

PUBLIC POWER NEWS
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POWER SECTION



Subdivision touts green building development

By David Shaw

PPN Editor

With the right mix of building materials, construction techniques and appliance selection, it is possible for new homes to save their occupants \$900 a year on utility bills, according to Greg Davies, deputy director for the Columbus Department of Development.

That is the premise for Green View Estates, a subdivision under construction in Columbus to spur environmentally-friendly building in the city.

“The appliances, the big energy users, are energy efficient,” Davies said. “The lighting uses two-thirds the energy and lasts six to 10 times longer than traditional lighting. All of these little things add up to saving money for the homeowner in the long run.”

In 2005, Mayor Michael B. Coleman published the “Green Memo” that sparked the Get Green Columbus initiative, a collection of green projects to push environmentally-friendly efforts in the city.

The purpose of Green View Estates is to change the behavior among both builders and homeowners, Davies said. Seven builders are currently on board with the project, mostly custom builders.

The environmentally-friendly theme extends to components such as reducing waste in building materials and even using paint and carpet that conforms to green standards.

A second component to the project is to provide affordable housing in Columbus. The homes will retail between \$130,000 and \$180,000, and homeowners who eventually occupy them will receive a 15-year, 100 percent tax abatement.

Green View Estates is being built off of Woodland Avenue on the north side of Columbus.

“Another one of the Mayor’s projects is to strengthen the core of the city, so we have two really great opportunities here to build green and to also provide affordable housing to a part of town that hasn’t seen a lot of new builds,” Davies said.

The subdivision will contain 30 single-family homes. The frame of reference used to determine the energy efficiency of each Green View Estates home is the Home Energy Rating System (HERS) determined in the United States by Energy Star.

“It’s energy efficient and we’re trying to become more green through the Mayor’s policies and we thought we should lead by example, which is what we’re doing,” Davies said.

Green View Estates is just one portion of Get Green Columbus, which also incorporates a citywide anti-idling policy, recycling in public buildings and extending tax abatements in some areas for those businesses that decide to build green.

The Department of Public Utilities (DPU) is an integral part of Get Green Columbus.

“The Department of Public Utilities goal is to set the best-in-class standard for environmental stewardship and many of our Get Green Columbus objectives focus on storm water management and protecting our water and watersheds,” said Columbus Department of Public Utilities Assistant Director Frances Beasley.

The Fifth Avenue Dam Project is a partnership between Ohio State University, the Ohio Environmental Protection Agency, residents and other local stakeholders to examine a variety of alternatives for modification or removal of the dam located near the Fifth Avenue Bridge on the Olentangy River.

Another initiative, the Community Watershed Stewardship Program, will engage local community and watershed protection groups as partners in improving watershed education, health and protection.

Also, the DPU is one of seven partners in the Mid-Ohio Regional Planning Commission/Greenways Pilot Prairie Project that have agreed to convert a portion of their holdings to natural landscaping.

These native Ohio prairie plots will enhance biodiversity, decrease water and air pollution and provide an economically viable alternative to traditional turf management.

Get Green Columbus

Green View Estates is just one aspect of Get Green Columbus, a citywide initiative with projects such as:

Anti-Idling

All city vehicles idle as little as possible to reduce emissions and fuel dependency.

Recycling Programs

The city has committed to expand recycling programs at city offices and at private downtown businesses.

Green Economic Development

Business owners in targeted areas can access extended tax abatements by building green.

Neighborhood Greening

Mayor Coleman wants 20,000 trees planted in the next five years. 2006 will see 4,000 new trees.



Airport area now host to luxury pet hotel

By David Shaw

PPN Editor

The Columbus Department of Public Utilities, Power Section, can now count a pet hotel, complete with brass beds and televisions in some rooms, among its customers.

Pet Palace, a luxury pet boarding facility on Old Country Lane near Port Columbus Airport, caters to pets and their owners using city power. Like most commercial ventures, reliability is key in the services Pet Palace provides.

“We have to keep the climate controlled, we adjust the humidity levels and there are a lot of things in our building where electricity is important to us, not only our office operations, but also in the comfort and care of the pets,” said Kelly Jo Marks, general manager of Pet Palace.

“We needed a reliable choice for electricity and something that we know since people are entrusting their pets to us. We need to ensure pets get a high level of care and they don’t have any interruptions in their care or service due to power problems.”

After a year’s worth of research on types of boarding services nationwide, Pet Palace settled on a “luxury boarding resort” concept that includes special suites that pamper pets with brass beds and televisions. A special area for boarding cats is also offered.

