

**Partner Update**

January – February 2000

Office of Energy Efficiency and Renewable Energy

**Profile**

Voris Williams

**America's  
Heartland Benefits  
from EnergyWorks**

A handful of partnerships marked Rebuild America's launch back in 1995.

Among them was **EnergyWorks**, which is spearheaded by the Metropolitan Energy Center

(MEC) in Kansas City, MO. EnergyWorks was among the initial Rebuild America partnerships that were awarded grants from the U.S. Department of Energy (DOE) and received \$500,000 in "seed money" for new partnerships.

The partnership, which targets schools, local government and nonprofit buildings in the Kansas City metropolitan area for energy-efficiency improvements, is responsible for the retrofit of 4.3 million square feet comprising 58 buildings and energy savings of \$2.3 million per year. Its parent organization, MEC, is an established nonprofit that has focused on improving energy efficiency and environmental quality in the Kansas City metropolitan area since its inception in 1981. At the helm of EnergyWorks for the past two years is **Voris Williams**, formerly an ozone compliance specialist with the Mid-America Regional Council in Kansas City, MO.

EnergyWorks met with success early on and attracted a wide range of partners including

*Continued on page 11***Students Proclaim  
Efficiency Is Elementary**

A dozen student ambassadors from across the nation took their ideas on how to make the nation's schools more energy efficient straight to Washington, DC on November 17.

The U.S. Department of Energy (DOE) and Owens Corning appointed 12 energy ambassadors based on their award-winning essays on why "Saving Energy Starts with Me." The national essay contest, in which thousands participated, was part of a larger educational program developed by DOE and Owens Corning for 4th, 5th and 6th grade students.

Through the comprehensive, energy-focused, in-class and take-home activities, students, parents and teachers learned about the importance of energy conservation and simple steps to take at home and at school to reduce energy use and help protect the environment.

The ambassadors met with government and industry officials at the U.S. Capitol for the first EnergySmart Schools Student Summit to discuss the serious

problem of energy waste in the nation's 112,000 K-12 schools.

DOE estimates that as much as 25 percent of the \$6 billion spent annually on energy is wasted due to inefficient roofing, heating, air conditioning, lighting, and insulation systems.

The students wrote an "EnergySmart Schools Proclamation" during the Summit to encourage school superintendents to improve the energy efficiency of their facilities and transportation vehicles and to educate students on ways to save energy. The ambassadors unveiled the Proclamation at a national news conference held November 18 at Patterson Elementary, one of the oldest elementary schools in Washington, DC.

"The reason we wrote the Proclamation is to let everyone know that kids are serious about saving energy," said **Jia Harden**, a sixth-grader at Patterson Elementary School and an EnergySmart school ambassador. "We want to live in a world that

*Continued on page 8***Inside This Issue****2** SUN DEVILS DELVE INTO BUILDING AUDITS**2** ANNOUNCING THE 250TH PARTNERSHIP**3** TEAMING WITH HOME DEPOT IN TOLEDO**4** TAKING STOCK OF WINDOWS**6** SEEING SCHOOLS IN A NEW LIGHT**7** "MINING THE SKY" IN NEW MEXICO

# Sun Devils Score Energy-Efficiency Points

Engineering students at Arizona State University (ASU) are getting an education about energy efficiency and area apartment complexes and businesses are benefiting from their expertise. Beginning in the summer of 1997, the ASU College of Engineering, under the auspices of Rebuild Arizona, embarked on a 5-year program to perform building audits on area businesses and recommend improvements to building owners. To date, ASU students have performed audits on 1.8 million square feet in the Valley of the Sun including retail space, apartment complexes, commercial office buildings, an elementary school, and city and state government facilities including a water treatment plant.



"The program exposes the students to existing building equipment and to the technologies available to substantially upgrade them and prepares them to make appropriate recommendations for energy-efficiency improvements," notes **Rebuild Arizona** partnership leader **Jim Westberg** of the Arizona Department of Commerce-Energy Office. Partners of Rebuild Arizona include the City of Tempe, the City of Scottsdale and the Arizona Public Service Company.

According to ASU Faculty Research Associate of engineering **David Chau**, students have identified \$700,000 in energy-efficiency improvements that would yield annual energy savings of \$400,000 if implemented. He says the students are an independent third party and do not recommend contractors or specific products to building owners, nor do they participate in energy-efficiency installations.

The improvements that building owners have made based on student recommendations include lighting, electric motors, HVAC equipment, chillers, variable frequency drives, air compressor cooling towers, and daylighting using skylights with reflective mirrors to minimize summer heat gain, Chau says. Students also recommended the use of controlling devices such as occupancy sensors, timers and photocells.

The Arizona Department of Public Safety used a matching state grant to implement the students' recommendations and installed a new chiller, energy-efficient motors, occupancy sensors and 350 efficient light fixtures, according to Chau. Students have found that lighting operating costs, which represent approximately one third of building energy costs, can be significantly reduced, he notes.

## View from DC

By Mark Bailey

### Announcing Rebuild America's 250th Partnership!

From a Rebuild America perspective, what better way to herald the new year, new century and new millennium than to announce that the program has reached a key goal? And that is, to reach 250 partnerships by 2000. It is now official. **Rebuild Austin, TX** will wear the mantle of the 250th Rebuild America partnership.

