact fluorescent lamps, and high-intensity discharge systems have been installed to improve the work environment.

IllumElex looks for additional money-saving opportunities and ways to increase its pollution prevention impact beyond completing lighting upgrades. The company's staff of 10 Green Lights Surveyor Allies tests various lighting products for maximum energy efficiency and employee satisfaction. The staff uses the information from the Lighting Upgrade Workshop to perform the work and report its progress.

Carolina Freight Carriers Corporation, a nationwide motor freight carrier, and Dallas' MobilTech, one of Mobil Oil Company's largest facilities, are examples of the lighting projects IllumElex has worked on for Green Lights Partners. These projects will save more than 868,000 kWh of electricity annually and bring the companies closer to fulfilling their Green Lights commitment.

Recently, IllumElex formed a winning partnership with Duracell USA. The nation's leading battery manufacturer

sought assistance with upgrading its 106,000 square-foot office, laboratory and manufacturing facility. Duracell USA considered involvement in Green Lights when it chose a lighting management firm to help with the upgrades, according to Duracell USA Green Lights Implementation Director Irwin Tronchin.

Duracell's Facilities Engineering Manager, Ed Bullington, got the corporate ball rolling by arranging a survey of the 20,000 square foot facility in Lexington, NC. IllumElex stepped in to do the job—testing different lighting technologies for employee acceptance.

IllumElex also arranged a continuing maintenance program to ensure the new equipment is working properly and Duracell has replacement lamps in stock and the Ally helped Duracell complete their implementation report forms.

IllumElex's familiarity with energy-efficient lighting practices and Green Lights progress reporting methods made Duracell's transition to energy-saving lighting a smooth one. "Green Lights involvement has provided Duracell an opportunity to emphasize our commitment to helping the environment and our desire to make energy-conscious choices," said Tronchin. ■

*continued from page 8*

reduced. Energy savings can be significant. For example, reducing the static pressure setpoint from 2.5 inches to 1.5 inches can reduce energy consumption by 10 to 35 percent.

EPA provides a software tool for Stage

4 that estimates the expected benefits of fan system upgrades in variable air volume buildings. This software, *QuikFan*, provides estimates of the potential for energy savings and for reducing the size of fan system equipment.

The September Update will take a

closer look at Stage 5: Improved Heating and Cooling Plants. To learn more about the ENERGY STAR Buildings and Showcase programs, call the Green Lights/ENERGY STAR Hotline at 202 775-6650. ■

REGIONAL FOCUS

## Los Angeles Ally Forum Enhances Green Lights Involvement

*"This forum gave Allies a new appreciation for Green Lights and what the program can do for them."*

—Karen Rudek, EPA's Green Lights Ally National Coordinator



The first-ever Green Lights Lighting Management Ally Forum was held at Southern California Edison's facilities in Los Angeles, California on March 10, 1995. Fourteen Allies were represented along with EPA's Green Lights Ally National Coordinator Karen Rudek and Southern California Edison's Green Lights Program Manager Gary Suzuki.

Allies learned how they can use program support to enhance their own market positions. The Forum allowed Allies to discuss raising levels of Green Lights awareness, learn more about the support EPA offers, and learn about the role of the Green Lights account manager. Attendees also had the opportunity to network with other Southern California Allies. ■

## City Year Members Spread the GL Message in Boston

Minority and low-income neighborhoods in Roxbury, Massachusetts have received the benefits of Green Lights and other energy-efficiency measures, thanks to a team of young people from Americorps-funded City Year, an innovative national community service program based in Boston. The City Year EPA/Environmental Industries team was led by Norman Willard of EPA's New England office, and Sarah Hammond-Creighton of Tufts University about the principles of electricity generation, energy efficiency, lighting, and pollution prevention.

The City Year team performed lighting audits in cooperation with Pete McBreen and Green Lights Utility Ally Boston Edison at the offices of NuEstra Comunidad Development Corporation, the Dudley Street Neighborhood Initiative (DSNI), and at City Year's Roxbury office. NuEstra and DSNI became the first non-profit community development corporations to join Green

Lights. These offices now can serve as demonstration sites to show inner city businesses and residents the energy and money-saving benefits of efficient lighting technologies.

