KENTUCKY SUSTAINABILITY INSTITUTE

Practically Green

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Introduction to the Kentucky Sustainability Institute

"The local government level is where sustainability happens."- International City/County Management Association.

The Kentucky Sustainability Institute is a partnership between the NewCities Institute, the Kentucky Energy and Environment Cabinet- Division of Compliance Assistance, and the Kentucky League of Cities, to promote the "greening" of the Bluegrass State through education and resources.

Mission: *The Kentucky Sustainability Institute seeks to teach municipal and county leaders, community groups, and citizens about sustainable development techniques including Brownfield (properties that are abandoned or underutilized due to real or perceived contamination) redevelopment, smart growth strategies and green building practices. The intent is to get Kentucky's leaders and citizens actively involved in the future planning of their communities and to inform them of programs and services that can aid them in sustainably growing and redeveloping their community*

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Reasons to
Go Green

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Why Go Green?

This question is at the forefront of issues across the country and is no longer one only asked by environmentalists. Living in an age where there is a constant flow of information, we are hearing more and more about global climate change and its effects. Environmentalists have identified numerous ways of reducing our impact on the environment and reducing our carbon footprint. Never before has living green been more important and feasible. As fuel prices increase at astounding rates, the benefits of being environmentally responsible can also translate into being fiscally responsible. There are numerous ways, which we will eventually address, in which going green has turned into money saved. By going green on the city level we can address issues that are specific to each community; it involves local citizens in a movement which is growing across the nation, and it creates a better quality of life.

The extra money generated from new green projects can be used for numerous other projects in a city's budget. If there is a city park that is in need of renovations, this money would be a good source. It could also go to infrastructure needs in the city. Whatever the desire, it never hurts to have extra funding in the city's budget.

By making the transition to going green, citizens' lives are affected in a positive way. We live in a state that ranks in the top ten for diabetes, heart disease, and obesity, thus we need to become healthier. Cities can help change this by creating communities that are biker and walker friendly. This also translates into less cars and traffic. That makes for less emissions, cleaner air, healthier lungs, cheaper health bills, and happier citizens with a better quality of life. This is just one example of the interconnectedness to going green.

Citizen involvement is one of the most important and unique aspects of going green. The people that live their day-to-day lives in the community are the ones that know which aspects of their local environment need help, and what the strengths and weaknesses are in that area. By involving the community and getting local support this movement will be very successful. These changes can occur if the local government is setting a precedent by going green and taking the right steps. The benefits of this are numerous—community wide financial savings, a healthier place to live, a more attractive environment, and a better quality of life.

Sustainability

The term sustainability has been thrown around quite loosely and used to mean many different things to many different people and organizations. We define it as *a lifestyle that meets present needs without compromising the needs of future generations.* These needs include the environmental, cultural, and economic aspects of communities. This means that actions and policy should always reflect this and be kept in mind. A city's local environment must be thought of and treasured. Local business and economy should be supported and development should keep them in mind. The local culture and uniqueness of an area should be celebrated and kept alive so that all can enjoy it for many years. Sustainability is a concept that is mostly used when referring to the environment, but should be incorporated into all aspects of life.

NewCities and Sustainability

The NewCities Institute reflects many of the ideals of sustainability in its 12 Principles of Community Building. These include the following:

- Build beautifully and steward the environment
  - Manage local environments for future generations to enjoy
- Remain true to a city's uniqueness
  - Celebrate diversity and cultural uniqueness
- Recruit, retain, and generate wealth
  - Use local resources and diversify local communities

Environmentally Sustainable Communities

Moving from the broad picture view of the importance of a green city to actually creating one can be difficult. There are several important steps that should be taken.

- First of all, the local government needs to be committed to going green—they need to lead the city by example. By proverbially practicing what you preach, people will be more likely to follow.
- Form a committee or task force that will outline the issues that need to be addressed and develop a plan and goals. This committee should be a combination of elected officials and citizens that are leaders in the community. Community buy-in and support are important—a committee or task force can make this happen more easily. This group should create attainable goals for both the short and long term with a timeline.
- Creating actual policy to show the government's commitment is also important. One easy first step for the committee would be the greening of city hall and other city buildings.

Later on, different green initiatives and examples will be explored in much more depth.

Green Collar Jobs

As the environmental movement progresses and the need for alternative energy sources become greater, a new job sector is emerging. The new sector is called green collar jobs and refers to typical blue collar jobs that are focused on improving environmental quality. These jobs exist in many areas including waste management, energy and water conservation, solar installation, wind turbine mechanics, and so on. These jobs are important because they are specific to the area that needs them. They support the local economy and cannot be outsourced. The potential for this job market is huge, and it is crucial to get a head start in this field.

Green Initiatives

Introduction to Green Initiatives

Now that the broader view of why it is important to go green has been explained, it is time to really delve down into some of the initiatives. This section highlights a range of topics that will introduce the reader to more specific ways to go green. Green initiatives typically refer to actual projects and policies that are being put into place to create more sustainable communities. This section includes what cities in Kentucky are doing as well as other cities across the country. It also includes examples of green government policy and green purchasing policy.

Green Initiatives in Kentucky

This highlights just a few of the many cities throughout Kentucky that have already taken steps to go green.

Ashland

- Converted old railroad property into a park that runs through the middle of town.
- Converted an old city pool into a park that includes a softball field and play area

Lexington:

- Greening Schools
    - Planting gardens with students, improving indoor air quality and planting trees strategically to help save energy.
- Lexington-Fayette Urban County Government Initiatives
    - Promote use of biodiesel
    - Compost yard waste and make available to citizens for mulch
    - Joined ICLEI Cities for Climate Protection Program
    - Recycling days for various appliances and waste that are not usually picked up.
    - Great American Cleanup Event
    - Greener Buildings
    - Greener Fleet by purchasing hybrids (41 in total)
    - Buying green products
    - Purchase of Development Rights Program
        - Buying conservation easements in rural farmland to help protect water and air quality
    - Bike Trails
    - Urban Forestry
        - Reforest the Bluegrass
    - US Mayor's National Recycling Challenge
        - Month long recycling challenge between cities.
        - Also sponsored school contest with monetary prizes
    - Joining with Bluegrass Partnership for a Green Community.

Louisville:

- Go Green Louisville
    - Becoming a bike friendly city—"Mayor's Bike and Hike Day" to promote biking.
    - Lists of green tips and suggestions online.
    - Brightside Environmental Education Center—anti-litter campaign
- The Partnership for a Green City
    - Between Metro Government, Jefferson County Public Schools and U of L.
    - Statement of Environmental Principles used to guide budget and programs decisions to be more sustainable.
    - Focus on education, public health, and environmental management.
- City of Parks
    - Adding thousands of acres to park land.
    - Connecting parks around city with green corridors.
- Sustainable Business and Community Networks

Northern Kentucky

- Boone County
    - Ohio River sweet campaign
    - Created a new dog park
    - Plans to expand two large parks in the area
    - Making more greenways to connect the parks/communities
- Covington
    - Brownfields initiative to clean up industrial waste and implement environmental change

Owensboro

- City website offers tips on how to go green as an individual.

Paducah

- Green compost collection services (leaves, trimmings, brush)
- Park expansion
    - More accessible with more trails
    - A greenway to connect other communities and parks to Noble Park
    - Perimeter walking trail around park
    - Tree replacement program to reforest the park

Russell

- Green Jobs Initiative at a local school got students interested in alternative jobs
- Installed 6 solar panels and a wind turbine.
- Generate enough power to light the technology center
- Saves the school district nearly $6,000 per year.
- Created enough interest in students for some to pursue green collar job.

Initiatives across the State

- Started a city bus route- the Foothills Express to promote public transportation and low emissions
- Became much more bike friendly by creating two large bike route loops
- Implementing a 'greenbelt' that connects many different greenways
- Has a portion of the city website dedicated to recycling resources

NewCities Institute Planning Suggestions for Morehead and Madisonville:

Morehead:

- Link natural environment to education and preservation.
- Link Main St. to Daniel Boone National Forest and Cave Run Lake.
    - Make downtown a "trailhead."
- Sign the US Mayors Climate Protection Agreement
- Maintain and develop green infrastructure.
    - Natural areas, parks, wildlife habitat, etc.
- Create zoning that ensures environmental protection.
- Create more greenways and trails.
- Design "green" entrances to the city with by landscaping roadways and creating pedestrian and bike paths.
- Implement green building design.

