

Partner Update

U.S. Department of Energy • Office of Energy Efficiency and Renewable Energy

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November – December 2002

Midwest Forum Hears of Sales and Successes

Rebuild America state representatives and community officials gathered in Indianapolis November 5-7 to share knowledge and experience at the Midwest Regional Rebuild America Peer Exchange.

Participants in the Peer Exchange shared success stories and discussed the practical details of their accomplishments. The meetings involved a fair amount of give and take, including not only the state and local officials but business representatives and federal officials.

The setting for the peer forum was the Crowne Plaza-Downtown Hotel, a model example of successful redevelopment in the spruced-up heart of aging Indianapolis. The stylish hotel originally was a train station and is listed in the National Register of

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Colorado Builds Momentum on Performance Contracting



The Colorado state capitol building will undergo an energy retrofit.

Colorado is in the middle of a surge of energy performance contracts, with many in the works and more just around the corner. The contracts allow building improvements to be financed through the energy savings that come from the upgrades.

“While funds for capital construction grow scarce, performance contracting offers a huge, untapped source of funds. Millions of dollars otherwise paid to utility companies over the next decade can, instead, be invested in energy-saving improvements,” says **Linda Smith**, Colorado state representative for Rebuild America and an official of the Governor’s Office of Energy Management and Conservation.

The motivation for state facilities is a budget squeeze — the driver for performance contracts in many states, towns and counties. Colorado currently has no money for capital construction and renovations of state facilities, other than for emergency needs. Because performance contracts are self-financing, they provide off-budget improvements.

Ten new performance contracts are in the works in Colorado, and most have passed the stage of selecting energy service companies and are either negotiating contract details or going through the energy audit stage. These are worth about \$18 million, as a very rough estimate.

“The total scope isn’t really known until they finish the audits,” Smith says.

The ten are for:

- State Capitol Complex Facilities in Denver;
- State Department of Human Services;
- Colorado State University at Fort Collins;
- University of Colorado at Boulder Department of Housing;
- University of Northern Colorado at Greeley;
- University of Colorado at Colorado Springs;
- University of Colorado at Denver;
- Lewis-Palmer School District;

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Historic Places. Its transformation — even incorporating 26 authentic Pullman train cars as sleeping rooms — is a reminder of what retrofitting can do.

First up on the agenda was a November 5 workshop for state representatives on the development of Rebuild America action plans and sales skills. The need for marketing skills stems from the challenge of selling Rebuild America programs as activities worthy of funding.

November 6 brought the roundtable discussions, kicked off by Steve Palmeri, the buildings team leader of the U.S. Department of Energy's Chicago Regional Office, and **Gavin Williams**, a manager in the Indiana Department of Commerce and the coordinator for Rebuild America in Indiana. Williams served as a master of ceremonies to keep the presentations rolling along.

Roundtables explored such subjects as the challenges of dealing with the Department of Housing and Urban Development and the rudiments of learning whether public housing occupants actually liked the changes that a program makes.

Salesmanship and sustainability often came up for discussion.

Frederick M. Schreiber of Energy Plus Associates (Troy, IL) brought light fixtures to make the point that you can sell a lighting retrofit program by bringing contrasting sets of lights along for proof of their effectiveness.

Quality gets more interest and excitement than efficiency when it comes to selling schools on the idea of lighting retrofits, remarked **Peter Brown** of MetalOptics, an affiliate of **Lithonia Lighting**.

Jobs are an important factor for selling a program in small towns, several participants stressed.

Speaking in general of energy retrofit programs, **Pete Cali** of the Kewanee (IL) Chamber of Commerce said, "You gotta get out there and sell it." Once you have some projects done, the program starts to sell itself, he added.

Program managers also should avoid piling up the red tape, especially for small businesses, which are not top-heavy with managers who would have time for bureaucracy, Cali explained. Bring the project as a package deal without a ton of paperwork, he said.

Once programs are generating savings and local support, they need less and less federal assistance and may end up needing none. That concept explained the meaning of the word "sustainability" as it was used repeatedly at the Peer Exchange.

One of the means of achieving sustainability is a performance contract, which pays for energy upgrades out of energy cost savings rather than government grants. Performance contracts were central features of several upgrades for public housing described by Ohio officials.

The measurement of progress was another issue raised

repeatedly.

How do you know when you're on the right track? Ohio public housing officials at the Peer Exchange offered a couple of ways: an annual survey and the simple process of walking around a housing complex asking the residents what they think.

Terry Pease, Rebuild America state representative for Wisconsin, offered a very systematic method of tracking progress based on many years of efforts for his state's schools. His matrix of contract goals and metrics uses an array of benchmarking connected to critical barriers, critical goals and critical milestones.

"We're trying to also achieve market changes," Pease said in explaining part of the value of such tracking. He added that the same tracking system could be applied to other sectors besides schools. It just happened that Wisconsin's energy-efficiency program experience was longer in schools than in other areas.

For more information on the Chicago Regional Peer Exchange, contact Carla Clemons at carla.clemons@ee.doe.gov.