The City Year team also performed energy audits and weatherization projects at local residences, the office of Alternatives for Community and Environment, a non-profit providing free legal services on environmental justice issues, and for Project LEEO (Leadership, Education & Employment Opportunity), an organization dedicated to providing productive alternatives for gang affiliated young men.

In addition, the team was given a tour of Boston Edison's Mystic Station electric generating plant in Boston. As one of several corporate sponsors of the EPA/City Year project, Boston Edison donated 500 compact fluorescents, which the City Year team and DSNI distributed to 125 families in the Roxbury community. ■

"I can't wait to get home and try out my new compact fluorescent lamp!"



## NEW PARTICIPANTS

### Green Lights Welcomes New Participants

Twenty-eight (28) new participants joined Green Lights in May to take advantage of the benefits of energy-efficient lighting upgrades. Green Lights welcomes its new participants and looks forward to working with them. If your organization would like more information about the program, please call the Green Lights/ENERGY STAR Hotline at 202 775-6650.

**PARTNERS (22)** American Conditioned Air, Inc. ■ Army National Guard ■ Atlanta Journal Constitution ■ Carl's Jr Restaurants ■ Cecil County, Maryland ■ City of Allentown, Pennsylvania ■ Eastern Slope Inn Resort ■ Erickson's Diversified Corporation ■ Expense Audit & Consulting Company, Inc ■ Harrah's Las Vegas ■ Huntingdon Memorial Hospital (CA) ■ Mannington Mills, Incorporated ■ National Society of Professional Engineers (NSPE), NCSU Chapter ■ New Castle County, Delaware ■ Northern Illinois University ■ Professional Mechanical Systems, Inc ■ Safeway Inc ■ Staples ■ Toyota Auto Body of California, Inc ■ Veterans Affairs Medical Center, Seattle ■ Villa View Community Hospital ■ WNC Regional Air Pollution Control Agency ■

**ALLIES (1)** Grahl Electric Supply Co. ■ **ENDORERS (5)** California Society of Hospital Engineers, Incorporated ■ E2 Environment & Education ■ Rice University Student Association ■ Student Environmental Action Coalition, University of Denver ■ World Resources Institute



City of Allentown



NORTHERN  
ILLINOIS  
UNIVERSITY



**MANNINGTON**  
MANNINGTON RESILIENT FLOORS

**STAPLES**  
The Office Superstore

## COMPLETED UPGRADES

### May Upgrades

Congratulations to the following program participants who submitted implementation reports for completed upgrades during the month of May.

3M, Thomas J. Lowenburg  
ALCOA, Steve Schmidt  
Abbott Laboratories, Al Musur  
Adat Shalom Congregation, Jerry Krautman  
Alta Bates Medical Center, Joseph Rieger  
American Conditioned Air, Inc., John D. Haydt  
Amoco, Walter R. Quanstrom  
Anne Arundel Community College, Eugene Avallone  
Baltimore County, Maryland, F. Douglas Johnson  
Bankers Insurance Group, Richard M. Brubaker  
Brown University, Kurt Teichert  
California Steel Industries, Inc., Russell W. Stark  
Carr Real Estate Services, Robert Fowler  
Cleveland State University, Constantine Draganou  
Clyde L. Choate Mental Health Center, Allan Pigg  
Electric Supply, Inc. (OK), Lance Murrie  
Fromm Electric Supply Company, Shawn Varghazadeh  
Grainger, Arshad Ali  
Harbor Hospital Center, Jon Wells

Heritage Pointe, Michael D. Kerner  
Hines Interests Ltd. Partnership.  
Columbia Square, William B. Alsop  
Honeywell, Inc., William P. Sikute  
Huntsville City Schools, Don Sadler  
Johnson Controls, Inc., Kim Kiesgen  
Lighting Resources, Inc., John Chilcott  
Los Angeles Jewish Homes for the Aging, Cedric Jackson  
Madison Gas and Electric Company, David Toso  
Massachusetts Institute of Technology, William Wohlfarth  
Mobil Corporation, Nicholas G. Greco  
Nike, Inc., Jim Petsche  
Oak Park Unified School District, Stan Mantooth  
Pennsylvania Hospital, Wendy L. Cody  
Polaroid Corporation, Robert Crockett  
SCT Yarns, Inc., Ken Combs  
Saugus Union School District, Arthur Clark  
Shaw's Supermarkets, Inc., Andrew Hayes

