

# Partner Update

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

www.rebuild.org • DOE/EE-0255

September - October 2001

## Georgia Tech Breaks Ground on New Project

Atlanta business leaders, U.S. Department of Energy (DOE) officials and **Georgia Institute of Technology** faculty and facility managers gathered on September 6 to break ground on a project one year in the making. The project will transform approximately eight acres in Midtown into Technology Square, which will house the school's programs, including the College of Management, the continuing education center, the campus bookstore, retail space, a new hotel and conference center, and other facilities.

**Rich Combes**, a Georgia Tech researcher on loan to the DOE, initiated contact with Georgia Tech's project manager, **Bill Miller**, to discuss the potential for making the project a

*Continued on page 9*

## Houston and Rebuild America Celebrate Partnership Launch



*Assistant Secretary David Garman commends Houston Mayor Lee P. Brown at a ceremony on October 4.*

Houston Mayor **Lee P. Brown**, joined by U.S. Department of Energy (DOE) Assistant Secretary **David Garman**, hosted a kick-off event for the City of Houston-Rebuild America Partnership at the E. B. Cape Center in Houston on October 4. With a population of 4.5 million, Houston is the second largest city in the U.S. and the largest in Texas to join Rebuild America.

The event drew wide support and participation from city government, public and affordable housing, community groups, Houston school districts and the business community.

Garman joined community and business leaders in offering remarks and commended Mayor Brown for his vision and commitment to make energy efficiency a standard practice in Houston. Students from Houston's Chavez High School, a magnet school with a focus on environmental science and energy, presented the Assistant Secretary with posters created by students in recognition of Energy Awareness Month – October.

Prior to the event, the Assistant Secretary toured Houston's Fifth Ward, where 62 percent of residents live below the poverty level. **Stephan Fairfield**, president of the Fifth Ward Community Redevelopment Corp., and community residents showed the progress already underway in the area. Rebuild America will lend support to efforts to revitalize the Fifth Ward and other communities deemed "Super Neighborhoods" across Houston.

Following the tour of the Fifth Ward, Garman accompanied officials of Enron Corp. for a tour of their new "green" headquarters building currently under construction in downtown Houston. Enron has received the DOE/U.S. Environmental Protection Agency ENERGY STAR® Label for Buildings for the recent renovation of its current headquarters building and plans to apply for the label for its new building.

One of the City of Houston-Rebuild America Partnership's key goals is to comply with recently passed Texas Senate Bill 5, which calls for a five percent reduction in electricity consumption each year for the next five years in communities with air quality that do not meet federal standards. Additional plans call for Houston's Super Neighborhood Councils to work with the city to determine the energy-efficiency programs that will benefit their communities.

*For more information, contact Rebuild America Program Representative Mike Myers at 512-280-7569 or mt4myers@aol.com.*

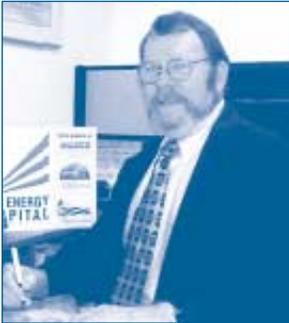
### INSIDE

- 2 Rebuild America's Web Site Improved
- 3 View from DC
- 4 New DOE Energy - Efficiency Software
- 7 David Garman Named Assistant Secretary



Land of the free, home of the brave.

# US Energy Capital Corporation



*US Energy Capital President Jim Borland has been instrumental in building a base of Business Partners for Rebuild America.*

Since joining the Rebuild America Business Partners in March of 2000, **US Energy Capital Corporation** has been steadfast in its support for the program and its many community partnerships in the Southeastern region. Represented by the company's President **Jim Borland**, US Energy Capital has referred various companies to Rebuild America, increasing the variety and scope of products and services available to partnerships.

Currently, Borland is leading US Energy Capital in efforts to completely renovate K-12 schools in the Rockdale County School System in Rockdale County, GA. The initiative began last September when Borland and several Rebuild America representatives, including Business Partner **Lithonia Lighting**, a founding Business Partner, held an introductory meeting for county and city officials, the Rockdale County School System Board and the Chamber of Commerce. **Ruel Parker**, school system superintendent, and **Linda Waters**, assistant superintendent for operations, liked what they heard and became a Rebuild America community partner shortly thereafter.

Earlier this year, several Rebuild America representatives met with Waters and discussed the benefits of changing the specifications of electrical, mechanical and other systems for the newly constructed Peeks Chapel Elementary School to make it a school that is energy smart. These discussions are expected to progress through the fall season.

The school's efforts have led to a retrofit plan for the entire school district, which includes 10 elementary schools, three middle schools and three high schools. The new partnership quickly began identifying areas in the 16 schools that are energy inefficient and set out to upgrade all 1.4 million square feet of the school system. Working with US Energy Capital and other Rebuild America Business and Strategic Partners, Rockdale County Schools hope to obtain system-wide energy savings of 35 percent to 40 percent overall.

"The ability to draw on the resources available through the Rebuild America network of Business Partners makes it easier to identify, organize and complete energy-efficiency projects," says Borland.

In addition to the Rockdale County projects, US Energy Capital has participated in other Rebuild America events, such as Regional Peer Exchanges, National Forums and Business Partner summits. Most recently, Borland attended a "train-the-trainer" workshop conducted at Lawrence Berkeley National Lab in California for Powercheck software (see pages 4-5 for more information on Powercheck). He is anxious to offer the same seminar to Rebuild Community Partners and other interested groups in the eastern part of the country.