Madisonville:

- Street tree and urban forest program to make Madisonville 'tree city USA'
    - can include a bi-annual tax for planting trees and/or a tree dedication program
- Healthway trail
    - converted rails into a shared-use pathway for pedestrians
    - ties into the local hospital to help promote their healthy living initiatives
    - shared-use path from park to the healthway trail
- County-wide greenway system
    - continued the pedestrian and bike system throughout the central portion of the county
    - links state park to other communities
    - can go alongside existing roadways and railways
- Sidewalks created for at least one side of all streets in the city
- Plans to possibly implement the 'walking school bus' program
    - where one or two parents walk a group of children to school each day rather than riding a bus
- Member of U.S. Mayors Climate Protection Agreement
    - Reduce sprawl, vehicle miles traveled, greenhouse gas emissions, etc.
- Reduce the number of parking spaces in the city
- Create rain gardens

Green Initiatives Across the U.S.

Kansas City

In the heart of the Midwest, one town is making great strides to create a greener city. Kansas City plans on having 10,000 rain gardens by 2010. A rain garden is a 4-8 inch deep garden bed with plants that help to absorb storm water run-off before it reaches waterways. These gardens benefit the city in a variety of ways—the main one being the city's wastewater system. The gardens can reduce runoff by 90%, decreasing the amount of water that wastewater systems have to process and protecting local streams from often polluted runoff. These gardens also add to city beautification. Hundreds of gardens around a town give the streetscape a much more appealing look. Rain gardens are also something that citizens can do at their own homes to help. Other benefits include filtering fertilizers, oils and other pollutants from the streams and preventing mosquitoes from breeding. This is a simple yet effective initiative that can easily be done in any city.

Ohio Valley Creative Energy

Ohio Valley Creative Energy has been utilizing the excess methane at its landfills by creating power plants. Methane develops in landfills as waste breaks down under heat and compression. It is usually just burned, but it can also be used to generate power. With the amount of waste we, as Americans, throw out each year, this is considered a renewable resource. The Ohio Valley Creative Energy group saw it as an opportunity to also promote local artists. At these sites they have installed pottery kilns and glass blowing furnaces for local artists to come and work. This has increased arts awareness in the local communities.

Montpelier, Vermont

Vermont is known for its cows. With the new Cow Power Program, they are taking full advantage. A small college in Montpelier is now generating half of its electricity from cow waste. Farmers throughout the region are generating power from the methane gas of cow waste. Local residents can also sign up to receive this alternative form of energy. There are now 3,500 customers and they plan on having 10,000 by 2010. Not only does this program offer alternative energy, but it also has significant benefits for the local farmers. Typically, these farms have over 500 cows and produce up to 3.5 million kilowatt hours of electricity per year. There are two types of leftover waste from the electricity-making process: liquid and dry. The liquid waste is put into sprayers that spray the fields for fertilizer, while the dry waste is used as bedding and compost for the farm.

Austin, Texas

Austin is often looked at as a leader in the field of going green. Their annual Green City Festival brings in speakers and promotes the importance of environmentalism. There are a variety of booths, music, and goodies promoting environmentalism. Their Center for Environmental Research partners with local universities to research water quality, urban ecology, and sustainability in the city. The Green Building program provides an abundance of resources to local contractors on green building, and has even resulted in a LEED Gold Certified City Hall. There are also many programs promoting

energy efficiency, commuting, biking, and composting. Austin has committed to being green and it has resulted in great success across the spectrum.

Chestnut Hills, Pennsylvania

Chestnut Hills has established a cutting-edge program to encourage its citizens to recycle. The Pay-to-Recycle Program offers $5 for every ten pounds of recyclables collected in each household. Each can earn up to $25 per month simply for recycling their trash. The money comes in the form of coupons for local and national businesses such as Whole Foods, Starbucks, FedEx, etc. Not only does the program help the citizens, it saves the city money as well. They pay $54 per ton for landfill disposal fees, and saved $2.4 million dollars after the program was put into place. The city previously had $40 million dollars in these fees, and ended up saving big. RecycleBank is the company that invented this program, and they are willing to negotiate fees for other cities. Currently their rate is anywhere from $24-30 per household. In Kentucky, we pay about $26 per ton for landfill uses. The EPPC estimates we throw away over 566,000 tons of recyclable goods per year and, at $26 per ton, the state could spend over $14 million just in landfill fees alone. This money could be saved through the Pay-to-Recycle program, and the excess could be used for other important programs in the state. This program creates a win-win-win situation for recycling companies who increase their business, retailers who feel good about benefiting society, and individual households who can save up to $400 per year.

5 Easy Ways to go Green

#1 Change Light Bulbs

Replacing incandescent bulbs with compact florescent lamps (CFLs) can result in longer-lasting usage and tremendous energy savings over time. The typical CFL uses 75% less energy and lasts up to ten times longer. Over the course of one light bulb's life, up to $83 can be saved. Even after subtracting the costs of the more expensive CFL, $75 can be saved in total. A common question about CFLs regards their mercury hazard. These bulbs contain 4 milligrams of mercury, and are no real health hazard if broken. In fact, a CFL emits 2.4 milligrams of mercury over its lifetime, but an incandescent bulb produces over 10 milligrams. CLFs should, however, be disposed of at a hazardous waste site to avoid mercury buildup in landfills. Some stores are beginning return and reuse programs, but www.earth911.com is a great way to find your nearest hazardous waste site. Most importantly, the Phillips brand just released a new CFL with 70% less mercury, and these advancements are likely to continue.

#2 Support Local Farmers

Over 40% of our fruit comes from overseas, while average grocery store produce travels over 1,500 miles to get to your table. The fuel it takes to get these grocery items to your store has a huge impact on carbon emissions and overall pollution. This food typically has to be packaged with lots of plastic so that it can stay fresh over the long trek to the store. This increases pollution and takes up space in our landfills. Supporting local

farmers, however, has many benefits. To start, there is very little time wasted between harvest and the food actually being on your table, giving you the freshest fruits and vegetables in your area. Also, the food you get from local farmers is actually better for you since food loses vitamins and minerals as it ages. Local food has very little time to age and little to no pesticides and hormones. Another great thing about supporting local farmers is that you, the buyer, can speak to the expert farmer who produces the food that appears on your dinner table. In short, you can ask questions and form an important rapport with your very own food producer. A great way cities can support this is by creating a local farmer's market. The Kentucky Department of Agriculture is a great resource to get this started, (http://www.kyagr.com/marketing/farmmarket/documents/INSIDEPAGESASSENT.doc)

Another great way to become involved in supporting local farmers is to join a community supported agriculture program (CSA). With CSAs you can purchase a 'share' of the farm and, for a certain price, can receive a basket of the farm's freshest fruits and vegetables every week. To find your nearest CSA, visit www.localharvest.com .

#3 Let your Grass Grow

Finally, a break from yard work! If grass is at least 2 ½ inches tall, there is much more surface area for absorbing sunlight. This gives the grass deeper roots requiring less water. By letting your grass grow, you can spend much less time grooming and watering your lawn. Another tip: let the grass clippings remain on the lawn. This will produce much less waste for disposal, and will serve as compost for your lawn. Applying this to city property may save money and enhance appearance.

#4 Do Less Laundry

When doing the laundry, combine half loads, choose shorter cycles, and always use cold or warm water rather that hot. This can save loads (no pun intended) on energy while also saving time and energy tending the laundry room. If you wash two fewer loads of laundry and one fewer load of dishes per week, you can save up to 4,500 gallons of water per year.

#5 Watch that Thermostat!

Just by adjusting the thermostat a couple of degrees lower in the winter and higher in the summer, you can save anywhere from $100-200 per year in electric costs in your home. These savings can be multiplied in the public sector. How much would you save at City Hall?

Green Suggestions for City Buildings

Green Suggestions for City Buildings

- Recycling Program
- Replace incandescent lights with CFLs
- Turn lights off when leaving rooms (reminder stickers—especially for restrooms)
- Encourage recycling
- Use biodegradable non-toxic cleaning products
- Shut down computers and other electronics at the end of the day
- Encourage two-sided copying
- Carpooling (make signups available)
- Encourage biking to work by offering changing rooms or showers for those who bike
- Employees bring own coffee cups or water bottles
- Save packaging material or shredded paper to use for packaging
- Purchase energy efficient appliances
- Reduce amount of paper by utilizing electronic resources
- Purchase green energy
- Look into installing a green roof on top of building
- Buy green paper (tissues, paper towels, bathroom tissue, etc.)
- Implement ‘green teams’ consisting of representatives from different departments to come up with ideas for making a greener place to work
- Provide incentives for employees who find ways to increase energy efficiency while lowering costs
- Switch off some overhead lights when sufficient sunlight is available
- Keep plastic bag in trash can and dump out the trash rather than replacing the bag
- Encourage employees to use the stairs rather than the elevator (healthy choice and saves energy)
- Send out a weekly e-mail offering ‘green tips’ to help employees make green decisions at work and at home
- Bring lunches in reusable containers
- Keep thermostat slightly lower or higher depending upon the season and allow employees to dress appropriately
- Allow employees to have live plants at their desks or near windows
- Consider using recycled paper for handouts, new letters, and city reports

Green Policy

The creation of a green policy is one of the most important first steps a local government can do. This shows commitment and creates guidelines from which to start. It also sets an example for the community as a whole on the direction of the project. The policy itself needs to design a place that improves the quality of life, environmental health, and adheres to the principles of sustainability. It is important to be specific and set goals so that things will actually be accomplished. There should also be a comprehensive plan that tracks progress. Form a task force, this group will outline the goals and figure out ways of attaining them. Make sure that people are responsible and liable for having specific goals accomplished. One of the most important things is not to reinvent the wheel—use other cities' policies as a template. The following are a few examples of this.