Specific roundtables at the Peer Exchange:

Public housing, led by Dr. Manny Anunike, Rebuild Ohio coordinator, who was joined by a contingent of Ohio public housing specialists from Cincinnati, Portsmouth and Stark County;

K-12 Schools, led by Terry Pease, coordinator for State of Wisconsin – Focus on Energy, and Blanche Scheinkopf, EnergySmart Schools national coordinator;

Higher Education, led by Greg Lenaghan, Rebuild Illinois coordinator;

Municipalities, led by Bruce Greiner and Chris Frantsvog of Polk County General Services, where they anchor Rebuild Polk County;

Small Business, led by Illinois' Greg Lenaghan and Doug Avery, Rebuild America's Business Partner coordinator;

EnergySmart Schools (K-12 Schools), led by Glenda Abney, the Rebuild America program manager for the Gateway Center of St. Louis, who spoke about new ideas for K-12 schools;

Energy-Efficient Design for Schools, led by David Ejadi of Weidt Group, who presented information on the energy efficient design of schools,

DOE, States Sign Agreement for Greater Energy Technology Research

The U.S. Department of Energy (DOE) signed an agreement in November that establishes greater coordination among state energy officials and the federal government to develop new energy technologies.

The agreement creates a potential opportunity for Rebuild America community and state partnerships, as well as associated programs within the Office of Energy Efficiency and Renewable Energy.

Assistant Secretary David Garman says the agreement “will allow the Department of Energy and states to increase their collaboration and leverage financial resources to accomplish mutually agreed upon projects.”

This agreement establishes a State Technologies Advancement Collaborative with DOE, the Association of State Energy Research and Technology Transfer Institutions, Inc. (ASERTTI) and the **National Association of State Energy Officials** (NASEO).

NASEO is a Rebuild America Strategic Partner. The agreement was signed at a ceremony during the ASERTTI meeting in Napa, CA, November 13-15, 2002.

This collaborative “will promote research and deployment in innovative ways to produce, transmit and distribute energy and to use it more efficiently,” Garman says. Partners will enjoy greater information sharing and eliminate duplicative efforts, while leveraging funds to bring technologies into the market, DOE says.



View From DC By Daniel Sze

With a new year upon us, it's time to take stock of the Rebuild America program and its progress in engaging communities in energy-saving efforts. What do the numbers tell us? During 2002:

- Partnerships improved an additional 109 million square feet, bringing the amount of total space improved since the program's inception to 528 million square feet, an increase of 25 percent over 2001 results.
- Partnerships are saving \$298 million annually, up 12 percent from \$264 million the previous year.
- The total collective investment that partnerships have made in energy-saving improvements climbed to \$1.5 billion, \$300 million more than the \$1.2 billion reported for last year.

Our data tell us that our K-12 schools sector has been the most active, accounting for 36 percent of the 528 million square feet improved to date, followed by the local and state government sector with 27 percent of the total. In contrast, we find that the colleges and universities and the public housing sectors account for 8 percent and 5 percent respectively, of the amount of space improved. Efforts are already underway to engage these sectors more fully in the program and boost their performance in 2003 and beyond.

As the program matures, we are looking for new and better ways to help partnerships expand their energy-saving activities. We are currently surveying partnerships in an effort to identify the Rebuild America resources that are most valuable to partnerships and the factors associated with good performance. We will take what we learn from the survey and apply it to help other partnerships succeed. The survey results are expected in early spring.

Our year-end metrics tell us that Rebuild America is steadily making inroads in communities across the nation. But our work is hardly done. A great many Americans are not aware of the importance of saving energy, and how it benefits our schools, our cities, our environment, and even the energy security of our nation. There are still too many architects, engineers and builders creating buildings that ignore significant energy-saving opportunities. Our job is to reach them. And with your help, I believe we can.

Dan Sze is National Program Manager of Rebuild America.

Rebuild America Progress Calculator

Number of Partnerships:
491

Total Number of Committed or Completed Square Feet:
1,097,102,390

as of December 15, 2002

New Tech Emerges: Advanced Rooftop Air Conditioners Available for Purchase

New energy-efficient rooftop air conditioners are available to Rebuild America partnerships from the U.S. Department of Energy's Emerging Technologies Program, showcasing greater synergy among Office of Energy Efficiency and Renewable Energy (EERE) programs.

These air conditioners are some of the first products to surface since the Emerging Technologies Program called for greater coordination among the programs at a Rebuild America Strategic Partners meeting in February.

The May/June edition of *Partner Update* detailed the Emerging Technologies Program and how that program and Rebuild America could work hand-in-hand to advance energy-efficient products throughout the U.S. Since then, EERE has undergone a shift that seeks to improve coordination among its programs.

For air conditioners, the Emerging Technologies Program explored needs and opportunities for higher efficiency and progress along several fronts. Those fronts included mandatory minimum standards, the Consortium for Energy Efficiency's High Efficiency Commercial Air Conditioning initiative, and new ENERGY STAR® ratings for rooftop units.

Rebuild America applications could include schools and small commercial buildings.

The Defense Logistics Agency (DLA) and Pacific Northwest National Laboratory (PNNL) issued a coordinated innovative procurement for a "new generation" of packaged rooftops in small commercial sizes between 65,000 and 135,000 Btu per hour. Some of the winning units are now available for purchase by government and private entities.

