

# PartnerUpdate

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

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November – December 2001

## A New Web Site for Rebuild America

Welcome to the new Web site of Rebuild America located at [www.rebuild.org](http://www.rebuild.org). Launched on November 1, this new site represents Rebuild America's investment in expanded services for its partnerships, partners, program teams and others interested in energy-saving practices. The goal is to create a communications hub for those in the building community seeking energy-efficient solutions.

One of the greatest challenges for the building community is empowering our communities and arming them with tools and services that save energy and money. It is in this spirit of

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## Ohio Housing Authority Meets Energy, Senior Citizens' Goals



*A newly retrofitted, senior citizen, housing facility, Cherie Turner Towers in Canton, OH, has incorporated energy efficiency "top-to-bottom."*

**Stark Metropolitan Housing Authority** has reached out to meet the needs of the senior citizen community, increasing climate comfort in the newly dedicated Cherie Turner Towers in Canton, OH, with energy-efficient technology that guarantees lower utility bills for the public housing authority.

In an October 15 ceremony with Congressman **Ralph Regula** (R-Ohio), SMHA unveiled the newly retrofitted Cherie Turner Towers, featuring a geothermal energy heat pump, and centralized

air and hot water. The senior citizen housing facility has incorporated energy efficiency "top-to-bottom," SMHA Deputy Director **Mike Williams** says, while meeting the demands of a senior population seeking increased amenities.

The seniors "are more than impressed" with the facility, Williams says. "We have tackled every aspect of energy that we could."

Formerly Metropolitan Arms, the building was renamed Cherie Turner Towers – for SMHA's former executive director – after a 2-year retrofit project launched in 1999 through SMHA's Rebuild America partnership. The retrofit covered the gamut of energy improvements, ranging from new roofing, efficient windows, compact fluorescent lighting, low-flow toilets, additional insulation and the geothermal heat pump.

The partnership turned to Rebuild America Strategic Partner ENERGY STAR® as well, using all labeled appliances in remodeling the housing units.

Williams says that the reason behind the improvements were actually, in a sense, a market-driven response to a new senior citizen population seeking more amenities from its housing. The residents with a little more money to spend were buying in-window air conditioning units to combat heat – particularly in recent summers of intense heat waves. The inefficiency of the A/C units substantially drained the authority's budget, since SMHA pays for senior residents' electricity bills. Plus all the residents could not afford air conditioners, and of those that did, units purchased did not always fit in the window – creating safety and further efficiency problems.

In search of an economical way to heat and cool the building, SMHA turned to geothermal energy. This alternative energy source is highly economical, using the heat of the earth as power, and reduces the pollution load from conventional power sources. It also allowed SMHA to install centralized air conditioning and heating – where the authority also will save money. The other upgrades were natural companions to the major overhaul in the heating and cooling effort.

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# Slaying 'Electricity Vampires' at Home: BTS Lecture Series Presents Alan Meier



Alan Meier, with the Lawrence Berkeley National Laboratory, delivered tips on how to slay electricity vampires.

Vampires as we know them have changed, and the new ones are everywhere.

**Alan Meier**, an independent researcher for the Lawrence Berkeley National Laboratory, visited Washington, DC, to discuss the new, ever present, "electricity vampires" at a "Buildings for the 21st Century" lecture on October 11, hosted by the U.S. Department of Energy's Office of Building Technology, State and Community Programs.

These vampires, he explained, lurk in homes and

feed on "standby" power, or power consumed by appliances even when they are turned off.

In the lecture, Meier detailed how electricity vampires work in the home. He explained that by focusing on high-efficiency appliances and energy-saving measures, people can cut standby power considerably. Standby power generally accounts for 5-watts of electricity consumed per home when appliances are inactive – 5 percent of energy used overall. The amount may seem insignificant, but when applied to the 110 million homes in the United States, this adds up to over 500 million watts every day.

Some appliances with internal clocks, such as microwave ovens and VCRs, consume more energy over the course of a year while turned off, than they expend when in use. The same is true for cellular telephone chargers, compact stereos and remote controlled devices.

Meier suggests several methods for reducing standby energy consumption, which is the most rapidly growing end use for electricity in this country.

**Buy more efficient components.** Put the extra money in at the onset to save energy and money in the future.

**Avoid buying the energy vampires you don't need.** Halogen lamps, for example, waste electricity by constantly drawing and storing power in their bases.

**Gradually move to "eco-watt technologies" where possible.** These include motion sensors and controls.

**Use a power strip.** Plugging and unplugging appliances, such as microwaves or televisions, repeatedly is bad for machines. Consolidate the power sources with a power strip, and unplug once at night.

Meier also touched on actions stated in the Global 1-Watt Plan, an international agreement enacted to reduce overall

global standby power consumption by the year 2010.

**Mark Ginsberg**, deputy assistant secretary for BTS, introduced Meier to over 40 attendees from the electric power industry, noting his expertise on the topic at hand, as well as his work at Berkeley and as editor-in-chief of *Energy and Buildings* and *Home Energy* magazines.