General Sample Environmental Statement

The City of Ecopura
Environmental Policy Statement

As a city government, and in line with the principles set out in its Local Agenda 21, the City of Ecopura is committed to the ideals and practices of environmental responsibility through measures designed to:

- promote good environmental practice and awareness of its environmental policies and issues amongst City personnel;
- promote the continued development of best practices and expertise in environmental disciplines in order to provide knowledge and capacity building related to environmental sustainability;
- promote practices consistent with environmental protection, both within and outside the city government;
- minimize the negative impact of the city government on the environment, through a process of continual improvement in environmental performance;
- take into account the principles of sustainable development in conducting its administrative, commercial and social activities;
- participate in local initiatives to improve the quality of the environmental;
- Implement this policy through a comprehensive plan with measurable goals and with monitoring and analysis of performance against the plan.

The City of Ecopura will adopt a bold, policy oriented program to develop human resources and build up capacities to support the planning and implementation of environmentally sustainable development strategies throughout the city. The City has already given a commitment to environmental responsibility in the Local Agenda 21 and fully endorses the principles set out therein.

Inherent within our approach is a commitment to raise awareness of the effects of Ecourbia, and of human activity in general, on the environment. Hence Ecopura intends not only to be a leader in bridging the gap between the theory and practice of environmental management at the macro and micro levels, but also to lead in addressing environmental issues, in ensuring that personnel are fully aware of these issues and contribute to their resolution and in instilling environmental responsibility as an intrinsic feature of all its practices and procedures. Ecopura intends to provide the opportunity for all urban stakeholders in participating in developing sound environmental policy that will help us live sustainably.

(Source: The Global Development Research Center)

Portland, Oregon

Sustainable City Government Partnership
Binding City Policy
BCP-ENN-3.02
PURPOSE

WHEREAS, the City of Portland has a long-standing commitment to stewardship, prosperity, and efficiency both in its internal practices and in community-wide initiatives; and

WHEREAS, many bureaus have demonstrated exemplary leadership in pursuing sustainable practices in their operations; and

WHEREAS, previous coordinated resource efficiency measures have resulted in considerable cost savings for City government, including $18 million in energy bill savings since 1992 through City Energy Challenge projects, with more than $2.3 million in savings in 2005-06 alone; and

WHEREAS, significant opportunities remain to build on existing bureau efforts and to foster a collaborative City-wide effort to integrate environmental, economic and social sustainability into municipal operations; and

WHEREAS, the City has adopted resource conservation and sustainability policies that would be further supported and strengthened by the Sustainable City Government Partnership, including:

· 1990 Energy Policy (Ordinance No. 162975),
· Sustainable City Principles (Resolution No. 35338),
· Local Action Plan on Global Warming (Resolution No. 35995),
· City of Portland Green Building Policy (Resolution No. 35956),
· Sustainable Procurement Strategy (Resolution No. 36061),

· Sustainable Paper Use Policy (Resolution No. 36146), and
· Toxics Reduction Strategy (Resolution No. 36408); and

WHEREAS, the Bureau Innovation Project (BIP) Implementation Team has reviewed and approved the BIP #18 Sustainable City Government Partnership working group's recommendations (see Attachment A) for the creation of a coordinated City-wide sustainability effort.

POLICY

NOW THEREFORE, BE IT RESOLVED, that the Portland City Council acknowledges the work that has been done to date by many of the City of Portland bureaus to implement resource conservation and efficiency practices and programs; and

BE IT FURTHER RESOLVED, that the Portland City Council adopts the Sustainable City Government Partnership to set specific goals, objectives and performance measurements to be used by all bureaus and City Council in decision making; and

BE IT FURTHER RESOLVED, that City bureau directors are directed to:

· Appoint a bureau Sustainability Liaison who has direct access to bureau management decision makers and has experience or skills in developing or implementing strategic plans, and
· Adopt, implement and update a bureau specific sustainability plan and progress report, and
· Contribute to an annual City-wide sustainability report on progress; and

BE IT FURTHER RESOLVED, that the Office of Management & Finance (OMF) and the Office of Sustainable Development (OSD) are directed to work with bureau directors, and their Sustainability Liaisons, to implement the Sustainable City Government Partnership and to report progress to City Council annually; and

BE IT FURTHER RESOLVED, that the Sustainable Development Commission is directed to review the bureau sustainability plans and the City-wide annual report and provide recommendations to City Council.

BE IT FURTHER RESOLVED that this resolution will become binding City policy upon adoption and shall be included in the Portland Policy Documents.

BIP #18 – Sustainable City Government Partnership (SCGP)

GOAL The goal of the Sustainable City Government Partnership is to foster a collaborative, City-wide effort to integrate sustainable practices and resource efficiency into municipal operations. By establishing a planning and monitoring framework, based on employee and Bureau-level innovation, the SCGP promotes the City's sustainability goals and strengthens existing policies and efforts.

BENEFITS The City will gain financial and environmental benefits from a coordinated system for implementing sustainable best practices within all levels of City operations and facility management. Several bureaus have taken important steps to institutionalize resource efficiency, but the City lacks an overall sustainability strategy.

Implementing the SCGP will:

- **Increase accountability** for efficient use of resources, creating vibrant communities, supporting local economic development and protecting the environment;
- Maximize **inter-Bureau collaboration** and knowledge-sharing, capturing City-wide efficiencies and cost savings;
- Integrate into and improve existing **operational frameworks**;
- Provide a **platform for communicating** the City's sustainability efforts to the larger community; and
- Help the City become a **leader** and model for other communities in the application of sustainable practices and technologies, an area with economic growth potential.

Commitment to Sustainability

The City of Portland will promote a sustainable future that meets today's needs without compromising the ability of future generations to meet their needs, and accepts its responsibility to:

- Support a stable, diverse and equitable economy
- Protect the quality of the air, water, land and other natural resources
- Conserve native vegetation, fish, wildlife habitat and other ecosystems
- Minimize human impacts on local and worldwide ecosystems

(excerpt from Sustainable City Principles, 1994)

IMPLEMENTATION Implementation of the SCGP depends on participation and collaboration between multiple functions of City government, encouraging the infusion of innovative ideas from all levels through a partnership approach. The SCGP will also support other operational frameworks, including Managing for Results, to institutionalize sustainable practices as a part of how the City does business.

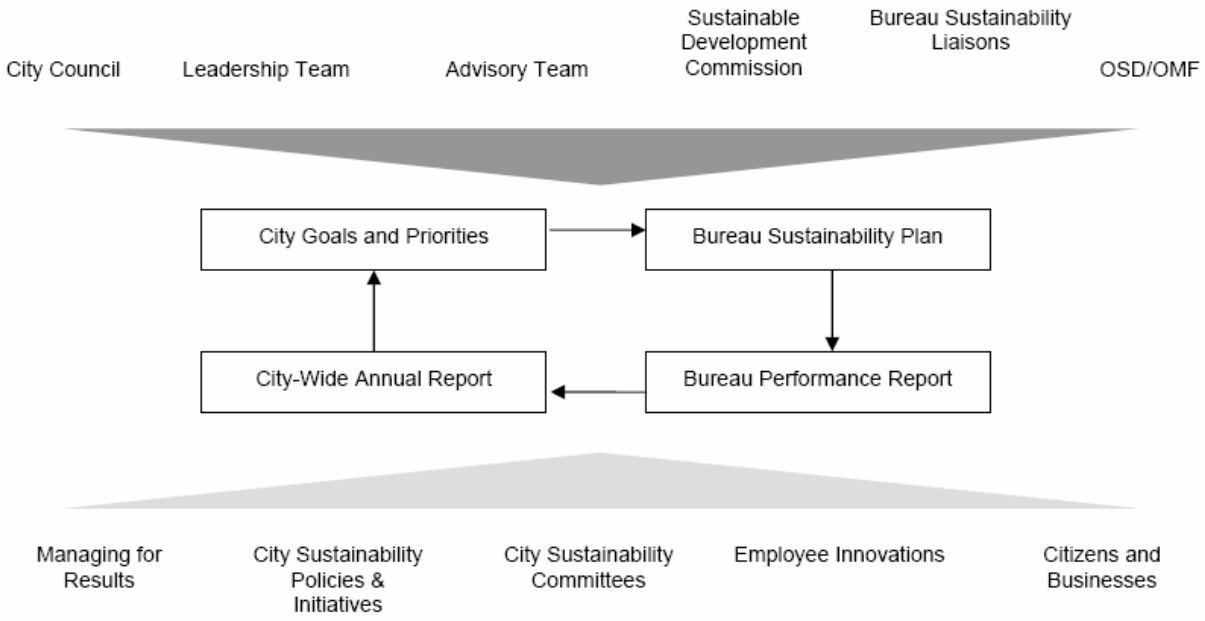
Implementation of the SCGP proposed to create the following groups:

Leadership Team	Chaired by OSD and OMF Directors with members including Bureau & PDC Directors and Sustainable Development Commission representatives. This team implements and oversees the SCGP; annually establishes City-wide goals and priority areas; reviews and supports Sustainability Plans; and reports annually to the Council and community via a City-wide Annual Report.
Advisory Team	Bureau and PDC Sustainability Liaisons, Committee Representatives (e.g. Sustainable Procurement, Toxics Reduction, Green Building), City Staff and external parties with relevant expertise. This team provides staff support to the Leadership Team; develops targets and performance measurements based on City-wide goals and priority areas; assists Bureaus in identifying and implementing specific sustainability practices; and leverages resources for innovative projects that strengthen inter-bureau collaboration.
Sustainability Liaisons	Appointed by each Bureau Director. The Sustainability Liaisons participate in the Advisory Team; coordinate the development of Bureau Sustainability Plans and Performance Reports with other Bureau staff; facilitate implementation of the proactive strategies outlined in the Bureau Sustainability Plan; and contribute to the development of the City-wide Annual Report.

The involvement of the following groups is also crucial to the success of the Sustainable City Government Partnership:

Employees	Serve as a source for innovation and driving force behind implementation of sustainable practices.
City Council	Reviews and adopts City-wide goals and City-wide Annual Report; implements sustainability-related performance expectations in Bureau Director performance evaluations; and allocates necessary resources to Bureaus for implementation of Sustainability Plans.
Sustainable Development Commission	Reviews Bureau Sustainability Plans, Performance Reports and the City-wide Annual Report and provides feedback and recommendations to City Council.

GENERAL FRAMEWORK



Sustainability Plans & Performance Reports
The SCGP will be implemented in phases, conducting a baseline assessment in the first year and adopting new action times and goals in subsequent years. For example, Bureaus would:

Year One Develop a sustainability policy or vision statement; collect baseline data on resource consumption (e.g. energy use, waste generation, fuel consumption); and document past and current efforts and savings.

Year Two Continue to track resource consumption; establish at least three new action items that address the City-wide sustainability goals; outline the associated performance measures, roles, budget resources, and target dates; establish employee communications plan and identify training needs; and report on progress annually.

Implementation for Small Bureaus

Small Bureaus may reduce the burden of SCGP staffing by sharing a Sustainability Liaison who prepares Sustainability Plans and Reports for all participating Bureaus. It is expected that the time required to implement the SCGP on an ongoing basis will be commensurate to the size of each Bureau, the significance of their impacts, and the sphere of their influence.

RECOMMENDED COUNCIL ACTIONS

Adopt a resolution creating the Sustainable City Government Partnership, as outlined.

Green Purchasing

Offices consume an enormous amount of products, and buying environmentally friendly products is one of the best things that can be done to combat the environmental impacts of all this consumption. Green purchasing is not only good for the environment, but it can save lots of money. It is important to create a “Green Purchasing Policy” in order to implement and stay true to buying green. Again, it is important not to reinvent the wheel—use what has been done before. Look in the resources section to find links to samples of this type of policy.

Green Building

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Green Building

Green buildings have a range of benefits including energy efficiency, better health and productivity, and higher worth. Many are discouraged from considering building green due to the preconceived notion that they are much more expensive. On average, green buildings only have a 2% premium cost to build. This is matched with 25-30% more energy efficient buildings that can easily recover this initial investment, and go further. Other benefits include better indoor air quality, healthier individuals, better lighting, and better work conditions. All of these things translate into better employee productivity and fewer sick days being taken. The benefits easily outweigh the initial cost of going green.

Figure 3
Financial Benefits of Green Buildings
Summary of Findings (per ft^2)

Category	20-year Net Present Value
Energy Savings	$5.80
Emissions Savings	$1.20
Water Savings	$0.50
Operations and Maintenance Savings	$8.50
Productivity and Health Benefits	$36.90 to $55.30
Subtotal	$52.90 to $71.30
Average Extra Cost of Building Green	(-3.00 to -$5.00)
Total 20-year Net Benefit	$50 to $65

Source: Capital E Analysis

Another way of building green is to follow the guidelines set by the United States Green Building Council, in their Leadership in Energy and Environmental Design (LEED) certification program. LEED is a rating system for buildings that outlines multiple areas for buildings to be green. Buildings are assessed on this scale and then given a certification level—bronze, silver, gold, and platinum. Points are based on 7 major areas—water and energy efficiency, site development, design, transportation, materials used, renewable energy, and innovation and design. LEED has been able to document many of it its benefits. These include:

- 30%-50% reduction in energy use
- 35% reduction in carbon emissions
- 40% reduction in water use
- 70% reduction in solid waste

- Protects and improves environment
- Reduces operating costs and increases value
- Increases employee productivity
- Better indoor health conditions

LEED does charge a fee to become certified, which includes a $600 registration fee for non-members.

	Less than 50,000 Square Feet	**50,000-500,000 Square Feet**	**More than 500,000 Square Feet**
LEED for: New Construction, Commercial Interiors, Core and Shell, and Schools	**Fixed Rate**	**Based on Sq. Ft.**	**Fixed Rate**
Combined Design & Construction Review			
Members	**$1,750.00**	**$0.035/ Square Foot**	**$17,500.00**
Non-Members	**$2,250.00**	**$0.045/ Square Foot**	**$22,500.00**
LEED for Existing Buildings	**Fixed Rate**	**Based on Sq. Ft.**	**Fixed Rate**
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Members	**$1,250.00**	**$0.025/ Square Foot**	**$12,500.00**
Non-Members	**$1,500.00**	**$0.03/ Square Foot**	**$15,000.00**

Green Infrastructure

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Green Infrastructure

According to the Center for Neighborhood Technology, green infrastructure is the interconnected network of open spaces and natural areas, such as greenway, wetlands, parks, forest preserves and native plant vegetation, which naturally manages stormwater, reduces flooding risk and improves water quality. Green infrastructure usually costs less to install and maintain when compared to traditional forms of infrastructure. Green infrastructure projects can also foster community cohesiveness by engaging all residents in the planning, planting and maintenance of sites.

Benefits of green infrastructure

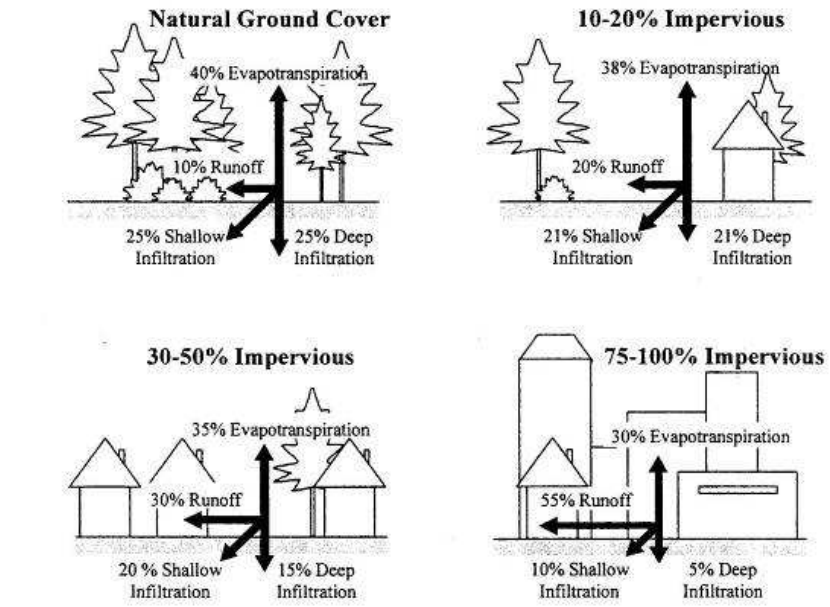
- Reduced stormwater runoff
- Reduced discharge of pollutants
- Enhanced groundwater recharge
- Reduced sewer overflow events
- Increased carbon sequestration
- Offset heat island effect
- Improved human health
- Increased land values

Socio-economic benefits

- Project in Philadelphia with New Kensington Community Development Corporation and the Pennsylvania Horticultural Society converted unsightly abandoned lots to "clean & green" landscapes of mowed grass & trees. Economic impacts from these green retrofits:
  - Vacant land improvements resulted in surrounding housing values increased by as much as 30%
  - New tree plantings increased surrounding housing values by approximately 10%

  Result: $4 million gain in property values with tree plantings and a $12 million gain with lot improvements (i.e., increased tax base)
- Apartment buildings surrounded by trees and greenery are safer than buildings devoid of greenery
- Compared with areas that had little or no vegetation, buildings with high levels of greenery had 52% fewer crimes
- Inner city families with trees and greenery in their immediate outdoor surroundings have safer domestic environments than families who live in buildings that are barren
- Symptoms of children with Attention Deficit Disorder are relieved after contact with nature
- The greener the setting, the more the relief

The graphic below shows the impact on water flow as the levels of impervious surface increase.