The procurement, supported by both the Federal Energy Management Program (FEMP) and DOE's Office of Building Research and Standards, in addition to the Department of Defense, seeks to promote the manufacture of equipment that improves both performance and cost-effectiveness. PNNL provided the technical and market research to initiate the procurement and recruited several large prospective buyers, both within and outside the government.

The solicitation, issued in early January, required that equipment meet at least the CEE Tier II/ENERGY STAR®/FEMP efficiency levels, and it prescribed a cost-effectiveness rating formula that balanced the initial price of the equipment against expected energy costs. This formula takes into account average weather conditions and both full- and part-load efficiencies. Winning models with the lowest total life-cycle cost have been selected, and PNNL has negotiated basic ordering agreements reflecting the offered prices and terms with two manufacturers for the products listed:

Buyers will soon be able to purchase these winners through Defense Logistics Agency catalogs or by visiting the

Lennox Industries

Model	Btu/hr	EER	IPLV	Price
LCA090H	90,000	11.3	12.0	\$2,990
LCA102H	101,000	11.0	12.0	\$3,390
LCA120H	120,000	11.0	11.8	\$3,990

Global Energy Group (Available this Fall)

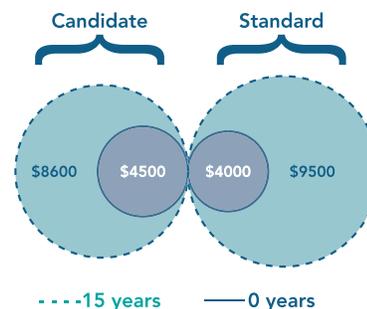
Model	Btu/hr	EER	IPLV	Price
PH007C	88,000	13.5	13.9	\$4,325
PH010C	115,000	13.4	14.0	\$5,525

program's Web site at <http://www.pnl.gov/uac/>. In the meantime, purchasers can contact Brad Hollomon at PNNL (Ph.: 202-646-5043; email: hollomon@pnl.gov).

The Web site also contains useful advice on typical air conditioner design features, as well as a life-cycle cost comparison tool that grew out of the selection method for the procurement. The comparison tool is designed to help users select optimal equipment by comparing different models' life-cycle costs at their respective efficiency levels. Among its key features, the menu-driven software:

- Quickly estimates life-cycle cost, simple payback, rate of return, and savings-to-investment ratio;
- Accommodates equipment with one or two compressor stages;
- Accounts for part-load as well as full-load efficiencies;
- Simulates operation under specific climate conditions at any of 237 U.S. locations;
- Reflects user-specified air conditioning requirements and building use patterns;
- Allows a comparison of alternative equipment choices with user-specified electric rate and financial assumptions;
- Provides results as downloadable graphic files for further analysis and presentation.

The sample graph shows cumulative costs of acquiring and operating two hypothetical air conditioners, one with a higher price and efficiency than the other.



For more information, contact Alison Thomas of FEMP at 202-586-2099 or alison.thomas@ee.doe.gov

Montana School Participation in Commissioning Demo Leads to Energy Success

The discovery of natural resources in the Western states caused towns to spring up and pockets of specialized laborers to develop. Folks who settled down often rested their hopes on the abundance of fuel and minerals vital to industries back East. And their hopes proved correct: There was plenty of work for the settlers.

Montana is such an area and is well known as an extraction state. Industries such as mining flourished in towns like East Helena for decades, requiring well-paid skilled labor, and East Helena's 5,000 people prospered.

In the 1990s, much of that prosperity came to an end. The town's largest employer shut down its operations in East Helena, and this town located six miles east of Montana's capital started down a less bountiful path. People who formerly earned a \$20/hour wage — big money in these parts — were out of jobs.

"The community was hammered hard," comments **Toby Benson**, Rebuild America state program representative with the Montana Department of Environmental Quality (DEQ).

The town lost its tax base, and its public services began to erode. Perhaps most notable were the decline's effects on the educational system that always drew funds from taxes on property values and commercial sales. For decades the extraction industry supported East Helena. Its loss crippled the town, threatening school financing.

Despite the town's economic situation, leaders chose to construct a new middle school because the children of East Helena still needed an education, and the old school was eroded. East Valley Middle School opened its doors in 1999. But instead of rejoicing upon its completion, town and school officials were frustrated because of its poor "performance."

Benson explains that East Valley came with indoor air quality problems and comfort woes that the town did not anticipate nor feel like dealing with.

Commissioning, the idea...

Getting projects funded for schools is a problem given that East Helena's municipal budget is stretched. To correct the problems in East Valley Middle School would take an overwhelming commitment on top of the commitment already laid down to build the school.

The Northwest Energy Efficiency Alliance (NEEA), a consortium of electric utilities supported by rural cooperatives, was conducting a regional project aimed at demonstrating commissioning and the development of case studies. This "Commissioning of Public Buildings in the Northwest" project seeks to make commissioning standard practice in Idaho, Oregon, Washington and Montana. The

Alliance has pulled together 35 demonstration sites, seven of which are schools and school districts.