For more information about standby power, contact Alan Meier at [akmeier@lbl.gov](mailto:akmeier@lbl.gov) or visit <http://standby.lbl.gov>.

## President Bush Orders Federal Government to Limit Standby Power Use

President Bush first identified power-hungry appliances as "vampires" in his June address to Energy Secretary Spencer Abraham and U.S. Department of Energy employees. In his speech, Bush called Abraham the "vampire slayer" and referenced what eventually became Executive Order 13221.

The executive order states that all newly purchased federal appliances must consume less than 1-watt of standby power, and directs federal departments and agencies to purchase off-the-shelf products that "use no more than 1-watt in their standby power consuming mode" or, if those products are not available, ones "with the lowest standby power wattage."

This order is one of the first steps towards achieving the goals of the Global 1-Watt Plan, an international agreement aimed at reducing standby power consumption by 2010. The plan also states that 50 percent of appliances manufactured in the United States must meet the 1-watt standard by 2005. Further, the U.S. must work with the international community to develop agreeable codes and definitions for standby energy performance and an internationally recognized symbol for appliances that are 1-watt compliant.

# Rebuild America Welcomes Covington School District

**Covington School District** in southwestern Virginia may be small, but it isn't letting its size stand in the way of progress. Home to only three schools – an elementary, middle and high school – and just over 900 students, the district is changing the way it approaches energy efficiency.

On October 1, with preliminary energy audits already underway, Covington School District officially joined the Rebuild America ranks. Recognizing a need to address aging, inefficient technologies and save money, **Max Shawver**, director of administrative services for the district, and **Edward Graham**, superintendent, contacted **Larry Schoff**, technical advisor for Rebuild America's EnergySmart Schools, about a potential partnership.

"Being a small district, we don't have the staff and infrastructure that a lot of other districts have," Shawver says. Saving money on energy will free up funds that can go back into the schools and keep them running smoothly."

With the partnership solidified, next steps include negotiations with the school board to hire an architect and conduct overall safety and quality audits.

Upgrades will likely focus on lighting, in an effort to produce savings and improve the quality of life for students. The middle school will experience the changes first, and the upgrades that are most effective will be implemented at the other two schools. Over 186,000 square feet of space are eligible for retrofits.

While one school, Edgemont Primary, measured quite well on the ENERGY STAR® scale with a 72 percent rating, the other two schools rated lower – 20 percent for the middle school and 6 percent for the high school. Bringing all school buildings up to ENERGY STAR® standards would save Covington School District close to \$50,000 a year. Currently the district spends over \$150,000 on energy costs.

*For more information on the Covington partnership, contact Max Shawver at 540-965-1400.*

## Now Available! Putting Energy Into Profits: ENERGY STAR® Guide for Small Business

The newly updated, 100-page guidebook is designed to help small businesses save money by making smart choices about energy. Co-produced by the U.S. Department of Energy and the U.S. Environmental Protection Agency, it's available for free from the Energy Efficiency and Renewable Energy Clearinghouse at 1-800-363-3732 or online at [www.rebuild.org/news/guides.asp](http://www.rebuild.org/news/guides.asp).



## View From DC By Daniel Sze

The U.S. Department of Energy is awarding a total of \$2.28 million in State Energy Program Special Projects Awards this year to fund Rebuild America projects in 19 states. The awards range from \$50,000 to \$150,000.

The goal of the 2001 Rebuild America SEP Special Projects Awards is to strengthen the Rebuild America program representatives' abilities to serve and expand partnerships. States are encouraged to use their award funds to train state representatives to strengthen the partnership network and to use Rebuild America as the portal or "gateway" to address the broad multi-sector needs of communities. Our annual Special Projects Awards serve to remind us of the important role our state energy offices play in supporting partnership development and in fortifying the Rebuild America network.

Here is a roundup of this year's award recipients:

- Michigan** – \$50,000 in seed money to establish Rebuild Michigan, the state's first partnership.
- Kentucky** – \$110,000 to market and implement an EnergySmart Schools program in six northern Kentucky counties through Rebuild Kentucky.
- Alaska** – \$50,000 in funding for the Rural Alaskans Conserve Energy Rebuild America partnership to provide energy audits and training to 75 facilities, including public schools in 25 rural communities.
- Arkansas** – \$75,000 for the Rebuild Arkansas and EnergySmart Schools project to initiate an education and buildings program in elementary schools that complements the successful Active Physics program.
- Montana** – \$150,000 for a Rebuild America Montana project aimed at uniting public buildings, schools and local governments under a cohesive, comprehensive energy initiative.

**California** – \$150,000 for California Rebuild America to expand partner activity and address the needs of K-12 schools.

**Pennsylvania** – \$150,000 was federally approved for the Gateway to an EnergySmart-Green Schools Program, the focus of which is to improve building performance in Philadelphia schools while providing hands-on energy efficiency and management instruction for students.

In addition to those listed above, other states receiving Special Projects Awards include: Colorado, Connecticut, Hawaii, Idaho, Iowa, New Hampshire, New Mexico, New York, Ohio, Oklahoma, Oregon and Utah.