Plans are now underway for an event to honor this milestone in Austin in late February. Details to be announced.

Led by **I.Q. Hurdle**, project director with the East Austin Economic Development Corporation, Rebuild Austin embodies strong leadership, a broad scope of activities, and a diversified roster of partners. It also embraces a key Rebuild America theme: Using energy efficiency as a catalyst for community improvement and economic development.

Partnership plans revolve around sustainable development and a demonstration project aimed at transforming a disadvantaged neighborhood surrounding a local Baptist church into a model of energy efficiency and sustainability. Energy-efficiency solutions will be incorporated into housing for families and seniors, community buildings including a daycare center, and office space for small businesses. The project will create a training center designed for replication in an estimated 70 churches.

As we move ahead with our plans to expand Rebuild America into more communities in the coming year, let's be mindful that Rebuild America is part of the big picture of creating better communities through sustainable development, clean technologies and the wise use of our resources. Let's keep focused and help advance the concepts of *Clean Energy* and *Buildings for the 21st Century* as we continue to work together toward an energy-efficient future.

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# Rebuild Toledo And Home Depot Offer A Do-It-Yourself Degree

Residents of Toledo, OH, are gaining hands-on experience in home repair and improvement thanks to an innovative partnership between Neighborhood Housing Services of Toledo (NHS) and The Home Depot.

NHS, lead partner in **Rebuild Toledo**, expanded its HomeOwnership Center to offer The Home Depot University, a series of eight classes covering weatherization, drywall, painting, plumbing, electrical, landscaping and other topics.

“Home improvement and maintenance is not something people inherently know,” said Rebuild Toledo Manager **Paulette Huber**. “People are interested in improving the value of their homes and making them more attractive and comfortable. This is a way to learn from the experts.”



Kathy Parker and Scott  
Main grout tile.

Group learns the finer points of staining wood.

## Giving Back to Communities

The partnership began in early 1999, when Huber approached Home Depot with the idea for taking their training program out of the store and into the community.

“The Home Depot is dedicated to giving back to the communities where we work and live,” said **Jim Watson**, Toledo Home Depot store manager. Since the first classes began in May, the company has donated more than \$22,000 in materials, cash and labor.

The free classes are held in the evenings in a house that NHS is renovating, which Huber said makes a difference: “There’s a tremendous sense of satisfaction because people are working on a real house, not a set.”

Each series of classes enrolls about 25 people; the four held to date have all been full. The Home Depot experts provide tips, materials lists, safety information and complete instructions.

Participants who attend at least seven classes receive a free copy of the how-to book, *Home Improvement 1-2-3*.

## Building with a Fresh Perspective

Since its founding in 1977, NHS has focused on home ownership as the key to community redevelopment. Their services include homebuyer education, mortgage and improvement loan programs, and residential weatherization programs.

Huber said a large part of their work involves creating affordable, energy-efficient housing that gives people the choice of staying downtown. After acquiring houses in central city neighborhoods, NHS either does a complete rehab or tears them down to build new homes.

“Before joining Rebuild America, we built to code,” Huber said. “Now we have a fresh perspective and the impetus to build energy-efficient homes that serve our clients even better than before. We’ve done three ENERGY STAR® homes and have 18 more slated.”

Home Depot University was a logical next step for NHS, according to Huber. While NHS had offered many classes on the home-buying process, they hadn’t focused on owning a home. Now they’re taking a comprehensive approach to energy efficiency.

“Right now, this is the only program of its kind in the country,” Huber said. “But it is replicable across Rebuild America. There is an effort by Home Depot to build partnerships like ours nationwide, and they need to find non-profits to talk to.”

For more information, contact Paulette Huber at 419-691-2900 or e-mail [rebuildtoledo@toledolink.com](mailto:rebuildtoledo@toledolink.com).



Joanne Wilson learns to  
cut ceramic tile.



Ribbon cutting for first ENERGY STAR®  
modular home in Ohio.

## Work Bench

# Windows are Key to Building Energy Performance

By Susan Douglas

Building owners pay an enormous price for old and inefficient windows. According to the U.S. Department of Energy, 25 percent of the energy used to heat and cool buildings goes right out those windows. Inefficient fenestration products contribute to unnecessarily high energy bills and reduce the comfort level of the people who have to live and work inside those buildings.

Energy-efficient technologies now available can dramatically improve the overall energy performance of a building. Building owners nationwide are taking advantage, and realizing substantially lower energy bills that provide an ample return on their investments in energy-efficient upgrades. These technologies include:

- *Low-e coatings*, a microscopically thin metal coating applied to the glazing surface, and *spectrally selective glazings*, which reflect the infrared radiation in sunlight and help keep buildings cool in the summer

- *Inert gas fills*, such as argon and krypton, which improve the insulating properties of a window and help keep buildings warm in the winter
- *Warm edge spacers*, which improve the insulating properties of a window by reducing heat transfer at the edge of insulating glazings

Research now underway will lead to improved performance in the future. Electrochromic windows will automatically adjust their tint, providing extra shading when the sun is at its hottest. One day, windows may even serve as mini power plants, with small heating coils inserted in the glazing that can produce heat during the winter, and, in some cases, completely replace traditional baseboard or central heating.