The Alliance's building commissioning effort hopes to achieve four goals:

- Educate communities and their policymakers on building commissioning;
- Demonstrate how commissioning can improve the performance of buildings;
- Establish model policies for local governments to follow in implementing commissioning in municipal facilities and encouraging them in commercial and residential buildings;
- Show the hard data, results and success stories.

In 2003, the Oregon Office of Energy will compile the case studies, cull the data and economics from the seven schools to ensure they are "parallel" and publish the findings.

Commissioning at East Valley

As part of the Alliance's project, the Montana DEQ provided funding to East Valley Middle School to pay for commissioning. The school district contracted with Facility Improvement Corporation (FICO) to conduct commissioning on the new school.

The project was borne out of warranty issues that resulted in a lack of comfort and high energy bills in the new school. Occupants fretted about the comfort — it was always either too hot or too cold — and the cash-strapped town and principal felt the burden.

As part of the East Valley Middle School project, commissioning was undertaken to analyze what needed to be corrected under warranty by the contractor. According to an executive summary of the commissioning report, the specific goals of the project were as follows:

- Verify that the heating, ventilation and air conditioning system and controls were installed correctly;
- Investigate HVAC system problems and determine cause;
- Identify potential changes to building systems and controls that will lower energy bills;
- Document material for the Alliance's case study.

Commissioning revealed serious flaws in the operation of the school. Several systems needed adjusting, including calibration of control system components, changes in boiler operation and programming problems with the control system. The effort fixed the problems in the school.

What FICO concluded

After conducting commissioning, FICO says, "As a Commissioning Authority, we need to educate school

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California Consortium Addressing Energy Efficiency in Multi-Family Housing

Members of the California Multi-Family Housing Consortium are implementing a detailed action plan that seeks to integrate energy-efficient technology and design into affordable, multi-family dwellings.

“The sector has been largely ignored when it comes to energy efficiency, and that is one relatively benign way to help these families out,” Program Representative **Cyane Dandridge** says.

Four critical points make up the Multi-Family Housing Consortium’s plan of action, an ambitious agenda for this new Rebuild America partnership striving to improve energy efficiency in this “underserved” housing market in California.

The action goals of the California-focused consortium include:

- Educating lawmakers and policymakers about the benefits of energy efficiency in multi-family dwellings;
- Marketing the concept and public outreach;
- Sustainable planning that examines land-use issues, not just the building;
- Transforming the market through case studies, pilot projects and information sharing.

The fourth goal — transformation of the market — is the ultimate for the consortium, but those involved recognize that the other goals are stepping stones to revamping the market.

Not all new housing developments use energy-efficient technology and design, although U.S. Department of Energy programs like Rebuild America and its network of nearly 500 partnerships are trying to change the landscape. This consortium is carving out a niche in the housing market among the houses that are traditionally less expensive to build and purchase — and thus contain few energy efficiency design elements.

The consortium recognizes that incorporating energy efficiency does not necessarily drive up the cost of these houses. But the current problem, Dandridge explains, is that policy does not encourage their construction and that the public and those in the industry are unaware of this fact.

Because the consortium recognizes this, it must convey these principles; thus the need for its diligence on the issue. Participants are hard at work developing a Web site for easy access to information. They are sitting down with lawmakers and policymakers to help drive the adoption of state and local codes for energy efficiency in construction. They are documenting successes to prove it can be done. And they are doing it all with limited funds and within the program architecture already set up.

“We need to understand how to best serve this market, which is completely underserved, by leveraging existing programs, not creating new ones,” Dandridge emphasizes.

Participants in the consortium — described by Dandridge

as “every type of group working with the multi-family sector” — all share the common goal of revamping multi-family buildings to make them more energy efficient. With this goal comes increased comfort for tenants of such housing whose income levels generally lie between poverty and middle class, and an improved environment with lower pollution levels.

A follow-up to the consortium’s meeting over the summer was held December 5, and committees meet continuously to flesh out details of the action agenda.

Participants include: **Nehemiah Stone** of the Hescong Mahone Group; **Maura Clark**, Rebuild America state representative for California; **Doug Shoemaker**, Non-Profit Housing Sustainable Working Group Policy; and **Matt Pesce**, Rebuild America Public and Affordable Housing Market Sector representative.

Dandridge’s organization, **Strategic Energy Innovations**, a Rebuild America partnership, spearheads the consortium.

For more information on the Multi-Family Housing Consortium, contact Cyane Dandridge at cyane@sei.org.

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Colorado Builds Momentum on Performance Contracting

- Academy 20 School District;
- Fort Morgan School District.

Most include water as well as energy usage in the upgrade plans. Most are likely to use the full 12 years permitted under state law for performance contracting.

The highest-profile project, roughly estimated at \$1.5 million, may be the upgrade for the state capitol building and the complex of state office buildings surrounding it in Denver.

About a dozen energy service contractors are able to compete for performance contracts in Colorado, giving the state and local governments a healthy competitive marketplace.

And although they can’t be discussed yet, there are a lot of potential projects in the works.

The ten new projects follow on the heels of 26 other Rebuild Colorado projects where performance contracts are already delivering energy savings after an energy investment of \$26 million in state and local government facilities — the buildings of school districts large and small, rural counties, state colleges and other government operations.

