

EnergySmart Update

Weatherization and Intergovernmental Program

DOE/EE-0294 • March – April 2004

Efficiency Helps Neighborhoods in Philadelphia

Philadelphia is reinventing itself, as Mayor John Street has put it, and energy efficiency is part of that transformation. For the city's low-income neighborhoods, those measures are expanding through the Livable Neighborhood Program, with assistance from Rebuild Philadelphia.

The program puts into action a wide array of measures – energy efficiency, home water-systems repair, block and vacant lot cleanups, fire and safety inspections, traffic calming and more. It operates in neighborhoods that, in many cases, are blighted by poverty and crime, with residents living in old row houses and some multifamily housing.

By January of this year, the Livable Neighborhood Program had reached 93 city blocks with its brand of neighborhood transformation. Trained volunteer block leaders teach fellow residents to take steps

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Here Comes the Conference: Energy Smart America 2004

Hundreds of leaders and decision makers in energy efficiency and renewable energy will gather at Energy Smart America 2004: *Tools and Solutions for States and Communities*, May 11-14 in Minneapolis, MN.

Hosted by the U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy, the conference will provide expert sessions on existing and advanced energy efficiency, renewable energy, and clean-fuel technologies and their deployment to federal, state and community projects.

Energy Smart America 2004 is in lieu of the Rebuild America Forum and State Energy Program All-States Meeting and features an expanded agenda. The conference program reflects the inclusion of resources and practices from federal programs within DOE, other public agencies and industry markets.

SIEMENS

JOHNSON CONTROLS



Experts on contemporary energy topics will present information not available elsewhere. Through the conference program, Energy Smart America 2004 will facilitate discussions among community leaders, policymakers, grassroots organizations and other stakeholders.

Sponsoring and exhibiting organizations will be on hand to demonstrate and explain solutions to potential project challenges. Energy Smart America 2004 sponsors include Siemens, Johnson Controls Inc., Minnesota Department of Commerce, Minnesota Soybean Research & Promotion Council, McQuay International, Savastat-USA, United Soybean Board, Verdiem Corp. and York International Corp.

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STRATEGIC PARTNER

ENERGY STAR Adds Buildings and Products



The ENERGY STAR® program helps consumers identify energy-saving products, from computer monitors and light bulbs to televisions and heat pumps. Although the name has become synonymous with energy efficiency for appliances, in recent years the program has expanded to include more products, as well as commercial buildings.

A new product area under exploration is power supplies. According to Andrew Fanara, ENERGY STAR's team leader for specification development within the Environmental Protection Agency, many products are inefficient at converting AC power from the outlet to DC power used by common household and office electronics. Between 6 percent and 10 percent of the energy that flows through a power supply is used for this conversion, and a significant portion is wasted. With 3.1 billion external power supplies in use in the United States, more efficient power supplies

could reduce U.S. electricity consumption by 1 to 2 percent.

In February, ENERGY STAR proposed a draft efficiency specification for "single voltage power external AC/DC power supplies" to help reduce energy used by these devices. The program also unveiled a test procedure, developed in partnership with numerous governments and industry stakeholders.

"The test procedure allows for the first time external power supplies to be compared to one another according to their energy efficiency regardless of where they are sold or the end use device they're bundled with," says Fanara.

Beyond Electronics

Although a variety of products have their own ENERGY STAR specifications, an integrated approach is applied to commercial buildings, says Fanara. He is often asked why ENERGY STAR has not created specifications for certain commercial products, such as chillers. The reason: installing

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REGISTER NOW!

ENERGY SMART AMERICA 2004:

TOOLS AND SOLUTIONS FOR STATES AND COMMUNITIES

May 11-14, | 2004 Minneapolis, MN | Hilton Minneapolis

We invite and welcome your participation in *Energy Smart America 2004*, hosted by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy. Join fellow leaders in obtaining information on:

Innovative technologies • Management strategies • Partnering and financing options

Register for the conference on-line at www.energysmartamerica.org. The registration fee includes program materials and admission to all conference sessions, the exhibit hall, receptions and networking events.

Reserve your hotel rooms at the Hilton Minneapolis by calling 1-800-445-8667. Mention *Energy Smart America 2004* to receive the government rate of \$110/night (plus taxes) available to conference participants who register before April 30, 2004.

Exhibitor and sponsor opportunities are still available, but space is limited! If interested, email exhibits@energysmartamerica.org.

