



Rebuild America

# Partner Update

Energy Efficiency is Smart Business

Fall 1996

## Dandridge “ReEnergizes” Bay Area

When she called, it was 10 a.m. in Washington. So it was only 7 a.m. in Berkeley, California.

She was pounding out something on her computer and was well into her schedule of the day's activities. There was no morning crack in her voice. Cyane Dandridge was ready and roaring to go.

This energized “go getter” is the project director for the ReEnergize East Bay Consortium.

Dandridge and her award-winning consortium have been successful in launching new products and services, maintaining the community's involvement in ReEnergize programs, forming new partnerships and learning many lessons along the way.

“We are developing two new programs,” said Dandridge. “One is the office equipment energy audit which will track paper and energy consumption; the other is to act as an unbiased reporting source for business owners interested in creating energy efficient buildings.”

These programs are on track to be implemented early next year. The consortium

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## Rebuild America Program Nears 100th Partnership

### Business Focus Attracts Attention

Leaders in 90 communities from Maine to Hawaii and from Alaska to Florida are putting Rebuild America on the map. Actually, they're putting it all over the map.

“With 90 partnerships already in place in nearly 40 states and territories, Rebuild America is right on schedule to create 250 partnerships by the year 2000,” said Christine Ervin, Assistant Secretary for Energy Efficiency and Renewable Energy at the U.S. Department of Energy in Washington, D.C.

“I think we will reach the 100th partnership milestone soon because we're trying to run the program like a business,” she predicted.

Ervin said Rebuild America is taking a business-like approach for many reasons.

“First of all, this program is voluntary. Partners join because they see ways that energy efficiency can fuel economic growth and development, and because they know Rebuild America can help them save money.”

When Rebuild America hits full stride in the year 2000, Ervin anticipates that partners will be saving more than \$600 million each year and cutting annual energy waste by as much as 100 trillion Btu's in renovated buildings. “That's enough energy to power the entire United States for a full business day,” she said.

At the same time, partnerships will create thousands of new jobs.

Ervin pointed to Kansas City's EnergyWorks program as an example of how partners benefit. Citing statistics provided by the Kansas City-based Metropolitan Energy Center, she said EnergyWorks alone will create 1,700 new jobs over 10 years.

“That one partnership will save millions of dollars in government and non-profit energy expenditures,” according to Ervin. “The money saved can be invested locally to improve the community.”

Ervin said a second reason Rebuild America appeals to the business-minded is that it's action oriented. Every

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# Rebuild America's 100th Partnership

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partnership develops an action plan that sets priorities, identifies targets, assigns roles, and measures results — many of the same elements found in any business plan.

A good action plan will generate tangible benefits for partners. State and local agencies, for example, will save money on energy costs for renovated government buildings, schools, and subsidized housing.

“The Rebuild Boston partnership’s action plan has led to work with dozens of local housing developments to screen and treat thousands of apartments throughout the community,” Ervin said.

Building owners and operators can also look forward to higher property values for energy efficient buildings and the likelihood that they will be able to retain more tenants because tenants realize their leasing dollars are buying greater value.

Employers generally benefit from modernized buildings because an improved work environment fosters increased worker productivity.

Finally, Rebuild America attracts those with a bent toward business because partners are innovative problem-solvers, Ervin explained. “And each program is tailored to local priorities.”

An innovative technique that many Rebuild America partners are using is performance contracting. It saves money and provides a way to

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– Christine Ervin  
Assistant Secretary  
for Energy Efficiency  
and Renewable Energy  
U.S. Department of Energy

complete projects when in-house money is unavailable.

As the program continues to grow, Ervin said, more and more partners will be working together and with the national program staff to help each other find resources, form effective partnerships, and solve energy efficiency problems in communities of all sizes.

The reason is simple, she said. “Energy efficiency is smart business.”

## Welcome to Partner Update

**By Mark Bailey  
Director  
Rebuild America**

Welcome to the first issue of *Partner Update*, the new quarterly newsletter for and about partners in the U.S. Department of Energy’s Rebuild America program.

With 90 partnerships already in place in nearly 40 states and territories — and plans for at least 150 more during the next few years — communication is the centerpiece of our Rebuild America strategic plan. *Partner Update* will be one of our most important tools for reaching out and sharing information.

We’ve designed this first issue to provide you with a mix of technical and not-so-technical information that we think will help you get on with the important business of renovating buildings to improve energy efficiency. It’s the prototype for future newsletters.