Source: Adapted from Arnold and Gibbons, 1996

Common Green Infrastructure Elements

- Low impact development
- Rain gardens/Infiltration
- Rain gardens/Bioretention
- Grassed swales
- Green roofs
- Green parking/Pervious pavement
- Conservation Development

Useful Websites

- **http://www.epa.gov/npdes/greeninfrastructure.cfm**
- **http://www.lowimpactdevelopment.org/green infrastructure.htm**
- **http://www.cnt.org/natural-resources**

Information courtesy of Maryann Gerber, US EPA

Land Revitalization

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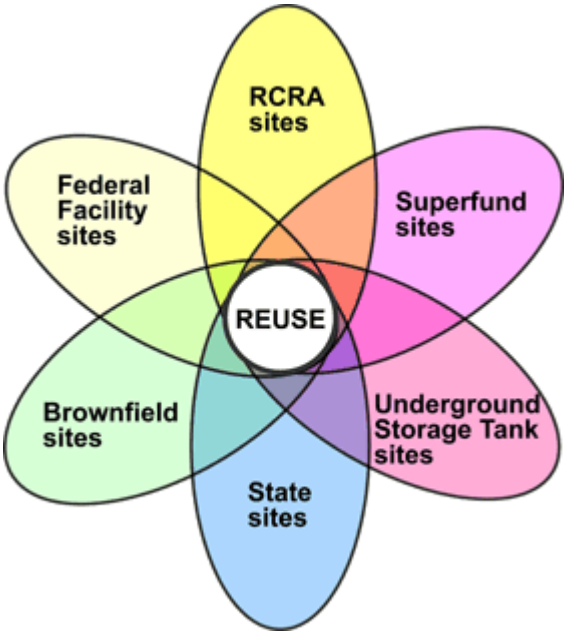
Land Revitalization

Land Revitalization is the restoration of contaminated or potentially contaminated sites to productive use. Targets for land revitalization can include superfund sites, sites with underground storage tanks and brownfields.



Graphic provide by U.S. EPA

The state of Kentucky has a program that emphasizes the redevelopment of brownfield sites.
Brownfields are properties that are abandoned or underutilized due to real or perceived contamination. They can include old factories, former dry cleaning establishments, meth labs, mine scarred lands, old service stations, hospitals and schools just to name a few.

How do brownfields impact my community?

Brownfields can:

- Cause harm to human health and the environment
- Reduce employment opportunities and tax revenue
- Contribute to neighborhood crime
- Reduce surrounding property values
- Limit economic growth and development

Why redevelop a brownfield?

A brownfield is a unique opportunity to turn a perceived problem property into an economic development project or a community-enhancing recreation area. By remediation and redevelopment of brownfield properties, a city or town can restore properties to active use, increase the job and local tax base, mitigate public health and safety concerns, and improve community image.

The Kentucky Brownfield Program, housed within the Division of Compliance Assistance, is here to help individuals, corporations, nonprofits and communities with their brownfield projects. We offer a variety of services to those who are interested in turning problem properties into economic and community development opportunities. Our services include:

Assessments
The Kentucky Brownfield Program can provide Targeted Brownfield Assessments (TBAs) to local governments and nonprofits free of charge. The TBA includes an "all appropriate inquiry" (phase I environmental assessment), a full phase II environmental assessment, cleanup options and an estimate of cleanup costs.

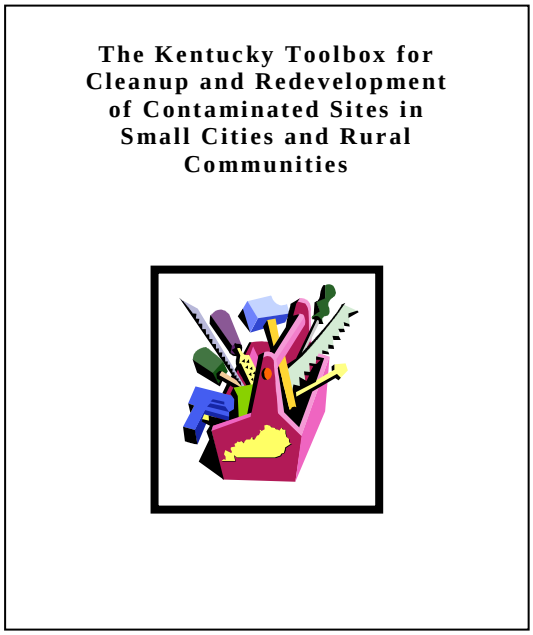
Tax Incentives
Kentucky offers tax incentives for redevelopment of qualified properties. The Kentucky Brownfield Program can help determine if your site is eligible.

Help Desk
The Brownfield Help Desk connects you with a member of the Kentucky Brownfield Program team that can serve as a liaison, ombudsman and interagency coordinator for your project, provide information about financial resources, inform stakeholders about liability protection, help determine site status, answer questions about statutes, regulations and policies, and review grant applications.

Information and Education
The Kentucky Brownfield Program is striving to provide more learning opportunities, informational programs and materials. If you are interested in future trainings, such as grant writing workshops, mailings and newsletters, contact us and we will be happy to put you on our brownfield distribution list. Our staff is also available to provide one-on-one sessions and group presentations.

Brownfield Inventory
Do you own a brownfield that needs to be redeveloped, or are you interested in purchasing a brownfield? The Kentucky Brownfield Program has established a voluntary brownfield inventory. Sites submitted to the inventory are marketed by the brownfield program staff and are potentially eligible for free site assessments, grants, low interest loans and tax incentives. Check out the program Web site at www.dca.ky.gov for more information.

Another resource available on the brownfield program website is the **The Kentucky Toolbox for Cleanup and Redevelopment of Contaminated Sites in Small Cities and Rural Communities**. This takes the reader through the steps of redevelopment from assessment to redevelopment. It can be found on the program website at www.dca.ky.gov/brownfields.



Funding Resources

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Funding for the Public Sector

Free Assessments
The Kentucky Brownfield Program can provide Targeted Brownfield Assessments to municipalities, quasi-governmental agencies and nonprofit agencies free of charge. A candidate site should have redevelopment potential and suffer from the stigma of potential environmental liability. A limited number of these assessments are performed each year, so they are considered on a first-come, first-served basis.

Grants
Grants for cleanup are available from a variety of sources. Eligibility depends on the type of project and end use of the property. Many of the brownfield grants available can be found on the U.S. EPA web site: **http://www.epa.gov/brownfields/pilot.htm.**

Loans
Revolving loan funds are another resource option. An entity can apply for an EPA grant to establish its own revolving loan fund for brownfield projects. Check the EPA web site for more information: **http://www.epa.gov/brownfields/rlflst.htm**

Tax Increment Financing (TIF)
Tax increment financing is a tool that uses future gains in taxes to finance the current improvement projects that will create those gains. When a project such as a road, a school or hazardous waste cleanup is carried out, there is an increase in value of the surrounding real estate. These improvements often spark new investment in the area as well. This creates more taxable property, thus creating more tax revenues. Those revenues are dedicated to finance debt issued to pay for the project. TIF creates funding for distressed areas where redevelopment might otherwise not occur and funding for projects that are unaffordable for municipalities. TIF projects will be approved and administered through the Finance and Administration Cabinet by the newly created State Tax Increment Financing Commission. More information can be found at: **http://finance.ky.gov**

Other Resources
Other resources may be available for the public sector, the private sector and individual brownfield redevelopers dependent on the planned end use of the property. Contact the brownfield program staff to determine if your project may be eligible for other resources.

Funding for the Private Sector

The commonwealth of Kentucky offers tax incentives and credits to individuals or businesses that complete a cabinet-approved cleanup on a qualified property. A qualified property means that the cabinet has made the determination that

- All releases of hazardous substances, pollutants, contaminants, petroleum or petroleum products on the property occurred prior to the property owner's acquisition of the property.
- The property owner made all appropriate inquiries into previous ownership and uses of the property in accordance with generally accepted practices.