Explore energy-efficient tools and solutions you can put to work today!

For more information, visit www.energysmartamerica.org.

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2004 Conference

Minnesota Gov. Tim Pawlenty, DOE Assistant Secretary for Energy Efficiency and Renewable Energy David Garman and DOE Chicago Regional Office Director Peter Dreyfuss are scheduled to open the conference program. Winners of the Energy Smart America 2004 Awards will be announced during the opening plenary. Visit www.energysmartamerica.org/awards.html to nominate a partnership, person or project for an Energy Smart America 2004 Award. The deadline for submissions is Monday, April 19.

General conference sessions will take place for two and a half days – full-day sessions on May 12-13 and a half-day on May 14 – organized under four tracks:

- Buildings
- Existing Technologies
- Emerging Technologies
- Market Integration

Rebuild America is hosting several pre-conference events on May 11 including a Business Partner summit and a Chicago-region peer exchange, as well as three training workshops: Rebuild America 101, Using the Rebuild America Web Site, and Community Benefits from Green Building Projects.

Pre-conference, evening and post-conference events and tours are available through Energy Smart America 2004. For details, and other conference information and updates, visit www.energysmartamerica.org.



Registration

On-line registration is available through the conference Web site. The registration fee includes program materials and admission to conference sessions, events and the exhibit hall.

Hotel reservations can be made by calling the Hilton Minneapolis at 612-376-1000 or toll free at 1-800-445-8667. Mention *Energy Smart America 2004* to receive the government rate of \$110 per night during the conference. The special conference rate is available through April 30.



View From DC

by Daniel Sze

A national conference May 11-14 in Minneapolis will bring together more than one U.S. Department of Energy program. The combination of programs in the conference has a kind of symbolic appropriateness: It is an example of the networking that is central to changing energy consumption.

There are substantial market barriers that prevent Americans from using energy wisely. Mistrust, lack of knowledge, strained financing and inertia are among the primary problems. The conference in Minneapolis is designed to help knock down those barriers through the spread of essential knowledge and networking.

To overcome mistrust – which rightly or wrongly greets the claims of many technology vendors – government experts will speak alongside energy specialists from the private sector. From my perspective, it is a two-way street. Energy technology and service companies bring credibility to speakers from government and nonprofit organizations. The good intentions of public officials and idealistic organizations can be met with skepticism, too. It helps to be teamed up with pragmatic business representatives.

To increase knowledge, there will be speakers who understand the best available technologies. To address cost, speakers will devote an appropriate amount of attention to financing methods and payback periods.

Inertia is a different sort of problem. It is easy for people to shrug off energy-efficiency ideas and assume that we will not make a significant difference in the markets. But consider this. For a decade we have been promoting T-8 fluorescent lamps and electronic ballasts as energy-efficient replacements for T-12 fluorescents and magnetic ballasts. In 2001, electronic ballast sales finally surpassed those of magnetic ballasts. Market data put electronic ballasts at 53 percent of 2001 sales, magnetic ballasts at 47 percent. In 2002, electronic ballast sales were 57 percent of the market, leaving magnetic ballasts far behind.

So market barriers fall, after all – with enough pushing from Rebuild America, technology vendors, state energy offices and our sister programs in the Office of Energy Efficiency and Renewable Energy.

We have success strategies to discuss in Minneapolis. Network with us there.

Dan Sze is National Program Manager of Rebuild America. Your comments are always welcome at danielsze@rebuild.org.

Hundreds of Small Businesses by the Bay Join in California Lighting Upgrades

A surge of lighting improvements is spreading energy efficiency among small businesses in cities on the eastern side of San Francisco Bay in California.

The City of Berkeley and the nonprofit Community Energy Services Corp. (CESC), through its Smart Lights Program, convinced 884 small businesses to improve the efficiency of their lighting during the year and a half that ended Dec. 31, 2003, in a project funded by the California Public Utilities Commission.

Retail outlets, restaurants, offices and a variety of other enterprises, such as commercial laundries and auto repair shops, were convinced to switch from incandescent to compact fluorescent lights and to replace T-12 fluorescents and magnetic ballasts with T-8 fluorescents and electronic ballasts. Though the City of Berkeley managed the contract, the effort was regionalized and served businesses in Oakland, Richmond, El Cerrito and Albany as well as Berkeley.