The National Fenestration Rating Council (NFRC) administers a uniform, independent energy performance rating and labeling system for windows, doors and skylights. NFRC recently adopted a new site-built procedure that will allow manufacturers and glazing contractors to



The NFRC Energy Rating Label

certify the performance of their site-built products. We encourage commercial building owners to specify NFRC-certified products for all retrofits and new construction.

For more information on energy-efficient window technologies, contact Susan Douglas, NFRC Administrator, at 301-589-6372, or Alecia Ward at the Efficient Windows Collaborative, 202-530-2245, [www.efficientwindows.org](http://www.efficientwindows.org).

## Business Partners Convene in San Francisco

“We have momentum, we have direction and we have the nucleus of a strong industry/DOE partnership that has the real potential to implement massive efficiency projects in the near future.” That’s Rebuild America Business Partners Team Leader **Doug Avery’s** assessment of the initiative’s first summit held December 2 in San Francisco.

“We also have the opportunity for a true partnership where each participant has a real voice in how Business Partners works and how we jointly leverage the tremendous resources provided by DOE, Rebuild America and private industry,” Avery notes.

Current and prospective Business Partners convened to review the initiative, consider standards for

membership, and examine ways to better market the initiative for both the Business Partners and Rebuild America.

Avery wants an industry council to set standards for acceptance into the Business Partner ranks. He also stresses the importance of getting feedback from the Business Partners to shape the “Rules of Engagement” between Business Partners and Rebuild America partnerships.

Several Business Partners are already “in action” with partnerships. The **City of Reno** has signed a performance contract with Sempra Energy Services to implement \$1.4 million in energy-efficiency improvements. The scope of work includes implementing lighting upgrades in 60 buildings, installing

# Public Housing Takes the Stage at Hall of Fame

Nearly 80 participants attended “Energy Opportunities in Public Housing,” a conference presented by **Rebuild Ohio**, and **Stark Metropolitan Housing Authority** (SMHA) on November 15-16 at the Pro Football Hall of Fame in Canton, OH.

Attendees represented 20 public housing authorities and six partnerships, says conference organizer **Mike Williams**, maintenance and development director for SMHA.

“They came to learn about Rebuild America, HUD [U.S. Department of Housing & Urban Development] incentives and partnerships,” Williams said, “and they walked away with a sense of excitement about energy issues.”

Rebuild Ohio’s **Manny Anunike**, a conference organizer, agreed. “We want to work with many more public housing authorities in our Rebuild Ohio partnership, and at this conference we formed a real focus on their issues.”

Conference speakers addressed electric industry deregulation and the opportunities it holds for public housing authorities. Representatives from HUD and state agencies also discussed innovative approaches authorities around the country are taking.

Rebuild America Business Partners FirstEnergy Corporation and Viron Energy Services sponsored the conference and participated as presenters. Along with national laboratory

representatives, they discussed performance contracting and energy audits, the role of energy service companies, and tools available to help authorities manage their resources.

Rebuild America representatives **Juli Pollitt** and **Geri Perrotte** provided an in-depth look at Rebuild America and the resources available through the U.S. Department of Energy to assist partnerships. They also assembled a “Building Partnerships” roundtable featuring Ohio partnership leaders.

Attendees were enthusiastic about their time in Canton, ranking the overall conference near-excellent on their evaluations. “The topic is timely and there was a good level of interest from the audience,” wrote one participant. And, from another: “My expectations were both met and exceeded.”

For his part, Williams is focusing on next steps. “We already have added one new member to Rebuild America, and several others have an interest in aggregation,” he says. “With such a small percentage of public housing authorities taking advantage of Rebuild America, we definitely plan more conferences like this.”

*For more information, contact Mike Williams at 330-454-8051 or Manny Anunike at 614-466-6797.*

## Sun Devils

*Continued from page 2*

ASU engineering students also teamed with the Arizona Department of Commerce’s Housing and Energy Offices to help lower utility bills for residents of the 124-unit Mercy Court Apartments in Phoenix. The Housing Office provided State Housing Trust Fund monies to install the measures recommended by the students. The Energy Office helped prepare bid specifications and monitored the installation of the following measures in coordination with the property manager:

- Converting incandescent exterior lighting by the apartment entry walls and back patios to compact fluorescent technologies

- Converting exterior parking lot lighting from incandescent to high-pressure sodium technology
- Converting the kitchen light fixtures to more efficient fluorescent lighting.
- Testing and sealing leaks in heating and cooling equipment ductwork in each apartment
- Installing shade screens on all east, west and south facing windows.

The property manager reports that residents are pleased with the installation and especially with the added privacy provided by the shade screens. The installation of all of these measures cost \$70,000 and is expected to save the apartment building owner and residents

over \$20,000 annually. The owner pays the utility bill for the common areas while residents are responsible for the utility bills for their own apartments. The Energy Office will be working with both parties to track their utility bill savings.

