

Partner Update

July–August 1999

Office of Energy Efficiency and Renewable Energy

Profile

Paul Normandie

Rebuild Nevada Advances With Major Plans

Rebuild Nevada takes a project-driven approach in its efforts to save energy in communities across the state.

Paul Normandie, partnership leader with the Nevada State

Energy Office, puts it this way: "We find the project first and then set up the partnership." He has helped launch seven new partnerships since he took over the helm of Rebuild Nevada last November.

The partnership's primary goal is to retrofit 16 million square feet over a 2-year grant period, according to the provisions of the state's Rebuild America grant signed with the U.S. Department of Energy in 1998. By the end of June, Rebuild Nevada had 4 million square feet in the pipeline in varying stages, according to Normandie. By August they will have completed their first energy retrofit with the help of e-three, a Nevada energy services company: the 300,000 square-foot Carson Valley Inn, a hotel/casino in Douglas County.

Normandie brings a number of strengths to his post. He is an a licensed general contractor with 21 years of experience, a college professor, a former banker and commercial loan officer, and a proponent of sustainable building practices who looks for opportunities to utilize alternative technologies in Rebuild Nevada projects.

An instructor with Great Basin College and the University and Community College System of Nevada,

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Powerful Partnerships for Stronger Communities

Everyone knows that two together can accomplish more than just one alone, but a network of partnerships can accomplish even more. As with all successful partnerships, the **Rebuild Nevada** program was created out of a common desire to strengthen and enhance communities. **Nevada Power Company** understands that successful partners share not only a common goal, but common values as well.

"Sharing values for community betterment is at the core of Rebuild Nevada's partnerships," says **Arnold Lopez**, manager of conservation programs for Nevada Power Company and one of many champions of the Rebuild Nevada program.

Early in 1998, Lopez represented Nevada Power Company on a state-wide steering committee — comprised of state, public, and private sector representatives — to help identify needs in southern Nevada that could be addressed by the Rebuild America program. The state applied for a State Energy Program Special Projects grant and the umbrella partnership, Rebuild Nevada, was born.

As a key Rebuild Nevada partner,



N E V A D A
P O W E R C O M P A N Y

Nevada Power Company helps promote Rebuild America and assists Nevada communities in implementing energy-saving projects.

"One thing that is unique and appealing about the Rebuild Nevada program is that each partnership has the flexibility to identify, prioritize and execute energy retrofit projects that are important to their own community," says Lopez. "Nevada Power Company knows that effective use of energy resources can enhance economic development, productivity, safety, comfort and convenience in the community. We saw the Rebuild America program as an opportunity to leverage our expertise in serving our community's needs."

Several projects underway in the Rebuild Nevada partnership are covered in this issue. (See Rebuild Nevada profile at left.)

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Rebuild Western New York Targets Healthcare Facilities

Through the **Rebuild Western New York Partnership**, the New York State Energy Research and Development Authority (NYSERDA) is helping healthcare facilities become more energy efficient.



Jamaica Hospital Medical Center

To date, nine healthcare facilities — representing more than 3 million square feet and \$10.8 million in energy-efficiency improvements — have benefited from Rebuild Western New York's services. The facility improvements, all of which are underway or completed, are expected to collectively achieve annual energy savings of about \$1.8 million. Another \$2 million in energy improvements are planned for an additional seven projects totaling 3.5 million square feet.

Rebuild Western New York originally targeted New York's seven western-most counties, but is now open to all areas of the state. Plans include providing similar services to the municipal and college/university sectors.

Collaborating with NYSERDA in this partnership are the Healthcare Association of New York State, the Western New York Healthcare Association, Niagara Mohawk Power Corporation, New York State Electric and Gas Corporation, National Fuel Gas, and the New York State Energy Efficiency Council. NYSERDA has also teamed up with the Dormitory Authority of the State of New York (DASNY) to provide the healthcare sector with low-cost, tax-exempt financing of energy-

efficiency improvements through its Tax Exempt Leasing Program.

The partnership provides cost-shared technical assistance services to healthcare facilities through NYSERDA's Flexible Technical Assistance (FlexTech) program. Services include technical assistance with energy performance contracting or with technical feasibility studies that investigate the energy and economic benefits of installing HVAC and lighting energy conservation measures.

Rebuild Western New York's services include assistance with all phases of an energy performance contracting project and include:

- preparing Request for Proposals seeking energy services companies (ESCOs) and reviewing submittals
- developing the scope of work for the ESCO's Comprehensive Energy Audit and reviewing audit results
- assessing the proposed contract to ensure that the installed equipment is capable of achieving the projected energy savings
- reconciling achieved savings with guaranteed savings by reviewing the ESCO's annual measurement and verification reports

View from DC

By Mark Bailey

Thirty-nine states are now directly involved in Rebuild America, thanks to the latest round of U.S. Department of Energy State Energy Program (SEP) Special Projects grants.

