

Project seeks to reduce greenhouse gas emissions in off-campus housing

By Stephanie Laird

August 11, 2008

The Green House Project, a pilot program striving to reduce greenhouse-gas emissions in Athens by improving the efficiency of off-campus student rentals, is accepting applications from student tenants and landlords for

whole-house efficiency audits.

This project addresses many related goals including offsetting Ohio University's carbon footprint in accordance with the Presidents' Climate Commitment; reducing Athens greenhouse-gas emissions as directed by the Cool Cities Initiative; furthering awareness among OU students and their landlords on the relationship between energy use, utility costs and climate change; promoting the use of energy-efficient practices and products; and improving the quality of housing in Athens by making units more efficient, affordable, healthy, safe, durable and comfortable, according to the Green House Project Web site.

OU Sustainability Coordinator Sonia Marcus said this project will benefit many stakeholders since its goals are multi-fold. The OU Office of Sustainability was approached by the Sugar Bush Foundation about forging a partnership with the Corporation for Ohio Appalachian Development, a private, nonprofit community organization based in Athens that provides whole-house energy-efficiency audits and weatherization services in southeast Ohio, Marcus explained.

After applying for a grant to launch this program, the Sugar Bush Foundation provided \$50,000 to be used for efficiency audits and cash rebates for improvements implemented by landlords.

According to Marcus, COAD performed an efficiency audit for the EcoHouse in 2005, which yielded significant changes for improvements in the house, which is located on Dairy Lane in Athens. This sparked her interest in expanding efficiency audits beyond campus, since a lot of properties in Athens could use improvements.

"Students are concerned about the ramifications of additional resource use and higher energy bills," said Marcus. "[This project] offers opportunities for living a greener lifestyle and provides more efficient residences."

The Green House Project extends to students who don't necessarily live in properties owned or operated by OU. If a student tenant or landlord's application is selected for participation in this program, there is a one-time \$75 enrollment fee for the professional whole-house efficiency audit conducted by COAD.

The efficiency audit includes blower door tests, to check for air leakage; interviews with tenants and landlord; room-by-room equipment inspection, which includes refrigerators, air conditioning and heating units; and a safety inspection, according to the Web site. In addition, a utility billing analysis based on degree days is conducted, and personalized recommendations for upgrades are provided by COAD along with a list of local service and product suppliers, since neither COAD nor the Office of Sustainability is a service provider.

In addition to identifying efficiency issues and providing a list of recommended improvements, a general estimate for how much the proposed improvements will cost is included in the audit.

"If a landlord makes a change from the list of recommendations, they are eligible for up to a 50 percent rebate for the repair(s) up to \$500," said Marcus. In addition, six free compact fluorescent light bulbs and a high-efficiency showerhead are given to all participants. Detailed conservation tips are offered to tenants and a final quality inspection and report are issued to participants.

The grant for the Green House Project is based on a two-year timeline; however, it will close early if all of the available funds are expended. "It depends on how quickly we receive applications from landlords and students and to what extent they use the cash rebate," Marcus said.

The Office of Sustainability began accepting applications for the Green House Project in May. More than 10 applications are currently being processed, though they have received inquiries from numerous students and landlords, she added.

While it is difficult to determine the projected annual savings for participants in the Green House Project, since there's such a range of student-housing units that have different energy-efficiency needs, COAD has estimated that the savings on utilities can be up to 60 percent, said Marcus.

According to Tom Calhoun, assistant community development division director for COAD, the organization “performs energy audits on residential structures occupied by students in the city of Athens and produces a report that provides details on what the landlord can do to make the residence more efficient.”

In the past 30 years, COAD has done weatherization audits on an estimated 80,000 homes, making them an experienced partner for this pilot program, which the agency has been involved with from the beginning. Calhoun said that Marcus recognized a need in this community to make residential structures more efficient and reduce the university’s carbon footprint. By tapping into a resource in her backyard, Marcus identified the problem and implemented a partial solution, added Calhoun.

MANY BUILDINGS IN Athens were built in the 1900s to 1940s before central heat, air and modern electrical appliances, so there’s lots of potential for energy savings, Calhoun noted. “We should be able to reduce energy consumption by 30-50 percent, especially on the heating side,” he said.

Calhoun cited one problem with off-campus student housing in Athens. “Mostly the students pay the utility bills, not the landlords, so they’re not wanting to invest money to make the building more energy efficient since there’s no incentive for them to do so,” he said.

Encouraging landlords to make buildings more energy efficient, however, is a way to increase their attractiveness as a rental property, said Calhoun. This project also benefits students who want more energy-efficient housing.

“If a landlord buys the whole package of things to be done to a house, that will greatly change the dynamics of that house,” he said, adding that the entire building is looked at as a system when the audit is performed.

“[Participating in this project] is a win-win situation for students. We’re not just trying to save energy; we’re trying to make a cultural change,” he said. “As Americans, we have to learn that energy is not inexhaustible; we all have to alter our habits and how we use energy. This program is part of the educational process for students. Hopefully they’ll start becoming more aware of the fact that we have to save energy and use it more wisely.”

The Green House Project program is part of the Presidents’ Climate Commitment to achieve climate neutrality by reducing greenhouse-gas emissions as much as possible, then devising ways to offset the remainder, according to Marcus. “We’re looking for ways to reduce greenhouse-gas emissions in our community. [This project is] creating value by reducing energy costs, educating landlords, and creating savings that will continue to incur year after year,” she said. “The type of savings will come nowhere near offsetting 100 percent of the greenhouse emissions by the university, but it’s an important step.”

THE FOURTH GREEN HOUSE Project efficiency audit was performed at the Hillel House on Mill Street in July at the behest of Lori Gromen, the property’s manager, who applied for the audit at the end of May. She plans to implement the recommendations provided by COAD for both environmental and economical reasons, she said.

“At this time, it remains to be seen to what extent landlords will decide to act to make their rental(s) more efficient, and the degree to which students are willing to commit to more sustainable lifestyles,” said Marcus, who stressed that she’s optimistic about students’ willingness to act. “I hope [the Green House Project] serves as a pilot project for future revisions and creates a model for a program than can be implemented on a much wider scale,” she said.

Marcus cited many simple things that can be done to reduce the amount of energy consumed, including reducing the thermostat and water-heater temperature; installing compact fluorescent light bulbs; being aware of how many things are plugged in; drying clothes on a clothesline; putting plastic around windows; closing the curtains during the day; and fixing water leaks.

For more information on the Green House Project program, including the application form, visit: www.facilities.ohiou.edu/conservation/greenhouseproject.htm.