*For more information, contact Jim Westberg of the Arizona Department of Commerce at 602-280-1434 or e-mail [jimu@eps.state.az.us](mailto:jimu@eps.state.az.us).*

*Albuquerque, NM was the site of two important events held November 16. At the first, the U.S. Department of Energy (DOE) launched the Rebuild Greater Albuquerque partnership during a ceremony to recognize Rio Grande High School for retrofitting four classrooms with energy-efficiency technologies. (See Partner*

*Update, Nov-Dec '99). At the second, DOE officials helped dedicate a solar carport at the city's Indian Pueblo Cultural Center as part of the City of Albuquerque's Million Solar Roofs Initiative partnership and its Rebuild America partnership.*

## Lighting Retrofits with Daylighting: Seeing Schools in a New Light

Through **Rebuild Greater Albuquerque**, Rio Grande High School was treated to a double dose of lighting improvements that included a “hybrid” technology offering a mix of artificial and natural light.

Organized by **Barbara Ford** of the South Valley Energy Action Team, the event at the high school officially launched the partnership and its efforts to make Albuquerque a more “livable community” through efficiency and renewable energy projects. More than 15 Albuquerque partners – including the City of Albuquerque, Albuquerque Public Schools, the Public Service Company of New Mexico, and Diversified Systems Manufacturing – have been working with Rebuild America representatives since September 1998.

Four Rebuild America Business Partners – FineLite, Prudential Lighting, NORESCO, and Watt Stopper – provided pro bono services and on-site lessons about energy-efficiency technologies during a demonstration retrofit of four classrooms. Business Partner contractors conducted energy audits, replaced inefficient T-12 lamps with efficient T-8 linear fluorescent lamps, and installed lighting controls, dimmable ballasts and daylighting systems. Students plan to monitor the improved systems for energy savings

and post the results on a web site.

The Rio Grande students presented a summary of the anticipated energy savings and technology installed in their classrooms to DOE Deputy Assistant Secretary **Mark Ginsberg**. In his remarks, Ginsberg stressed to students the importance of saving money through energy efficiency and joked that they “couldn't blame poor lighting for missing homework assignments anymore.” Other Rebuild Greater Albuquerque energy-efficiency projects, including one led by the Solar Energy Association, were demonstrated in the school courtyard.

### **Energizing Students**

A 1999 California Board for Energy Efficiency study found that students in daylit classrooms progressed at a rate 20 percent faster on math and 26 percent on reading tests in one year compared to their counterparts in classrooms that offered little daylighting. The lighting retrofits at Rio Grande – especially the daylighting units – were a big hit with the teachers and students.

“I just feel more energized by daylighting,” says teacher Pam Mackara. “I hope every classroom eventually has a system like the one I – and the students – are enjoying. I'm not surprised by the claims of better health and performance. Surely sunlight confers a psychological as



*DOE Deputy Assistant Secretary Mark Ginsberg addresses Rio Grande High School students.*

well as a physical boost to the human body.”

The hybrid lighting system by Prudential Lighting in one classroom uses two 2-by-2-foot daylighting units to harvest enough daylight to almost obviate the need for artificial light altogether. Prudential determined that Albuquerque received 350 days of good sunlight each year with the help of SkyCalc, a program developed by DOE, Pacific Gas & Electric (PG&E) and the California Energy Commission and the Skylight Initiative Committee. On these days, daylighting provides enough light for the classroom, with the possible exception of the blackboards, which may require some artificial lighting.

The “Type A” daylighting units installed in the Rio Grande's classrooms filter out harmful UVA and UVB light and most of the infrared or heat associated

## “Mining the Sky” in New Mexico

U.S. Department of Energy (DOE) officials helped dedicate a solar carport at the Indian Pueblo Cultural Center (IPCC) as part of the City of Albuquerque's Million Solar Roofs initiative and its **Rebuild Greater Albuquerque** partnership.

DOE Assistant Secretary for Energy Efficiency and Renewable Energy **Dan Reicher, Dave Melton** of the Indian Pueblo Cultural Center, and representatives of the Albuquerque Million Solar Roofs Partnership, were on hand to help dedicate the 10 kw system, which is the largest commercial photovoltaics (PV) array in New Mexico.

The PV panels were installed atop a solar carport or shading structure in the parking lot of the IPCC, and convert sunlight directly into electricity.

Reicher spoke about the importance of renewable energy to an audience of about 70 and presented a plaque from Million Solar Roofs to IPCC President **Rafael**

**Gutierrez**. In his comments, Melton described the PV method of using solar energy to make electricity and conserve water by reducing coal processing as “mining the sky, making it rain.”

A comprehensive monitoring system will be installed to monitor and calculate annual energy, water, and money savings resulting from the PV array. A kiosk inside the Cultural Center will graphically convey the energy savings to the 400,000 visitors to the Center each year. The solar carport will serve as an educational tool for the public, according to Melton.



From left: Dave Melton and Rafael Gutierrez of IPCC with DOE Assistant Secretary Dan Reicher.

Denver Regional Team Leader **Dave Waltzman** sees potential for greater Native American involvement in Rebuild America.