Twenty-four grants, collectively worth about \$2 million, were recently awarded to 23 states and the District of Columbia. Seven states received awards for the first time: Alabama, Alaska, Florida, Georgia, New Jersey, New Mexico and Wyoming.

Joining these new award winners with the 33 states and three territories already involved means Rebuild America is hard at work in hundreds of communities across the country and in three U.S. territories. Our partnerships — from **Rural Alaskans Conserve Energy to Rebuild Guam to Rebuild Florida** — are improving the quality of life by making buildings operate more efficiently.

In the process, they're keeping us on track to meet our goals for 2003:

- Save \$650 million a year in energy costs.
- Generate \$3 billion in private investment.
- Create 26,000 new jobs.
- Reduce air pollution by 1.6 million tons of carbon dioxide a year.

We welcome our new partners and look forward to an energy-wise future together.

The National Forum

Also on track is our 1999 National Forum — the chance for partnerships and the program team to share their successes, renew — and make new — friendships, and learn from the best and brightest in the industry.

I look forward to seeing many of you at the Forum, August 9-11, in Las Vegas.

Mark Bailey is the national program manager of Rebuild America.

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Meet Our National Forum Speakers

Speakers addressing Rebuild America's 1999 National Forum include leaders in the effort to move the nation to a more sustainable future. Their work and areas of interest are in line with Rebuild America's. We have no doubt they will enhance the exchange of ideas and information that is the hallmark of our annual Forum.

Denis Hayes **Earth Day 2000**

Denis Hayes is president of the Bullitt Foundation, a \$100 million environmental philanthropic organization located in Seattle. In 1970, he was national coordinator of the first Earth Day and he is now international chairman of Earth Day 2000. During the Carter administration, Hayes was director of the federal Solar Energy Research Institute. He served as adjunct professor of engineering at Stanford University for seven years and is also an environmental lawyer.

Hayes has received the highest honors awarded by the Sierra Club, the National Wildlife Federation, the American Solar Energy Society, and the Humane Society. He was selected by *Look* magazine as one of the 100 most influential Americans of the 20th century, and by *Time* magazine as one of its "Heroes of the Planet." He has been profiled as "Newsmaker of the Week" by ABC News and as "Today's Person in the News" by *The New York Times*.

John Schaeffer **Real Goods Trading Co.**

John Schaeffer is founder and chief executive officer of Real Goods, a retailer specializing in energy-efficient and renewable goods that encourage "sustainable living practices." Real Goods and Rebuild America have mutual concerns and goals in several areas including:

- a desire to implement energy-efficiency technologies and practices using renewable energy systems for a more sustainable future
- a focus on advanced technologies, such as photovoltaics, to achieve environmentally low-impact energy consumption
- green design of buildings to take advantage of clean energy

Real Goods consultants have helped design innovative projects involving energy efficiency and renewables including "Greening of the White House" energy-efficiency measures; two resorts using photovoltaics and wind energy; and the Real Goods Sustainable Living Center, which is able to sell excess power back to the grid through utility tie-ins.

Huey Johnson **The Resource Renewal Institute**

Huey Johnson is president of The Resource Renewal Institute (RRI), a nonprofit organization founded in 1983 to support innovative environmental management in the U.S. and worldwide. RRI's main role is to promote the implementation of "green plans." This approach to solving environmental problems calls for cooperation among industry, government and nongovernmental organizations, among other things.

Johnson is author of *Green Plans for Sustainability*, a book that explores national environmental strategies and paths that nations and regions should take to protect their ecosystems.

Powerful Partnerships

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To help promote Rebuild Nevada, Nevada Power launched a web site (www.nevadapower.com/rebuildnv) in July 1999 dedicated to Nevada partnerships and showcasing their projects. As this year's premier host sponsor of the Rebuild America National Forum, Nevada Power is pleased to welcome community leaders and energy professionals to Nevada.

A Salute to our 1999 National Forum Sponsors

Rebuild America extends a special thanks to the following sponsors who have helped make this year's Forum possible:

Premier Host Sponsor
Nevada Power Company

Innovative Sponsors
NORESCO
ONSITE SYCOM
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Lithonia Lighting
Sempra Energy Services
SLi Lighting
Sunpark Electronics

Rebuild Western New York

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Other technical services may be custom-tailored to the facility's needs, such as feasibility studies for energy-efficiency measures that facility managers will implement outside of an energy performance contract. The following are examples of how Rebuild Western New York customizes its services to meet the building energy needs of the healthcare sector.

Lake Shore Health Care Center

The Lake Shore Health Care Center, a 120,000 square-foot skilled nursing and hospital facility in rural Irving, NY, tapped Rebuild Western New York's services to enter into an energy performance contract for cogeneration and other energy conservation measures. The partnership assisted in the development of an energy performance contract providing \$184,000 in annual energy and operational savings through a \$935,000 investment. The energy-efficiency improvements, which are nearing completion, included:

- installing a cogeneration plant and an energy management system to provide efficient heating and cooling
- retrofitting the food cooler refrigerator
- eliminating a chiller by repiping air handling unit to another existing chiller
- replacing existing burner (boiler) with modulating burner

This project was the pilot for DASNY tax-exempt financing which made the project more economically attractive for the center. The FlexTech energy performance contracting consultant was Wendel of Buffalo, NY.