- The property owner or a responsible party has provided all legally required notices with respect to the contaminants found at the property.
- The property owner is in compliance with all land use restrictions and does not impede the effectiveness or integrity of any institutional control.
- The property owner complied with any information request or administrative subpoena under KRS 224.
- The property owner is not affiliated with any person who is potentially liable for the release of the contamination through direct or indirect family relation, any contractual or corporate, or financial relationship, or reorganization of a business that was potentially liable.

For qualified parties, the state and local property tax rates on a remediated property are reduced. For three years following the cleanup, the property will not be subject to local ad valorem property taxes. The state ad valorem property tax rate will be reduced from 31.5 cents per $100 of assessed value to one point five cents per $100 of assessed value.

Qualified parties can also receive up to $150,000 worth of income tax credits for expenditures made in order to meet the requirements of the cabinet-approved cleanup. The allowable credit for any taxable year is a maximum of 25 percent of the credit authorized. The credit may be carried forward for 10 successive years. The Cabinet for Economic Development offers incentives for companies that relocate or expand in Kentucky. Please visit the cabinet's Web site to see what assistance is available.
http://www.thinkkentucky.com/

The Kentucky Brownfield Program
300 Fair Oaks Lane
Frankfort, KY 40601
800-926-811
www.dca.ky.gov/brownfields

Herb.petitjean@ky.gov- Brownfield Coordinator
Amanda.lefevre@ky.gov- Brownfield Outreach Coordinator

Self-Assessment Tools

KENTUCKY SUSTAINABILITY INSTITUTE

Practically Green

Self-Assessment Tools

Self-assessment tools can be a great starting point to evaluate where your city stands. The following tool is based on the NewCities Institute's 12 principles of Community Building. It divides assessment to fall into the four categories of the principles—perspective, place, people and prosperity. This tool should be used by city officials to assess their government and city.

KSI Green Tool

Perspective

- What is the general attitude of the environmental movement in your community?
- Is there much of a knowledge base on going green (why, how, its benefits, etc.)?
- Do the community leaders have any training or background in going green?
- Is there any formal government plan or policy on becoming more sustainable?
- Is there much skepticism around green practices/will change come difficultly?
- Does your community look to other cities as benchmarks on how to go green?
- Does your community use outside resources provided by agencies such as the EPA or DCA?
- Does your community collaborate with its surrounding neighbors to come up with solutions? If yes, how so?
- Do the local media address environmental issues or publish green tips?
- Are there initiatives you have seen in other communities that you would like to see done in your own?
- Do local businesses offer green alternatives to purchase?
- Does your community support local agriculture?
- Are the schools educating students on environmentalism?

Place

- Does your community have a permanent green belt to prevent sprawl and protect its identity?
- Is there a sufficient system of parks with easy access for all community members?
- Are there any natural areas in your community that need to be preserved or protected?
- Are there any unique natural features or natural heritage that sets your community apart (Ecotourism)?
- Does your community support local business, artists, restaurants, or farmers?
- Is there a local farmers market?
- Is there a restaurant that features local food?
- Do the schools practice green standards or use green products?
- Do the schools serve healthy local food?

- Is there an active local environmental organization in the community?
- Is there any sort of green festival or expo that educates the citizens and promotes environmentalism?
- Is there policy protecting your community's environment and preventing sprawl?
- Are small parks required in new developments?
- Is there policy requiring land and cost efficient development patterns?
- Is there alternative transportation? Bikes, buses, carpooling…?
- Is there a no cars day where a street is shut down and citizens come enjoy a part of the community with out cars?
- Is there a policy to require future government and school buildings to be LEED or energy efficient?
- Are there tax breaks for building LEED or energy efficient?
- Is your community biker and pedestrian friendly?
- Are the parks appealing for citizens? Art? Ball fields?
- Does your community have highly visible green space?
- Is there a recycling program and is it used?
- Does your community regulate vehicle emissions?
- Does your community have a brownfields cleanup program?
- Has your mayor signed the U.S. Conference of Mayors Climate Commitment
- Is there an Earth Day event (cleanup, plant a tree with the mayor, etc)?

People

- Does your community have a green task force or committee to spearhead green initiatives?
- Is there a time line or a list of goals to be accomplished?
- If there is a committee, of whom does it consist? If not, of whom should it consist?
- Are there active environmental grass roots groups?
- Are there active neighborhood associations who would be interested in forming green communities?
- Are the youth involved in environmental organizations?
- Are there environmental education opportunities for citizens?
- Does the local government inform citizens of its initiatives?
- Who are the key players in making your community greener?
- What steps would you like to see taken?

Prosperity

- Is your community environmentally healthy?
- Are the residents health/environmentally conscious?
- Are there public parks with trails for walking/biking that are easily accessible?
- Are the neighborhoods walkable/within easy distances to schools?
- Is smoking restricted?

- Are there plenty of recreational activities for the youth?
- Are citizens aware that going green coincides with saving money and a healthier life?
- Is green industry encouraged to come to your community? Are there incentives?
- Is there green infrastructure in your community?
- Are there partnerships between local groups (school board, city government, county government, etc) to work together to become more sustainable?
- Are there any tax incentives for going green (building, buying…)?
- Is it possible to purchase green energy though local providers? Does the local government?
- Does your community take energy saving measures?
- Is recycling available?
- Is there a green procurement policy?

The following assessment tool deals with many of the same issues and questions, but should be used for citizens. The questions are not as specific about the government and will allow citizens to assess their city. This will give the city an idea of the citizens' perspective on their city's greenness.

Citizen Green Questions

Perspective:

- What is the general attitude of the environmental movement in your community?
- Is there much skepticism around green practices? Will change come slowly?
- Does your community look to other cities as benchmarks on how to go green?
- Does your community collaborate with its surrounding neighbors to come up with solutions? If yes, how so?
- Do local businesses offer green products to purchase as an alternative to conventional products?
- Does your community support local agriculture?
- Are the schools educating students on environmentalism?

Place:

- Does your community have a permanent green belt to prevent sprawl and protect its identity?
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Virginia Municipal League's Assessment Tool

Take the Green Government Challenge

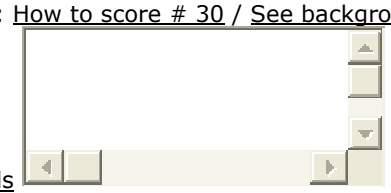
	Click on "see background materials" to read a detailed description of each action. In addition, view examples, links and explanations of how to score points or partial points.	Total Possible Points	Points for Pre-2008 Actions	Points for 2008 Actions
	Government Policy Adoption			
1	Formal adoption of a sustainability plan, climate protection resolution, or similar commitment by the governing body See background materials	10		
	Energy Efficiency			
2	Create an Energy Improvement Plan (EIP) See background materials	10		
3	Register with the EPA's Energy Star Challenge and use their tools, or an equivalent system, to conduct a baseline emissions inventory of your government facilities See background materials	10		
4	Conduct an energy audit of two or more of your government facilities and implement at least one recommendation See background materials	10	Points	Points
5	Purchase electric power from renewable sources or install renewable energy technology (solar, wind, or geothermal) for use in government facilities. The total of purchased renewable energy and on-site produced renewable energy must equal at least 2.5% of the energy use of all government facilities See background materials	5		
6	Create a separate real-estate classification and lower tax rate for buildings that are 30% more efficient than required by building code (Code of Va. §58.1-3221.2) See background materials	5		
7	Develop a policy to utilize energy efficient and dark sky compliant outdoor light fixtures See background materials	5		
8	Establish an energy manager position/responsibility or management team within the government See background materials	5		
	Green Building			

9	Establish a policy of LEED certification for all new government facilities See background materials	5	☐	☐
10	Approve or build a LEED certified government or school building OR renovate an existing building to the LEED certified level. See background materials	10	Points	Points
	Waste Management			
11	Implement an internal government program that reduces, reuses, and recycles paper, plastic and other materials See background materials	5	☐	☐
12	Establish a procurement policy of a minimum of 30% post-consumer recycled content for everyday office paper use (consistent with the current federal government policy) See background materials	5	☐	☐
13	Establish a community-wide recycling collection program See background materials	5	☐	☐
	Vehicles			
14	Adopt a "Green Fleet" policy that incorporates, at a minimum, the purchase of low emitting fuel-efficient vehicles for vehicle fleet replacement and the use of alternative fuels (biodiesel, natural gas, ethanol) in fleet operations See background materials	10	Points	Points
15	Offer personal property tax break for low emitting fuel-efficient vehicles See background materials	5	☐	☐
	Land Use / Transportation			
16	Adopt land-use plans that allow higher-density development either near public transit nodes or in areas with existing infrastructure AND encourage mixed-use communities See background materials • •	5	☐	☐
17	Promote the use of permanent conservation easements on private property within your community and/or implement a permanent conservation easement on public land See background materials	5	☐	☐
18	Adopt a land use or development tool that preserves open space, farmland and forests such as Purchase of Development Rights (PDRs) or Transfer of Development Rights (TDRs) See background materials	5	☐	☐