“The program with the Pueblo Cultural Center shows how dedicated individuals can successfully build partnerships with Native American programs and communities,” says Waltzman. “The Albuquerque initiatives have been an exciting opportunity for DOE to work with committed and innovative community leaders in New Mexico.”



Dan Reicher addresses the audience under the cover of the IPCC's new solar carport.

### Lighting Retrofits

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with sunlight, while letting in full-spectrum white light – readily available even on cloudy days. Other components of the hybrid system are the sensors, T-8 lamps, dimmable ballasts, and timers. Sensors monitor the incoming daylight and send electrical messages to a new array of compact fluorescent lights, which are dimmed or brightened as needed with dimmable ballasts. Timers turn on the blackboard lights based on “patterns of need”. Even if artificial lighting was required all the time, efficient T-8 lamps – which replaced the conventional T-12 lamps – use 10 percent less energy. Payback periods for this new hybrid system – which benefit from a greatly reduced requirement for fluorescent lighting – are expected to be seven years or less.

Albuquerque Public Schools (APS) spent approximately \$7.5 million of public funds for electricity in fiscal year 1997-98 – \$2.2

million of this amount was spent on classroom lighting alone, according to David Robertson, APS facilities planning engineer.

“DOE is proud of Albuquerque's accomplishments with Rebuild in such a short time”, says Denver Regional Team Leader **Dave Waltzman**. “The Albuquerque Partnership has shown tremendous initiative in planning, undertaking, and implementing real hands-on projects in creative ways. The way they have linked the schools with the Rebuild America Business Partners should serve as a model for other partnerships.”

*To learn more about how Rebuild America Business Partners can help expand your community partnership's resource base, visit [www.eren.doe.gov/buildings/rebuild](http://www.eren.doe.gov/buildings/rebuild) and click on "Business Partners," or e-mail Doug Avery at [dougavery@earthlink.net](mailto:dougavery@earthlink.net).*

## Snapshot



**Juli Pollitt**  
is the Chicago  
Regional Team  
Leader.

**Vital Statistics:**

Lives in  
Waukegan, IL,

about 40 miles north of Chicago, in the very northeast corner of the state. Shares house with best friend, Cheri; 6-year-old son, Mikey; and two cats and a dog.

**Current Role with Rebuild America:**

Regional Team Leader for Rebuild America in the Department of Energy's Chicago Regional Office.

Office covers the states of Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio and Wisconsin.

**Most rewarding aspect of your work:**

I find many aspects of this work rewarding. I probably get the most out of letting the people who are actually doing the real work of the program know how greatly their efforts are valued. Generally speaking, though, it's always rewarding to see people excited about doing something that they believe in and that they believe makes a difference.

**Your greatest Rebuild America challenge:**

Finding the best way to use Rebuild America as an opportunity to apply the full range of energy-efficiency and renewable opportunities to a stakeholder/community. We wrestle all the time with a multitude of program identities – it's confusing to the end user. We should consider it progress whenever we can find a way to simplify access to resources.

**What you like to do in your spare time:**

Spare time?! As a single parent with a busy career, I don't have too much of that. When I can, I make time for gardening (hybrid tea roses are a passion of mine) and music – both have a profoundly calming affect on me.

**Something you haven't tried but think you might be good at:**

Being independently wealthy.

**A book you recommend:**

*The Fran Leibowitz Reader.* A very funny woman with a wry wit and little concern for political correctness.

**Where you'd live, if you could live anywhere in the world:**

Outside the range of my cell phone and pager.

## Students Proclaim

Continued from page 1

never runs out of energy, but first everyone has to stop wasting it. We want everyone to start saving energy in their schools and their homes now."

DOE Assistant Secretary **Dan Reicher** promised that the signed Proclamation will be forwarded along with energy-efficiency advice and teaching materials to school superintendents in conjunction with Earth Day 2000 in April. Reicher praised the ambassadors for their interest in saving energy.

"The kids have done their jobs by writing this well-thought-out Proclamation, and now it's time for school administrators across the country to address this serious issue of energy inefficiency in our schools," Reicher said.

"We are very proud of the contributions that all of these ambassadors have made to the EnergySmart Schools campaign and appreciate the thousands of other children who wrote essays," said **Glen Hiner**, CEO of Owens Corning. "These kids are definitely making



The 12 designated energy ambassadors are pictured here with Deputy Secretary of Energy T.J. Glauthier, top row at left, and Owens Corning Sr. Vice President Bob Lonergan.

a positive long-term impact in our nation and on our planet."

The event attracted media attention and the story was featured in the *Washington Post*, *Scholastic News*, *Weekend Today* (NBC), *The Early Show* (CBS) and several national radio shows, including *The Carrey Brothers*, *Home Improvement USA*, and *The Money Pit*.

For more information, see the DOE press release at <http://bome.doe.gov/news/releases99/novpr/pr99309.htm>. View the winning essays and the Proclamation on the EnergySmart Schools web site on [www.eren.doe.gov/energysmartschools](http://www.eren.doe.gov/energysmartschools).

