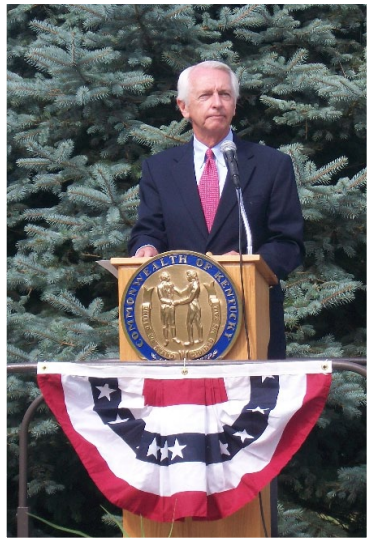


Energy at Work

LOCAL FOCUS

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The Green Bank of Kentucky

Award-winning revolving loan fund brings energy efficiency to state facilities

By: Brooke Smith

On a clear and sunny July morning Governor Steve Beshear joined residents and staff of the Thomson-Hood Veteran's Center in Wilmore, along with other state and local elected officials, to announce major energy efficiency changes happening within the Commonwealth's veterans' facilities. With blue skies and patriotic décor adorning both driveway and façade of the center, the Governor proudly announced major updates to the facility that will create a healthier environment for residents and save the state significantly in energy costs. These energy updates are made possible by the Green Bank of Kentucky, funded by the American Recovery and Reinvestment Act from the US Department of Energy and administered by the Kentucky Finance and Administration Cabinet.

The Green Bank of Kentucky is a revolving loan fund, which the Governor kicked off more than a year ago with an announcement at the KY School for the Blind in Louisville. The fund, which was created by a partnership between the KY Department for Energy Development and Independence and the Finance and Administration Cabinet, promotes energy efficiency in state buildings through competition for low-interest loans. The resulting building improvements will reduce operating costs and energy use, protect the environment, save taxpayer dollars, promote economic development and create new green collar jobs.

"I am pleased that Green Bank's second-largest loan to date goes to improve service for veterans in our state veterans' nursing homes," Gov. Beshear said. "This project represents yet another success for the Green Bank. In tight budget times, it allows agencies to make needed improvements that save money immediately without having to pay large sums upfront, reduces use of electricity and water, and saves taxpayers money in both the short and long runs."

In November 2010, the Green Bank of Kentucky program was nationally recognized for its innovative use of American Recovery and Reinvestment Act funding to finance energy-efficient improvements in state buildings, where the savings are guaranteed and used to repay the loan. The Finance and Administration Cabinet reported that the State & Local Energy Report magazine ranked the Green Bank of Kentucky third in a list of the "Top 10 Most Exciting ARRA Funded State Energy Projects."

"Kentucky is truly a pioneer in creating such an innovative funding mechanism that allows state agencies to continue to make improvements and promote energy conservation during a time when especially lean budgets could not have afforded such opportunities," said Lori Flanery, Finance and Administration Cabinet secretary and chair of the Green Bank of Kentucky. "And because it operates as a revolving loan program, the money will continue to recycle so that we'll be able to help many agencies over a period of many years."

How it works

Financing from the Green Bank of Kentucky pays for up-front costs of energy-savings projects. The funds saved through reduced energy costs will help facilities to pay back the loan. Energy loans approved by the Green Bank Program Loan Committee carry a fixed rate for the term of the loan. Under an Energy Savings Performance Contract, the Energy Service Company (ESCO) guarantees the level of energy savings the project will generate. The guarantee means that the ESCO will pay the difference if energy consumption exceeds the guaranteed amount.



One of the primary purposes of the Green Bank is to offer supplementary financing to traditional sources to make a project go. Initially, the minimum amount that may be borrowed is \$50,000.

State facilities may use the energy loans, including secondary loans, for construction, upgrades or retrofits that are intended to result in reduced energy usage and costs. Loans may also be used to pay for certain administrative costs associated with an energy project and projects may involve one or more measures for individual or multiple sites.

“Reducing energy consumption in government buildings is an integral part of my comprehensive strategy for energy independence,” said Gov. Beshear. “The Green Bank of Kentucky program helps state agencies implement progressive changes that will have a positive, long-lasting impact on our environment and will also save tax dollars. It’s exciting that Kentucky is receiving national attention for our efforts to lead the nation in progressive action on energy reduction and savings.”

The Green Bank of Kentucky’s funded projects

Kentucky Department of Education –KY School for the Blind, KY School for the Deaf, Future Farmers of America facility

On Jan. 21st, 2010 First Lady Jane Beshear congratulated the Kentucky Department of Education (KDE) as the first recipient of a loan from the Green Bank. KDE will use the loan of nearly \$1.3 million to make improvements and implement energy conservation measures to three of its facilities. This project will reduce energy consumption by employing advanced technologies to improve energy efficiency at the Kentucky School for the Blind in Louisville, the Kentucky School for the Deaf in Danville and the Future Farmers of America Leadership Training Center in Hardinsburg. These technologies include lighting system improvements, equipment control systems, mechanical system improvements and more efficient dishwashing systems. After the energy conservation measures are in place, KDE will realize savings of nearly \$140,000 annually from a reduction in utility costs.

