Iraq war veteran celebrates green job this Earth Day

Mike Flaherty

COLORADO SPRINGS, CO - An Army veteran who served in Iraq has found a new career weatherizing homes for poor residents. When Mike Flaherty of Newburgh, Ind., left the military in 2006 after five-and-a-half years and two deployments to Iraq as a petroleum supply specialist, he had limited "marketable skills" for the civilian job market, he says.

Flaherty's Army career brought him to Colorado Springs, Colo., where he stayed after fulfilling his military duties. While taking a break from studying at Pike's Peak Community College last spring, he was recruited to join the first wave of weatherization training by the non-profit Veterans Green jobs. Funded by the Recovery Act, Veterans Green Jobs provides weatherization services for low-income residents in Colorado.

After completing his training, Flaherty worked as a crew member weatherizing homes in the six county region of San Luis Valley. He was promoted to crew leader and is now a weatherization coordinator for Veterans Green Jobs.

The Denver-based nonprofit is hiring 100 new employees to take on work related to weatherization and energy efficiency. Flaherty says for veterans, green jobs and training programs provide "hands to catch them when they get back" to civilian life. "I think it would be great for veterans to lead the way in the emerging clean energy," he adds. After serving in the military, weatherization work provides a positive, more restorative departure, Flaherty says. "It's therapeutic, from that standpoint."

Over a third of the population in San Luis Valley lives below the poverty line. Temperatures range from 90 degrees in the summer to 30 degrees below zero in winter. Making homes energy efficient can save poor residents big money during those months of extreme weather. "You're literally changing the way people live on a daily basis," Flaherty says.

North Carolina City Has Big Plans for Energy Grant

GASTONIA, NC - On this 40th observance of Earth Day, communities across the country are using the new Energy Efficiency and Conservation Block Grant (EECBG) program funded through the Recovery Act to help realize their energy efficiency and environmental goals. Under the leadership of Mayor Jennifer T. Stultz, the City of Gastonia has developed a variety of innovative uses for their grant. Specific projects will include lighting and equipment upgrades in municipal buildings, water and wastewater treatment energy monitoring, conversion to LED-lighted pedestrian signal heads, purchase of electric vehicles for park and recreation and police use, and route planning software for utility vehicles.

A 2008 city-wide energy efficiency audit recommended a variety of building upgrades and improvements to reduce energy consumption. The EECBG funds will allow the city to improve efficiency by 10 percent at affected municipal facilities by replacing older, inefficient equipment, including HVAC units, lighting systems, a technology switch, and a walk-in freezer, and installing diagnostic equipment on water and wastewater systems.

Mayor Jennifer Stultz

CenterPoint Energy's Smart Grid

HOUSTON, TX - CenterPoint Energy Houston Electric, LLC recently completed an agreement with the U.S. Department of Energy (DOE) for $200 million in American Recovery and Reinvestment Act funds for its advanced metering and intelligent grid projects. The award, part Department's Recovery Act Smart Grid Investment Grant program, has a total project value of over $739.2 million. CenterPoint Energy is using the Recovery Act funds to accelerate the deployment of smart meters and start the first phase of their intelligent grid work.

Technician for CenterPoint Energy

"We are very pleased to receive this award," said Kenny Mercado, CenterPoint Energy division senior vice president of Smart Grid Deployment. "These funds will help deliver the benefits of smart grid technology to Houston-area consumers sooner and at a reduced cost to them."

CenterPoint Energy's Smart Grid will enable consumers to monitor their electricity use more frequently and in greater detail as well as take advantage of potential new service offerings. For example, time-of-use rates are expected to lead to changes in consumer behavior such as deferring energy intensive work to a time of day when electricity is less expensive, both reducing peak power consumption and power plant emissions. Smart Grid technologies are also expected to boost energy efficiency and conservation. Market savings could be significant because consumers served by CenterPoint Energy use about 20 percent of the electricity consumed in Texas.

Moreover, CenterPoint Energy's Smart Grid projects could also benefit the environment by reducing the use of fossil fuels, resulting in lower greenhouse gases (GHG) emissions. Remote completion of service orders will decrease CenterPoint Energy's use of vehicles to execute orders, reducing fuel consumption and associated emission of greenhouse gases and other pollutants. The adoption of Smart Grid technologies also creates a platform that supports the advancement of distributed generation resources like wind or solar power and promotes the use of plug-in hybrid electric vehicles (PHEVs). Finally, CenterPoint Energy's Smart Grid will help improve reliability of electric service by reducing the duration and impact of power outages. For more information on the DOE's Smart grid work, visit http://www.oe.energy.gov/.