“There’s just a lot of new momentum now in performance contracting,” Smith says.

For more information contact Linda Smith, Rebuild Colorado, 303-894-2383 x 1203.

Wind Energy Moving to the Forefront of U.S. Energy, Rebuild America Partnerships



More and more turbines are generating electrical power these days.

In 1978, Congress passed the Public Utilities Regulatory Policy Act (PURPA) that, among other things, created an incentive for the development of renewable energy. This act requires utilities to purchase energy created from “qualifying facilities” at the utilities’ avoided cost of producing power. A solar panel, biomass plant or a wind turbine therefore has guaranteed buyers for any electricity it generates thanks to PURPA.

This incentive has advanced the level of technology in renewable energy such as wind power, albeit at a slow pace. The U.S. Department of Energy (DOE) reports that the wind was first harnessed 7,000 years ago. In a more modern context, since the passage of PURPA, it has taken nearly 25 years to dramatically lower the cost of producing electricity from wind. But wind power is finally moving to the forefront of the energy industry.

Of the various forms of non-hydroelectric renewable energy, wind power is leading the charge as the single fastest-growing electric technology in the world. Its cost has dropped to one-tenth of its cost two decades ago, and it is a driver for employment — creating more jobs per dollar invested than any other form of electricity generation.

Stories are popping up all over the professional news media and in school district, association, local government, neighborhood and other types of newsletters all over the country. Hardly a week goes by without an article on wind power appearing in the Office of Energy Efficiency and Renewable Energy (EREN) Network News. Wind power is building in strength and power.

The reasons are apparent. Wind power is free and always replenished. In both theory and practice it is simple – wind turns turbine blades, which turn a rotor, which generates

electricity. Turbines generate not a single molecule of pollution or carbon dioxide, and new technology enables turbine blades to spin even at low wind speeds.

Drawbacks are that wind energy is intermittent, some believe it despoils the landscape, and it can kill birds. Also, connecting wind turbines to the power grid is an infrastructure challenge. However, its cleanliness, life-cycle cost and relatively simple technology — which mean lower operating and maintenance costs — are making it popular.

Research and development, in part conducted and sponsored by DOE, has led to many advancements in wind energy that have resulted in the decrease in price per kilowatt-hour of electricity from 40 cents to four to six cents.

The non-profit RAND Corporation recently conducted an analysis claiming that the Pacific Northwest can increase its reliance on green power through 2020, in part through wind energy, without harming the economy.

And, as stated, news stories continue to appear all over the country. In West Virginia, as the *Charleston Daily Mail* reports, Mount Storm Wind Force, a Pennsylvania company, received approval to construct 166 wind turbines in two West Virginia counties. Site work is expected to begin in 2003. These generators are expected to produce 250 megawatts of power.

Seattle City Light, a Rebuild America community partnership, already purchases 50 megawatts of wind-generated electricity from the Stateline Wind Farm in Washington.

And a Virginia Rebuild America community partnership is pursuing wind power to export onto the electricity grid. **Northampton County** joined Rebuild America in early 2002 to obtain technical resources to bolster its ongoing sustainability quest. Its latest vision is the construction of a wind farm with a capacity to generate at least 50 megawatts of electricity.

The role of wind energy may be limited until it gains broad community support. Some feel that wind turbines are blots on the landscape. Others are concerned about their impact on the flight behavior of migratory birds.

Led by Gov. George Pataki, New York is one of the strongest supporters of wind energy. However, at least in one instance, investors in a wind project in Cherry Valley ran into stiff opposition at the local level. Patient work by wind energy proponents to obtain the approval of communities will ensure the acceptance of wind power and ultimately steer the direction of wind energy in the United States.

For more information on wind power, visit the Office of Energy Efficiency and Renewable Energy’s Web site at www.eren.doe.gov. For more information on Northampton County, visit <http://www.esva.net/~northampton>.

Peers Gather in Mississippi to Exchange Ideas



Greg Andrews, Rebuild America team lead for the Atlanta Regional Office (left), and Dr. Lloyd Roberts, Mississippi College, discuss energy.

Community partnership representatives convened at a Rebuild America Peer Forum November 19-21 at the historic Edison Walthall Hotel in Jackson, MS.

Representatives of partnerships in the Atlanta Region shared experiences and learned new information from state and program officials. Strategies for promoting energy efficiency were presented and discussed.

Greg Andrews, Rebuild America Team Lead for the Atlanta Regional Office, opened the annual forum by emphasizing three ways to improve energy efficiency in buildings: design, technology, and operations and maintenance. The program agenda reflected the three different topics.

Martha Jane Murray, an architect with The Wilcox Group, kicked off the presentations by addressing the question: how do you get the design profession to adopt sustainable building practices?

She urged architects to take a leadership role in energy efficiency by promoting sustainable design within their profession. Murray recommended that architects look to the medical profession's Hippocratic Oath, "first do no harm," when designing a building. Architects must ask themselves, "Is this material hazardous? Is this the most sustainable project?" Murray noted that simply orienting a building more thoughtfully on the site is an easy way to save energy with little or no extra cost.