*For more information on the seminar or US Energy Capital's energy upgrade financing programs, contact Jim Borland directly at [jimborland@usenergycapital.com](mailto:jimborland@usenergycapital.com), 800-562-1659 or check out their Web site, [www.usenergycapital.com](http://www.usenergycapital.com).*

## Rebuild America Web Site Adds New Features

Visit [www.rebuild.org](http://www.rebuild.org) and check out the new features and components that have been added to the Rebuild America Web site. There is an improved home page, new online energy and financial calculators, and an enhanced key metric reporting and data collection process that community partnerships will find helpful.

The homepage showcases events, boosting the visibility of partnerships, Strategic Partners and Business Partners. Event listings include the location of the event and online registration. To submit your event, email [rawebmaster@rebuild.org](mailto:rawebmaster@rebuild.org).

Other key changes include links to "Top News" and links for featured Strategic and Business Partners. These links provide increased visibility and help individual partners support the program, while recognizing their contributions in supporting community partnerships.

New energy and financial calculators have been added that will assist users in determining financial costs associated with

energy projects. These calculators (Fuel Conversion, Energy Intensity, Net Present Value, Internal Rate of Return and Life Cycle Cost) offer cost-benefit analyses, rate of project return and vehicles for project comparison.

An automated data collection form will check reporting partnerships against national energy project benchmarks and inform the regional team offices of submitted project entries. This process can be used by partnership representatives to instantly update project results.

In addition, increased reporting options on these projects will be available this fall when the newly redesigned site is launched to enable real time metrics collection and display of partnerships' results.

**Stay tuned:** In the next Partner Update we will review the new site launch features and enhancements.

*For more information contact Scott Igoe, Rebuild America Webmaster, at [rawebmaster@rebuild.org](mailto:rawebmaster@rebuild.org).*

# Building America Fulfills Affordable Housing Dream



*The "I Have a Dream" House in Atlanta, GA, can be heated and cooled for less than \$1 a day.*

Two blocks from Dr. Martin Luther King's boyhood home in Atlanta, GA, stands a home dedicated as the "I Have a Dream House." This house fulfills a dream of the U.S. Department of Energy's (DOE) Building America program. It costs owners about \$300 a year – less than a dollar a day – for heating and cooling, and uses 57 percent less energy for heating and cooling than does a comparable house in the Atlanta area.

"This house illustrates how DOE and its building industry partners are re-engineering the American home and supporting community redevelopment through energy-efficient affordable housing," said Secretary of Energy **Spencer Abraham**.

Its structural insulated panel (SIP) walls are factory-built with foam insulation sandwiched between layers of oriented-strand-board. SIPs tighten the building envelope and allow builders to install downsized heating and cooling equipment, resulting in lower energy bills, reduced construction waste and increased labor productivity. They are also three times stronger than conventional materials. Plus, the anticipated savings from using smaller heating and cooling equipment went towards the purchase of high-performance ENERGY STAR® windows.

DOE's Building America helped design the house. EarthCraft House, a program of the Greater Atlanta Home Builders, and Southface Energy Institute provided advice on green building to the Historic District Development Corporation, the nonprofit developer for the project. Other project partners include the Engineered Wood Association, Structural Insulated Panel Association, Georgia-Pacific Corporation and two Building America teams, Building Science Consortium and Integrated Building and Construction Solutions. No taxpayer money was used to subsidize the construction of the "I Have a Dream House."

*For more information, contact EarthCraft House Project Director James Hackler at [earthcraft@earthcrafthouse.com](mailto:earthcraft@earthcrafthouse.com).*



## View From DC By Daniel Sze

Here in the headquarters of Rebuild America, and throughout our system of community-based partnerships, we are all at a loss. When we think about the horrific moments of September 11 and the dreadful days that followed, we are left with a range of emotions: shock, sadness, outrage, fear, disbelief, resolve.

This devastating attack on thousands of innocent people has also done much to bring us together. Every day since that grim Tuesday, we've witnessed countless acts of heroism, compassion and generosity.

In addition to the enormous human tragedy, those of us in the Rebuild America community may have been affected in another way. The destruction of these landmark buildings, symbols of America's financial might, at the hands of terrorism adds to the enormity of the catastrophic human loss. We're dedicated to creating better working, learning and living environments for people. We share a commitment to make buildings better by improving their utility, comfort and operation. To see buildings used as a vehicle to human destruction compounds our sense of loss.

Because of who we are and what we do, however, we in the Rebuild America community have a unique opportunity to make our own small contribution to restoring what has been lost. Energy efficiency has always made sense. Today, in the wake of this disaster, efficiency makes more sense than ever before. We now import 65 percent of our nation's oil for use in making such vital things as gasoline, other fuels and countless petrochemical products.

And energy efficiency is likely to be an important element in any new energy policy we craft, as we act to protect ourselves from future assaults on our way of life. That's where Rebuild America can help.

October is Energy Awareness Month. It's an opportunity for every Rebuild America partnership to showcase the role energy efficiency plays, not just in saving money, creating jobs and stimulating economic activity, but in ensuring our national security and protecting our way of life.

I encourage every partnership to redouble its efforts to achieve efficiency gains and to spread the word about the benefits of energy efficiency. This would be a fitting tribute.