The changes under the Smart Lights Program have involved approximately 2.9 million square feet of space, based on an average of 3,300 square feet per business. The project reduced the level of the area's electricity demand by 1.6 megawatts and its annual consumption by 4.8 million kilowatt hours, CESC estimates.

More state funds are in the pipeline, and CESC aims to upgrade the lighting of another 430 small businesses by the end of 2005.

State Earmarks Millions

Several years ago, CESC became the leading partner in the Re-Energize East Bay Consortium, a Rebuild America partnership including the cities of Oakland, Berkeley and Emeryville. CESC continues to be an active Rebuild America partner, using the program as a source of information, a networking system and channel through which its project reports can assist others. Nancy Hoeffler, CESC executive director, spoke earlier this year at a Rebuild America Peer Forum in Scottsdale, AZ, where she described the Smart Lights Program.

The electrical power crisis of 2000-2001 in California, with its brownouts, blackouts and skyrocketing prices, motivated Smart Lights. State legislation signed into law in April 2001 allocated \$60 million for high-efficiency lighting. The California Public Utilities Commission disbursed the money in grants. Berkeley received a \$2 million grant and put the regional program into action through CESC.



"Smart Lights coordinated the entire process," says Kim Wong, manager of New Oakland Pharmacy in Oakland, CA.

Maria Sanders, the program manager, explains that the program had to overcome distrust, cost concerns and lack of knowledge among small businesses. "There's a higher degree of mistrust in the small business sector, I think, than in general," she says.

The involvement of a nonprofit organization and a city government helped. "We are kind of a neutral mediator," Sanders says.

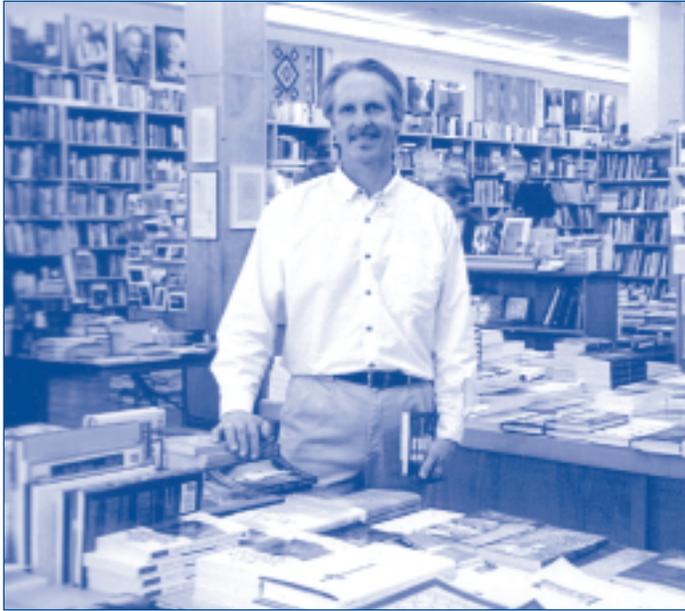
Generous subsidies – thanks to the state funds – also helped. Typical subsidies ranged between 30 and 60 percent of the retrofit cost, and for the smallest businesses the subsidies reached 90 percent.

CESC fielded people who canvassed the urban neighborhoods by walking the streets and entering businesses to talk to the managers and owners and convince them to take part in the program.

That approach also overcame one of the common problems for energy efficiency – the differing interests of building occupants and owners. All too often, companies leasing space in a building pay their utility bills automatically, with a fatalistic attitude about the energy efficiency of a building they do not own. But for Smart Lights, fully 50 percent of the businesses that participated were leasing space.

Attracting Contractors

The retrofits were turnkey operations, with no responsibilities for the small businesses other than paying



"It was a real simple decision to make," says Nick Setka, facilities manager of Black Oak Books, in Berkeley, CA.

their share of the costs. CESC would bring in local contractors to do the work. The contractors, normally reluctant to hunt for energy-efficiency retrofit work among small businesses, were satisfied to have CESC drumming up the business – doing the contractor's marketing work – and arranging for jobs to be handled by suppliers within their own towns. The contractors also would receive a "setup fee" as an added incentive – \$100 added to a \$1,000 project, for example.

Originally, CESC had thought the contractors would want several retrofits grouped together to achieve the economies of scale that a single larger customer would offer. But that ran into scheduling problems, with businesses unable to arrange for the work in neatly coordinated time periods. As Sanders puts it, "The world is too messy for that."