Jamaica Hospital Medical Center

Rebuild Western New York helped the Jamaica Hospital Medical Center, a 600,000 square-foot facility in urban Jamaica, NY, save \$115,000 in annual energy and operational costs by replacing a main chiller during a cooling season failure. The chiller replacement is underway and other measures – including interconnecting segregated heating and cooling plants, upgrading an energy management system, and evaluating the boiler plant – are to follow. The facility is self-funding these measures. The construction costs for the chiller and energy management system were \$607,000. The project's FlexTech energy consultant was Parsons Brinkerhoff of New York, NY.

For more information, contact NYSERDA Project Manager Lee Smith at (518) 862-1090 ext. 3312 or e-mail lls@nyserda.org.

Tennessee Expands Energy-Saving Initiatives

1999 may prove to be the year Rebuild America profoundly impacts the way the state of Tennessee approaches energy efficiency. This impetus for change finds its roots in the Fall of 1997, when Governor Don Sundquist issued a challenge to the wardens responsible for the success of the recycling program in the Tennessee Department of Corrections (TDOC).



Tennessee Gov. Don Sundquist

If TDOC could carry out a highly effective recycling program, could it reduce energy and water costs in the state's prison system by 30 percent over a 3-year period? TDOC has jurisdiction over 12 state prisons and a training academy representing 4.6 million square feet.

The results for fiscal year 1998-99 are expected to show annual energy savings of \$1.8 million and \$440,000 in savings from the recycling program for the same period. This performance has been a springboard for developing a plan to save energy and dollars by improving state-owned buildings across Tennessee. Rebuild America helped guide state officials in preparing their state-wide Action Plan by providing crucial information on performance contracting and soliciting partnerships and service providers to ensure successful implementation and start-up. The Action Plan represents a coordinated effort by Tennessee's Department of Finance and Administration, a Rebuild America partnership, and state agencies with assistance from the ENERGY STAR® Buildings Program as well as Rebuild America.

The Action Plan seeks to introduce performance contracting to achieve a net 30 percent reduction in actual energy costs over 5 years in approximately 20 million square feet of state-owned property and is expected to generate over \$44 million in guaranteed savings. Qualified energy service companies would implement the plan and use local engineers and contractors to guarantee the savings. The goal is to have performance contracts underway in state office buildings by January 2000.

Tennessee is on the threshold of a brighter, more sustainable future, using proven methods presented by Rebuild America, to ensure that the state not only meets the governor's challenge, but sets an example for other state and local governments.

For more information, contact Dave Edmunds, program manager for the Tennessee Department of Finance and Administration, State Building Energy Management Program at (615) 741-9357 or e-mail dedmunds@mail.state.tn.us.

Profile

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Normandie developed an Associates degree program in construction management which will evolve into a 4-year program. He believes that schools need to be energy efficient and that administrators, facilities staff, faculty and students need to be taught energy efficiency.

“I have two goals with Rebuild Nevada,”

Normandie says. “One is to energy retrofit as many buildings as possible. The other is to develop training, education and degree programs that address energy efficiency in construction.”

His background serves him well when it comes to getting “buy in” to shepherd a project through the retrofitting process.

“With Rebuild America, you work for the state and are an independent third party,” Normandie says. “You become part of the building owner’s development team but have no vested interest. This works well in bringing a project on line.”

“He’s got a very high energy level and drive — he’s absolutely committed to bringing in partnerships that will bring in significant results,” notes **Paul Johnson**, team leader of the Seattle Regional Office. “His strong background in construction and project management helps him identify partnerships and projects likely to result in success.”

In the Works

Rebuild Nevada is setting its sights on projects that will have the greatest impact. One involves energy improvements to 400,000 square feet of National Guard properties under the auspices of the Federal Energy Management Program. Rebuild Nevada is also working with the City of Reno to retrofit 660,000 square feet of municipal buildings. Other highlights:

Rosewood Lakes

Rebuild Nevada has set up a partnership with Rosewood Lakes, a municipal golf course now

in design that will serve as a demonstration project for introducing young people to the game of golf. Alternative technologies the golf course is introducing include:

- photovoltaic golf carts and a solar cart re-charging barn
- a watering and irrigation system designed to reduce water consumption by 50 percent – the cost of watering being the greatest expense for golf courses in the Western states.
- a 3,000 square-foot alternative technology clubhouse and conference center

“You create a culture change when you get people to look at energy alternatives in new construction”

– Paul Normandie

The Professional Golf Association (PGA) has awarded the golf course its prestigious First Tee Award and will fund the construction cost of the first hole for the course.

University of Nevada, Reno

Rebuild Nevada is also working with Nevada’s university and community college system to develop a sustainable campus on a 160-acre geothermal field near Reno. The Redfield Foundation donated the land with the provision that construction begin by 2000. The state responded by appropriating \$12.5 million to build the University of Nevada, Reno Redfield campus. The design of the campus is underway and construction is slated to begin by early next year.