*Daniel Sze is National Program Manager of Rebuild America.*

# Managing Energy Use Smartly in Tennessee



Workers install data loggers on the Andrew Jackson/Rachel Jackson State Building to capture information for calculating future energy-use.

An effort is underway in the Volunteer State, backed by Gov. **Don Sundquist**, to retrofit Tennessee government buildings, particularly deteriorating older buildings, with energy-efficient technology.

While the reasons behind the effort are many, state entities, particularly the public university system, are turning to energy-efficiency upgrades as a way to renovate buildings where operators have deferred maintenance for many years.

Since the **State of Tennessee** joined Rebuild America in 1997,

for example, the Tennessee Board of Regents' (TBR) higher educational system has moved towards making campus buildings energy-efficient. At Middle Tennessee State University (MTSU), where much of this work began, many buildings have fallen into disrepair because of deferred maintenance.

"As is the case with many universities, the key facilities problem at MTSU is the accumulation of deferred buildings maintenance over a period of many years," said MTSU Energy Director **Joe Whitefield**.

At MTSU, the university's budget provided limited funds for maintenance on the campus' coal-fired electric plant. The facility had deteriorated, was inefficient and was a heavy polluter. In 1998, the university opted to use its limited funds to construct a 5 megawatt cogeneration plant, which provided heat to the campus as well. Lower energy costs resulted from the capital improvement.

MTSU's project is merely an example of Tennessee's commitment to energy efficiency. The state has long been involved in energy efficiency, having created the State Building Energy Management Program within the state's Department of General Services in 1977. **Dave Edmunds**, director of the program, and **Herb Stonebrook** increased the program's influence in recent years, resulting in the commitment of five government agencies to energy-efficient retrofits.

Whitefield was also instrumental in enhancing the state's broad energy-efficient building initiative. As an employee of the U.S. Department of Energy Oak Ridge National Laboratory, he became the Rebuild America coordinator for the state and began working with Stonebrook and Edmunds.

*Continued on page 10*

# New Construction Software Delivers Simulation Accuracy and High Detail

Thanks to new U.S. Department of Energy (DOE) software, developing energy-efficient buildings just got easier with a new tool that allows developers and building planners to more accurately simulate energy use in buildings before construction or renovations begin. With more precise predictions about building performance prior to commencing work on a project, developers can install the most appropriate energy-efficient technology.

**Dru Crawley** of DOE's Energy Efficiency and Renewable Energy Office says the new EnergyPlus software merges the best features of previous government-developed building simulation programs, BLAST and DOE-2. The new product will assist partners of Rebuild America and its sister program, Building America – which focuses on new energy-efficient residential construction. Energy Secretary **Spencer Abraham** released the software in April 2001.

Unlike older programs, EnergyPlus allows building simulators to consider data they previously could not, such as heat balance calculation, moisture absorption and desorption, building occupant comfort, advanced window systems such as electrochromic and low-e, ventilation airflow and realistic system controls. The new computer program can share data with all the major CADD design software packages – achieving "interoperability."

Government talk of merging the old programs began in 1994 at a Department of Defense workshop. DOE seized the opportunity in 1996 to merge the two programs, but soon found that it would be cheaper, quicker and result in a better product to start from scratch. Bringing in people from the U.S. Army Construction Engineering Research Laboratory, University of Illinois, Lawrence Berkeley National Laboratory, Oklahoma State University, Florida Solar Energy Center and GARD Analytics, DOE moved forward with combining resources and talent to mesh the best features of BLAST and DOE-2. The result is the all new EnergyPlus software.

According to a DOE paper on the software, users agreed that "a more flexible and robust tool with additional capabilities [was] needed. ... Designers need tools that provide answers to very specific questions during design. They want tools that provide the highest level of simulation accuracy and detail reasonably possible but that don't get in the user's way." EnergyPlus delivers this to its users.

*EnergyPlus is available free of charge for download at its Web site, [www.eren.doe.gov/buildings/energy\\_tools/energyplus/](http://www.eren.doe.gov/buildings/energy_tools/energyplus/).*

# Government Retrofits in Greenville County

Greenville County, located in upstate South Carolina and home to the City of Greenville, is embarking upon a series of energy-saving measures that will achieve nearly \$100,000 in annual energy savings with plans to reinvest that money into future energy-efficiency projects.

The effort started when County Facilities Manager **Ronnie Roberts** began to investigate performance contracting and other energy reduction measures. A brochure on the U.S. Department of Energy's (DOE) Rebuild America program and a visit with the South Carolina Energy Office generated more interest in Greenville's own project.

After gathering appropriate information, and contacting **Rick Baldauf** of the South Carolina Energy Office and **Charles Young** of Rebuild America, Roberts approached the County Administrator requesting authorization to enter a partnership with **Rebuild South Carolina**. The request included having an energy audit performed on one of the largest local government facilities.

Formerly an old shopping mall renovated in 1987, Greenville County Square features 290,000 square feet of local government office space and is the county's hub of government operations. When the building was first renovated, the county used top-of-the-line energy products, including fluorescent light bulbs. But much of that equipment is now outdated. As a result, the county's energy bills have soared in recent years. Roberts says Greenville is reeling from an energy bill that climbed to \$1.3 million per year – \$400,000 alone for Greenville County Square. Property management feels the energy projects will reduce energy

bills, stabilize costs and have investment paybacks.