So CESC ended up simply arranging for the jobs to be grouped within the same general time and a short drive from job site to job site. That was enough to satisfy the service and equipment companies.

What CESC would like to do next – other than the second phase of lighting retrofits – is tackle some of the other energy-efficiency challenges that small businesses face. Restaurants, for example, are a large category of business in the Smart Lights Program, but refrigeration is a much bigger expense than lighting for those companies.

"That is a direction we really want to go in," Sanders says.

For more information, visit www.smartlights.org, call Nancy Hoeffler of CESC at 510-644-8546 or call Maria Sanders of CESC at 510-981-8955.

Eyes on Bottom Lines in the Travel Industry

The potential for saving money was the No. 1 consideration mentioned repeatedly at a conference on environmental improvements for the travel industry. Many speakers insisted on the primacy of the bottom line, and the Hyatt Regency Washington exemplified it.

Greening the Hospitality Industry, a conference hosted by the Virginia Housing and the Environment Network (VaHEN), was held Feb. 4-5 near Warrenton, VA. VaHEN is the lead partner of Rebuild Virginia. The conference was sponsored by Rebuild America and several other organizations.

There are more than 54,000 lodging properties in the U.S. travel industry, by one estimate. It is a large and competitive industry with much potential for energy savings.

Kevin Anderson, director of engineering for the Hyatt Regency Washington, was one of the hotel management representatives who spoke at the conference. Energy and water efficiency have saved millions of dollars at his large hotel – 715,000 square feet – in the nation's capital.

Anderson explains that the changes at the Hyatt Regency Washington included a few ground rules. The retrofits could not reduce guest comfort, and they had to save money.

Rebates from local electric utility Pepco for the installation of energy-efficient lighting helped kick off a phase of lighting improvements back around 1993-94. The changes included replacement of incandescent bulbs with compact fluorescent lights, replacement of T-12 fluorescent tubes and magnetic ballasts with T-8s and electronic ballasts, and replacement of exit signs with new ones lit by light-emitting diodes (LEDs).

Next came the installation of variable-frequency drives for any motor over 10 horsepower, which included motors for most of the air handlers and pumps in the hotel.

Then, in 1994, another rebate offer from Pepco allowed the Hyatt outlet to replace a pair of chillers that were almost 20 years old with a pair of chillers that are about 35 to 40 percent more efficient. Because the lighting retrofits had reduced waste heat in the building, less air conditioning was needed, which meant less chilling. So two 675-ton chillers replaced two less-efficient 770-ton machines.

Savings on electricity from the retrofits amount to about \$200,000 a year, according to Anderson. He adds that the building's energy consumption dropped about 20 percent.

For information on other great green projects in Virginia, visit the VaHEN Web site, www.vahen.org. Proceedings from Greening the Hospitality Industry are in the Commercial Sector of the Rebuild America Web site, www.rebuild.gov.

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Philadelphia

utilizing a workbook of well-crafted actions keyed to city services and carefully designed block meetings. A portion of a recent Rebuild America grant will allow the program to focus on energy efficiency in multifamily housing.

“It has been an intensive learning process,” says David Gershon, director of the Empowerment Institute, which manages the program under a city contract. “We are just completing the third year of our demonstration project. We’ve made good progress in working with what has traditionally been a disenfranchised population in the city. The programs empowerment tools have been well received by residents, and we are very pleased to be achieving a 60 percent participation rate.”

Utility expenses impose a disproportionate burden on the underprivileged. The U.S. Department of Housing and Urban Development says median-income families spend less than 4 percent of income on energy, while low-income families pay an average of 26 percent of income for energy, as measured among households enrolled in Aid to Families with Dependent Children.

The Empowerment Institute has delivered the Livable Neighborhood Program elsewhere, most notably in Kansas City and Pittsburgh, with the Pittsburgh effort still ongoing.



Philadelphia has made energy efficiency a part of the city's life for years.

In essence, it is behavior modification and block-based team building for lasting change.

“Transformation is not merely about building new houses and offices, because those structures will crumble and fall if not maintained,” says Mayor Street. “The Livable Neighborhood Program serves to enlighten citizens on how to better maintain their homes and neighborhood blocks to improve the quality of life.”