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

# Alaska Partnership Improves the Seafood Industry



The **Rural Alaskans Conserve Energy Rebuild America** partnership has taken great steps toward helping seafood processing plants improve energy efficiency. The Alaskan seafood processing industry faces rising energy costs, competitive markets, increasing environmental regulations and skyrocketing costs for waste disposal. Energy costs typically run three times greater in Alaska than they do in the contiguous United States.

A grant, issued in 1999 by the U.S. Department of Energy and Rebuild America, that resulted in hundreds of thousands of dollars in energy-saving improvements was used to kick-off energy assessment audits in five Alaskan plants. The grant, which was matched by state funds, funded extensive technical audits conducted by engineering faculty and students from Oregon State University. The team identified 28 improvements involving plant management, operations and waste disposal. Seattle regional customer service representatives provided technical assistance for the projects.

This program is particularly critical to Alaska because the seafood industry is the largest private employer in the state and produces over half the volume and value of seafood in the United States. But this production comes at a cost. All of the technical equipment required to bring Americans fresh fish – efficiency motors, refrigerators, boilers and wrap machines to name a few – cost millions of dollars to maintain.

According to **Rebecca Garrett**, Rebuild program representative and program manager for the Alaska Energy Authority, 17 of the 28 recommendations have been implemented and completed to date. The plants are currently saving \$741,000 annually. Rebuild America is continuing to provide technical assistance for these projects.

Engineers identified a number of areas where upgrades can produce \$260,000 in energy savings per year, per plant in Alaska. Here are several of them:

**Self-Generation** – Installing diesel generators to produce electricity, rather than purchasing it from the local utility has cut kilowatt hour costs by more than half from \$.1424/kWh to \$.068/kWh.

**Premium Efficiency Motors** – Replacing selected standard motors with premium efficiency motors allows motors to do the same amount of work for less money and saves an average of \$13,000 per year.

**Refrigeration** – Refrigeration equipment operates primarily freezers, cold storage, chillers and icemakers, and uses 65 percent to 85 percent of electricity in processing plants. Resetting fan switches that control the minimum discharge pressure is free and saves over \$15,000 per year.

**Boilers** – Boilers provide steam for cooking crab and shrimp, cooking and pasteurizing surimi seafoods, sterilizing canned foods, heating the workplace and cleanup. Tuning the boilers in five plants optimizes the combustion and saves \$2,500 per year.

**Lights** – Installing high-efficiency lights in plants saves about \$1,000 a year.

**Waste Reduction** – Recycling water used to clean fish, defrost freezers and similar uses saves upwards of \$9,000 per year, while pressing excess water out of fish waste reduces the weight by 1,600 tons per year. Many plants pay \$15 to \$30 per ton to dispense of fish waste.

For more information on the *Rural Alaskans Conserve Energy Rebuild America* partnership, contact **Rebecca Garrett** at [rgarrett@aidea.org](mailto:rgarrett@aidea.org).



*Ocean Beauty is one of many Alaskan seafood processing plants making energy-efficient upgrades that will save each plant close to \$260,000 annually.*

# Geothermal Energy 101

Using the heat generated below the earth's surface, geothermal energy is a clean, reliable and domestically plentiful energy resource. While the technology is still gaining in popularity, **Rebuild Hawaii**, featured in the September/October 2001 issue of *Partner Update*, and Ohio's **Stark Metropolitan Housing Authority**, written about on page 4 of this issue, have put geothermal energy to good use.

*Partner Update* recently spoke about the pros and cons of geothermal energy with **Patrick Hughes** from the U.S. Department of Energy's Oak Ridge National Laboratory. Hughes is program manager of the ORNL's Federal Energy Management Program team, which among other responsibilities, provides technical assistance on geothermal heat pumps to federal agencies.

## Question: What is geothermal energy and how does it work?

Deep, high-temperature "geothermal energy" – think geysers – is one of the nation's major renewable-power generation resources. It also is theoretically possible to directly use this high-temperature resource for building heating or process needs, or for generating chilled water to serve cooling or process loads. However, the number of buildings close enough to tap into these geyser-like resources is insignificant. It is better to use this type of geothermal energy for generating electric power.

The kind of geothermal energy addressed here, however, is available essentially everywhere with the help of heat pumps. Geothermal heat pump systems – also known as GHP systems, geo-exchange systems, ground-source heat pump systems and others – is the name of a broad family of space conditioning, water heating and process serving systems that employ a geothermal resource – the ground, groundwater, surface water, wastewater streams – as both a heat source and sink. Conventional systems use outside air, flowing over an outdoor coil, as its heat source and sink.