We’re introducing *Partner Update* in conjunction with the Rebuild America Fall Forum in Washington, D.C., because it’s the first national gathering of partners. The Forum program is designed to give partners the opportunity to network, exchange ideas and experiences, and help each other to build and implement successful community-based programs.

This newsletter is designed to do the same things. We want it to be a practical tool you can use to find out what other partnerships are doing, and to get help solving problems unique to your own program. Each issue of *Partner Update* will concentrate on the activities and accomplishments of our partners.

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Partner Update is the quarterly newsletter from Rebuild America, a program of the Office of Energy Efficiency and Renewable Energy at the U.S. Department of Energy.

Rebuild America projects improve the energy efficiency of buildings to save money, create jobs, promote growth and protect the environment through cooperative partnerships with America’s communities.

To submit an article to Partner Update, contact Lani MacRae, Editor, at the U.S. Department of Energy, Mail Stop EE-421, 1000 Independence Avenue, SW, Washington, D.C. 20585; or email [lani.macrae@hq.doe.gov](mailto:lani.macrae@hq.doe.gov)



# When Ranking Buildings, Consider More Than Size

## Benchmarking Compares Apples to Apples

By Terry Sharp, P.E.

A common refrain heard during arguments is, "You're comparing apples to oranges!"

That is, the comparison being used is not fair. Accurately ranking the energy performance of buildings also requires comparing those with similar characteristics — apples to apples. Now you can.

A set of benchmarking spreadsheets that we have developed at Oak Ridge National Laboratory (ORNL) in Tennessee uses certain aspects of your office building in addition to size to provide a more accurate picture of how its energy consumption compares with others.

Benchmarking a building compares its performance with others that are similar. It helps you identify problems with buildings and target energy efficiency efforts.

Energy analysts typically use the EUI of a building, an index measuring energy use per square-foot. For example, the high EUI of the office building housing ORNL's Building Technology Center (BTC) makes it look less efficient than 74% of U.S. office buildings, even though it has many energy efficient features (Figure 1).

However, by using the benchmarking spreadsheet, the building's location (a moderate heating and cooling climate), the high number of personal computers, and the impact of owner-occupancy are all taken into account.

The result? The building is found to use less energy than almost two out of three similar buildings (Figure 2).

The Commercial Buildings Energy Consumption Survey (CBECS) is a large-scale, national survey of commercial buildings conducted by the Energy Information Administration of the U.S. Department of Energy.

The spreadsheets consider the five characteristics with the greatest impact on energy consumption, based on an analysis of approximately 1,500 office buildings in the CBECS database.

The characteristics are:

- worker density;
- number of personal computers;
- operating hours;
- occupancy type; and
- heating fuel type.

The first four characteristics are needed to accurately determine the reasons for electricity usage. The fifth, heating fuel type, is important when looking at non-electric fuel use, such as natural gas.

Even in buildings of the same size, energy consumption can vary greatly because of these factors. By accounting for them, we can avoid comparing buildings having sound reasons for higher energy usage with those that do not.

For example, a building with a high worker density — that is, more people working in the same amount of space — can easily use 30% more electricity. Specifying these added characteristics allows you to get a more precise picture of how a building performs.

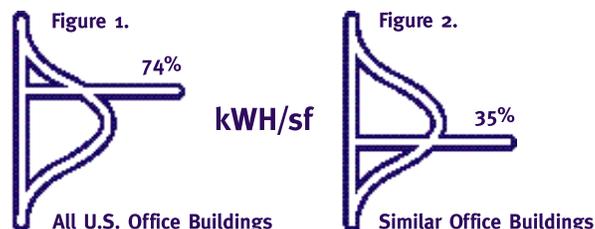
The benchmarking spreadsheets for office buildings are available for Rebuild America partners. Similar spreadsheets for other types of buildings are planned for development.

*Terry Sharp, P.E., develops methods for evaluating the energy efficiency of existing buildings at Oak Ridge National Laboratory's Buildings Technology Center. To obtain the benchmarking spreadsheets, contact him at (423) 574-3559, fax (423) 574-9338, or e-mail ats@ornl.gov*

### Comparing the BTC Office Building with Others

Figure 1. In a comparison using the EUI, it is found to use more kilowatt-hours per square foot than 74% of all others.

Figure 2. When compared only to other owner-occupied office buildings in the same 4-state region with similar numbers of computers, it is found to be more efficient than 65% of them.



# Dandridge "ReEnergizes" San Francisco Bay Area

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will also debut its new office in Oakland. "The office will highlight the most up-to-date efficient lighting, heating and cooling systems, which have been donated by consortium members," commented Dandridge. "We are really looking forward to showing people that energy efficiency is not a novelty, but a great way to save the environment."