Richard Heinisch of **Lithonia Lighting** discussed new developments in lighting technology that make lamps more efficient while improving light quality. He compared traditional lighting sources with compact fluorescent, pulse-start metal halide and LED technologies. He said that an often overlooked technology is sensor controls. Why light a

space 100 percent of the time if it is only being used 10 percent of the time?

Robert Somers of **2RW Consulting** discussed building commissioning. Somers debunked the prevalent assumption that commissioning is only about heating, ventilation and air-conditioning. He emphasized that commissioning is for all building systems and it can reduce change orders, improve a building's performance and provide greater occupant comfort.

Somers recommended that the commissioning authority be independent of the design team. Ideally, the owner should include the commissioning authority from the very start, even before the plans are drawn. Although commissioning can increase construction costs by one-half percent to 3 percent, he said non-commissioned buildings have 8 percent to 20 percent higher operating costs as compared to commissioned buildings.

The forum continued on the second day with what Andrews referred to as "Rebuild America boot camp." The state program representatives and partnership leaders reported on current activities and exchanged strategies and ideas. How to get people actively involved in partnerships was discussed. Several participants advised that representatives reaching out to government agencies and other groups should be cognizant of the fact that many baby boomers are reaching retirement age. It is important to know who will be working in that agency within the next several years to be sure the partnerships will continue.

Dennis Clough, Rebuild America products and services coordinator, concluded the morning session with a presentation on Rebuild America's products and services and resources available through www.rebuild.gov.

During lunch, state Rep. **Tyrone Ellis** spoke about positioning Mississippi as a leader in energy efficiency and stressed the importance of tying sustainability with economic development. He commended the efforts of **Rebuild Mississippi**.

The group later toured the physical plant at Baptist Medical Center. **Harry Brister**, of the facilities department, explained how the hospital is collecting waste heat from an electricity generator and using it to help power the chiller system. Brister remarked that the hospital has saved about \$700,000 per year in energy costs since the system was installed in 1991.

The site tours continued with a visit to Mississippi College. The facilities staff led a behind-the-scenes tour of several campus buildings and their mechanical systems. The following day, attendees divided into small groups to develop reports to identify ways the college can save energy dollars.

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California Students Recognized for Helping Community Save Energy



Joe Zupo, Owner, Pinole Valley Barber Shop, and students (left to right) Elisa Martinez, Karla Duran and Alba Barragan.

Part of Rebuild America's allure is that it is more than retrofitting buildings with energy-efficiency technology. It is changing the way Americans think about and behave with energy. It is about small businesses doing their part to lower pollution levels. It is about creating teams of students to live in a world of conservation and energy efficiency.

Strategic Partner **Alliance to Save Energy** recently presented an Earth Apple Award to Pinole, CA, high school students and the **Strategic Energy Innovations (SEI)** partnership for helping the kids' school, city government and local businesses save money through energy audits. The students received a digital camera and a plaque recognizing their efforts.

Twenty students participated in the year-long **Energy Smart Schools** program developed by SEI, based in San Rafael, CA.

"We developed this program not only to educate students about the importance of conserving energy but also to provide them hands-one experience as energy auditors for their school and local small businesses performing a valuable service for their community," notes Cyane Dandridge, executive director of SEI and a Rebuild America program representative.

The program engaged students in their community and also helped local small businesses save money.

SEI staff taught the students how to perform energy audits for lighting. The student "Watt Cops" completed an energy audit of their high school and then presented their findings to the **West Contra Costa Unified School District** Board. The work led to the students gaining the support of the City of Pinole Redevelopment Agency, prompting the students to conduct energy audits for 15 small businesses, including the city-owned post office building.

The City of Pinole gave the students \$150 for each audit, which helped pay for an SEI-led trip for six students to visit the Massachusetts Institute of Technology (MIT). Fundraisers, business sponsors and local organizations financed the balance of the cost.

While visiting MIT, the students attended classes, participated in an energy-efficiency lab, took an admissions tour and visited energy-efficient dormitories. During a visit to an animation technology research laboratory, one student exclaimed, "Wow, I never realized math could be so cool!"

With the success of the program, SEI was able to find jobs for three students with local energy audit programs this past summer. Pinole funded a job for one of the students to perform 15 more audits during the summer months. The student identified more than \$6,000 in potential energy savings. The city also committed to retrofitting the post office to make the building more energy efficient.

The **Local Government Commission**, a new Rebuild America partnership, recently invited SEI and a student to make a presentation on energy efficiency at the 2nd Annual New Partners for Smart Growth conference in New Orleans January 30 – February 1, 2003.

The school also announced that it will continue the Watt Cops program this year. Two of last year's juniors will lead this year's group during their senior year.

After participating in the program, one senior decided to change her college major to environmental science and others expressed an interest in energy efficiency and conservation careers. One student noted, "When I grow up, I want an energy-efficient house because I learned how important energy efficiency is to saving our environment."

For a paper on this Energy Smart Schools program, visit [http://www.seiinc.org/papers/E\\$Sprogram.pdf](http://www.seiinc.org/papers/E$Sprogram.pdf).

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Peers Gather in Mississippi to Exchange Ideas

The program concluded with a question and answer session with Dan Sze, National Program Manager for Rebuild America, and an open group discussion addressing regional activities, programs and needs.