## Q: How do heat pump systems work?

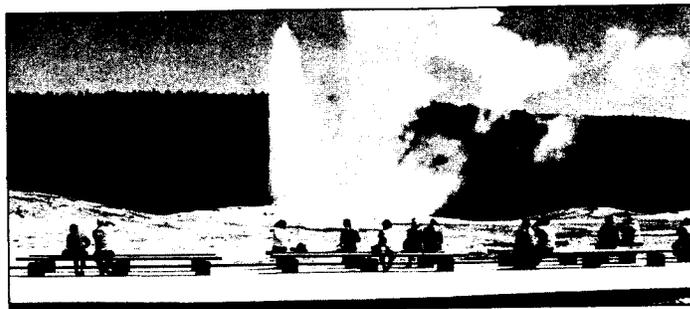
In a typical space conditioning application, a thermostat will turn on a heat pump to provide heating when room temperature is lower than the desired range, and turn on the heat pump to provide cooling when room temperature is higher than the desired range. Heat pump efficiency and output capacity decline as the temperature difference increases between where the heat is going and where it is coming from.

## Q: Why is the GHP variety more efficient?

GHPs are more efficient than conventional systems because the geothermal resource is warmer than outside air when heating is required, and cooler than outside air when cooling is required.

## Q: Why is GHP considered renewable energy?

GHPs are renewable energy systems because the natural processes that keep the geothermal resources at friendlier temperatures than outdoor air are always at work. These natural processes are as renewable as the sun that shines and the wind that blows. And unlike these other renewable resources, the geothermal resources used by GHP systems are available almost everywhere, whenever you need them.



## Q: What are the cost expenditures for geothermal energy? How do those costs compare with traditional forms of energy?

The question is posed as if GHP systems were a form of energy supply. While thinking about them as an energy supply is interesting, GHP systems are really about using less energy to meet the same energy service needs. The most economic and environmentally friendly form of energy is the energy we avoid using in the first place.

It is better to think about GHP system costs and savings relative to conventional heating, ventilating and air conditioning systems. This data has been difficult to come by in the past, but within the last year DOE's Federal Energy Management Program sponsored ORNL to assemble a database of past private and federal projects. DOE programs, including Rebuild America, look forward to using the results of this study to help identify additional opportunities for use of GHP systems.

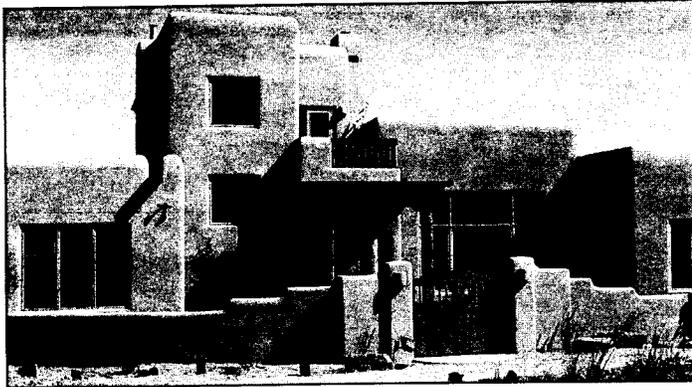
One thing we discovered is GHP systems in commercial new construction, such as for K-12 schools, for example, are costing on average about \$14.61 per square foot of gross building area – roughly the same as conventional HVAC systems able to provide the same level of control, flexibility and comfort.

We also know that in commercial and large residential retrofits – hundreds or thousands of military housing units, for example – first costs are generally higher than conventional HVAC systems, but simple payback periods are three to eight years because of lower energy and maintenance costs.

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IN NEW MEXICO

# Energy-Efficient Houses Win Awards



*This house merited Artistic Homes two awards – best value and best overall home for \$80,00 to \$115,000.*

Four Building America homes in central New Mexico recently received awards from the residential building community – a move that welcomes and encourages the integration of energy-efficient housing design into the mainstream.

These houses, constructed under a unique partnership between the **Building Science Consortium** and the **Home Builders Association of Central New Mexico**, were honored at the 11<sup>th</sup> Annual Homes of Enchantment Parade, an October event sponsored by the Builders Association that features 95 open houses scattered throughout central New Mexico.

“I told you one could build a better house and still win awards,” one home designer and Building Science Consortium member said following the presentation ceremony.

Artistic Homes, High Mountain Homes, Strosnider Company and Homes by Dawn Davide were honored for houses that meet stringent standards for energy conservation, indoor air quality, water conservation and solid waste reduction.

Participants in the Homes of Enchantment Parade say they faced many challenges in implementing innovative building practices, including tough negotiations with reluctant subcontractors. **Dave Engleman** of High Mountain Homes and **Tim Strosnider** of Strosnider Company say that while it was a difficult endeavor, the resulting houses are greatly improved because of the effort. Both agree that it wasn't easy at times, but it certainly was worth the effort.

Although the satisfaction of building a more durable, more

energy- and resource- efficient house may be reward enough for these builders, recognition by the building community for building a house with market appeal was a great bonus.

Artistic Homes won top prize for the La Encantada Award for providing the best value in homes priced between \$80,00 and \$115,000. Artistic Homes also won runner-up in the same price category for best overall home. High Mountain Homes won in the \$645,00 to \$735,000 price category. Homes by Davide and Strosnider Company received runner-up prizes for \$460,00 to \$530,000 and \$645,00 to \$735,000 homes respectively.

A team of judges from the home construction industry and related professions, including architects and appraisers, chose the winners. Energy-efficient features were not required to compete for prizes.