“We would like to develop the geothermal capabilities and develop a plant on-site to power the facilities,” he says.

Challenges

Normandie says the biggest challenge facing Rebuild Nevada is how to fund smaller retrofit projects in rural communities. In rural northern Nevada, for example, the need for energy improvements to schools is great, Normandie notes. “In one Pershing County school, there are no thermal-pane windows on the eastern and western sides of the building, causing tremendous heat gains in the warm months and heat loss during winter,” he says. “And schools used year-round are without air conditioning, despite summer temperatures that climb to the high 90s.”

“A small project can’t be done with the typical financing approach,” Normandie says. So he drew upon his banking expertise to introduce a new type of funder — one willing to extend credit in “marginal” markets in exchange for charging a slightly higher interest rate. The building owner is “ecstatic” to get the financing — despite the higher rate, he notes.

A native of southern California who retired his surfboard when he moved to Nevada in 1993, Normandie looks after his two daughters, Ashley, 4, and Helena, 5, and pursues alternative development technology as an avocation. He says he has a personal commitment to building a 20-unit office complex he designed that uses passive solar strategies and is 80 percent self sustaining.

“You create a culture change when you get people to look at energy alternatives in new construction,” he notes. “If we take the steps today to make energy efficiency a part of new construction practices, we won’t have to rebuild these buildings tomorrow.”

For more information, contact Paul Normandie at (775) 684-8735 or e-mail pnormand@govmail.state.nv.us.

Market Sector

Partnerships Tap Local And State Governments

Municipal and state governments throughout the U.S. present enormous opportunities and challenges for Rebuild America. A look at the numbers tells why. With 10,000 local governments (cities, counties, towns and townships) and more than 70,000 special districts and unincorporated entities operating under them, local and state governments own, lease, and maintain buildings that represent over 16 billion square feet. These buildings consume approximately 1,500 trillion Btus each year.

Energy costs — for operating offices, schools, libraries, colleges, medical facilities, police stations, fire stations, correctional facilities, airports and other facilities — are in the billions and represent 5 percent to 7 percent of local and state government annual expenditures. Local governments are also responsible for water supply and wastewater treatment facilities and outdoor lighting for streets and recreational facilities. The potential for energy savings is substantial:

- Improved energy efficiency can achieve conservative savings of \$3 billion annually.
- Total investment required to realize those savings is between \$13 billion and \$20 billion.
- Fixed-site energy costs in state and local governments total about \$30 billion annually.
- Electricity costs account for nearly 75 percent of these total annual energy expenses.

Rebuild America has made some significant inroads in establishing partnerships at the local and state levels. Fifty-five percent of Rebuild America's 229 partnerships are led by municipal and state governments. Eighty-seven partnerships are headed by municipalities and 38 are run by

the states. There is ample room for a great many more. A look at the factors that drive government decisions about energy efficiency helps to identify some of the obstacles and opportunities that have an impact on growth in these two key Rebuild America market sectors.

Barriers to Implementation

A recent survey conducted by Public Technology, Inc. (PTI) found that while most state governments interviewed had installed energy-efficient equipment in the previous 5 years, only about half of the responding local governments had made such installations. Respondents indicated that:

- Short payback periods and maintenance needs are often more important deciding factors for energy management than are lifecycle cost analyses.
- Lack of funds and low priorities for energy-efficiency projects were the two most significant barriers to installing energy-efficient equipment.
- Inadequate in-house expertise, difficulties in the procurement process, and risks associated with performance were other important constraints.

The findings of a California Energy Commission survey of local governments sheds more light on the subject:

- Lighting and HVAC system improvements were most often implemented, although fewer than 40 percent of all respondents made lighting improvements and less than 25 percent installed HVAC equipment.
- Respondents rated three factors as influential in reaching a project decision:
 - a performance or savings guarantee
 - the ability to obtain project financing



The energy retrofit of the Northeast Regional Library serves as a model for the Free Library of Philadelphia system.

- resources and guidance for project identification and installation
- Funding from "operating funds" led projects financed through capital budgets or bonds by a wide margin.

Partnerships Overcome Obstacles

The Rebuild America partnership model is ideal for local and state governments. Rebuild America can help customize a plan to fit specific partnership needs and provide technical assistance and marketing support. State governments can benefit through the State Energy Program (SEP) Special Project Awards granted annually by the U.S. Department of Energy. They can use the funds to implement projects in state-owned buildings or to benefit local communities. Rebuild America can provide:

- information on performance contracting and workshops on financing geared to meet specific needs as well as a Sourcebook available on-line
- access to colleagues facing similar challenges and a forum for peer exchange and mentoring

Rebuilding Locally and State-wide

Rebuild Cheshire (CT) has drafted a comprehensive Action Plan with a goal of achieving economic prosperity through

New York Supers Tune In To Rebuild America

In New York City, the Rebuild America message is starting to reach those on the front line of building maintenance: the building superintendents or “supers.” Rebuild America has partnered with the **Superintendent’s Club of New York** to provide club members with expertise on energy-efficiency technologies and creative ways to market and sell the concept of retrofits and upgrades to building owners.