This year, the consortium modified approximately 400,000 square feet of office space. These modifications helped the Bay area maintain its economic balance while supplying employment opportunities to local contractors. Dandridge added that she would like to see the consortium do more for small and mid-sized business owners next year, but was very happy with progress thus far.

The consortium has been working to sign new partners to its local partnership. For example, Cannon USA will help design the audit pilot programs and donate efficient office equipment for the new ReEnergize office in Oakland.

Dandridge pointed out that success has not been easy. "I've learned that in order to make a project of this magnitude effective, I've got to stay on top of planning." Because of the large number of participants involved, Dandridge and her staff are preparing a model communications plan to help similar organizations.

Even though Dandridge's occupation may be demanding, she said she loves what she does. "This is what I went to school for.

**"Energy efficiency is not a novelty, but a great way to save the environment."**

– Cyane Dandridge  
Project Director  
ReEnergize East  
Bay Consortium

I wrote my master's thesis on energy efficiency and office technologies at the Massachusetts Institute of Technology." Her thesis was published in the CD-ROM *Greening of the White House*.

Dandridge had an early fascination with buildings. In high school, she designed and built her family's home.

In addition to enjoying adventure sports like mountain biking and skiing, she is an accomplished writer. Dandridge has lived all over the world, and speaks five languages.

Before directing the ReEnergize East Bay Consortium, Dandridge spent two years designing new programs for the EPA's Energy Star program. In the early stages of the consortium, it was not so immense. Today, Dandridge has four full-time staff and two part-time employees working with her.

"We have come such a long way from a year ago," she said. "So many wonderful and positive things are happening with ReEnergize and I'm glad to be a part of it."

## News Briefs

As *Partner Update* went to press, the U.S. Environmental Protection Agency proposed tighter federal standards for two National Ambient Air Quality Standards (NAAQS) – **ozone and particulate matter**. The Clean Air Act requires EPA to review NAAQS standards every five years, based on the latest research, and decide whether existing rules are adequate. A federal court order required EPA to make that decision by November 29, 1996.

If the standards are tightened, EPA may have to designate hundreds of counties as "non-attainment areas" for compliance with those standards. Counties in non-attainment must take steps to achieve compliance, or risk federal sanctions. Energy efficiency programs like Rebuild America can help counties demonstrate that they are making progress towards attainment.

Deregulation of the electric power industry is likely to be a key issue in the 105th Congress. At least two bills are expected to be introduced when Congress convenes in January 1997 to **restructure the industry** directly or pave the way for states to do so. Issues surrounding the restructuring discussion include:

- allowing utilities to compete for customers nationwide;
- the impact of potential new environmental regulations to mitigate increased emissions as the result of deregulation; and
- providing for the recovery of large capital investment costs, known as stranded costs, such as nuclear plants.

## Partner Briefs

**Hampden County, Massachusetts** says energy-efficiency improvements to its Hall of Justice will cut the building's utility bill almost in half. The \$2.7 million project will be paid for by energy savings over 10 years. CES/Way International, the project contractor, will guarantee the energy savings as part of its performance-based contract. Annual savings are expected to reach \$350,000. The quarter-million square foot Hall of Justice has served as the county seat since its construction in 1974. Renovations will include converting the electric heating system to gas and updating thousands of lighting fixtures to energy-efficient T-8 lamps. The one-year project will begin in early 1997.

*For more information, contact Paul Schroeder at (413) 748-7910.*

**The Center for Energy and Environment (CEE) in Minnesota** has partnered a multifamily building owner and an energy service company to highlight the value of installing very high-efficiency boiler systems in older multifamily buildings. The project will document the energy savings potential of such retrofits and address operations and maintenance issues with unfamiliar boiler designs. CEE leads the Rebuild America partnership in Minneapolis. Their five-year goal is to reduce energy consumption by \$5.2 million annually in 25 million square feet of commercial and multifamily building space in the Minneapolis/St. Paul metropolitan area.

*For more information, contact Rich Szydlowski at (612) 335-5862.*

Residents of Holyoke, Colorado will improve their recreational centers thanks to consulting help provided by **Rebuild Colorado**. The staff has been busy working with interested cities for months in preparation for the spring rollout of its community improvement package. In Holyoke, a coalition of residents and city leaders conducted an energy audit of the 1960's-era buildings to document potential cost savings through system upgrades. Partners have also been traveling around the state to build awareness of energy efficiency and the savings possible through operational improvements.