## Rebuild America Briefs

**Rebuild Richland completes library project.**...Rebuild America and Pacific Northwest National Laboratory dedicated the City of Richland (WA) Library on November 4. Rebuild Richland replaced the library's 30-year-old lighting system with high-efficiency units that resulted in over \$8,000 per year in energy costs savings, improved lighting levels and reduced maintenance requirements.

**Rebuild America plays ball.**...The Rebuild America program has been proposed as the primary platform for the San Diego Regional Energy Office's (SDREO) efficiency projects. SDREO is currently working on a \$411 million efficiency project to create a Ballpark District in the heart of Downtown San Diego. The District will include residential lofts, restaurants, shops, entertainment and conference facilities and a 40,000-seat, open-air, multiple-use ballpark that will feature natural grass and serve as the home of the San Diego Padres. The City of San Diego will be incorporating its energy-efficiency building policy into numerous areas of this project. SDREO estimates taxpayers will save over \$375,000 in electricity costs per year, and reduce CO<sub>2</sub> emissions from power plants by more than 1,400 tons annually.

**Rebuild Cedar Falls wins award.**...The Center for Energy and Environmental Education (CEEE) at the University of Northern Iowa in Cedar Falls has received the 1999 Iowa Energy Leadership Award. The Iowa Department of Natural Resources presents the award annually to recognize outstanding innovations in energy efficiency and renewable energy.

CEEE is the community coordinator for Rebuild Cedar Falls.

**Rebuild New Hampshire issues RFP.**...Rebuild New Hampshire has sent a Request for Proposals (RFP) to city, town, school, county and other local government officials and community partners to encourage investment in energy efficiency and renewable energy improvements to existing buildings. Qualified applicants will receive grants for energy-efficiency and renewable energy improvements under the Community Energy Partnership (CEP) Grant Program from the Governor's Office of Energy and Community Services. Individual CEP grants may not exceed \$15,000 or 40 percent of a project's total cost, whichever is less.

**Develop New Albany, Inc. honored.**...Develop New Albany, Inc. (IN), a Rebuild America partnership, received the Downtown Special Events Award at the Annual Indiana Main Street Conference in Evansville, IN, in September. Partner representative **Jackie James** of PNC Bank in New Albany was also honored as Board Member of the Year.

**Havasupai Indians to receive weatherization and energy-efficiency assistance.**...Rebuild America Seattle Regional Team Leader **Paul Johnson** has announced that the U.S. Department of Energy, through the Weatherization Assistance Program and Rebuild America has committed \$20,000 for weatherization and energy-efficiency retrofit activities for the Havasupai Indians of the Grand Canyon in Arizona. The program will focus on providing weatherization

training to Havasupai housing staff, weatherizing homes audited by the Rebuild team in October, and exploring potential partnerships for the Weatherization and Rebuild America programs on reservations.

### Business Partners

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variable frequency drives on pumps and air handler units, replacing chillers, and installing a solar panel over a pool, among other improvements.

The State of Connecticut Energy Office organized a financing workshop sponsored by ONSITE SYCOM Energy Corp. Connecticut Rebuild America representative **John Ruckes** reports that ONSITE SYCOM received high marks from the audience for its educational presentation.

Jon Wellinghoff of NORESKO briefed participants about the lighting upgrade demonstration project that four Business Partners (NORESKO, WAIT Stopper, Prudential Lighting, and FineLite) had successfully completed in Albuquerque at the Rio Grande High School.

*For information about the Business Partners initiative, visit [www.eren.doe/buildings/rebuild](http://www.eren.doe/buildings/rebuild) and click on Business Partners or contact Doug Avery at 310-798-6927 or e-mail [dougavery@earthlink.net](mailto:dougavery@earthlink.net).*

# Solutions

Where do you go online to find solutions to your partnership's energy-efficiency needs? What web sites can give you a leg up on buying energy-efficient equipment in bulk, on tools for

evaluating building energy use, or on sustainable building practices? The chart below identifies the web sites that provide some useful resources for partnerships.

