

Sharing Knowledge, Saving Energy

Philadelphia HA forms “living laboratory” with Drexel researchers



The Philadelphia Housing Authority has begun including green roofs on its new mid-rise senior buildings, like this one at Warnock Village in North Philadelphia. Source: PHA

The Philadelphia Housing Authority (PHA) has developed a unique partnership with Drexel University. Researchers from Drexel are measuring the energy efficiency of green technologies like solar panels and green roofs in real time on PHA buildings. Their results could also prove useful for other housing authorities across the country.

The project is called a “living laboratory” because the research and implementation are going on at the same time. As the researchers determine which technologies are saving the most energy, PHA can use that information for projects in progress.

The partnership began because PHA had received stimulus funds from the government, who wanted them to be invested in energy conservation and retrofit projects. To do this, Executive Director Carl Greene wanted to know which were the best energy conservation technologies out there. He called Jin Wen, assistant professor of civil, architectural, and environmental engineering (CAEE) at Drexel. The two had previously served on a HUD-sponsored panel on Recovery Act funding opportunities together.

Since last October, Wen, her colleague Patrick Guarian, also assistant professor of CAEE, and four students have been conducting research on the buildings. And their results have been making a real difference. For example, they found that in buildings with more than 80 units, solar hot water panels save more energy than photovoltaics.

The living laboratory concept helps the researchers in that the data that they gather from the field will help them to better tune their models and

understand the factors that affect technology. It’s also helping them as a teaching tool. Their students benefit from using the PHA buildings as case studies, so they can better understand the concepts they’re learning. “Our students are thrilled at the level of information they gathered from this project, and to see that their research results really could shape the decision-making process,” says Wen.

The PHA benefits as well: Field practitioners can talk with college faculty about the newest findings in the research field and the latest technologies. “The results of this project, I think, will be of immense industry value, not just to Philadelphia,” says Greene.

Greene adds: “We wanted to partner with a world-recognized university that would help us tell our story. I think it’s important for us as public housing authorities to consider that having good industry standards and respected performance data is essential to our ability to receive funding in the long term, to be competitive as Congress decides which programs to fund and which not to fund.”

Greene hopes that other universities will be able to use the work that was done in Philadelphia without incurring the investment cost. “Feel free to contact us,” he says. “We’re certainly open to sharing.”

Earth Day Events in NY, SC; NYCHA forms Green Committees

Housing authorities across the country hosted events for Earth Day (April 22). In South

UPCOMING EVENTS

Five-Day Intensive EPC Course
 ▶ June 14 - 18, 2010 | Chicago, IL
 Contact: Eugene Goldfarb
 312-554-0900 or egoldf1@uic.edu

IAQVEC 2010
 ▶ August 15-18, 2010 | Syracuse, NY
 ☞ www.tinyurl.com/ydglrk9

Energy and Environmental Building Alliance
 ▶ October 12-14, 2010 | Portland, OR
 ☞ www.eeba.org

Enviro Build Expo
 ▶ October 13 - 14, 2010 | Hartford, CT
 ☞ www.envirobuildexpo.com

Carolina, for example, several PHAs held tree- or flower-planting events.

The New York City Housing Authority (NYCHA) held an event called “Preserving NYCHA through low carbon living – The Power is in your Hands!” At the event, they gave residents a user-friendly guide with tips on how to live a low-carbon lifestyle. Hosted by Board Member and Environmental Coordinator Commissioner Margarita Lopez, the Earth Day event featured speakers from the Environmental Defense Fund and from YRG Sustainability.

NYCHA also has created 32 resident-based Green Committees whose members pledge to recycle, take care of newly planted trees, switch to CFLs, and conserve water. Several of these Green Committees have now taken leadership and applied for grants to install rain harvest systems and greening projects in their developments.

HUD, CPSC Issue Guidance on Repairing Homes with Problem Drywall

HUD and the U.S. Consumer Product Safety Commission (CPSC) issued interim remediation guidance April 2 to help homeowners struggling to rid their properties of problem drywall linked to corrosion of metal in their homes, such as electrical components.

Based on scientific study of the problem, HUD and CPSC recommend consumers remove all possible problem drywall from their homes, and replace electrical components and wiring, gas service piping, fire suppression sprinkler

CONT from P1

systems, smoke alarms and carbon monoxide alarms. Taking these steps should help eliminate both the source of the problem drywall and corrosion-damaged components that might cause a safety problem in the home. To view a full text of the remediation guidance, visit the [Federal Drywall Information Center website](#).

Homeowners who believe they may have problem drywall should immediately report to CPSC by calling 800-638-2772 or visiting the [Drywall Information Center](#). Deaf or hard of hearing individuals may access the phone number through TTY by calling the toll-free Federal Relay Service at 800-877-8339.