Philadelphia Finds Ways to Save

Philadelphia's Municipal Energy Office has been chalking up energy savings since 1994. Examples of the diverse strategies include:

- Negotiated electric-utility rate reductions valued at \$22 million over a 10-year period
 - Energy-efficient relamping in approximately 9 million square feet of facility space
 - LED traffic signal pioneers
 - Procurement requirements for ENERGY STAR equipment
 - New 5 percent energy reduction mandate for facilities
 - Assistance on capital projects to incorporate efficient heating and cooling and energy management systems
 - Monthly review of 1,500 utility accounts (\$50,000 to \$200,000 in annual utility refunds)
- The Energy Office is also engaged in cross-sector and public-private sustainability initiatives that include:
- Research and development partnership with Philadelphia University to develop a cost-effective exterior insulation for residential homes affected by mid-block demolition activities
 - Partnership with the Gas Technology Institute to develop a citywide Sustainable Energy Management Plan
 - Partnership with Steven Winter Associates to publish a High Performance Renovation Guide (summer 2004 release date)
 - Participation in urban heat island initiatives
 - Design and construction bids for the city's first photovoltaic system (10kW installation scheduled for summer 2004)
 - Cooperative effort with the Capital Program Office to incorporate sustainable building principles in new construction and major renovation projects
 - Partnerships with Penn State University's Hamer Center and the Institute for Local Self Reliance to promote building material reuse
 - Partnership with Kronosport Inc. on the deployment of innovative human-electric hybrid utility vehicles

For those households in Philadelphia's Livable Neighborhood Program that have self-reported their energy-efficiency actions and results, the annual savings is 7.9 percent. For the next phase of the program – the multifamily housing emphasis – the projection is energy savings of 10 percent, or about \$200 a year. If that phase reaches 500 households as planned, the savings would multiply to \$100,000 a year.

Block leaders will explain low-cost and no-cost measures for saving energy, and home weatherization kits will be given to neighborhood residents who attend block meetings. People will learn about utility conservation programs that can save money, and they will hear about such things as “cool roofs” – reflective roof coatings that reduce the need for air conditioning by reducing solar heat gain.

The block leaders will be trained to gather energy-saving metrics from residents to demonstrate the effects of the program.

Convincing households to report is not easy, Gershon notes. As of January, 33 households had reported their energy savings. It is reasonable to assume that a greater number of households took actions to reduce energy consumption, but the trick for the program is to refine the art of obtaining the household results.

For more information, contact Michelle Knapik of Rebuild Philadelphia and the Municipal Energy Office, 215-686-4472, email michelle.knapik@phila.gov, or visit the Web site of the Empowerment Institute, www.empowermentinstitute.net.



Students at Spruance Elementary School in Philadelphia get involved in energy education.

Philadelphia's 'Green Schools' Branches Out into Higher Ed

The temptation is to see energy education as a seedling that can be planted in elementary school to become a fast-growing sapling by high school and a valuable tree in college. The metaphor can fit the facts better than you might expect. Green Schools, a program well rooted at all levels in the K-12 schools of Philadelphia, will expand into Drexel University and Philadelphia University.

Combining education and energy-saving measures, the program is a local adaptation of the approach developed by the nonprofit Alliance to Save Energy, a Rebuild America Strategic Partner. More than 50 schools in the Philadelphia School District have participated in Green Schools. In any one year, about 20 schools are active in the program, which educates students, teachers, administrators and building operations staff on energy efficiency.

Active schools apply the lessons to their own buildings. Those schools use about 7 percent less electricity than other schools, says Janet Castellini, local project leader for the program. That advantage in energy efficiency builds on the school district's 20-year-old energy conservation program. The additional savings are an indicator that student learning is useful in improving energy savings, says Castellini, who works for Castle Education, which manages and staffs the program.

Students can start learning as early as kindergarten, with very concrete activities about how to know that energy is being used and how energy can be saved. In one Philadelphia kindergarten, a class is responsible for monitoring the lights in the auditorium next door. There are 15 “high hat” recessed lights, each with an 800-watt bulb, in that auditorium, and people who use the room often leave without turning off the lights. The kids next door take care of it.

For older students, the age-appropriate activities are more advanced. At a middle school, students surveyed appliances in the school and proposed that the school think about whether various appliances actually were needed.

At the two local universities, Drexel and Philadelphia, students will analyze energy consumption in selected buildings and propose ways to improve energy efficiency through better technology and operations. The university students also will mentor K-12 students in the city school district.