Improving building energy efficiency is especially beneficial in a city like New York with rental rates that are among the nation’s highest and a preponderance of aging residential buildings. New York City tenants could get relief from sharp rental increases if energy savings were passed onto them, notes **Greg Davoren**, team leader of the Boston Regional Office (BRO).

The Super’s Club joined Rebuild America in September 1998 and its partnership has been evolving ever since. The Club is a nonprofit organization that acts as a technical society for multifamily building maintenance personnel. It was started one year ago and is sponsored by the Apartment House Institute of New York

City Technical College in Brooklyn. Members include porters, superintendents, maintenance directors, co-op board members, building owners and management. It has 65 members presently and plans to expand to 500 members by year’s end, according to **Richard L. Koral**, a professor at the Technical College who organized the Super’s Club. Koral is the college’s resident energy-efficiency expert and “mentor” in the multifamily housing sector.

The Club’s objectives are to provide its members with a chance to exchange ideas, share technical information and act as a networking association. Monthly meetings feature guest speakers who address such issues as boiler maintenance, locksmithing, and lighting. In June, the New York Chapter of Association of Energy Engineers presented an award to the Super’s Club for “Energy Program of the Year.”

Argonne National Laboratory (ANL) and the BRO have supported the Club by presenting workshops and demonstrations of the latest in energy-efficiency technology and building retrofit practices. Davoren and **Jim**

Cavallo of ANL have shared their expertise regarding window maintenance and replacement, energy-efficient heating system maintenance, computerized heating control systems, and reflective roof surfaces.

Club organizers plan to explore developing sister clubs in other major cities which will present additional opportunities for assistance from Rebuild America. The Superintendent’s Club is excited about the many opportunities they can access through Rebuild America, that in turn, will benefit New York City and their trade.

For more information, contact Greg Davoren at (617) 565-9706 or e-mail greg.davoren@hq.doe.gov; or Jim Cavallo at (630) 252-8688 or e-mail cavallo@anl.gov.



Greg Davoren, left, and Richard Koral

Snapshot



Doug Avery lights up the country as a Rebuild America program representative.

Vital statistics:

Lives in Redondo Beach, CA. Married and has five children, three boys and two girls. Enjoys walking on the beach, reading (three to four books a week), and working with computers.

Current role with Rebuild America:

Program representative for the Seattle and Denver regions. Also serves as technical resource on lighting and works with Native American tribes and partnerships across the country. Travels extensively to meet with current and potential partnerships.

Most rewarding aspect of your work:

We provide a catalyst that results in communities improving the quality of life for their residents. Rebuild America is part of the galvanization of communities to get things done. I’ve also had the privilege of meeting wonderful people representing all aspects of American society.

Your favorite Rebuild America moment:

In Rapid City, SD, I was honored with a Star Quilt for my efforts on behalf of the Rosebud and Lower Brule Sioux tribes.

Plans for the Rebuild America

National Forum:

Seeing the whole team and hearing what’s been happening around the country. It’s a chance to learn, grow and renew friendships.

Your greatest challenge:

Keeping up with all the work we have to do and delivering all we promise on time.

Workbench

How To Passively Cool An Existing Building

While it may be easier and more cost-effective to incorporate energy-efficient cooling strategies into new construction, there are still some effective ways to reduce the cooling load in existing buildings during the summer months. Bill Bobenhausen, director of sustainable design for Steven Winter Associates, Inc. of Norwalk, CT, shares some insights about passive cooling techniques that work in existing buildings.

Buildings constructed of brick, concrete and other heavy materials can reduce the need for cooling energy use during the afternoon hours. In addition, such mass should be taken into account when the capacity of cooling equipment is being determined.

Many small commercial buildings (such as offices, restaurants, recreation buildings and warehouses) can use natural ventilation to cool spaces and improve the comfort of building occupants. Cooling a building with natural ventilation involves controlled manipulation of positive wind pressures to allow for controlled entry, distribution and exiting of the moving air stream. This approach favors an arrangement of inlets and outlets — usually some type of window or transom — for efficiently moving air in and out of the building. In

hot, dry climates the ventilation strategy of "night flushing" massive buildings with relatively cool night-time air can cool down the mass of the building overnight and reduce the need for cooling energy the following day

Particular attention should be given to windows and glazing. South-facing glazing can be shaded by simple overhangs. Exposed west-facing glazing is more problematic, especially at the latitudes of the southern United States, although vertical fins can provide some benefits. Tinting of glass to reduce solar heat gains is often a good strategy, particularly the use of green and blue-green tinted glasses that let a large amount of the visible solar spectrum to pass through. And when buildings are abundantly illuminated by sun-controlled daylight, electric lighting can be dimmed or turned off, resulting in cooling energy savings.