“We’re very bright, very clean, very open. It really is premium care,” Marks said. “We’re proud that we’re getting clients that have never boarded their pets before but feel comfortable staying with us.”

Pet Palace chose its location on Old Country Lane to maximize traffic both from the airport and through Interstate 670. That area has been an area of focus for the department as well.

“The airport corridor around Stelzer Road and I-670 is an important customer base for us,” said Ted Vollmuth, Department of Public Utilities spokesperson.

“We have a couple of large hotels, a McDonalds Restaurant, a soda bottling company and, in fact, American Municipal Power-Ohio as customers in the area.”

Several years ago the Power Section of the Department of Public Utilities added two major distribution circuits off Stelzer Road extending all the way to Morse Road.

These circuits have done two things: increased reliability for existing customers and greatly increased the department’s ability to add new customers, Vollmuth said.

“Pet Palace is probably one of the more unique electric customers on our system, but we have many interesting customers,” Vollmuth said.

Among those interesting customers are a meat packing company that makes Ohio State University Buckeye Hotdogs, a candy company that makes chocolate hockey pucks for the National Hockey League and even a race track, Scioto Downs, Vollmuth said.

Pet Palace follows in the steps of those Columbus-based businesses, but hopes to make a unique and significant splash in changing the perception of pet care.

“We’re just kind of the newest concept in pet boarding,” Marks said.



Green building makes sense

By Julia Blankenship

Manager of Clean Energy Development and Sustainability

American Municipal Power-Ohio

The delicate balance on the nation’s electric grid between consumer demand and provider supply is most often seen on the extreme weather days when heating or cooling units are pushed to the limit. This summer’s remarkable heat and its corresponding strain on the electric grid once again thrust conservation to the forefront of the discussion on how to lessen that load. Plus, energy not needed due to conservation efforts means fewer emissions and a cleaner environment for us all.

There are two main ways to look at the conservation of electricity, each from one side of the equation. On the supply side, generators are moving towards increasingly efficient

equipment, an increased reliance on renewable energy and investing in extra capacity to serve increased demand.

The consumer demand side of the equation represents a more diverse set of home, business and industrial customers. With so many households around the country making demands on the electric grid, the push to provide easy-to-use, environmentally friendly products that make sense for consumers is now bigger than ever before.

Electric providers, like your municipal electric system, are fully aware of the value, both in dollars and other resources, of energy conservation. They recognize both the strain put on the system by extreme demand and the potential benefit in reducing that strain. Conservation simply makes sense for all involved.

Incorporating “green building” concepts into every-day living and working environments is an important component in the fight to conserve and remains a manageable way for consumers to make a meaningful impact. There are several, viable options that homeowners and business owners can invest in that will pay dividends in reduced energy consumption and lower utility bills.

The key to many of these concepts is controlling the flow of air into and out of the home. It is expensive to heat or cool air and it is important to be aware of just where that air is going. If too much warm air enters the home in the summer months, the air conditioner has to work even harder to cool a home. If that same cooled air is escaping from the house, the air conditioner once again has to ramp up its efforts.

One of the most obvious places that cool air can leave or where heat can enter is through a home’s windows, and use of storm windows can make a big difference. Furthermore, adding new, energy efficient windows can make one of the biggest impacts on the internal atmosphere of a home. These windows shield heat in the summer and keep heat in during the winter.

That same effect can be seen in upgrading the insulation in any home. Insulation maintains the temperature level in a home and keeps that expensive, heated or cooled air in the home.

Perhaps the most “green” of all of these energy efficient products is effective landscaping around a home. Deciduous trees that lose their leaves in the fall and gain them in the spring fit in perfectly with letting sunlight into a home in the winter and keeping it from a home in the summer. Placing trees on the sunny side of a home can help reduce the burden on a home’s cooling and heating unit.

Sometimes it can be jarring to incur an expense up front in the hopes of seeing savings later, but conservation is built on seeing savings on the electric bill after making an investment in the effort to conserve.

Little efforts like extra caulking or weather stripping can make a difference over a period of time but may not show up as instant savings over a month of use. That has to be expected and welcomed as an early spring or fall conservation renovation can still pay dividends months and years down the road.

There is a laundry list of tips available for those wishing to conserve, many of them covered right here in this issue of *Public Power News*. The options out there really are endless as far as upgrading the energy efficiency of a home. Small steps like using compact fluorescent light bulbs that are 75 percent more efficient than incandescent lights, all the way up to big steps like installing a geothermal heating and cooling system, are out there. Solar cells, efficient appliances, programmable thermostats, the list goes on and on.