Phase I of the Greenville County Square retrofit is ready to begin. Greenville County and South Carolina Energy officials selected the lighting retrofit project because of its potential to provide quick returns on the investment. The retrofit will replace 4,700 light fixtures with state-of-the-art electronic lamp ballasts at a cost of \$280,000 to \$300,000 – saving \$88,000 the first year. “It provides the quickest return and potentially some of the biggest dollar savings,” Young says.

The county plans to pursue an aggressive path to energy efficiency following completion of Phase I improvements. Tentative plans include energy audits performed in the Law Enforcement/Detention Center Complex, and General Sessions and Family Court facilities. Implementation of energy management systems in all facilities and upgrades to the county's heating, ventilation and cooling systems are expected.

While current work focuses on Greenville County Square, Roberts anticipates that energy-efficiency projects will catch the attention of others in the community. Projects could expand to other facilities and agencies within Greenville County. Young, Baldauf and county officials are excited about using savings from energy projects to expand the county's efforts and reduce energy consumption in county-owned and operated buildings.

*For more information on Rebuild South Carolina's Greenville County project, contact Rick Baldauf at [rbaldauf@ogs.state.sc.us](mailto:rbaldauf@ogs.state.sc.us).*

## Energy Efficiency Starts with Power Checks



Rebuild America is offering a new free CD-ROM that features low- and no-cost energy-saving tips, known as “Power Checks”. The program shows users how to maximize the energy efficiency of their homes and offices by taking simple, but smart steps and making minor, but worthwhile investments in energy products.

The software complements other U.S. Department of Energy residential guides for consumers, such as Energy Savers, and is also available in Spanish.

During the interactive computer program, host Dr. Sartorstein and his sidekick “E2 the owl” guide viewers through the energy audit of fictitious buildings in Anytown, USA, calculating potential savings from these simple tips.

For example, Dr. Sartorstein advises users to turn off lights when leaving the copier room and to use daylight to

illuminate rooms whenever possible, explaining that small changes like these can save Anytown nearly \$120,000.

Dr. Sartorstein and E2 also showcase residential energy savings, educating software users on Power Checks around the house, such as replacing incandescent bulbs with compact fluorescent lamps, installing programmable thermostats and using window coverings. Following these tips plus four other Power Checks, the average home in Anytown can save hundreds of dollars through energy efficiency.

In addition to the Power Check tips, the program provides users with energy-saving exercises in the Play Pen section of the CD-ROM.

*For free CD-ROM copies of Power Check or Energy Savers (en espanole tambien), contact EREC at 800-363-3732.*

## Wisconsin Targets Homes for Energy Efficiency



State engineers test ENERGY STAR® refrigerators installed at a Milwaukee low-income residence to ensure optimum efficiency.

As Wisconsin transitions to a “public benefits” format for energy-efficiency programs, **Wisconsin Focus on Energy** is expanding energy-efficiency programs beyond commercial, government and school buildings to include single and multi-family dwellings. With this new residential focus, Wisconsin will concentrate on retrofitting and building new apartments and condominiums in line with ENERGY STAR® ratings, working with the U.S. Department of Energy (DOE) and the Environmental Protection Agency (EPA) to help low- and middle-

income consumers take advantage of energy and dollar savings offered through ENERGY STAR and Rebuild America.

The new state-wide focus on the residential sector stems from a series of pilot projects that have been ongoing in parts of the state for a couple of years, says **Don Hynek** of the Wisconsin Division of Energy. Several other plans are also now in the works and will be unveiled over the next four months.



Builders learn about the dynamics of infiltration and depressurization at Wisconsin's "Cure For the Common Callback" Conference for new home builders.

For example, the state's residential administrator, the Wisconsin Energy Conservation Corporation, is working across the state to educate appliance sales staff and consumers on the virtues of simple energy-efficiency technology. The program involves training store employees, salespersons and consumers on basic ENERGY STAR products. Program staff are also helping stores host individual energy-smart events, such as efficient lighting blitzes at local hardware stores.

Other efforts concentrate on new construction and renovations to existing homes and apartments. In the northeastern part of the state, Wisconsin is teaching builders

*Continued on page 8*

## Florida Housing Exceeds Standards

Using redesigned and enhanced versions of existing floor plans, DOE's Building America **Consortium for Advanced Residential Buildings (CARB)** and Mercedes Homes, have come together to create two new production home models that exceed ENERGY STAR® standards. This marks the start of three new energy- and resource-efficient housing developments planned for Central Florida by Mercedes Homes.

The new homes are based on popular floor plans already in the Mercedes line, with an added focus on increasing energy efficiency and reducing construction time – *without* increasing labor or materials costs.

A total of 175 homes will be built in 2001, and Mercedes, which builds 1,200 homes per year in the Florida market, has adopted the new design and material enhancements as its building standard in Florida.

Steven Winter Associates, the building systems research firm that heads up CARB, worked with the builder to produce and test eight prototype homes. The effort yielded model-specific design and specification packages expected to save Florida homebuyers an average of 30 percent on annual energy costs in comparison to Model Energy Code-compliant construction.

For the builder, the new models represent a significant departure from the concrete block construction prevalent in the Florida market, to a “poured-in-place” concrete wall approach that uses innovative aluminum forms.

After initial successes using poured concrete walls in prototypes, Mercedes made a capital investment in a sophisticated aluminum form system and hired an in-house form and concrete crew to engage in production-scale building. The investment paid off, as the time required for setting up the forms, pouring concrete, and stripping the forms away from the finished walls stabilized at three days – a savings of three full days of labor in comparison to standard block-wall installation.