Building Science Consortium and the Home Builders Association of Central New Mexico have a unique Building America partnership. Rather than working with just one or two production builders, the consortium has signed contracts with 15 builders. In addition to the four award-winning builders, six of the partnership's builders are developing their plans, and four have started construction on energy-efficient homes.

The bar for building homes in central New Mexico has been raised. Friendly competition, with a dose of shared learning, has produced better homes. The partnership between

Building America and the New Mexico builders association is a highly successful model that could be employed across America.

*The Building Science Consortium 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/bsc.shtml](http://www.eren.doe.gov/buildings/building_america/bsc.shtml).*



*Strosnider Company won runner-up in the \$645,000 to \$735,000 category for this house.*



*High Mountain Homes won top honors in the \$645,00 to \$735,000 category for this house.*

# Salt Lake City Green Preparing for Olympics and Beyond

Salt Lake City has announced a broad "green" initiative that ranges from the construction of energy-efficient public buildings to increasing open green space, in a move that will likely capture national attention during the 2002 Winter Olympic Games in February.

**Salt Lake City Green** includes projects that focus on environmental responsibility and energy efficiency and awareness. Its breadth ensures that all of the town's citizens, including its corporate and business citizens, have an opportunity to participate.

"Green solutions don't just come from environmental experts; truly successful, long lasting, quality-of-life solutions require community acceptance, business commitment and individual dedication," Salt Lake City Mayor **Rocky Anderson** said in a kick-off speech in August.

In development for many months, the program will integrate simple behavior among residents of Salt Lake City, such as increased recycling, and efforts by the city to meet carbon dioxide reduction targets.

But perhaps the largest segment of the project is its energy-efficient component. The Salt Lake City Green initiative commits all future construction and renovation of city government and publicly owned buildings to be constructed in an environmentally friendly and energy-efficient manner. The city will implement an Environmental Management System to track energy use and other environmental aspects of city government operations.

In October, Anderson launched Salt Lake City Green's High Performance Buildings Initiative. This program will "ensure that any future buildings constructed by the city or with city funds will be designed with efficiency and the environment in mind," Anderson explained. "This initiative will not only save the city energy and resource costs, but it also will set us up to be a local and national leader in sound building practices."

Rebuild America Program Representative **Alan Nagle** says that Salt Lake City Green will draw upon the technical and organizational expertise Rebuild America offers its partners. While the details of Rebuild America's coordination with Salt Lake City Green are still being fleshed out, its Strategic and Business Partners and ENERGY STAR® will surely have a role in the project's success.

In addition to improving energy efficiency, Salt Lake City will create an "Olympic Forest" to improve the greenscape of the city for attendees of the 2002 Winter Olympiad. Following the games, the trees will be transferred to city parks. Additionally, the efforts of Salt Lake City Green will not conclude when the athletes depart in February. The city's Zero Waste Initiative, a component of the broader program, will focus on reducing energy consumption.

Sources predict that the Winter Games will provide the project with so much recognition that other partnerships, towns, and local and state governments will be quick to adopt the successes of Salt Lake City Green. And they say that because of the scope - with many different aspects available to all citizens and businesses - the program should last for a long time and result in notable energy savings.

For more information on Salt Lake City Green, contact **Lisa Romney** in the mayor's office at 801-535-7939 or **Denver Regional Team Leader Dave Waltzman** at [dave.waltzman@ee.doe.gov](mailto:dave.waltzman@ee.doe.gov).

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## Ohio Housing Authority Meets Energy, Senior Citizens' Goals

Financing for the project came from a number of sources, including a City of Canton Community Block Grant and performance contracting. Ohio Office of Energy Efficiency sponsored a Rebuild America audit for the retrofit project and the U.S. Department of Housing and Urban Development provided modernization funds.

Stark has 40 returning occupants for 134 available apartments and is taking applications to fill the remainder. Williams is confident the retrofits will live up to residents' expectations.

"We were trying to raise the quality of housing for our seniors while making the building incredibly energy-efficient," says Williams. "We've done both."

*Stark Metropolitan Housing Authority was recognized in 1999 by the U.S. Department of Energy with an Energy*

*Champion Award for Excellence in Public Housing. Last year, SMHA received the Governor's Award for Energy Excellence. For more information on Cherrie Turner Towers, contact Mike Williams at 330-454-8051 or Manny Anunike of the Ohio Office of Energy Efficiency at [EAnunike@odod.state.oh.us](mailto:EAnunike@odod.state.oh.us).*



From left: **Mike Williams**, SMHA deputy director; **John Devine**, Rebuild America Chicago regional team leader; Canton Mayor **Richard Watkins**; Congressman **Ralph Regula**; **Cherrie Turner**, retired director of SMHA; **Manny Anunike**, Ph.D., Rebuild Ohio state representative; and **Phillip Shotwell**, supervisor, Minority Business Development Division, Ohio Department of Housing.

# Rebuild Grundy Moves Media

The Town of Grundy, VA, is moving! And it is catching the attention of major newspapers and television networks along the way. Heavy hitters like ABC, *The New York Times* and *The Washington Post* have covered the very ambitious and controversial attempt to literally move the town across the river out of harm's way.