The latest from ENERGY EMPOWERS …

Ball State building massive geothermal system

MUNCIE, IN - Ball State University is building America's largest ground source district geothermal heating and cooling system. The new operation will save the school millions of dollars, slash greenhouse gases and create thousands of jobs.

The project will also "expand how America will define the use of geothermal technology on a district-wide scale," and provide health benefits such as reducing asthma rates for Indiana residents, says Philip Sachtleben, Ball State's associate vice president of governmental relations.
FULL STORY >

N.C. college to implement efficient climate controls

HAMLET, NC - The stimulus is saving North Carolina's taxpayers some money while helping Richmond Community College, in Hamlet, become more energy-efficient.

RCC was awarded a $157,000 Energy Efficiency and Conservation Block Grant from the Department of Energy through the Recovery Act. The grant will help the college improve the efficiency of systems that use energy as well as give them the ability to remotely monitor energy use and adjust thermostats; saving an expected $21,000 annually.
FULL STORY >

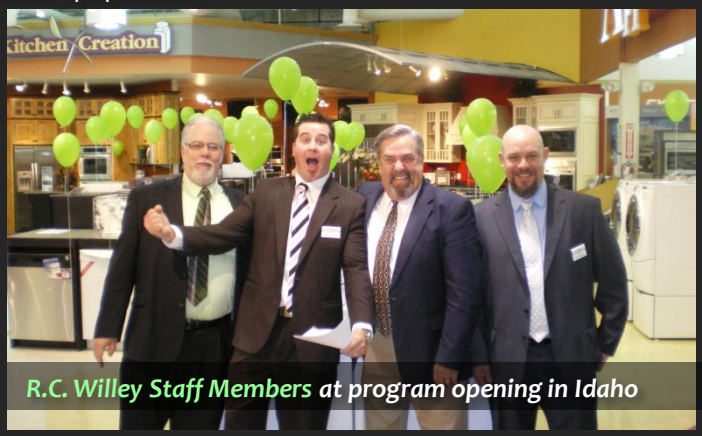
Solar projects to spark students' studies, school savings

NORTH ADAMS, MA - A solar installation on the roof of Drury High School in North Adams, Mass., and an integrated curriculum for students will be the result of $300,000 in Energy Efficiency and Conservation Block Grants, funded by the Recovery Act. North Adams and neighboring Clarksburg, which also sends students to the high school, pooled their $150,000 grants to contribute to the project.
FULL STORY >

Eight States Begin Recovery Act Appliance Rebate Programs on Earth Day

For residents of eight U.S. states, the green images that instantly spring to mind on Earth Day might be saved dollars on household utility bills as the Energy Efficient Appliance Rebate Program funded by the American Recovery and Reinvestment Act gets underway to stimulate job growth and reduce energy costs.

Residents in California, Kentucky, Maryland, Massachusetts, Mississippi, New Mexico, North Carolina and Oklahoma will be eligible for the rebate after April 22. To qualify, appliances must have the ENERGY STAR designation and old appliances must be removed and properly disposed. Each state is eligible for a portion of the ARRA's allotted $300 million based on each state's population.



R.C. Willey Staff Members at program opening in Idaho

In Oklahoma for example, the ENERGY STAR appliance program is expected to annually save:

- over 7.6 million Kilowatt hours of electricity
- over 34 million gallons of water
- and 9.9 million pounds of carbon dioxide

States have the flexibility to select which residential ENERGY STAR qualified appliances to include in their programs and the individual rebate amount for each appliance. DOE has recommended that states and territories focus their program efforts on heating and cooling equipment, appliances, and water heaters as these products offer the greatest energy savings potential. ENERGY STAR qualified appliance categories eligible for rebates include: central air conditioners, heat pumps (air source and geothermal), boilers, furnaces (oil and gas), room air conditioners, clothes washers, dishwashers, freezers, refrigerators, and water heaters.

The appliance rebate program also leverages the power of the ENERGY STAR program, a well-known labeling program that helps consumers make energy smart choices by identifying the most energy efficient products. ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that covers more than 60 product categories and is supported by a network of almost 600 utility and state and government partners serving more than 74 million households, over 2,000 retail partners representing more than 27,000 storefronts, and 2,645 manufacturers of ENERGY STAR qualified products.