Window installation is also quicker, because concrete window forms allow windows to be inserted directly into the concrete, without wood bucks or blocking. Plus, interior partitions are framed using steel studs, which have a high recycled content and are not prone to the splitting, warping and inconsistencies of board lumber.

Savings were also achieved with a more efficient building envelope, which allows for smaller HVAC systems in all six models. The HVAC savings equal roughly \$400 per house, which compensate for the \$300 construction expense of high performance windows.

*The Consortium for Advanced Residential Buildings is one of five Building America teams sponsored by the U.S. Department of Energy. For more information visit [www.eren.doe.gov/buildings/building\\_america/carb.shtml](http://www.eren.doe.gov/buildings/building_america/carb.shtml).*

# New President for Rebuild Hawaii

**Rebuild Hawaii** has seen a lot of changes in recent months, all in keeping with the island's commitment to reduce energy consumption despite its high reliance on imported oil. Most recently, Rebuild Hawaii welcomed Honolulu City Councilman Steve Holmes aboard as its new president. Holmes' varied experience with local government will benefit the partnership on all levels and keep its energy-efficiency commitments on track.

"Rebuild Hawaii will focus on the community through energy-efficiency improvements made to buildings," says Holmes. "These improvements save money, create jobs, promote economic growth and protect the environment," he adds.

In his first move as president, Holmes introduced updates to Building Energy Efficiency Standards, which include assistance from the State Department of Business, Economic Development and Tourism, Energy Division. The bills were signed into law in August by Mayor **Jeremy Harris** and have enjoyed wide acceptance by energy utilities and the building industry. The improved standards will allow builders and architects to offer more efficient and cost-effective products and services.



Honolulu City and County Mayor Jeremy Harris, seated, joined by (left to right) John Ogrodny, Jeff Mikulina, Howard Wiig, Councilmember Steve Holmes, Richie Mudd, Karen Nakamura, Steve Golden, Sharon Narimatsu, Jackie Mahi Erikson and Eileen Yoshinaka at a bill signing in August.

To date, Rebuild Hawaii has reduced energy consumption in targeted buildings by about 30 percent, resulting in cumulative savings of \$194,000 annually. Projects have included lighting retrofits of 27 county fire and police buildings and complete retrofits of the two main public safety buildings. The investment for this project was \$1.4 million and will yield a projected \$140,000 in annual energy costs.

In addition to building upgrades, Rebuild Hawaii is committed to exploring all available types of renewable fuel as it continues to generate 30 percent of its electricity from diverse sources such as geothermal, wind, solar and run-of-river hydropower.

For more information contact April Coloretti at [acoloretti@co.honolulu.hi.us](mailto:acoloretti@co.honolulu.hi.us).

# Garman Named New Assistant Secretary



**David K. Garman** was nominated by President **George W. Bush** to serve as Assistant Secretary for Energy Efficiency and Renewable Energy on April 30, 2001 and was confirmed unanimously by the United States Senate on May 25, 2001. Secretary of Energy **Spencer Abraham** swore Garman in on May 31, 2001.

Assistant Secretary Garman previously served in a variety of positions on the staff of two U.S. Senators and two Senate Committees during a 21-year career on Capitol Hill. Most recently, Garman served as chief of staff to Alaska Senator **Frank Murkowski**, ranking member of the Energy and Natural Resources Committee. Garman also served on the professional staff of this committee and the Senate Select Committee on Intelligence.

Throughout his career, Garman has focused primarily on energy and environment policy. Even during his tenure on the Senate Select Committee on Intelligence, he worked in the newly emerging area of "environmental intelligence and security," focusing on issues such as global climate change, transboundary pollution and regional environmental threats from the former Soviet Union. While on the staff of the Energy and Natural Resources Committee, Garman's portfolio included energy research and development, science and technology, and global climate change.

Garman served as a U.S. Senate observer at nearly all major negotiations held under the United Nations Framework Convention on Climate Change from 1995-2000, including the November 2000 climate talks in The Hague, Netherlands.

Garman holds a Bachelor of Arts from Duke University, and a Masters of Science in Environmental Sciences from Johns Hopkins University. He is married to Kira L. Finkler, counsel on the Democratic staff of the Senate Committee on Energy and Natural Resources. He drives a dark green Toyota Prius.

Looking for an energy-efficiency expert to address your next meeting? Tap into the Rebuild America Network of Experts by visiting [www.rebuild.org](http://www.rebuild.org).

# Ford City Enlists Rebuild America in Revitalization Effort

Through a partnership with Rebuild America, **Ford City, PA**, is turning its economy around.

The town, located one hour northeast of Pittsburgh on the Allegheny River, long depended on PPG Industries – a leading glass company – for jobs and a stable regional economy. So when the company closed its doors in the early 1990s, Ford City faced hard times. Town leaders believe a revitalization program focused on energy efficiency is key to the town's future success.

At an early July event celebrating the town's new partnership with Rebuild America, Ford City Borough Council President **Lou Vergari** and Mayor **John Zanetti** welcomed the community to a "You Can Come Home Again" town meeting to announce Ford City's revitalization plans. **Don Mains**, executive director of the Ford City Development Corporation, outlined the \$7 million revitalization project. The plan includes an energy-efficiency retrofit of about 80,000 square feet of business incubator office space, and the creation of a video conference center, museum and café.