Bill Bobenhausen (billbob@swinter.com) presents workshops on designing low-energy buildings for the Passive Solar Industries Council (PSIC). For information about the workshop series, contact PSIC at (202) 628-7400 ext. 210 or visit www.psic.org

Partnerships Tap

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energy efficiency. The partnership used state funds to develop a municipal energy conservation strategy. It audited all municipal and school buildings to ascertain the best approach to a long-term energy management plan.

The upgrades are expected to help cut energy consumption by 10 percent to 15 percent annually. As part of an outreach campaign to local building and business owners, the partnership presented a "Power Expo" to demonstrate how Rebuild America and related programs could help the town stimulate economic development.

Rebuild Nebraska shows how a state partnership can balance a state-wide approach with community-based action. The partnership's umbrella covers more than 110 partners including local governments, businesses, housing authorities, utilities, and

schools among others. Rebuild Nebraska provides building owners with options, technical information and financing. The partnership's flexibility has eased its transition from large-scale efforts to a community-based approach. Its efforts in Otoe County, one of the oldest counties in the state, are focused on county-wide sustainability and historic preservation. Thirty to 40 buildings representing an estimated 525,000 square feet are under consideration for retrofitting, with a goal of reducing energy use by 25 percent in each building.

Nationwide Partnering

At the national level, Rebuild America is working with local and state government constituencies to promote energy efficiency and knock down barriers. Rebuild America has established strong working relationships

with the National Association of State Energy Officials and the National Conference of State Legislatures. In the coming months, Rebuild America looks forward to building similarly supportive national partnerships with other leading associations that represent elected officials and the technical and professional managers of cities and counties.

Sources for information in this article include reports published by the U.S. Department of Energy, Energy Information Administration and the U.S. Department of Commerce. For more information contact Richard W. Zelinski, Rebuild America Financial Services, at (703) 551-0250 or e-mail richzel@ibm.net



Energy Retrofits Planned For L.A. Office Towers

Douglas, Emmett and Company, one of the Los Angeles area's largest property management firms, is planning for big energy savings at two Class A high-rise buildings in West Los Angeles. The firm targeted its Landmark II and Executive Tower projects for approximately \$1 million worth of energy retrofit projects. Based on engineering analysis done by Servidyne Systems, Inc., they stand to cut energy costs by as much as \$270,000 per year in the two buildings which total 665,000 square feet. The work is expected to begin by next summer and will take a year to complete.

The retrofit of these buildings is part of a program by Douglas, Emmett and Company to perform energy audits and retrofit all of its properties acquired in the past several years. The firm did its first comprehensive retrofit project in the early 1990s with mixed results. It took some time to get all systems installed and operating properly, but ultimately the project realized significant savings.

In early 1997, Daniel W. Emmett of Environment Now, a nonprofit group involved in local issues, contacted Bill Knox, the state's Rebuild America representative at the California Energy Commission, to find out more about energy options under California's electricity restructuring. He was also seeking recommendations for qualified energy auditors for Douglas, Emmett and Company. Knox recommended a number of qualified energy engineering firms based on his retrofitting experience through Rebuild America and state energy programs. Douglas, Emmett and Company selected Servidyne Systems, Inc., whose engineers completed the audits last December.

Towers to Yield Big Savings

The two buildings differ in their HVAC systems and in the opportunities each

presents for cutting costs. Recommendations for the 278,000 square-foot Executive Tower on Olympic Boulevard will save an estimated \$91,000 per year, or about 15 percent of total energy costs. The improvements will pay for themselves in energy savings in about three years. A large share of the savings comes from restoring lockout control for the electric reheat system. Servidyne found that controls were not functioning properly — the cooling and heating systems were fighting each other — and the building was being heated needlessly at night. Fixing existing controls and installing new components should save an additional \$30,000 with a payback of less than two years. Lighting projects, including electronic ballasts for both T-8 and T-5 fixtures, will also result in big savings.

The 387,000 square-foot Landmark II on Wilshire Boulevard stands to save an even higher 22 percent of energy costs. The simple payback is between four and five years. Measures with large savings at Landmark II include lighting retrofits with T-8 tubes and electronic ballasts in the parking garage, common areas and tenant space, and sensor control of lighting in the parking lot. The biggest share of the savings from HVAC improvements will come from installing variable frequency drives on air handling units. Premium efficiency motors will cut the cost of pump and fan operation.

Benefits for Both Landlord and Tenants

Because of the structure of leases in both buildings, a significant portion of the direct savings will go to tenants. Douglas, Emmett and Company points out the value in the retrofits beyond near-term electrical savings:

- Tenants look closely at all costs associated with their lease in Los



Landmark II in Los Angeles

Angeles' competitive real estate market. Lower energy costs contribute to lower total cost per square foot.

- The retrofits will improve comfort and lighting quality, benefits that businesses are beginning to recognize, especially in terms of increased productivity - which is beginning to be documented.
- A growing number of tenants are sensitive to the environmental effects of reducing energy consumption.
- Improving the mechanical and electrical systems increases the value of the buildings upon sale.