Sponsors of the exchange included the **Mississippi**

Development Authority-Energy Division, which demonstrated the true meaning of Southern hospitality. **Sarnafil Roofing Systems, Inc.**, **FMS Lighting Management Systems, Inc.** and Mississippi Power Company also supported the forum.

For more information on the Atlanta Regional Peer Forum, contact Greg Andrews at greg.andrews@ee.doe.gov

Snap Shot: Mel Powers



Mel Powers

Mel Powers is a Rebuild America customer service representative for the states along the Eastern Seaboard.

Vital Statistics

Mel lives in the historic coastal plains town of Weldon, NC — in the northeastern part of the state near the Virginia border — with his wife Gail, a school guidance counselor, and daughters Jacqueline, a freshman

at North Carolina A&T State University in Greensboro, and Melanie, age 10. The family has two pets — a Teacup Pomeranian named “Cody” and a tabby named “Gonzo.”

How long have you been working with the Rebuild America program?

I’ve been working with Rebuild America since 1997 while employed by Choanoke Area Development Association (CADA) when the organization signed on as the lead agency for the Roanoke Chowan Rebuild America partnership.

How did you get into this line of work?

I served as Manager of Community Services for CADA, which included responsibility for a myriad of human service programs in the four-county service area, such as affordable housing, employment, emergency assistance, weatherization, energy efficiency and other related programs.

With the assistance of Lawrence Wilson, director of the North Carolina Office of Economic Opportunity (which funds community action agencies in the state), and the North Carolina Energy Office we were able to get administrative support for our Rebuild America activities covered as part of the Work Plan for Community Services Block Grant. This provided us with the needed support to help organize a four-county partnership that would eventually have 33 organizational partners.

I’ve been involved in community building for the past 20 years and really liked the concept of working from the bottom up with Rebuild America marketed as “not just another government program.” This approach was highly successful with the Roanoke Chowan partnership and allowed us the opportunity to share the success with partnerships across the nation.

I was fortunate enough in 1999, when the opportunity to be involved on a full-time basis as a regional representative with Aspen Systems presented itself, to be asked to come on board as part of the Customer Service Team. And I’ve thoroughly enjoyed it!

What do you find most rewarding about your work?

Having the opportunity to travel and work with the diverse constituency of Rebuild America.

What is your favorite thing to do in North Carolina?

North Carolina truly is the variety vacation land. Within a few hours you can travel to the beach or the mountains. I enjoy visiting the mountains and my wife loves the beach, especially the Outer Banks. So we try to do both.

What do you like to do in your spare time?

Fishing in the Roanoke River, reading a good book (historical fiction) and cooking for family and friends for the holidays are all favorite pastimes.

What is your dream job?

To serve as a management consultant to local governments and communities addressing quality of life issues. I guess I’m doing it now!

What is your dream vacation?

Working on it ... a cruise to an island with crystal blue water, sunny skies, at a remote location.

Continued from page 5

Montana Schools Participate in Commissioning Demo...

districts planning to build schools in the near future on the advantages of building commissioning. ... As East Helena School District now realizes, building commissioning can provide a school district with a much better operating building with a smoother shakeout and initial occupancy period.”

According to Benson, “Commissioning appears to be one of the best ways for building owners to be assured of receiving a complex HVAC system and controls that [are] designed and installed to be effective, efficient and meet their needs.”

Finding the funding

Lessons learned extend beyond the concept of commissioning. There are communities across the country that experience serious fiscal deficiencies. Sometimes obtaining the needed funding to conduct energy efficiency activities — especially for school districts — gets left behind because of that lack of funds.

East Helena School District found an opportunity to receive grant money to participate in a project that also netted it much improved comfort and energy savings.

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Reducing Energy Loss Through Windows

From big-time corporate headquarters to small-town “mom and pop” stores, Rebuild America Business Partner **South Sun Energy Conservations, Inc.** brings its experience in making energy-efficiency technology pervasive to Rebuild America partnerships nationwide.

Through the Rebuild America network of partnerships, every community has the opportunity to learn about and install South Sun’s window technology, used in such prominent places as NASA and Bank of America buildings.

The most impressive product of South Sun Energy Conservations is the Winsulator™ — the company’s interior storm window that can be installed in new and old buildings. Since joining Rebuild America two years ago, South Sun Energy Conservations has worked with partnerships such as **Rebuild Sarasota County** to install the Winsulator during retrofits of existing buildings.

The Winsulator is an interior window attachment that improves the energy performance of windows. The clear acrylic panel, which reduces harmful ultraviolet rays up to 98 percent, attaches to existing glass windows through the use of an insulated magnetic gasket. The gasket system incorporates bellows that expand and contract as temperatures change, to ensure that the Winsulator will stay in place. By creating a space of insulating air between itself and the original window, it saves energy by reducing thermal transfer.

Sarasota County first installed the Winsulator in one of its older government buildings. Prior to installation, county officials had left some meeting rooms unused because the intense Florida sun overheated them. Installation of the Winsulator moderated room temperatures and made those rooms useful again.