For more information, contact Michelle Knapik of Rebuild Philadelphia and the Municipal Energy Office, 215-686-4472, email michelle.knapik@phila.gov, or visit the Web site of the Alliance to Save Energy and Green Schools, www.ase.org/greenschools.

Clean Air Act May Push States to Follow Texas on Mandating Efficiency to Reduce Air Pollution

The program launched in Texas to reduce electricity consumption in government buildings is ambitious, pioneering, a political balancing act – and it may be the leading edge of a national wave. Because of the obligations placed on all states by the federal Clean Air Act, programs following the Texas model may soon be coming to metropolitan areas near you.

SB5 – Senate Bill 5, also called the Texas Emissions Reduction Plan – mandates energy efficiency partly to control ground-level ozone, or smog. Enacted in 2001, the state law instructs 41 counties, including all of the larger cities of Texas, to set a goal of reducing electricity consumption in government buildings 5 percent each year during five years starting with 2002.

Reduced electricity consumption translates into reduced power production, and that cuts emissions of nitrogen oxides (NOx) and other pollutants contributing to ozone formation. Many of the 41 affected counties are “nonattainment” areas under the National Ambient Air Quality Standards (NAAQS) of the Clean Air Act. The other counties are close to the edge of nonattainment.

But Texas is only part of the picture. Under the tougher ozone standards promulgated in 1997 by the U.S. Environmental Protection Agency (EPA), 291 counties spread across 32 states are out of attainment, as measured by 1999-2001 data. That reality could turn the Texas experience into a pilot program for jurisdictions nationwide.

Getting the Numbers

A formal EPA listing of nonattainment areas under the stricter standards was scheduled to be issued by April 15 of this year. Compliance deadlines will be spread across the years 2007-2021. Failures to comply can bring penalties: denial of new construction permits when they involve air pollution, and a cutoff of highway funds.

One fear is that companies worried about permitting and other regulatory headaches will avoid nonattainment areas when deciding where to locate an operation.

Because states are well aware of their pollution problems, several already have begun looking at SB5 compliance policies for lessons they can apply at home.

The SB5 program may show what can be done in terms of mandated improvements for existing buildings. At the same time, it may provide a model for converting energy-reduction numbers into pollution-control numbers that

satisfy EPA.

“Getting emission numbers is a requirement of EPA’s to meet NAAQS standards,” says Mike Myers, a Rebuild America coordinator based in Austin, TX. “It is a mandatory item.”

SB5 does not require emission calculations, but such estimates are being devised anyway because of the federal law, and the calculations will rely on energy data gathered under SB5. The idea is to match consumption data to local sources of electricity rather than using national averages that fail to reflect local realities.

The first two steps – collecting and organizing electricity consumption data – are difficult enough, because they are new activities for most of the people who must do the work. Those people need specialized help, and in Texas they are getting it.

Partnering in Texas

Implementation of SB5 is assisted by the Texas Energy Partnership, a joint venture of the State Energy Conservation Office, Rebuild America and ENERGY STAR. Data is channeled through the Texas Energy Partnership, which also provides advice on energy efficiency and data collection. EPA, a partner in ENERGY STAR, does not have a passive role in this.

“We’ve been working with Texas closely to learn the way we can calculate the emission reductions and quantify them and give credit,” says James Yarbrough, chief of air quality analysis for EPA’s Region 6, which includes Texas. He adds, “Other states are very interested.”

The Texas Commission on Environmental Quality has contracted with the Texas A&M University Energy Systems Laboratory for development of site-specific conversion factors. The idea is that state officials will be able to plug retrofit data into the software to calculate emission impacts. While that is in development, the commission is pushing things along with an interim process for estimating emission reductions.

“The calculations are easier in Texas simply because we’ve got a contained grid,” says Yarbrough, referring to the grid of the Electric Reliability Council of Texas. The state’s grid includes far fewer power generators than the other two grids serving the rest of the 48 contiguous states.

But while the calculations may be more complex outside Texas, the methodology could prove sufficiently valuable that other states would want to adopt and adapt it.



Using 1999-2001 air pollution data, 291 counties would be classified as violators of the latest (8-hour) National Ambient Air Quality Standards for ozone.

In drafting SB5, the Texas Legislature decided to focus only on government buildings, despite the fact that commercial and residential buildings are vastly greater in number. Mandates for the private sector are more likely at the local than the state level in most states, Yarbrough suggests. That pattern has begun to take hold in Texas.