3,100 PHAs Meet Critical ARRA Deadline

U.S. Housing and Urban Development Secretary Shaun Donovan today announced that more than 3,100 public housing authorities across the U.S. successfully met a critical funding deadline outlined in the American Reinvestment and Recovery Act of 2009 (ARRA).

To date, as a result of this critical ARRA funding, public housing authorities reported creating or retaining nearly 9,000 jobs and developing or rehabilitating 150,000 public housing units in hard-hit neighborhoods throughout the country. Just one year after being awarded, ARRA public housing funds, which were intended to help jumpstart the economy during the worst recession in a generation, are also allowing housing agencies to address the long-standing capital needs of public housing, create jobs, and increase energy efficiency.

Source: [PHADA News](#)

Boston Overhauls PH Energy Efficiency



Massachusetts Governor Patrick, Secretary Goldstein, Construction Project Manager Kevin McCarthy, and Boston Housing Authority Communications Director Lydia Agrea at a construction site. (Photo credit: Eugena Ossi/Governor's Office)

The Boston Housing Authority (BHA) is conducting the largest energy efficiency overhaul in public housing in the nation's history, a sweeping initiative designed to save electricity, countless gallons of water, and millions of dollars. The \$63 million renovation will target 4,300 apartments in 13 BHA developments. Upgrades include low-flow toilets, LEDs and compact fluorescent lights, and natural gas boilers that will allow residents to control their heat. Tar roofs will be replaced with heat-reflecting white surfaces and solar panels. After loans are repaid, taxpayers will save an estimated \$7m annually on utility payments.

Source: [Boston Globe](#)

ARRA Provides Funding for PHA Solar Project

Solar panels will power 120 apartments in a project run by the Housing Authority of the County of Monterey. The \$1.4 million project cost will be covered by federal stimulus funding provided by the American Recovery and Reinvestment Act. This project expands on last year's housing authority project, in which solar panels were installed on 170 new units. Those panels produce power for common areas and supply about half of the homes' demand.

Source: [HACM](#) and [The Monterey Herald](#)

Mass. Housing Board Starts New Energy Initiatives

The Shrewsbury (Mass.) housing agency has undertaken several green initiatives and programs that have made for a more eco-friendly housing authority. The housing authority has replaced stoves and refrigerators at Shrewsbury Towers with new American-made Energy Star efficient appliances, a project that was funded by the ARRA and HUD.

Other efforts include a successful voluntary recycling program, and the installation of motion-activated Energy Star fluorescent lighting to reduce energy waste in hallways and common areas. Upcoming plans include partnering with SELCO to mount solar heating panels on the roof of all buildings at Francis Gardens. This project will provide hot water at the 100-unit complex that is currently subsidized by the Massachusetts Department of Housing and Community Development. Source: [The Shrewsbury Chronicle](#)

Turtle Mountain (N.D.) Indian Reservation Begins Construction on Green Housing Complex

The USDA Rural Development and the Turtle Mountain Housing Authority celebrated the groundbreaking of a new 24-unit multi-family housing complex on the Turtle Mountain Indian Reservation in North Dakota.

Affordable and safe housing is in demand in the Turtle Mountain area. Recognizing this need, the Turtle Mountain Housing Authority, Pathways to Prosperity, and Tribal leaders put into motion a plan to improve the living conditions for many of those living on the reservation. The apartment complex, called "New Generation," will incorporate green technologies including EnergyStar™ appliances and an energy-efficient building design that uses ground-source pumps to heat and cool the facility.

The complex will include 24 federally assisted low-income one-bedroom apartments with rental rates that will be based on 30 percent of the tenant's adjusted annual income. Funding for this project will come from the USDA Rural Development Section 515 Multi-Family Loan Program, the North Dakota Housing Finance Agency, and the Turtle Mountain Housing Authority, owner of the facility. The total cost of the project is estimated at \$3,813,790, with a completion date of early 2011. Source: [KFGO](#)

Resident's Corner Make a Green Resolution This Year

Save energy and money on heating and cooling with these tips:

Heating and Cooling Tips

- Set your thermostat as low as is comfortable in the winter and as high as is comfortable in the summer.
- Clean or replace filters on furnaces once a month or as needed.
- Clean warm-air registers, baseboard heaters, and radiators as needed; make sure they're not blocked by furniture, carpeting, or drapes.
- Bleed trapped air from hot-water radiators once or twice a season; if in doubt about how to perform this task, call a professional.
- Place heat-resistant radiator reflectors between exterior walls and the radiators.
- Turn off kitchen, bath, and other exhaust fans within 20 minutes after you are done cooking or bathing; when replacing exhaust fans, consider installing high-efficiency, low-noise models.
- During the heating season, keep the draperies and shades on your south-facing windows open during the day to allow the sunlight to enter your home and closed at night to reduce the chill you may feel from cold windows.
- During the cooling season, keep the window coverings closed during the day to prevent solar gain.

Source: [The US Department of Energy](#)

We want to hear from you! Please send us nominations for projects to be highlighted in EcoWise.

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