PPG Industries donated its long abandoned waterfront plant and office complex to the project. Now local officials plan to redevelop the site of the turn-of-the-century glass and window manufacturing plant, as well as the surrounding waterfront, in an effort to attract new business to the area.

A number of leading organizations are also participating in the renewal efforts, including the U.S. Environmental Protection Agency, the U.S. Department of Housing and Urban Development, and other state and federal agencies.

The whole community is behind the project. As part of



*Ford City Mayor John Zanetti (left) and Rebuild America representative Mike Myers discuss the town's renovation plans prior to the public announcement of the new partnership.*

the kick-off event, the U.S. Department of Energy hosted a workshop for Ford City architects, engineers and community leaders. Topics included building performance; green building practices; energy-efficient windows; lighting, heating, and cooling technologies; and the latest in alternative power systems, including fuel cells.

Vergari and Rebuild America's **Michael Myers** signed a Rebuild America agreement, while the National Renewable Laboratory's (NREL) **Pat Kelly** and PPG Industries' **John Ruch** confirmed the company's commitment to Ford City's revival.

Speakers at the kick-off event included: John Zanetti; **Ray Boarts**, Ford City Community Development Corporation; **Richard Dennis**, National Energy Technology Laboratory; **Greg Laface**, Laface & McGovern Associates, Inc.; **Michelle Mondazzi**, Carnegie Mellon University's Center for Building Performance and Diagnostics; **Mel Powers**, Rebuild America; and **Alison Tribble**, Efficient Windows Collaborative. Other participants included **Craig Hustwit**, NREL; and **Jim McTish**, Pennsylvania Department of Environmental Protection.

*For more information on the Ford City partnership, contact Mike Myers at [Mt4myers@aol.com](mailto:Mt4myers@aol.com) or Susan Guard at [susan.guard@pro.doe.gov](mailto:susan.guard@pro.doe.gov).*

*Continued from page 6*

## **Wisconsin Targets Homes for Energy Efficiency**

techniques to improve energy efficiency and buyers how to verify the savings in both dollars and energy. DOE also is involved in this venture, but Hynek says that Wisconsin is "going one step beyond guidelines" by proving that houses are energy-efficient through performance testing by third-party consultants – an extra step not required by ENERGY STAR.

The State of Wisconsin partnership also is putting more funds into its new construction program, as it strives to identify and remedy market flaws blocking energy-efficient construction from becoming mainstream in the marketplace. While those details are still being hammered out, 15 percent

to 20 percent of the Focus on Energy residential funding will be for new construction.

Finally, the state plans to fund a program aimed at residential retrofits for consumers who can not afford energy-efficient technology, yet do not qualify for federal or state assistance. "We want to pick up where low-income weatherization programs leave off," Hynek says. "Energy efficiency should be available to all Wisconsinites, and we are trying to create a seamless family of programs that reinforce each other."

The State of Wisconsin clearly is boosting its partnership in Rebuild America, working in conjunction with EPA.

*For more information on Wisconsin Focus on Energy, please contact Don Hynek at [don.hynek@doa.state.wi.us](mailto:don.hynek@doa.state.wi.us).*

# New, Affordable, Energy-Efficient Homes in Pontiac, MI

Rebuild America's sister program Building America and its Strategic Partner ENERGY STAR® helped Venture, Inc., a community action group, break ground on 17 new, affordable, energy-efficient homes in Pontiac, MI. While not Venture's first foray into energy-efficiency, this project posed a unique challenge because the new homes had to be energy smart, while construction costs had to be low.

**Payson Tilden**, Venture project manager, says the City of Pontiac approached Venture in 1999 to address the pervasive poverty in the northeast sector of the city that prevented families from purchasing new homes. Using city and state funding, Venture put together a plan, in conjunction with Building Science Corp. of Westford, MA, to construct 17 new houses, refurbish and sell two existing homes, renovate 40 owner-occupied houses, and spruce up the neighborhood.

This project is much larger than Venture's first work in the area of energy efficiency. In Hazel Park, MI, Venture built four energy-efficient modular homes.

Now, Venture is incorporating massive energy-efficiency investments with the installation of ENERGY STAR appliances. The 17 new three-bedroom, two-bath homes include an insulated concrete-form basement, mechanical ventilation, extensive air sealing, compact fluorescent lighting, efficient heating and duct systems, and ENERGY STAR appliances. The



A backhoe readies the land for Venture's construction of affordable energy-efficient homes in Pontiac, MI.

homes will be made available to first-time homebuyers when Venture completes construction in September 2002.

The success that Venture is having in Michigan reaffirms the good work of Rebuild America, Building America and ENERGY STAR, proving that partnerships are the cornerstone of energy-efficiency improvements.

*Venture is a subsidiary of the Oakland Livingston Human Service Agency (OLHSA), a full-service community action agency with over 60 different programs including Head Start and AIDS Support Services. OLHSA created Venture in 1992 as a Community Development Housing Organization – a U.S. Department of Housing and Urban Development designation – so the agency could apply for special federal housing funds. For more information on Venture and energy-efficiency homebuilding in Pontiac, MI, contact Payson Tilden at [tildenpays@aol.com](mailto:tildenpays@aol.com).*

Continued from page 1

## Georgia Tech Breaks Ground

Rebuild America partnership. The partnership was solidified soon after, and officials developed a committee of architects, engineers, facility managers and Georgia Tech faculty, involved with sustainable design, to examine green building issues for the new campus buildings.