Energy-Efficient Products	Energy Consumption Tools and Software	Community Solutions	Sustainable Building Practices	Electrical Deregulation/Utility Marketplace
<p><b>Bulk Purchasing:</b>  <a href="http://www.epa.gov/appdstar/purchasing">www.epa.gov/appdstar/purchasing</a></p> <p>The ENERGY STAR® purchasing web site makes it quick and easy for your organization to purchase bulk quantities of residential and non-residential energy-efficient product.</p> <p><b>Windows, Doors and Skylights:</b>  <a href="http://www.nfrc.org">www.nfrc.org</a></p> <p>The National Fenestration Rating Council provides accurate and reliable information in the form of a label to certify the energy performance of windows products. (See Work Bench this issue.)</p> <p><b>ENERGY STAR® Products:</b>  <a href="http://www.energystar.gov">www.energystar.gov</a></p> <p>Provides lists of ENERGY STAR® qualified products such as appliances and electronics and a store locator to help you find a retailer near you.</p> <p><b>The Green Building Resource Guide:</b>  <a href="http://www.greenguide.com">www.greenguide.com</a></p> <p>A database of over 600 green building materials and products selected specifically for their usefulness to the design and building professions, rather than for their green material content.</p>	<p><b>ENERGY STAR® Benchmarking Tool:</b>  <a href="http://www.epa.gov/buildings/label/html/benchmarking.html">www.epa.gov/buildings/label/html/benchmarking.html</a></p> <p>An online resource that evaluates building energy performance using detailed data on the building's physical attributes, operating characteristics, and monthly energy consumption. Identifies buildings that are eligible for recognition as an ENERGY STAR® Building.</p> <p><b>Energy-Related Software Tool:</b>  <a href="http://www.eren.doe.gov/buildings/tools/directory">www.eren.doe.gov/buildings/tools/directory</a></p> <p>Describes 174 energy-related software tools for buildings, with an emphasis on using renewable energy and achieving energy efficiency and sustainability in buildings.</p> <p><b>Online Home Energy Audit:</b>  <a href="http://hes.lbl.gov/">http://hes.lbl.gov/</a></p> <p>How much energy your home is using? Web site visitors can receive an energy audit online by inputting detailed information about their residence. The audit gives a close approximation of how much energy the house currently uses and offers advice on ways to improve energy efficiency.</p>	<p><b>What's Working in Other Communities:</b>  <a href="http://www.eren.doe.gov/cities_counties">www.eren.doe.gov/cities_counties</a></p> <p>Need help to jump start local energy projects? This series of fact sheets developed for DOE's Office of Energy Efficiency and Renewable Energy cues you in on tried and true approaches.</p> <p><b>The Local Government Commission (LGC):</b>  <a href="http://www.lgc.org/welcome.html">www.lgc.org/welcome.html</a></p> <p>LGC provides a forum and technical assistance to enhance the ability of local governments to create and sustain healthy environments, healthy economies, and social equity. Intended to provide up-to-date information on energy efficiency, renewable energy resources, utility restructuring and more.</p> <p><b>The Main Street Program:</b>  <a href="http://www.mainst.org/">www.mainst.org/</a></p> <p>Designed to improve all aspects of the downtown or central business district, Main Street communities take steps to stimulate the local economy by rehabilitating buildings, creating jobs, recruiting new businesses and transforming downtown areas into key destinations for residents and visitors alike.</p>	<p><b>U.S. Green Building Council:</b> <a href="http://www.usgbc.org">www.usgbc.org</a></p> <p>The U.S. Green Building Council positions itself as a forum for education, debate and action on environmental issues facing the industry's varied interests.</p> <p><b>Green Building Information Council (GBIC):</b>  <a href="http://greenbuilding.ca">http://greenbuilding.ca</a></p> <p>GBIC is a Canadian non-profit organization whose mission is to disseminate information worldwide about energy and environmental issues in the building sector.</p> <p><b>The Green Building Program:</b>  <a href="http://www.ci.austin.tx.us/greenbuilder">www.ci.austin.tx.us/greenbuilder</a></p> <p>The Green Building Program encourages construction professionals and consumers to incorporate sustainable building practices, systems, and materials into residential and commercial construction.</p>	<p><b>Utility Marketplace:</b>  <a href="http://www.Utility.com">www.Utility.com</a>  <a href="http://www.Essential.com">www.Essential.com</a>  <a href="http://www.Energy.com">www.Energy.com</a>  <a href="http://www.GreenMountain.com">www.GreenMountain.com</a></p> <p>The Internet has opened up a new marketplace for buying goods and services including electrical energy for your home or business. Get up to speed on what some of these electrical suppliers can offer.</p> <p><b>Utility Connection:</b>  <a href="http://www.utilityconnection.com">www.utilityconnection.com</a></p> <p>Provides links to 3,825 utility associations, news sources, regulatory and information sites.</p> <p><b>Energy Central:</b>  <a href="http://www.energycentral.com">www.energycentral.com</a></p> <p>A comprehensive state-by-state and federal "Deregulation Watch."</p>

Make your first stop the Rebuild America web site:  
[www.eren.doe.gov/buildings/rebuild](http://www.eren.doe.gov/buildings/rebuild)

## Profile

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national labs, ESCOs (Energy Masters, Viron, Johnson Controls), state energy office, City of Kansas City (MO), Greater Kansas City Community Foundation, and the Environmental Improvement and Energy Resources Authority of Missouri.

Project retrofits have been funded through public and private grants, low-interest loans, performance contracts, internal organizational funds, Williams notes.

Williams says DOE resources such as consulting assistance from national labs and the Facility Energy Decision System (FEDS) analytical software helped boost the partnership's efforts.

The program's biggest achievement to date has been its role in assisting the City of Kansas City (MO) in the retrofit of 3.5 million square feet of convention and entertainment facilities including Bartle Hall and the American Royal and Kemper Arena. The project entails about \$12 million in improvements in lighting, HVAC and building controls that are guaranteed to save \$1.6 million per year for 10 years through a performance contract with Johnson Controls. Williams says the performance contract made it possible for the project to proceed.

EnergyWorks has also assisted Kansas City with two outdoor lighting retrofit projects to replace aging, inefficient mercury vapor street lights with high-pressure sodium and to replace red traffic signals with LEDs (light-emitting diodes).