	Water / Air Quality		
19	Develop and implement a plan for tree preservation & planting See background materials	5	☐ ☐
20	Adopt a Low Impact Development (LID) storm water management policy and/or Environmental Site Design (ESD) guidelines See background materials	5	☐ ☐
21	Adopt an anti-idling policy for school/government fleet vehicles See background materials	5	☐ ☐
	Employee Incentives		
22	Provide employee benefits for ride sharing, walking, biking, or taking transit to work See background materials	5	☐ ☐
23	Adopt a policy that a minimum of 20% of the eligible workforce should participate in alternative work schedules or telework by 2010 (consistent with the current VA State policy) See background materials	5	☐ ☐
	Education / Community Participation		
24	Develop an employee education program on policies/practices relating to the environment and energy conservation See background materials	5	☐ ☐
25	Establish an advisory commission composed of local residents and business representatives to advise and assist the local governing board on policies and practices dealing with the environment and energy conservation See background materials	5	☐ ☐
26	Develop and implement an education program for the local community dealing with the environment and energy conservation See background materials	5	☐ ☐
	Schools		
27	Establish a Safe Routes to School program, which encourages walking and bicycling to neighborhood schools See background materials	5	☐ ☐
28	Establish clubs dealing with the environment or energy conservation in at least half of your high schools. See background materials	5	☐ ☐
29	Implement a program in one or more schools that connects students to local farms and/or local produce (such as the Farm to School program.) See background materials	5	☐ ☐

Innovation

30 Innovations: How to score # 30 / See background

materials 

25 Points Points

Group Totals 200

Grand Total: Pre-2008 Actions + 2008 Actions

Frequently Asked Questions

FAQs

1. Are there any small cities in Kentucky taking steps to become green?

Yes! The city of Russell, KY (population 3,600) has formed a strong partnership with the school system and created a more energy efficient school building. With the help of the school's students, solar panels and wind turbines were installed, ultimately saving the school district nearly $6,000 per year in electricity bills.

2. Are there any mercury or fire hazards associated with using a Compact Florescent Light bulb (CFL)?

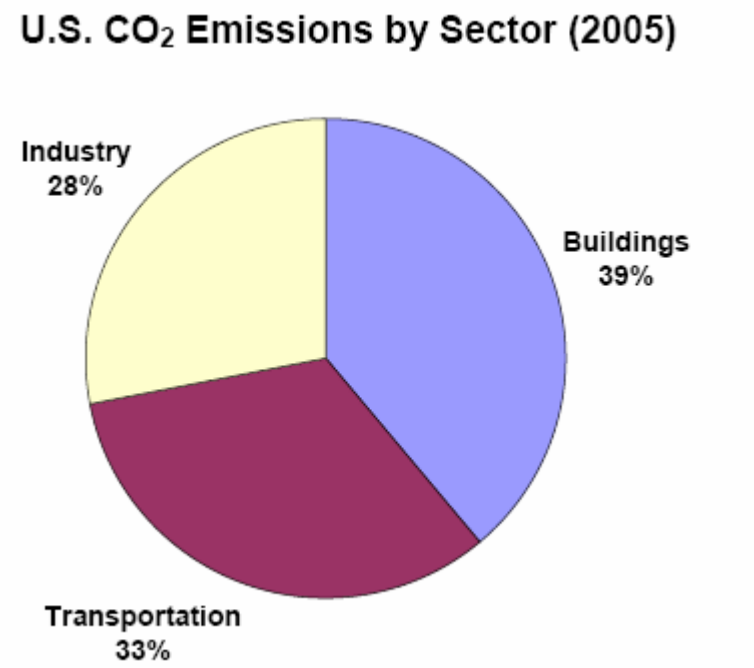
CFLs do contain a small amount of mercury (approximately 4 mg), but there is no health threat if the bulb is broken. Over the period of a bulb's lifetime, a CFL will emit 2.4 mg of mercury while an incandescent bulb emits over 10mg indirectly from the burning of fossil fuels to power the bulb. The bulbs should, however, be disposed of at a hazardous waste site to prevent high levels of mercury in landfills. To find your nearest hazardous waste site go to www.earth911.org . Many stores are now starting recycling opportunities. Also note that Phillips just released a new CFL that contains 70% less mercury.

3. What if my city wanted to become involved with a pay-to-recycle program?

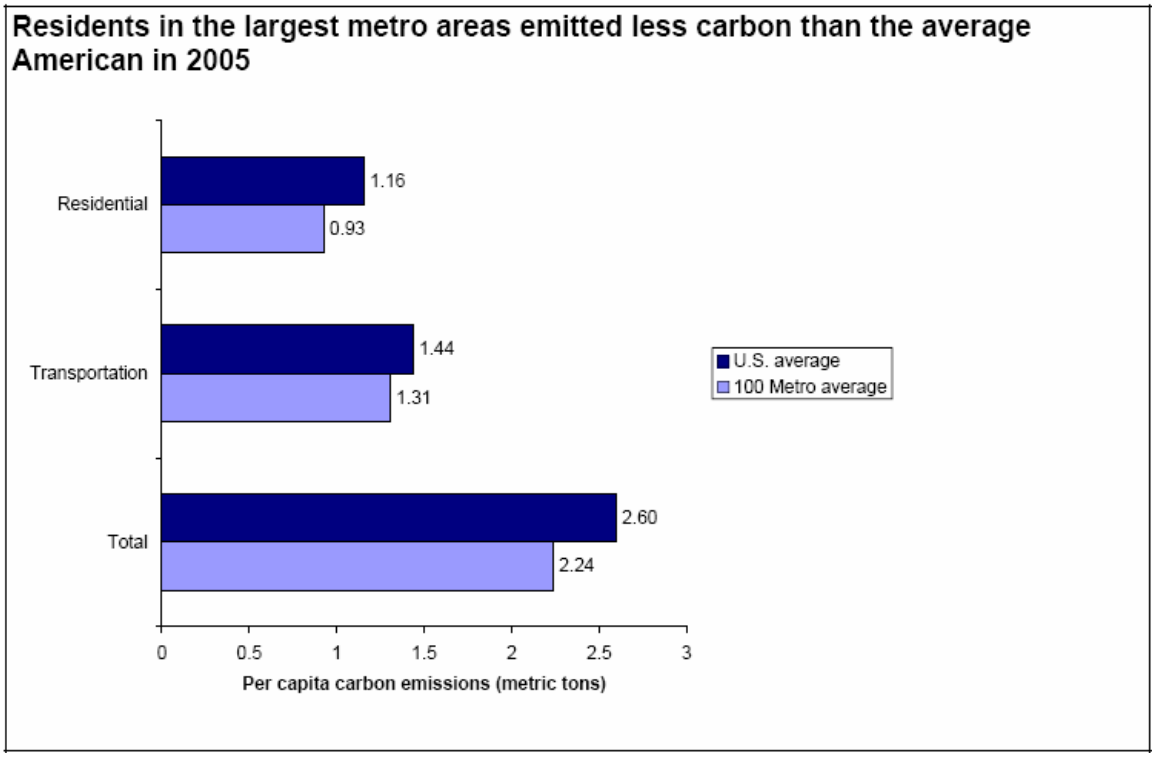
RecycleBank is the leading business for the job. Tom Hernandez is very interested in working with more cities in Kentucky. The website for RecycleBank is www.recyclebank.com. Tom Hernandez can be reached at 215.805.1839 or by e-mail at thernandez@recyclebank.com.