Environment Now plans to build on Douglas, Emmett and Company's success by developing energy savings Road Maps for commercial property managers that will address different paths to energy retrofits that improve the bottom line. Environment Now plans to introduce the Road Maps through the Building Owners and Managers Association (BOMA) to promote increased energy retrofits in the greater Los Angeles region.

For more information, contact Bill Knox at (916) 654-4048 or e-mail bknox@energy.state.ca.us.

Regional Roundup

Southeast

Rebuilding for the Future...Rebuild Asheville, NC held a ribbon-cutting and building dedication ceremony on June 10 for their newly renovated Lonnie D. Burton Head Start Child Development Center. The renovated facility, originally a school building built in the 1930s, serves 90 children and their families. Head Start is a national program that provides comprehensive developmental services for low-income, pre-school children ages 3 to 5 and social services for their families.

Energy-saving measures installed at the center include HVAC improvements such as an efficient reverse-cycle heat pump and timer; window replacement to enhance daylighting; and the addition of occupancy sensors and new lighting fixtures. Asheville's Head Start center improvement project was a collaboration among Rebuild America, The Opportunity Corporation, the City of Asheville, and the Administration for Children and Families at the Atlanta Department of Health and Human Services. **Jim Powell**, director of the Department of Energy's Atlanta Regional Office, was the featured speaker. Asheville Mayor **Leni Sitnick** was on hand to cut the ribbon. *Contact David Jones for more information at (828) 258-1222.*

Midwest

Rebuild Pella Financing Options... Rebuild Pella coordinator **Jenise Dahlin** has found a unique approach to help participants finance energy-efficiency improvements. A recent change in Iowa law allows businesses to avoid paying sales tax on energy used to manufacture items sold for retail. In applying for this exemption, business owners can also request a refund on past sales tax paid for this purpose. In addition to completing audits for Rebuild America participants, Dahlin will

help business owners apply for the exemption and refund. Owners are encouraged to use the refund to pay for identified improvements. "We are currently filing seven refund applications totaling more than \$6,500 for these businesses, three of which already have plans to make efficiency improvements," Dahlin said. "Tying the refund process to Rebuild is a good way to go in the door with a positive approach and come out of the process with a better chance of implementation." Additionally, Dahlin has worked with four local financing institutions to offer reduced rates on loans for Rebuild Pella projects. *For more information, contact Jenise Dahlin at (515) 628-2581.*

Rebuild Kewanee (IL) signs on Illinois Power... The Rebuild Kewanee Partnership, formed in February 1998, has signed on Illinois Power as a new partner. Illinois Power is currently working with the partnership to define their Rebuild America activities and has committed to helping local communities through performance contracting efforts and training workshops. Kewanee has approximately 13,000 residents. Other Rebuild Kewanee partners include Daisy's Bed & Breakfast and Henry County Public Housing. *For more information, contact Juli Pollitt, Chicago Regional Office at (312) 886-8571 or e-mail juli.pollitt@hq.doe.gov.*

Rebuild Iowa Receives National Recognition... Rebuild Iowa has been selected to receive a 1999 Certificate of Environmental Achievement from Renew America and will be included in the Environmental Success Index. Renew America is a network of community and environmental groups, businesses, government leaders, and civic activists who exchange ideas for improving the environment. The certificate is awarded to projects that measurably protect, restore or

enhance the environment. The **Environmental Success Index** provides brief descriptions of over 1,400 successful environmental programs. The Index serves as a database of innovative solutions used to locate effective, replicable models of action. *Contact Kimberly Baxter at (515) 281-6486 or e-mail kbaxter@max.state.ia.us*

West

The Affiliated Tribes of Northwest Indians (ATNI), representing 52 Native American tribes, has joined the Seattle Region's Rebuild America program. ATNI, which represents about 10 percent of the 554 federally recognized tribes, is dedicated to promoting tribal self-determination and sovereignty. Program representatives **Doug Avery** and **Scott Wolf** and Seattle regional team leader **Paul Johnson** have met with **Sonya Tetnowski**, tribal energy coordinator for ATNI, in Seattle to define the scope of work under this partnership and to shape the partnership's Action Plan. Tetnowski is well versed on how economic development and national energy issues such as electricity competition affect tribes.

For more information, contact ATNI at (425) 774-5419.

Rebuild America has a new identity in cyberspace. The new Rebuild America web site was launched in May with up-to-date information on over 220 community partnerships. From the web site, you can download our Technical Guide Series, Information Kit, and partnership success stories. The benefits of participating in Rebuild America, program achievements, and the schedule for upcoming national and regional workshops and events are also featured. Log on at www.eren.doe.gov/buildings/rebuild.

Upcoming Events

1999 Rebuild America National Forum. August 9-11 in Las Vegas, NV. Visit www.eren.doe.gov/buildings/rebuild.

Energy '99. August 23-25 in Orlando, FL. Visit www.tainc.com.