### Funding for the Future

The biggest challenge facing EnergyWorks is finding a way to become self-sustaining once its DOE funding runs out in less than a year, notes Williams. MEC receives funding from DOE, the

Environmental Protection Agency, the Kansas and Missouri energy offices and private foundations.

"We're working on establishing a fee structure for our services," he says. "EnergyWorks is in the process of expanding its scope in several directions. About a year ago, we teamed with the local council of governments to provide a five-part energy management training program for local government personnel. This was very well received. We are also looking to offer an energy/environmental curriculum component to our projects involving schools."

EnergyWorks is also developing the Heart of America Smart Builder Program to incorporate energy- and resource-efficient technologies into new construction in the Kansas City area.

As have many of his Rebuild America colleagues, Williams, a native of Chattanooga, TN, took a circuitous path to his current post in the energy field. Armed with a communications degree, he worked as a newspaper reporter covering politics for The Knoxville (TN)

Journal in the late 1980s. By 1990 he had a master's in public administration from Indiana University and moved to Kansas City to take an auditing position with the City Auditor's Office. He became interested in the energy sector while working in air quality at his next post with the Mid-America Regional Council. He found himself drawn to EnergyWorks when he saw that the program produced tangible environmental, as well as economic, results and came on board two years ago. Williams served on the Planning Committee for the 1999 Rebuild America National Forum.

In his spare time, Williams enjoys playing the piano, hiking, and on clear nights, tracking satellites in the sky. He is part of SETI@home, a worldwide, Internet-based scientific experiment that is engaged in the Search for Extraterrestrial Intelligence (SETI).

*For more information, contact Voris Williams at 816-531-7283 or e-mail voris@toto.net.*

## EnergyWorks At-A-Glance (data as of July 1999)

Buildings analyzed . . . . .	= 107
Total sq. ft. . . . .	= 7.4 million
Buildings retrofitted . . . . .	= 58
Total sq. ft. . . . .	= 4.3 million
Capital investment . . . . .	= more than \$23 million
Estimated savings of retrofits to date . . . . .	= \$2.3 million per year
Potential additional savings if analyzed buildings are retrofitted . . . . .	= \$1.4 million per year
Total savings if all were retrofitted . . . . .	= \$3.7 million per year



## Upcoming Events

### FEBRUARY

**Greenprints 2000: Sustainable Communities by Design Conference and Tradeshow.** February 6-8, 2000 in Atlanta. Contact Morningstar Management Group at 404-653-0606.

**Buildings for the 21st Century Lecture Series: Revitalizing Communities with Energy Savings.** February 17, 2000 at the National Building Museum, Washington, DC. Presented by Ted Alexander of Rebuild Shelby (NC) and the Uptown Shelby Association. Contact Jim Fremont of DOE at 202-586-5735.

### MARCH

**Seattle Peer Exchange.** March 1-3, 2000, in Portland, OR. Contact Paul Johnson, Seattle Regional Team Leader at 206-553-2154 or e-mail paul.johnson@hq.doe.gov.

**American Association of School Administrators (AASA) 132nd Annual Conference.** March 3-6, 2000 in San Francisco. Visit [www.aasa.org/Events/events.htm](http://www.aasa.org/Events/events.htm).

**National Association of Counties (NACO) Legislative Conference.** March 3-7, 2000 in Washington, DC. Visit [www.naco.org/events/leg/index.com](http://www.naco.org/events/leg/index.com).

**2000 NAHRO (National Assoc. of Housing and Redevelopment Officials) Legislative Conference.** March 27-29, 2000 in Wash., DC. Visit [www.nahro.org/conferences/index.html](http://www.nahro.org/conferences/index.html)

## Share Your Success

To submit news or story ideas, contact:

- Elise G. Rand, (202) 466-7391, or e-mail [erand@pcgpr.com](mailto:erand@pcgpr.com)
- Alex Zartman, (301) 588-9387, or e-mail [alexz@drintl.com](mailto:alexz@drintl.com)

## Learn More

Rebuild America is part of DOE's Buildings for the 21st Century. If you would like information about Rebuild America or the other energy efficiency and renewable energy programs and resources, call 1-800-DOE-EREC or visit [www.eren.doe.gov](http://www.eren.doe.gov).

To be placed on the mailing list for *Rebuild America Partner Update*, e-mail [rebuildamerica@drintl.com](mailto:rebuildamerica@drintl.com).

## Rebuild America Welcomes 8 New Partnerships



Rebuild America is a network of community partnerships – made up of local governments and businesses – that save money by saving energy. These voluntary partnerships, working with the U.S. Department of Energy, choose the best ways to improve the energy efficiency of commercial, government and apartment buildings. Rebuild America supports them with business and technical tools and customized assistance.

By the year 2003, 250 Rebuild America partnerships will be involved in over 2 billion square feet of building renovations, which will save \$650 million every year in energy costs, generate \$3 billion in private community investment, create 26,000 new private sector jobs, and reduce air pollution by 1.6 million tons of carbon dioxide a year.

Rebuild America  
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State and Community Programs  
U.S. Department of Energy  
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U.S. DEPARTMENT OF  
**Energy**

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