A former coal town in the Appalachian Mountains, Grundy has, on four separate occasions, suffered tremendous flood damage from the Lavis River, which cuts through its center. After much local, state and federal agency collaboration, Grundy began clearing a 13-acre plot across the river – working with the Virginia Department of Transportation, the Army Corps of Engineers, and teaming up with Rebuild America.

ABC's *Good Morning America* reporter, **Diane Sawyer** interviewed **Chuck Crabtree**, Grundy town manager and **Rebuild Grundy** partnership head, in early August, discussing logistics of the \$177 million project, with footage of downtown Grundy's vacant and damaged office and store buildings. That same day, *The New York Times* ran a detailed story about the Grundy project in which Crabtree discussed

## The New York Times

some of the emotion behind the move. "The trick all along has been how to do this without killing the town you are trying to save," Crabtree told the *Times* in talking about some residents' opposition to the task. "This is survival. We have to make it happen."

*The Washington Post* and the ABC local news affiliate also covered the project in recent months, as did the regional

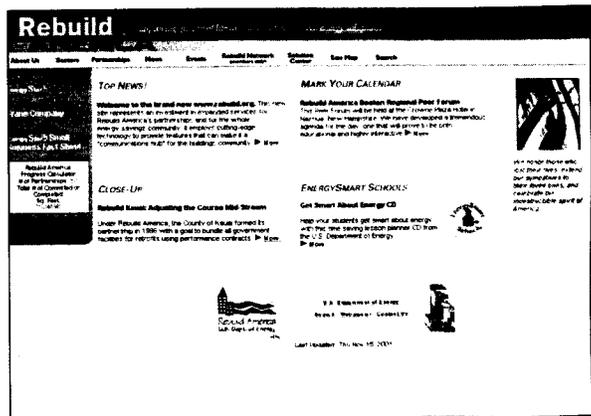
## The Washington Post

public television program, *Virginia Currents*. The program produced an extensive documentary on the Town of Grundy, talking to many residents and town officials whose lives have been affected by several of the floods. One resident stated that everyone has to make a sacrifice to save the town and its heritage for the future.

A bridge connecting the two areas has been built, and the 13-acre plot has been cleared, with construction set to begin this fall. The project is expected to take 10 years to complete.

For more information about Rebuild Grundy, contact Chuck Crabtree at [chuck@grundyvirginia.com](mailto:chuck@grundyvirginia.com) or check out the May/June 2000 issue of *Partner Update*, available at [www.rebuild.org](http://www.rebuild.org) and in hard copy from the Energy Efficiency and Renewable Energy Clearinghouse at 800-363-3732.

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A New Web Site for Rebuild America



empowerment that Rebuild America developed its new Web site, which features dedicated sections for Community Partnerships, Business and Strategic Partners, news and events, and most importantly our five market sectors: K-12 Schools, Colleges and Universities, State and Local Governments, Public and Affordable Housing, and Commercial Buildings. Here you will find news about the latest developments in the building community, as well as information on partnerships, events, success stories, building processes, technology and more.

Additionally, a special password protected section, the Rebuild Network, provides Rebuild America Partners the ability to keep contact information, partnership facts and project data up-to-date.

The new database-driven nature of Rebuild America's site will permit new data to be published quickly – a feature that will be particularly useful for the calendar and events databases. Users may sort information by sector and state, enabling them to zero in on what is happening in their own sector and/or state.

This new version of our site is only the beginning of an ambitious, longer term Web development project. Look for new features to be added in the coming months. Again, welcome. We look forward to hearing what you think about the new and improved Rebuild America Web site.

If you have questions – What is my password? How can I update my partnership information? How can I get my event posted to the Web Site? – or you just want to comment on the site, send an e-mail to [rawebmaster@rebuild.org](mailto:rawebmaster@rebuild.org).

**Q: When designing geothermal installation, do any problems arise that otherwise would not be present?**

GHP systems must interface with a geothermal heat sink or source. Most system designers are not yet comfortable with designing the system components for this interface. For example, most GHP systems use "vertical bore hole ground heat exchangers" as the interface component. Many of the engineering firms used for commercial jobs and HVAC dealers used for residential jobs found in the yellow pages aren't qualified to design this component. They may not even know where to go to get this specialized expertise. But great strides are being made, and more parts of the country have access to the necessary expertise than ever before.

With GHP systems there are cost consequences to over-sizing, and therefore designers pay more attention to this issue. To design a ground heat exchanger properly you need to perform a building energy analysis. Once designers start thinking that way, it isn't too much of a stretch for them to realize that energy-efficient envelopes, glazing, lighting and ENERGY STAR® plug load equipment will all reduce loads and allow smaller heat pumps and ground heat exchangers.

ORNL is experimenting with a GHP system at an elementary school near the lab to determine the optimum configuration for geothermal energy as a heat source and heat sink. The test involves remote monitoring and controls via the Internet.