*For more information, contact Alan Nagle at (303) 620-4292.*

## Regional Roundup

Helping new partners complete their action plans is the focus of the **Denver Regional Support Office**.

"There is a lot of potential out there to help local businesses and communities," said Jamey Evans, the regional program representative. After three months, the newest partner in Texas has completed five walk-through audits and has almost a dozen more scheduled. The Rebuild Colorado program has been working with energy service companies to draft sample performance-based contracts for partners to use.

*For more information, contact Jamey Evans at (303) 275-4813.*

Marketing efforts at the **Seattle Regional Support Office** have resulted in nine new Rebuild America partnerships. Current partners have also been busy. The Rural Alaska Building Energy Efficiency Project completed a trial audit for Tanana, a community of 350 people, and is working with the Lighting Design Lab in Seattle to explore lighting options for extremely cold climates. Also, Portland Partners for

Energy Efficiency held a kickoff in October and is currently recruiting a project director.

*For more information, contact Paul Johnson at (206) 553-2154.*

# New Guides Increase Partner Resources

## Model Action Plan, Financing Guide Coming

Two new products from the Rebuild America program team will make it easier for new partners to chart their course and current partners to finance their projects.

A *Model Action Plan* and a *Financing Guide* will be available to partners in early 1997. They both present ideas from business leaders and hands-on professionals around the country.

The *Model Action Plan* is an outline for new partners to use as they sort out what they want to accomplish and how they should target their resources.

Action plans from current partners are used as examples to illustrate the wide variety of ideas Rebuild America partners have generated.

The *Model Action Plan* will address:

- establishing a partnership, developing goals and setting priorities;
- selecting candidate buildings;
- outlining actions, responsibilities and resources;
- monitoring and evaluating results; and
- marketing and promotion.

The *Financing Guide* will help partners make financing decisions and access investment capital to finance community projects.

The guide takes advantage of experiences from banking and investment experts to craft strategies that local partners can use to move projects forward.

The five major financing options available to partners are discussed in the *Financing Guide*. For each option, several case studies are discussed.

These options are:

- internal operating funds;
- debt financing;
- leasing arrangements;
- energy performance contracts; and
- utility incentives and state programs.

The *Financing Guide* will include a decision matrix, which will assist partners in choosing the best financing alternative.

Also included is a discussion of energy issues that are likely to affect financing decisions over the next five to ten years. These include utility deregulation, emissions trading and secondary markets for energy efficiency.

Regional program representatives will notify partners when the *Model Action Plan* and the *Financing Guide* are available.

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We'll also devote as much space as we can to covering the nuts and bolts of organizing, financing, and managing effective partnerships.

And we'll be watching for new products, services, and ideas we think partners will find helpful. A regular calendar feature will identify conferences, seminars, and other programs you should know about and may want to attend.

Finally, we'll use this column to keep you informed on what's happening in Washington.

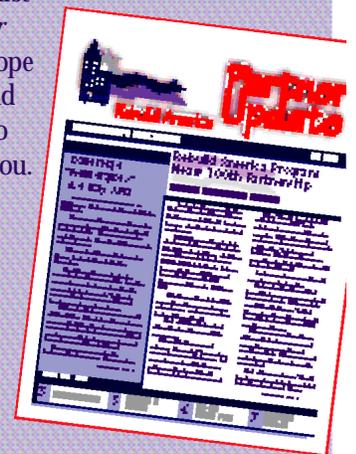
All of us on the Rebuild America staff, both in Washington and in the field, are excited about *Partner Update*. We've worked very hard to try to fill it with information our partners — and prospective partners — can use.

We invite you to help us make this newsletter the best it can be. You can do that in two ways.

First, share with us your ideas for future stories, features, events, profiles, and technical information.

And just as important, please tell us what you think of *Partner Update*. We need your comments to make sure we're giving you the kind of information you need.

Again, we're very happy to present you with this first issue of *Partner Update*. We hope you enjoy it and look forward to hearing from you.



# Calendar

**U.S. Conference of Mayors Winter Meeting.** January 17-20, 1997 in Washington, D.C. For information, contact USCM at (202) 861-6783.

**Winter Meeting and Exposition of the American Society of Heating, Refrigerating and Air-Conditioning Engineers.** January 25-29, 1997 in Philadelphia, PA. Contact ASHRAE, 1791 Tullie Circle, NE, Atlanta, GA 30329, or call (404) 636-8400.

**Financing Economic Development and Attracting Jobs.** Sponsored by the National Council for Urban Economic Development (CUED). February 26-28, 1997 at the Omni Shoreham Hotel, Washington, DC. Contact Chris Mead at (202) 223-4735.