Six other states and one territory; Alabama, Colorado, Missouri, New Hampshire, Louisiana Pennsylvania, and American Samoa, are starting their programs during Earth Week. They all now join the 24 other states and territories that have already started their appliance rebate programs. Seven more states have already completed their rebate programs and 1 other states and territories; the District of Columbia, Guam, Hawaii, Northern Marianas Islands, Maine, Montana, Nebraska, Tennessee, Utah, Virginia and West Virginia, will all begin by June.

For a listing of all the states and territories and their rebate programs visit the Appliance Rebate State Profile Page.

Climate Research Facilities at the National Labs

Clouds are the visible collection of water vapor and ice that forms and dissipates high in the atmosphere. "[And these] clouds play a critical role in Earth's weather and climate," said Dong Huang from Brookhaven National Laboratory. These ephemeral features affect how incoming solar radiation is absorbed by the planet or reflected back into space. Unfortunately, scientists only have a rudimentary understanding of the dynamic conditions inside the cloud. "Poor understanding of clouds has long limited scientists' ability to make accurate predictions about weather and climate change" said Huang.

The DOE Atmospheric Radiation Measurement (ARM) Climate Research Facility has been operating climate observing sites around the world for nearly two decades. The program allows scientists to collect climactic data in poorly understood regions of the atmosphere. The information collected thus far has had a tremendous impact on improving climate models used to forecast the timing, location, and magnitude of climate change. Detailed information such as this will help bring scientists closer to consensus about the scope and pace of changing climate conditions.

Continued next page…

From page 3...

Argonne National Laboratory and Pacific Northwest National Laboratory received American Recovery and Reinvestment Act (ARRA) funds to help scientists answer these critical questions about the atmosphere. "The ARRA funding has provided an unprecedented opportunity for ARM to expand its reach," said Doug Sisterson, meteorologist and operations manager of the ARM Climate Research Facility. "This new capability will allow scientists to dramatically improve climate model forecasts."

The money will be used to purchase 143 climate measurement tools to allow scientists to understand cloud composition, the movement of particles within clouds and their effect on the sun's radiant energy. It will also fund the installation of precipitation radars to the ARM sites measure the life cycle of clouds. All high-quality data collected by the ARM climate research facility is made freely available to anyone worldwide, usually with 24 to 48 hours of collection. Data from the new instrumentation is expected to be available in the fall of 2010 via the ARM Data Archive.

Doug Sisterson

Funding to push battery technology from Argonne Laboratory to marketplace

ARGONNE, IL - Look around. People walk to work grooving to their mp3 player, check email on laptops at coffee shops, and chat on the phone with loved ones while walking down the street. None of this could happen without innovative lithium ion battery technology.

Lynn Trahey ***Argonne National Lab***

Although these batteries have been available to the public for nearly 20 years, the full potential of this technology has yet to be reached. With the help American Recovery and Reinvestment Act (ARRA), Argonne National Laboratory will build three battery research and development plants to bring the next generation of batteries on-line for use in hybrid electric vehicles, plug-in hybrid electric vehicles and all other electric vehicles.

Greg Cheng ***Argonne National Lab***

The Battery Prototype Cell Fabrication Facility will create a direct pipeline between materials researchers and battery developers. According to Dennis Dees, an electrochemical engineer at Argonne, "this [building] will greatly reduce the time to get battery improvements into production."

The Materials Production Scale-Up Facility will accelerate the production of advanced battery material for industrial-scale testing. "Argonne has developed a great number of new and innovative battery materials but most never make it to industrial production," said Gregory Krumdick, principal systems engineer at Argonne. "This facility will be the link to connect the bench-scale research with the battery manufacturing industry."

One of the biggest complaints of lithium ion batteries is the life of the battery. The Post-Test Analysis Facility will help scientists and engineers extend a battery's performance and life. Argonne chemist Ira Bloom said, "Post-test analysis is the natural extension of the battery testing that Argonne has been doing for many years," he said. "As a battery ages during use or testing, performance degrades and changes occur in the battery materials. Post-test analysis lets us see what physical changes occurred."

Faces of the Recovery Act

1000 Independence Ave SW
Washington, DC 20585
202-586-5000
recoverystories@hq.doe.gov

*The "**Faces of the Recovery Act**" newsletter is a monthly publication issued by the Department of Energy, highlighting people and projects impacted by the Recovery Act.*

If you have a story, please tell us at recoverystories@hq.doe.gov
Visit our website: http://www.energy.gov/recovery/faces.htm