Shell Oil Company, Ron Dudley  
Snap-on Incorporated, Hiram Buffington  
Solar Kinetics, James Barrett  
Southern California Edison Company, Gary Suzuki  
Standard Federal Bank, William O. Zeidler  
Steelcase Inc., Daniel B. O'Malley  
Stitzell Electric Company, Robert Bridges  
TDIndustries, Robert Wilken  
The Commonwealth of Massachusetts, Terry Civic  
The Corcoran Gallery and School of Art, Stephen M. Brown  
The Ocean County Utilities Authority, Kenneth G. Stegemann  
Toshiba America, Doug Bagrowski  
Virgin Islands, Claudette Young-Hinds  
Westin Hotels & Resorts, Gus Newbury  
Westinghouse Electric Corporation, Timothy E. Ruman  
Wisconsin Public Service Corporation, Leon Engler  
Zurn Industries, Inc., James A. Zurn

### Corrections

The photo on page 3 of the July Update was incorrectly identified as Kaiser Permanente's headquarters. The photo was of one of their medical facilities in Portland, Oregon.



# Workshops

## 2½-Day Workshops Featuring:

- Lighting Upgrade Technologies
- Lighting Analysis Software
- Financing Analysis
- Green Lights Reporting
- Lighting Maintenance and Disposal
- Surveyor Ally Exam (on third day)

**Preregistration Form:** Green Lights workshops are free and open to the public. Space is limited, however, and priority will be given to Green Lights Partners. Complete details and instructions will be faxed to preregistrants within 4 weeks of the workshop date.

**Register by Phone:** Call the Green Lights/ENERGY STAR Hotline at 202 775-6650

**Register by Fax:** Fax this form to the Lighting Services Group at 202 775-6680

**Register by Mail:** Mail to EPA Green Lights (6202J), 401 M Street, SW, Washington, DC 20460

### Please Indicate Preferred Workshop\*:

- ☐ New Brunswick, NJ August 2-4
- ☐ Washington, DC Sept. 6-8
- ☐ New York, NY Sept. 20-22

NAME

TITLE

COMPANY/ORGANIZATION

ADDRESS

CITY

STATE

ZIP

( )

PHONE

( )

FAX (IMPORTANT IN PROCESSING THIS FORM)

### STATUS: (PLEASE CHECK ONE)

- ☐ Partner ☐ Prospective Partner
- ☐ Ally ☐ Surveyor Ally Candidate
- ☐ Other

\*Please call 202 775-6650 for current workshop information. The Surveyor Ally exam will be given on the morning of Day 3 and will conclude by 11:00 a.m.



# Online

Information about the Green Lights & ENERGY STAR programs is now available on the Internet's World Wide Web via the EPA's Public Access Server. Program participants, potential participants and other interested Internet users can now access a wide variety of information about programs, including Memorandums of Understanding (MOUs), fact sheets, software tools, and publication listings.

All programs can be reached from the EPA home page, the Office of Air and Radiation home page, or the Atmospheric Pollution Prevention Division's (APPD) home page. Pages can also be reached directly. Our Internet addresses (all are case sensitive) are:

**EPA home:** <http://www.epa.gov>

**APPD home:** <http://www.epa.gov/docs/GCDOAR/OAR-APPD.html>

**ES Programs:** <http://www.epa.gov/docs/GCDOAR/EnergyStar.html>

**ES Buildings:** <http://www.epa.gov/docs/GCDOAR/esb-home.htm>

**ES Office Equipment:** <http://www.epa.gov/docs/GCDOAR/esc-home.html>

**Green Lights:** <http://www.epa.gov/docs/GCDOAR/GreenLights.html>



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