Beyond Government Buildings

Frisco, a suburb of Dallas, has established a mandatory Green Building Program. All new homes must meet ENERGY STAR standards – at least 30 percent more energy efficient than the national energy code or 15 percent more efficient than the state energy code, whichever is more rigorous. The average new home in Frisco is exceeding even that standard.

Mandatory improvements have at least two advantages: they level the competitive playing field by putting the same obligations on all builders, and they reduce uncertainty about what standards might be coming.

For more information on SB5, visit the Web site of the Texas Energy Partnership, www.texasenergypartnership.org, or contact Mike Myers, 512-280-7569, email mmyers@aspensys.com.

Rebuild America Progress Calculator

Number of Partnerships:
646

Total Number of Committed or
Completed Square Feet:
1,304,534,084

as of March 26, 2004

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ENERGY STAR

one high-performance component does not necessarily make a commercial building energy efficient.

“As a result, the ENERGY STAR buildings program has developed a comprehensive program for the commercial sector that focuses on the building envelope before products, such as chillers, are considered,” explains Fanara.

Established in 1999 to recognize energy-efficient office buildings, the program has expanded to include hotels, hospitals, K-12 schools and supermarkets. Close to 1,400 buildings have earned an ENERGY STAR label.

In January, the program announced additional categories including courthouses, bank branches, financial centers, residence halls and warehouses. These category expansions, when added to the current ones, represent 50 percent of commercial floor space in the United States, says Cindy Jacobs, chief of the market sectors group. By year-end, they expect to cover two-thirds of commercial floor space by adding more retail categories such as discount centers or convenience stores.

ENERGY STAR buildings are more than just showcases for ENERGY STAR appliances and electronics. Rather, these facilities use an integrated, whole-building approach, with management that properly installs, integrates and maintains building systems.

Owners of older buildings should not be discouraged from pursuing an ENERGY STAR label. Jacobs notes that many buildings that perform the best do not necessarily have the latest technology or cutting-edge equipment, but combine good technology with good management.

ENERGY STAR is reaching out to small businesses through aggregate purchasing. A pilot program helps businesses bundle their purchasing power to receive discounts on energy-saving products, such as compact fluorescent light bulbs or LED (light-emitting diode) exit signs.

The program targets businesses without facilities managers that may not have the time or resources to implement energy solutions, says Jerry Lawson, national manager, ENERGY STAR for Small Business and Congregations.

For more information on the buildings program, visit www.energystar.gov/benchmark. *Guidelines for Energy Management*, available on the site, “walks through the steps of a good energy management program,” says Jacobs. Case studies are also posted.

Additional information on the ENERGY STAR Small Business program can be found at www.energystar.gov/index.cfm?c=small_business.sb_index.

Tolleson's Green Ways

Tolleson, AZ, a town just west of Phoenix, has launched a municipal building design and construction project incorporating green and sustainable design elements. Tolleson, an agricultural area evolving into a more diversified suburb, plans to build police, fire and city hall complexes that will include 120,000 square feet of high-performance, environmentally friendly buildings.

A ground-breaking ceremony was March 29, but that was a formality, with design still to be completed. The McAdams Group is helping to pull together financing, and Rebuild America is working with the town on energy-efficiency elements of the project.

New Partnerships

Community Greenhouse Foundation Inc., FL
 Franklin City Public Schools, VA
 Grand Traverse Heritage Center, MI
 Harvard Green Campus Initiative, MA
 Holmes County School District, MS
 Los Angeles Unified School District, CA
 Minnesota Alternative Energy Project, MN
 North Panola Schools, MS
 Putting Green Inc., MN

Web Site Update

The proceedings of the Feb. 4-5 Greening the Hospitality Industry conference have been added to the Commercial Sector of the Rebuild America Web site. (See related story, page 5.) The Solution Center in the Web site has more than 250 resources and counting. Recent additions are:

Energy Hog – a Web site link for children.

Rebuild America Public & Multi-Family Housing Program Brief – a PDF fact sheet.

Alliance to Save Energy Downloadable Lesson Plans – a link to the group's Web site.

Northside ISD Transportation Department Fact Sheet – a PDF on a school district's propane-fueled buses.

The Solar Decathlon – a link to the design competition's Web site.

DOE's Programs for Teachers and Students Links – a set of links to educational resources.