**Associated General Contractors Constructor Exposition.** March 7-9, 1997 at the Washington Convention Center, Washington, D.C. AGC members are responsible for approximately 80% of domestic contracting. Contact AGC at (202) 323-6789.

**NESEA Building Energy '97: Insuring a Sustainable Future.** Sponsored by Northeast Utilities System, PNL/Battelle National Labs and the Department of Energy. March 12-15, 1997. Contact Jo Ann Lawrence at (413) 774-6051, e-mail: nesea@nesea.org or via internet at <http://www.soltice.crest.org/nesea>

# Resource Library

Below is a selection of Rebuild America products designed to help partners achieve success in their communities.

**Information Kit:** A brief overview, including a Partner Application.

**Community Partnership Handbook:** A detailed guide to creating a partnership, developing programs, obtaining financing and evaluating results.

**Press Kit:** A folder of press-oriented information, with guidance on creating materials for your partnership.

**Media Relations Guide:** Information on developing press interest in your partnership and working with the media.

**Brochure:** A quick look for interested people.

The Rebuild America web site is: <http://www.eren.doe.gov/buildings/rebuild>

Rebuild America products, and additional information on becoming a partner, are available from the Energy Efficiency and Renewable Energy Clearinghouse (EREC) at 1-800-DOE-EREC (TDD 1-800-273-2957).

The EREC web site is: <http://www.eren.doe.gov>



# Rebuild America Partners

Alaska  
Rural Alaska Building  
Energy Efficiency Project  
Arkansas  
City of Fayetteville  
City of Little Rock  
State of Arkansas  
Arizona  
City of Chandler  
City of Tempe  
Rebuild Arizona  
California  
City of Petaluma  
City of San Diego  
ReEnergize East Bay Consortium  
Colorado  
Rebuild Colorado  
Connecticut  
Town of Fairfield  
City of West Haven  
State of Connecticut, Hartford  
Florida  
City of Hollywood  
City of Fort Myers  
City of Pembroke Pines  
Guam  
Territory of Guam  
Hawaii  
County of Hawaii  
County of Maui  
County of Kauai  
Indiana  
Job Source  
Illinois  
Chicago Housing Authority  
Iowa  
Hancock County  
Webster City  
City of Sioux Center  
City of Des Moines  
Ottumwa Area Chamber  
of Commerce  
Rebuild Iowa

Louisiana  
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City of New Orleans  
Maine  
York County  
Community Concepts, Inc.  
Massachusetts  
City of Cambridge  
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Renewable News Network  
Rebuild Boston Energy Initiative  
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Missouri  
EnergyWorks, The Metropolitan  
Energy Center, Kansas City  
Missouri Energy  
Resources Project  
City of St. Louis  
Mississippi  
City of Meridian  
City of Natchez  
Montana  
Montana Partners for  
Energy Efficiency  
Nebraska  
State of Nebraska

New Hampshire  
S.W. Community Services/Energy  
& Housing Collaborative  
State of New Hampshire  
New Jersey  
Bergen County  
Improvement Association  
Township of Gloucester  
City of Newark  
New Mexico  
City of Roswell  
New York  
City of Albany  
City of Bay Shore  
City of Binghamton  
City of Elmira  
City of Troy  
Rebuild New York  
Rebuild Western New York  
North Carolina  
North Carolina Department  
of Commerce, Energy Division  
Ohio  
City of Kettering  
City of Cuyahoga Falls  
City of Toledo  
SEED Ohio  
1500 Days, The Central  
Ohio Energy Efficiency Project  
Ohio Department  
of Aging, Columbus  
Oregon  
P.E. Portland Partners  
for Energy Efficiency

Pennsylvania  
City of Allentown  
City of Lancaster  
City of McKeesport  
Pittsburgh Housing Authority  
State of Pennsylvania, Harrisburg  
Rhode Island  
Rhode Island Energy  
Efficiency Partnership  
South Carolina  
State of South Carolina, Columbia  
Tennessee  
State of Tennessee, Nashville  
Texas  
Texas City  
St. Joseph Regional Health Center  
The Brazos Valley Energy  
Conservation Coalition  
Vermont  
Burlington Energy  
Efficiency Project  
State of Vermont, Montpelier  
Virgin Islands  
Territory of the Virgin Islands  
Washington  
Northwest Energy  
Efficiency Council  
Wisconsin  
State of Wisconsin

For information on Rebuild America, please call The Energy Efficiency and Renewable Energy Clearinghouse at 1-800-DOE-EREC.



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