National Association of State Energy Offices Annual Meeting. September 19-22 in Indianapolis, IN. Visit www.eren.doe.gov/buildings/state_and_community/sep.html.

International City/County Managers Association Annual Conference. September 26-29 in Portland, OR. Visit www.icma.org.

American Consulting Engineers Council Fall Conference. September 30-October 2 in Traverse City, MI. Visit www.acec.org.

Rebuild America Financial Services Workshop for Partnerships. October 5-6 in Rhode Island and Connecticut. E-mail Julia Kelley at j4u@ornl.gov.

Rebuild America Financial Services Workshop on Project Development and Financing Options. October 6-8 in Salt Lake City, UT. To be presented at the Energy Management for the New Millennium National APEM/ASTE Conference. E-mail Julia Kelley at j4u@ornl.gov.

National Rural Education Association Annual Conference. October 13-17 in Colorado Springs, CO. Visit www.colostate.edu/Orgs/NREA/1999Convention/call.htm.

Council of the Great City Schools. October 14-18 in San Francisco, CA. Visit www.cgcs.org or contact Terry Tabort at tabort@cgcs.org or 202-393-2427, ext. 213.

National Association of Housing and Redevelopment Officials Annual Conference. October 17-19 in Philadelphia, PA. Visit www.nahro.org.

National Council of State Housing Agencies Annual Conference. October 24-26 in Chicago, IL. Visit www.ncsha.org.

Reenergize Teams With Christmas In April

ReEnergize East Bay has found a way to encourage the installation of energy-saving measures in Christmas in April projects undertaken in Northern California. Christmas in April is the leading national volunteer organization that provides home repair and improvement services to low-income senior and disabled homeowners. (See Partner Update, January-February 1999.)

ReEnergize and its parent organization, Community Energy Services, Inc. (CESC), jointly coordinate volunteer projects year-round with the Albany-Berkeley-Emeryville chapter of Christmas in April to augment their other home repair activities on behalf of low-income seniors and those with disabilities.

Recognizing the potential for increasing expendable income for this population through reducing utility costs, ReEnergize East Bay has developed the *Home Energy Guide for Volunteer Workers*, a simple guidebook that details 15 residential energy and water conservation opportunities. The improvements can be performed by semi-skilled and unskilled volunteers working with Christmas in April or other similar assistance programs. Dr. Lisa Gartland of Positive Energy wrote the guidebook, which includes a description of the energy-efficiency measures and how they work, a list of materials and estimated costs, installation instructions, expected cost savings (annual and lifetime), and other benefits of each measure. The measures include:

- Weatherization of doors, windows, and other leaks
- Water heater and pipe insulation
- Compact fluorescent lamps
- Low-flow water devices
- Appliance cleaning and adjustments

National Rebuilding Day is observed each year on April 24 and the Albany-Berkeley-Emeryville (CA) chapter of Christmas in April rose to the occasion this year by providing home repairs to 39 Bay area homes. Dr. Gartland organized an energy-efficiency team to install energy and water conservation measures in addition to the safety and repair work typically performed by Christmas in April volunteers. Twenty-six volunteers (nine of them from Lawrence Berkeley National Laboratory's Energy & Environmental Technology Division) comprised six teams that traveled from site to site, installing energy-saving measures at 30 locations in a single day. Team members collected over \$4,000 in donations to assist the effort.

In addition to Christmas in April, ReEnergize East Bay's Richard Flood says he expects the guidebook to be used year-round by construction groups installing energy-efficiency measures in Community Development Block Grant projects.

"CESC provides construction services in about 200 homes per year," Flood notes. "We will also extend the project through the Alameda County Housing Department which serves about 800 homes per year in Oakland, Alameda, Hayward, Fremont, and other East Bay municipalities."

ReEnergize plans to revise the guidebook based on this year's experiences and post it on the Rebuild America website so it is accessible to Rebuild America and Christmas in April participants across the country. *For more information, contact Richard Flood at (510) 644-8546 or e-mail richflood@aol.com.*





Rebuild America is helping municipalities like the town of Cheshire, CT, improve energy efficiency in municipal buildings such as the waste control facility, pictured at left. See Market Sector column on page 6.

Share Your Success

To submit news or story ideas, contact:

- Elise G. Rand, (202) 466-7391, or e-mail erand@pcgpr.com
- Alex Zartman, (301) 588-9387, or e-mail 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.

To be placed on the mailing list for *Rebuild America Partner Update*, e-mail rebuildamerica@drintl.com.

Rebuild America Welcomes 8 New Partnerships

Affiliated Tribes of Northwest Indians, WA

City of Santa Fe, NM

Lamar County Schools, GA

Rebuild Santa Fe, NM

Rebuild the District of Columbia, Washington, DC

Sierra Assisted Living Foundation, NV

Town of Taos, NM

Wausau School District, WI



U.S. Dept. of Energy
Rebuild America

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
Office of Building Technology,
State and Community Programs
U.S. Department of Energy
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