Upcoming Events

May

5-6

High Performance School Buildings Workshop, presented by the Kentucky Division of Energy and the Kentucky NEED Project. Griffin Gate Marriott, Lexington, KY. Contact Pam Proctor at 859-635-7988 or email pproctor@need.org.

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Collaborative for High Performance Schools Design Training, Sacramento Municipal Utility District Energy & Technology Center, Sacramento, CA. Contact Sara Greenwood at 877-642-CHPS or email sara@chps.net.

11-14

Energy Smart America 2004: Tools and Solutions for States and Communities, presented by the U.S. Department of Energy Office of Energy Efficiency and Renewable Energy. Hilton Minneapolis, Minneapolis, MN. Visit www.energysmartamerica.org.

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Rebuild America Energy Technology Seminar: Integrated Building Controls, Southern California Edison Customer Technology Application Center, Irwindale, CA. Call 1-800-336-2822.

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Martha's Vineyard Energy Fair, presented by The Cape Light Compact. Martha's Vineyard High School, Oak Bluffs, MA. Contact Margaret Song at 508-375-6843 or email msong@cape.com.

June

16-17

West Coast Energy Management Congress, presented by the Association of Energy Engineers. Anaheim Convention Center, Anaheim, CA. Contact Patty Ardavin at 770-279-4390 or email patty@aeecenter.org.

Visit the Events page in the Rebuild America Web site to read about or post other events. You can also keep up on events and provide event listings through the Flash Report, with subscriptions available via the Web site's News page.

BUSINESS PARTNER

Siemens Operates at Multiple Energy Levels

Siemens Building Technologies Inc. is large enough to cover a huge range of options for energy-efficiency improvements, from sales of basic technology to the elaborate management of customer facilities and the application of advanced technologies. And it does so for customers at every level of sophistication in government or the commercial sector.

A leading single-source provider of cost-effective facility performance solutions, Siemens can ensure a facility reaches peak performance and is sustainable.

“When we work with our customers,” says Chuck Hall, Siemens national sales manager and executive sponsor for the Rebuild America program, “we really concentrate our efforts and focus on sustaining cost-effective and energy-efficient facilities. This allows our customers to concentrate on their top priority – their own customers.”

As a Business Partner with Rebuild America, Siemens also is a source of energy for the program’s technical seminars and other activities.

The challenge, and reward, for Siemens – as for Rebuild America – is achieving success with a diverse customer base that has so many levels of knowledge and motivation.

Adapting to Customers

“It’s as much about education as it is about the application of technology and services to a customer’s particular level of sophistication,” says Rick Walker, senior national manager of energy services for Siemens Building Technologies.

From his perspective, customers tend to fall into three categories. There are the underclassmen, who do not have high levels of knowledge about buildings or their systems and opportunities. There are the upperclassmen, who have more experience and knowledge and are trying to employ better strategies for reducing energy consumption and cost. Finally, there are the graduate students, sophisticated users considering some very specific technologies, or who are thinking of an exceptional enhancement.

“Each of these customers has specific requirements associated with their business objective and facilities, and Siemens caters to all their needs with customized solutions,” Walker says.

Motivation for energy efficiency also has different levels, but recently it is coming primarily from cost increases and expectations of more of the same.

An added challenge comes from some market sectors that still insist on straightforward short-term paybacks for investments. Some customers reject investments with longer

payoffs no matter how assured.

So the business of providing energy-efficient solutions is growing, but not as fast as it could be, he says.

Factors for Change

Some relatively recent developments help. For much of the public, the ENERGY STAR® ratings for buildings provide good simple benchmarks that people can get their arms around without special knowledge. For the “grad students,” extra motivation comes from wanting to attain the broad-scale quality reflected in the LEED (Leadership in Energy and Environmental Design) Green Building Rating System.

“At Siemens, we have seen more interest in LEED in the last six months than anyone would have predicted,” Walker says.

SIEMENS

The pending finalization of a LEED rating for existing buildings will only add to that source of interest, he notes.

It also helps that better technologies keep coming along. As an example, Walker points out that improvements made a decade ago can in many cases be cost-effectively replaced with newer technologies today.

With a growing energy service and technology business, Siemens naturally has a high profile among its peers. Bob Dixon, senior director of energy services and solutions for Siemens Building Technologies, is the 2004-05 president of the National Association of Energy Service Companies.

For more information, visit the company’s Business Partner entry at www.rebuild.gov or go to the company’s Web site at www.sbt.siemens.com.

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