**Q: How difficult is retrofitting a building with geothermal energy? How tricky is it to install in new construction?**

In areas where the design, installation and after-sales service infrastructure is well developed, new construction of GHP systems is no more difficult than for conventional HVAC systems. Of course the property must have an adequate geothermal resource and enough real estate to accommodate it.

Retrofit applications are not rocket science in terms of difficulty, but economic feasibility needs to be verified based on existing conditions. If ground heat exchangers are to be installed there are surface restoration costs to consider. Whether existing ductwork or piping can be used can matter, and some types of existing HVAC systems are very costly to convert into GHP systems.

**Q: What are geothermal energy's drawbacks?**

GHP systems are still not universally accessible everywhere. In some localities the design, installation and after-sales service is not yet well developed.

**Q: Where do you best recommend geothermal energy be used – schools, small office buildings, manufacturing plants?**

Based on market penetration the best places appear to be K-12 schools and large housing projects (military family housing, new subdivisions, etc.) where air conditioning is required.

**Q: When will geothermal energy emerge into the mainstream?**

I think the technology has an excellent chance of becoming a mainstream HVAC option within five years. The last I heard, there were over 500 K-12 schools with GHP systems nationwide, and \$70 million worth of federal agency GHP projects were awarded in FY2001.

*For more information on geothermal energy, visit [www.eren.doe.gov/RE/geo\\_heat\\_pumps.html](http://www.eren.doe.gov/RE/geo_heat_pumps.html), or contact Patrick Hughes at 865-574-9337.*

# Mark Your Calendar!



The 2002 State Energy Program-Rebuild America Conference is scheduled for July 28 to August 1 at the Hotel Inter-Continental in New Orleans, LA.

Sponsored by the U.S.

Department of Energy, this conference capitalizes on the common ground and audiences shared by the two programs. The Planning Committee is underway and currently brainstorming and developing sessions within four areas – the changing face of technology, program operations, market transformation, and interconnections and linkages with other programs and partners. We also will keep you posted via the Web site, Flash Report, broadcast e-mail and regular mail.

# Profile: The National Association of Counties – Addressing Energy Needs at the Local Level

Rebuild America and the **National Association of Counties'** strategic partnership is helping to bring energy issues to the forefront of local government.

Created in 1935, NACo represents more than 2,000 county officials throughout the United States, and supports Rebuild America partnerships by providing access to county officials and their staff. Headquartered in Washington DC, this full service organization provides legislative, research, technical and public affairs assistance to its members, and acts as a liaison with state and federal government.

“County officials gain access to information regarding federal and state energy programs through NACo’s Energy Efficiency Program. The goal is to educate county officials about their options,” says **Maggie Kennedy**, coordinator of the programs. NACo provides counties with the tools they need to make educated decisions about their energy use, and how Rebuild America can assist them in this process.”

The association also educates its member counties about the benefits of energy efficiency. With its unique networking capabilities, the association collects and shares information about how different counties are addressing energy efficiency.

Additionally, since NACo is located in Washington, DC, it is an excellent resource on current energy policy and legislative news. This expertise helps local officials craft new energy-

efficient policies for county buildings, such as courthouses, schools, hospitals, jails and administrative buildings.

Through its local connections, NACo also is helping Rebuild America line up partners. The effort is new but seems destined for success. So far, Maggie Kennedy and **Jack Werner**, Rebuild America local government liaison, have met with counties in Nevada, Texas, Illinois and Pennsylvania to discuss opportunities available through Rebuild America.

Another benefit of NACo’s involvement is free publicity for Rebuild America partnerships. NACo has a number of publications such as *County News* and the *County Environmental Reporter*, which have a combined circulation of over 37,000. *County News* is a bi-weekly publication, and the *County Environmental Reporter* is issued quarterly. Both publications are circulated to officials and their staff in over 2,000 counties. All *County News* articles are posted on the NACo Web site, [www.naco.org](http://www.naco.org).

NACo continues to share Rebuild America’s vision for saving energy and money at the local government level, and its efforts on Rebuild America’s behalf significantly benefit local government partnerships.

*For more information about NACo, visit [www.naco.org](http://www.naco.org).*

## Value of Regional Peer Forums Evident in Atlanta

Earlier this fall, Rebuild America partnership representatives sat down with national team officials and business partners at Regional Peer Forums in Atlanta, St. Louis and Seattle to learn from each other.

The Atlanta Regional Peer Forum, held October 17-19 in Atlanta, explored the Rebuild America experience from the partnerships’ perspective. Team Leader **Greg Andrews** delivered a “State of the Region” address and was joined by state representatives who provided local examples of partnerships at work in the region. Greenville County, SC, part of **Rebuild South Carolina**, provided a superb case study of how energy-efficient efforts, coupled with a revitalization plan, helped to transform a community and stimulate economic growth. Peer Forum participants also received lighting training and a tour of **Lithonia Lighting**.

Lithonia played host to both the Peer Forum and the Business Partners National Summit at its offices on October

18, providing an opportunity for the two groups to share their perspectives and expectations about their respective roles in the program. Peer Forum participants sharpened their skills by attending the sessions on the LEED (Leadership in Energy and Environment Design) Green Building Rating System and the ENERGY STAR® Benchmarking Tools.