The Technology Square project includes over 615,000 square feet of building space, plus a parking garage for over 1,500 vehicles. The total project budget is \$180 million. Project managers are seeking Leadership in Energy and Environmental Design (LEED™) certification for a significant portion of the project, including the Dupree College of Management, a building comprised of 239,360 square feet of space, and approximately 25 percent of the parking garage. LEED is a nationally recognized energy-efficiency standard that measures building components such as water use and electricity consumption, as well as the use of innovative

practices in new architecture and the overall impact these buildings will have on their existing environment.

**Mike McDonald** of the Oak Ridge National Laboratory and **Rick Diamond** of the Lawrence Berkeley National Laboratory provided technical assistance for daylighting, as well as DOE-2 software, a device for energy-efficient building modeling that allows the user to key in individual building information for comparative analysis. The DOE developed software was released commercially and distributed to building contractors and architects for design purposes.

Georgia Tech expects to save 15 percent to 25 percent a year in energy costs through LEED and other energy-efficient practices. Actual savings will be quantified when design and energy modeling is completed. Construction will start in November 2001 and is slated to finish by August 2003.

Continued on page 11

# Building America and Illinois Builder Produce Active Adult Housing



Working with the U.S. Department of Energy's Building America program and the **Consortium for Advanced Residential Buildings (CARB)**, Cambridge Homes developed a full

line of sustainable, energy-efficient housing for the new active adult lifestyle community located in Crest Hill, IL.

Designed for those at least 55 years young, Cambridge Home's Carillon Lakes community, with 942 homes, will be the first large-scale adult community in Illinois to receive an ENERGY STAR® certification for every home. The homes will also exceed Model Energy Code standards by 30 percent.

"The energy efficiency of these homes is especially meaningful because a number of people who are 55 and over live on fixed incomes," said **Richard J. Brown**, chief executive officer of Cambridge Homes. "Saving hundreds of dollars a year on utility bills is a significant advantage to these homeowners."

Among the energy-saving features common to all the homes is a design enhancement known as "inside the envelope" ductwork. This CARB innovation keeps HVAC ducts within the conditioned space, thereby reducing energy costs. Insulated crawl spaces and basement walls also contribute to a more energy-efficient building envelope, as does R-38 attic

insulation and high-performance low-E glass. Another feature, the Honeywell set-back thermostat, can be easily programmed to track occupancy schedules, so energy isn't wasted when no one is in the house.

In addition to providing a hedge against rising energy costs, the Carillon Lakes homes are environmentally friendly. Each home employs panelized construction, so that lumber waste is minimized.

"The homes in Carillon Lakes will be better for the environment on two levels. Residents will be using less gas and electricity, and there will be more efficient use of lumber as well," Brown said.

Cambridge Homes and CARB are working together on a second age-restricted community in the Chicago area, employing the same energy-efficient methods and products. The new community, Forest Glen, is located in Carol Stream and consists of 60 town homes. Model homes should be complete in late 2001.

*CARB employs innovative design strategies and sustainable building components to improve the quality and performance of a broad range of housing sizes and types. For more information visit [www.eren.doe.gov/buildings/building\\_america/carb.shtml](http://www.eren.doe.gov/buildings/building_america/carb.shtml).*



Energy-efficient town homes at Carillon Lakes, an Illinois active adult housing community.

*Continued from page 4*

## Managing Energy Smartly

These three led a team that developed an action plan for Tennessee that provided a framework for energy retrofits, helping to standardize the process for energy-efficiency projects for approval by the State Building Commission (SBC). The SBC approved the action plan in August 1999 and state agencies are implementing projects through voluntary partnerships modeled after the national Rebuild America program.

Tennessee's successes are apparent, with commitments from partner agencies to retrofit 50 million square feet of space in government buildings – broken down per agency:

- Department of General Services – 5 million square feet
- Tennessee Board of Regents (including MTSU) – 24 million square feet
- University of Tennessee – 18.5 million square feet

- Dept. of Environment and Conservation – 1.3 million square feet
- Tricorp (Dept. of Corrections Industry) – 8,200 square feet

According to Sundquist, Tennessee will reduce energy use and improve efficiency in much of the state government's building space with the potential to save the state \$11.7 million annually. In August, the governor also formed an Energy Policy Work Group, charged to find ways to improve energy efficiency. "By leading through example, state government can show the public and private sectors that these new technologies make sense for our environment and our bottom line," said Sundquist.

View the state energy action plan at: <http://www.state.tn.us/finance/cpm/action.pdf>.

For more information contact Herb Stonebrook at [hstonebrook@mail.state.tn.us](mailto:hstonebrook@mail.state.tn.us) or Charles Young at [charlesyoung@aspensys.com](mailto:charlesyoung@aspensys.com).

# Snap Shot

## George James



George James is the Building America program manager in the Department of Energy's Office of Building Technology, State and Community Programs.

Building America works with the residential building industry to develop and implement innovative building processes and technologies, saving builders and homeowners millions of dollars in construction and energy costs.

### Vital Statistics

A resident of Washington, DC, for almost 30 years, he lives in our nation's capital with his wife Martine.

### How long have you been with Building America?

From the beginning – I've been with the program since its inception in 1995.

### What is the most rewarding aspect of your work?

I really believe Building America has started, and is part of, an evolution toward better housing in America.