“With the support of the Green Bank loan, [these] energy efficiency projects can be fully realized...[and] will spur our school systems to develop their own energy-saving enterprises,” said Education Commissioner Terry Holliday.

Kentucky Educational Television (KET)

In early November 2010 Governor Steve Beshear announced that Kentucky Educational Television’s (KET) network center in Lexington was awarded a loan of more than \$1.8 million from the Green Bank of Kentucky program. With the low-interest loan, KET is implementing energy efficiency and conservation measures. The money saved through reductions in energy and utility costs will be used to repay the loan.

“By partnering with the Green Bank of Kentucky, KET demonstrates that when we save on energy costs, those dollars can be shifted to fund our state’s critical needs, such as education,” Gov. Beshear said. “The Green Bank helps state agencies save valuable dollars and improve their efficiency while also creating jobs by means of education, engineering analyses and building improvements.”

KET is implementing key updates that include new, high-efficiency boilers along with an innovative heat recovery system that will transfer heat generated in the studios and server rooms back into the heating system; state-of-the-art HVAC controls; high-efficiency light fixtures and occupancy sensors; and new water fixtures estimated to reduce annual water usage by approximately 50,000 gallons. Combined, these and other energy-saving measures made possible by this loan will cut KET’s annual energy consumption nearly in half.

“While we fully anticipated there would be several areas in which to address energy efficiency at KET, the projected savings of these improvements are far greater than any of us could have hoped for,” said Shae Hopkins, KET executive director and chief executive officer. “We are extremely grateful to the Governor and this program for presenting the opportunity to do our part for both the environment and the economy. Now, more of our resources will be directed toward the valued services we provide to Kentucky homes and classrooms.”

Old Capital Annex

The Green Bank’s loan committee approved funds for energy efficiency retrofits of the Old Capitol complex and the state fleet garage near Holmes Street in Frankfort.

The retrofits are expected to increase the energy efficiency of the complexes by 20 to 30 percent. The efficiency updates to the facilities include spray-on foam insulation and the replacement of inefficient lights with energy-efficient lights in the fleet garage. New controls and a more efficient airflow system in the Old Capital Annex were also installed. The Old Capitol Annex, which houses the Cabinet for Economic Development, was previously fitted with obsolete, inefficient technology. To complete the retrofit, the project will use \$114,000 and take up to six months for total remodeling.

Kentucky Department of Veteran's Affairs –Thomson-Hood in Wilmore, Paul E. Patton E. KY VA Center in Hazard, Joseph "Eddie" Ballard W.KY VA Center in Hanson, KY

The Kentucky Department of Veteran's Affairs (KDVA) received a \$2.2 million loan from the Green Bank, which is used to improve energy usage at three of its facilities: the Thomson-Hood Veteran's Center in Wilmore; The Paul E. Patton Eastern Kentucky Veteran's Center in Hazard and the Joseph "Eddie" Ballard Western Kentucky Veteran's Center in Hanson. The Thomson-Hood project is the largest improvement project in KDVA's history. The facility opened in 1991, and the others opened in 2002.

Improvements to the facilities include:

- o Lighting retrofits – changed existing lighting from T-12 to T-8 low wattage technology. Changed fluorescent exit lighting to LED.
- o Water conservation – replaced high water consuming toilets with low consuming units & flush valves
- o Replace water source heat pumps – replaced existing water source heat pumps with new high-efficient 410A systems.
- o Replaced HVAC systems with more efficient models
- o Natural gas & demand electric reduction – solicited bids from natural gas companies to lower billing charges related to natural gas.
- o Ozone laundry conversion – installed ozone laundry sanitizing system to minimize hot water requirements and wash/dry time.
- o Chemical dishwashing system – installed chemical rinse systems on Hobart dishwasher to eliminate the hot water rinse cycles

The loan is structured in such a way that the savings from lowered utility costs cover the loan repayments. Beginning in October 2011, KDVA will make quarterly payments of about \$44,000 for 15 years to completely repay the loan at 2.25 percent interest.

"Without the Green Bank loan, we could not have made these improvements," said Ken Lucas, commissioner of the Kentucky Department of Veterans Affairs. "Even though we knew the improvements would save us more than \$150,000 per year on utility bills, we could not afford the large up-front cost. The Green Bank is a huge benefit for Kentucky's veterans and every Kentuckian."

To date, the Green Bank of Kentucky has loaned out almost \$8.25 million to state facilities for energy efficiency improvements. For more information on the Green Bank of Kentucky please visit www.greenbank.ky.gov or <http://energy.ky.gov>.

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