In St. Louis, the Chicago Regional Peer Forum, held October 29-31, centered on exchanging ideas to help partnerships effectively implement Rebuild America projects. Discussions included Rebuild America partnering with ENERGY STAR®, the launch of the new Rebuild America Web site, and market sector, state and local energy goals. **Glenda Abney** of the Missouri Botanical Garden – which now houses the Center for Energy Efficiency partnership, formerly MERP – coordinated and hosted the event.

After an informal “get-to-know-you” session, participants

*Continued on page 11*

# Snap Shot



Scott Igoe

Scott Igoe is Rebuild America's Webmaster. Employed by Aspen Systems, Scott has been with the program since October 2000.

### Vital Statistics

A resident of Falls Church, VA, for eight years, he lives with his wife, Valerie, and pet basset hound, Reginald.

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

I believe Rebuild America is part of an evolution toward better energy solutions for communities around America. It has a great team that is passionate about improving energy efficiency, and it's exciting to be a part of that team.

### What brought you to Washington, DC?

I wanted to go to graduate school to pursue a degree in Information Management. So I found a facilities management position with American University where I was able to conduct training, manage a help desk call center, implement and oversee a facilities management maintenance system,

and set up Web sites for the university administration.

Washington's climate also is an improvement from my small hometown outside of Buffalo, NY – where there are only two seasons, winter and the 4th of July.

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

I like to spend time with my family hiking, biking and sailing. I also volunteer at our church and a homeless shelter in Falls Church. And I just recently completed building a backyard shed that is energy efficient but without any computers!

### What is your dream job?

Helping folks use technology as a tool that helps them solve problems and find information. Rebuild America gives me the chance to further that dream.

### What is your dream vacation?

I hope to travel with my wife to the land of my grandparents, Ireland, and retrace the steps of my forefathers.

# and St. Louis

rolled up their sleeves and got to work. Highlights from the conference included exciting projects in the K-12 and public housing market sectors.

**Blanche Scheinkopf**, EnergySmart Schools coordinator, encouraged attendees to focus on energy efficiency as a way to improve the quality of learning for students. The energy bike – a bike that students pedal to generate energy – was also discussed as an innovative energy-awareness, educational tool.

In a spirited discussion, **Mark Ternes**, Public and Multi-family Housing Sector manager at the U.S. Department of Energy's Oak Ridge National Laboratory, detailed measures for securing financing and implementing retrofits for public housing authorities. Representatives of Stark Metropolitan Housing Authority in Canton, OH – one of the most successful Rebuild America partnerships in the public housing market sector – offered insight from their own

experiences. Stark recently completed renovations of Cherrie Turner Towers, a newly renovated energy-efficient residency for elderly people. (See page 4 of this issue, for the complete story.)

Participant comments about Rebuild America Peer Forums have been overwhelmingly positive. One businessman said his few days in St. Louis completely changed his outlook towards conducting energy-efficient improvements. Prior to the conference, the gentleman believed public housing authorities typically were not interested in energy improvement work and had no incentive to do it. Ternes' discussion and Stark's success stories changed his mind.

You'll find coverage of the Seattle and Boston Peer Forums, held November 13-15 and December 3-5 respectively, in our next issue.

**December**

**4-5 Boston Regional Peer Exchange**, Nashua, NH  
Contact Greg Davoren at [greg.davoren@ee.doe.gov](mailto:greg.davoren@ee.doe.gov).

**6 High Performance School Building Workshop**,  
Washington, DC  
Contact Ellen Larson at 202-628-7400,  
extension 211.

**6-8 National Science Teachers Association Regional  
Convention**, Memphis, TN  
Visit [www.nsta.org](http://www.nsta.org).

**8 National League of Cities: Congress of Cities and  
Exposition**, Atlanta, GA  
Contact Fonda Richardson at 202-626-3107.

**January**

**13-17 The Association of Higher Education Facilities  
Officers Bi-Annual Institute**, Tampa, FL  
Visit [www.app.org/education/institute](http://www.app.org/education/institute).

**February**

**13 National Association of State Energy Officials  
2002 Energy Outlook Conference**,  
Washington, DC  
Contact Melanie Minesinger at 703-299-8800.



From left: **Jim Delbridge** of Cutler-Hammer, **Dave Ryslaarsdam** of Sempra Energy Services and **Jim Himonas** of Novitas explore the Business Partners' role with Rebuild America at the Business Partners National Summit. Lithonia Lighting hosted both the Summit and Atlanta Regional Peer Forum at its offices in Conyers, GA, on October 18.

**New Partnerships**

- Antilles School, U.S. Virgin Islands
- City of Stone Mountain, GA
- Covington City Public Schools, VA
- Oakland Housing Authority, CA
- Rebuild Capital/ Saratoga, NY
- Save the Bay, RI

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Rebuild America is a network of partnerships – focused on communities – that save money by saving energy.

These voluntary partnerships choose to improve the quality of life in their communities through energy efficiency. Rebuild America supports them with customized assistance backed by technical and business experts and resources.

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

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