### What brought you to Washington, DC?

I was working with Aerojet-General Corporation and Aerojet Liquid Rocket Company in California when I was asked, in 1971, to lead the feasibility study for the National Air and Space Museum. Once the site was chosen – it was between DC and California, and DC won – I moved on to the National Science Foundation, where I worked for 11 years as a Physical Scientist.

### What do you like to do in your spare time?

When I was 14 years old, I started the Rocket Research Institute. My parents weren't too keen on it, but it's proven to be a success. The Institute continues to work with young people who have an interest in space science. Kids need to get involved in something tangible. It's important. The engineers, educators and safety professionals who volunteer their time with the Institute give kids that opportunity.

### What is your dream job?

What I do right now. Years back I had the chance to learn through a scholarship with Frank Lloyd Wright. He believed that all people should have a decent, affordable and comfortable home – one they may have even helped build. Building America gives me the chance to further that dream.

### What is your dream vacation?

My job and my interests are my vacation. I'm solving problems, influencing positive change, investing in people, making a true difference. But it would be nice to tour France, my wife's native country.

Continued from page 9  
*Georgia Tech Breaks Ground*



*An architect's rendering of Georgia Tech's Technology Square project in downtown Atlanta. New energy-efficient buildings include the College of Management and the continuing education center.*

Georgia Tech intends to budget for and seek LEED certification in all future buildings constructed on the campus. "The long-term savings in energy costs, as well as providing a better quality building environment for our students and faculty, are goals we want to achieve," says Miller.

Georgia Tech's reputation within the Atlanta community has generated a lot of support for the project, particularly from the Midtown Atlanta business community. Business partners, alumni and corporations closely tied to Georgia Tech are also showing support, not only for the Institute, but for the Atlanta community as a whole. The combined effort has made good progress in revitalizing downtown Atlanta.

Technology Square is not Georgia Tech's first energy-efficient endeavor. An on-campus science lab was specified according to the LEED system. The rating for the building is pending, but architects expect it will be recognized with a silver certification, the second highest rating in the LEED system. Three existing buildings are also undergoing energy audits and retrofits.

*For more information on the Technology Square Project, contact Bill Miller at [william.miller@facilities.gatech.edu](mailto:william.miller@facilities.gatech.edu). To learn more about LEED software visit the U.S. Green Building Council Web site at [www.usgbc.org](http://www.usgbc.org).*

# Upcoming Events

## October

- 15-18 PowerMart 2001**, Houston, TX.  
Visit [www.fienergyusa.com](http://www.fienergyusa.com).
- 17-19 Business Partners Summit and Atlanta Peer Exchange**, Conyers, GA.  
Contact Doug Avery at [davery@lbl.gov](mailto:davery@lbl.gov).
- 18-19 Fuel Cell 2001 Research and Development**, Palm Harbor, FL.  
Visit [www.srinstitute.com/cr207](http://www.srinstitute.com/cr207).
- 24-26 2001 Energy Service & E-Commerce Conference**, Atlanta, GA.  
Visit [www.aeecenter.org/Shows](http://www.aeecenter.org/Shows).
- 29-31 Chicago Regional Peer Exchange**, St. Louis, MO.  
Contact John Devine at [john.devine.ee.doe.gov](mailto:john.devine.ee.doe.gov).
- 31 Power 2001**, Scottsdale, AZ.  
Visit [www.wbresearch.com/power20001az](http://www.wbresearch.com/power20001az).

## November

- 5 Grants & Funding for School Technology**, Chicago, IL.  
Visit [www.eschoolnews.org](http://www.eschoolnews.org).
- 5-6 California Air Tech 2001**, Anaheim, CA.  
Visit [www.aqmdconferences.org](http://www.aqmdconferences.org).
- 6 NAESCO 18th Annual Conference**, Miami, FL.  
Visit [www.naesco.org](http://www.naesco.org).
- 7 National School Boards Association's Technology & Learning Conference**, Atlanta, GA.  
Visit [www.rebuild.org/calendar](http://www.rebuild.org/calendar).
- 13-15 Seattle Regional Peer Exchange**, Seattle, WA.  
Contact Amy Tilton at [atilton@aspensys.com](mailto:atilton@aspensys.com).
- 26 Brownfields Redevelopment: Nuts and Bolts for Local Government**, Chicago, IL.  
Visit [www.bud.gov/local/chi/chienv2.html](http://www.bud.gov/local/chi/chienv2.html).
- 28-29 2001 Business Energy Solutions**, Orlando, FL.  
Visit [www.aeecenter.org](http://www.aeecenter.org).



DOE and Houston officials gather to celebrate the new City of Houston-Rebuild America Partnership.

## New Partnerships

- Proctor Academy, NH
- Panama City Housing Authority, FL
- Tamalpais Union High School District, CA
- Chuathbaluk Tradition Council, AK
- Fairfax County Public Schools, VA
- Rebuild Leslie, AR
- Town of Anthonyville, AR
- Idaho Energy Authority
- Energy Smart Hamilton County, OH
- Berlin Housing Authority, NH
- Thompson Public School System, CT
- Town of Sterling, CT
- University of New Hampshire
- Stafford Public Schools, CT

**NEW!**

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To submit news or story ideas, contact:  
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[mobrien@pcgpr.com](mailto:mobrien@pcgpr.com)

**Check Us Out: [www.rebuild.org](http://www.rebuild.org) 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-efficiency initiatives of the Office of Building Technology, State and Community Programs.



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