To get the full sense of just what can be done to a home, there are two great Web sites to try out. First, Energy Star is a government program designed to provide standards for energy efficient products. The Web site, energystar.gov, list appliance models that are energy efficient and where to find them, as well as other more general conservation tips.

The Department of Energy has a number of helpful resources, one of which is the Energy Hog program, designed just for kids. The site, energyhog.org, is full of fun and games that parents can use to teach their children about energy efficient techniques. The lessons may seem simple (saving hot water, for example), but they can be great ways to start a conversation about taking care of the planet. Each “Energy Hog” tip has a game attached to help make the lesson entertaining.

Conservation simply makes sense for all involved, from power generators to consumers. The prospective savings in money and electric grid strain are too valuable to let slip by. Meaningful change has already been enacted all around the country and through the continued efforts of all involved, that change can continue on at the high level the planet deserves.



How does a hybrid electric car work? **Integrated Motor-Assist Hybrid**

Hybrid electric cars have become increasingly popular and accessible over the past few years as soaring gasoline prices have put an emphasis on fuel efficiency. There are two main types of hybrids. The first, the integrated motor-assist hybrid, still relies on a gasoline engine. However, with assistance from an electric motor, these engines get away with being smaller and using less power, requiring less gas. When the car starts, the gasoline engine does the work and the electric motor converts some of that energy into electricity, storing it in the battery.

During normal cruising, the gas engine still does the work but when additional power is needed to pass a car or accelerate heavily, the electric motor assists, lessening the reliance on the gasoline engine. The integrated motor-assist hybrid recharges during braking when, instead of wasting the energy built up, the electric motor is reversed and the wheels are used to turn the motor. This slows the vehicle down and uses the motor as a generator, storing the excess energy as electricity in the battery. When the car stops, both the gas engine and the electric motor shut down, saving energy. The battery continues to power the car.

The full hybrid, the second main hybrid type, get a little more complicated in its workings. The main difference is that the full hybrid uses the electric motor during low speed, low acceleration periods and for reversing. The full hybrid uses its battery to power all features of the car upon starting. The engine will only run if it is necessary to charge the battery. At low speeds, the battery supplies the electric motor with power to move the car.

If power runs low, the gasoline engine will start up to charge the battery. At mid-range speeds, both the gasoline engine and electric motor work to move the car. The gasoline engine powers the wheels directly and can also power the electric motor through the use of the attached generator. For high acceleration times, both the gasoline engine and the electric motor work to propel the car. During braking, the car acts much the same as an integrated motor-assist hybrid and uses the electric motor as a generator to slow the car and store additional electricity in the battery. When the car returns to a stop, the battery again powers all systems.

Because of these operational characteristics, hybrid electric cars are most fuel efficient at low speeds or in stop-and-go city traffic. They show only marginal improvement in fuel efficiency for frequent highway users.



Your Conservation Cheat Sheet

- **Shower** – Take showers. A ten minute shower uses less water than taking a bath.
- **Sink Faucet** – Keep on top of faucet leaks anywhere around the house. Leaky faucets waste gallons of water.
- **Vent Fan** – Using an Energy Star rated vent fan in the bathroom not only saves energy over regular fans, but fights mold and mildew.
- **Washer** – Always use full loads and when possible, use cold water. Heating water for washing is primary home power expenditure.
- **Dryer** – Over-drying can be a real waste of electricity. Use full loads or invest in a moisture-sensing dryer that automatically shuts off.
- **Water Heater** – Water does not need to be heated to extreme temperatures for normal use. Set your water heater to 120 degrees or lower.

- **HVAC System** – Heating and cooling units have air filters that need to be replaced every three months to maintain efficiency.
- **Refrigerator** – Models made before 1993 use twice as much energy as those after. Energy star-approved models can save \$45-\$65 a year.
- **Dishwasher** – Most dishwashers are powerful enough today to properly clean dishes without wasting water on rinsing dishes before washing.
- **Range** – A six inch pot on an eight inch burner wastes 40 percent of the burner's heat. Use properly sized pots and pans.
- **Microwave** – Use a microwave or toaster oven when possible to reheat small portions as they take less energy to operate than a stove.
- **Windows** – Caulk and weather-strip around windows. Drafts force heaters and air conditioners to work harder.
- **Lights** – Use compact fluorescent light bulbs to light your home. They are huge energy savers.
- **Insulation** – Invest in insulation. The better the insulation is, the less heaters and air conditioners have to operate, saving energy.
- **Thermostat** – Programmable thermostats that reduce the load on HVAC units when you are not home can save \$100 a year.