The county then installed the Winsulator in one of the conference rooms on the 10th floor of the historic Terrace Building. Although the product is designed to save energy, county employees noticed it also reduced noise by 60 percent. **Richard Elliott**, facilities planner for Sarasota County, notes he was amazed at how much traffic noise was reduced after installation. The county opted to install the product in the second conference room to restore the usefulness of both meeting spaces.

Ed VerVane, CEO of South Sun Energy Conservations, says that the Winsulator has been installed in 400 buildings nationwide with that number rising quickly. In October, the company joined the College of Charleston for the grand opening of 114 Wentworth Street, an historic campus building retrofitted with sustainable building features, including the Winsulator. Charleston’s Board of Architectural Review had previously approved the use of the Winsulator for other buildings because it is not visible from the outside, distorting the image of historic buildings.

“We can go to a 200-year-old window and improve it, without disturbing the historic value,” VerVane says.

But as previously stated, the Winsulator is improving window insulation in prominent facilities that range from colleges and counties to naval bases and corporate office buildings.

The company recently completed work in Charleston, SC, for the Naval Weapons Station, installing more than 800 panels in 28 buildings. Earlier in the year, 2,700 Winsulators were installed in 17 buildings at the Naval Air Station in Jacksonville, FL. With the success of these projects, the Navy plans to install more Winsulators in other buildings throughout the two bases.

And while the Winsulator has been used primarily in retrofit projects, its use is expanding to new construction. Bank of America installed the product in four new projects and plans to use Winsulators in a building under construction in Winter Haven, FL.

The company notes that the Florida Energy Office, through the efforts of **Edward Cobham**, **Rebuild Florida**, issued a grant through the States Energy Conservation Assistance Program (ECAP) to assist South Sun Energy Conservations in completing measurement and verification testing.

Here’s another important aspect of the Winsulator as the threat of violent terrorist activity increases: The Department of Defense is currently testing the Winsulator for a blast mitigation rating. A positive rating — and early indications are that the product will receive one — could be all the proof needed that this technology stands a good chance of being installed in homes and offices across the United States.

For more information, contact Ed VerVane at ed@winsulator.com or 941-927-9460.

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Montana Schools Participate in Commissioning Demo...

Through the Alliance and its Public Building Commissioning Project, East Valley Middle School realized its full energy-efficiency potential.

Rebuild America Program Representative Alan Nagle encourages other school districts, as well as communities in general, to follow East Helena’s lead in obtaining funding.

“Traditionally, public entities just turn to the state or

federal government for money to conduct these energy-efficiency projects. But look around, look further. Sometimes the funding is available if you turn to an organization completely dedicated to the cause,” Nagle emphasizes.

The success of East Valley Middle School prompted the Helena School District to conduct building commissioning on its own buildings. The Southeast Montana City School used the tool as well to its benefit.

Upcoming Events

January

- 9-10 The Multi-State Conference on Clean Vehicles**
Sheraton Grand Hotel at DFW Airport, Dallas, TX
Call 303-462-1647 or email cap@cleanairports.com.
- 15 California Energy Commission Home Energy Efficiency Web Seminar, CA (statewide).**
Visit <http://www.rebuild.org/events/eventdetails.asp?NewsID=1454>.
- 23 High Performance Buildings Workshop**
Portland, ME Call 413-774-6051 or email nesea@nesea.org.
- 24-25 High Performance Schools Symposium, sponsored by the Council of Educational Facility Planners International.**
Chaparral Suites Hotel, Scottsdale, AZ.
Visit <http://www.rebuild.org/events/eventdetails.asp?NewsID=1403>.
- 27 Preserving Historic Buildings Through Sustainable Technology**
National Building Museum, Washington, DC
Visit <http://www.rebuild.org/events/eventdetails.asp?NewsID=1413>.

February

- 10-11 Energy Management Workshop, presented by the Florida Solar Energy Center**
DoubleTree Hotel Cocoa Beach Oceanfront, Cocoa, FL Contact Dianne Wood at 321-638-1441 or email dianne@fsec.ucf.edu.
- 10-12 National Association of State Energy Officials 2003 Energy Outlook Conference**
Westin Grand Hotel, Washington, DC
Visit <http://www.naseo.org/events/outlook/default.htm>.



Harry Brister, of Baptist Medical Center's facilities department, explains to Charles Young and peers how waste heat from a generator helps power the hospital's chiller system at a Rebuild America Peer Forum in Jackson, MS.

New Partnerships

- Energize Champaign, IL
- Virgin Islands Housing Authority, VI
- Hennepin County, MN
- Keene Housing Authority, NH
- Neshaminy School District, PA
- Hanover Schools – School Administrative Unit #70, NH
- Johnson County, KS

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Check Us Out: www.rebuild.gov or 1-800-DOE-3732



Rebuild America is a network of partnerships – focused on communities – that save money by saving energy. These voluntary partnerships choose to improve the quality of life in their communities through energy efficiency. Rebuild America supports them with customized assistance backed by technical and business experts and resources.

Published bimonthly by the U.S. Department of Energy to report on Rebuild America activities, *Partner Update* now incorporates news from Building America and High Performance Buildings, energy-efficient initiatives of the Office of Energy Efficiency and Renewable Energy.



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