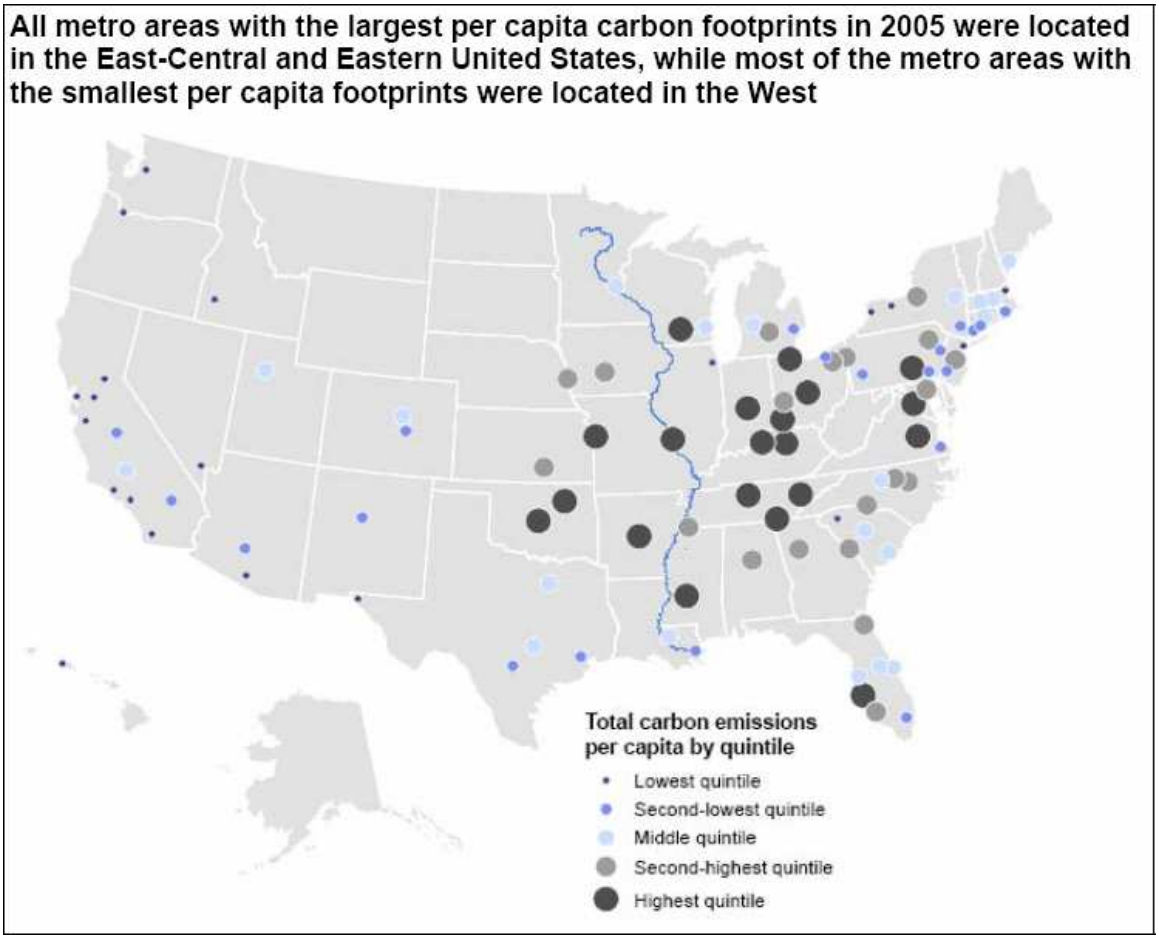
Relevant Statistics

U.S. Carbon Emissions



Source: Energy Information Administration





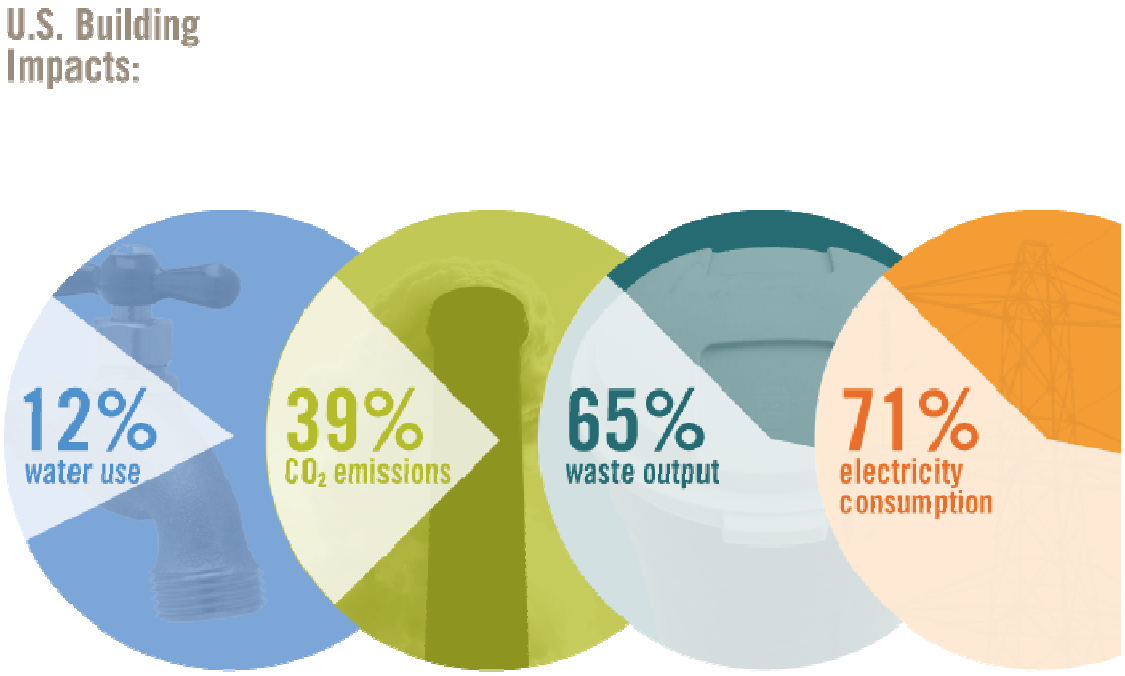
This map demonstrates that, in Kentucky, we live in the region where the highest levels of carbon emissions are found. We can make a large difference simply by implementing a few strategies. Now is the time.

Building Statistics

In the United States alone, buildings account for:

- 70% of electricity consumption,
- 39% of energy use,
- 39% of all carbon dioxide (CO2) emissions,
- 40% of raw materials use,
- 30% of waste output (136 million tons annually), and
- 12% of potable water consumption.

(Source: USGBC)



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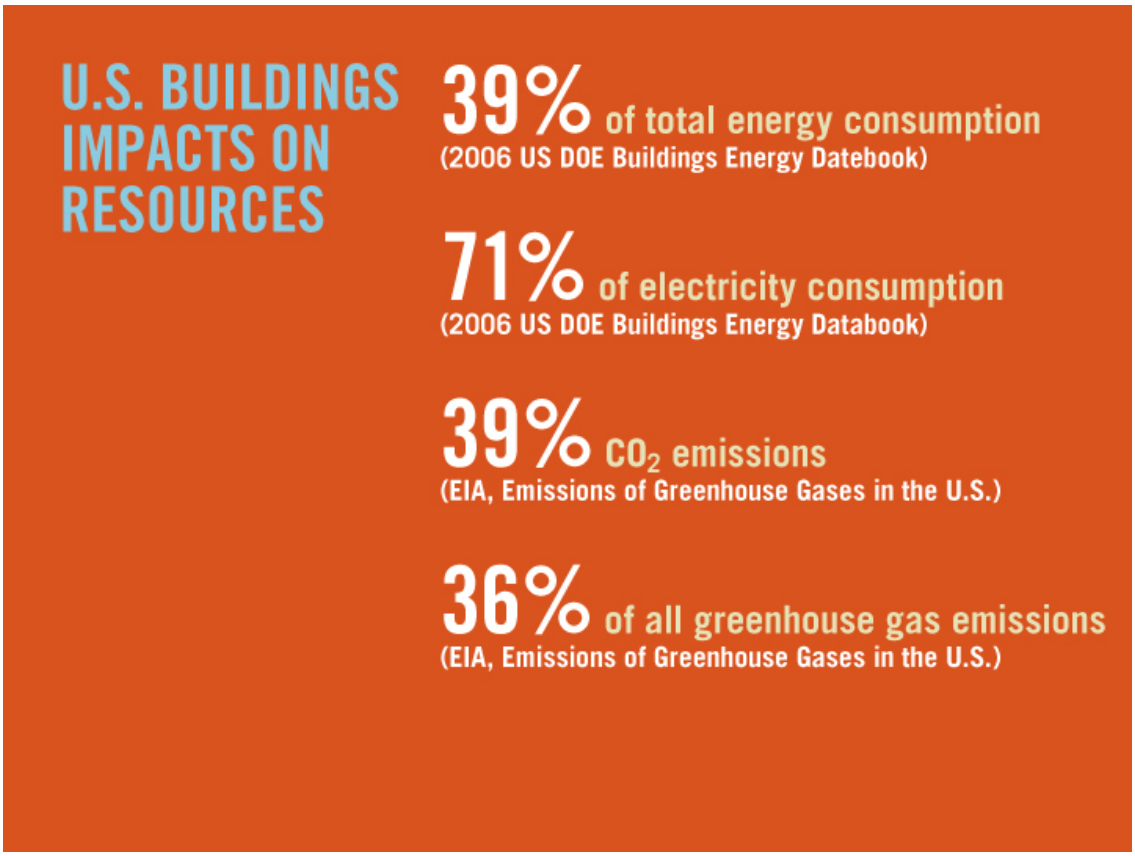

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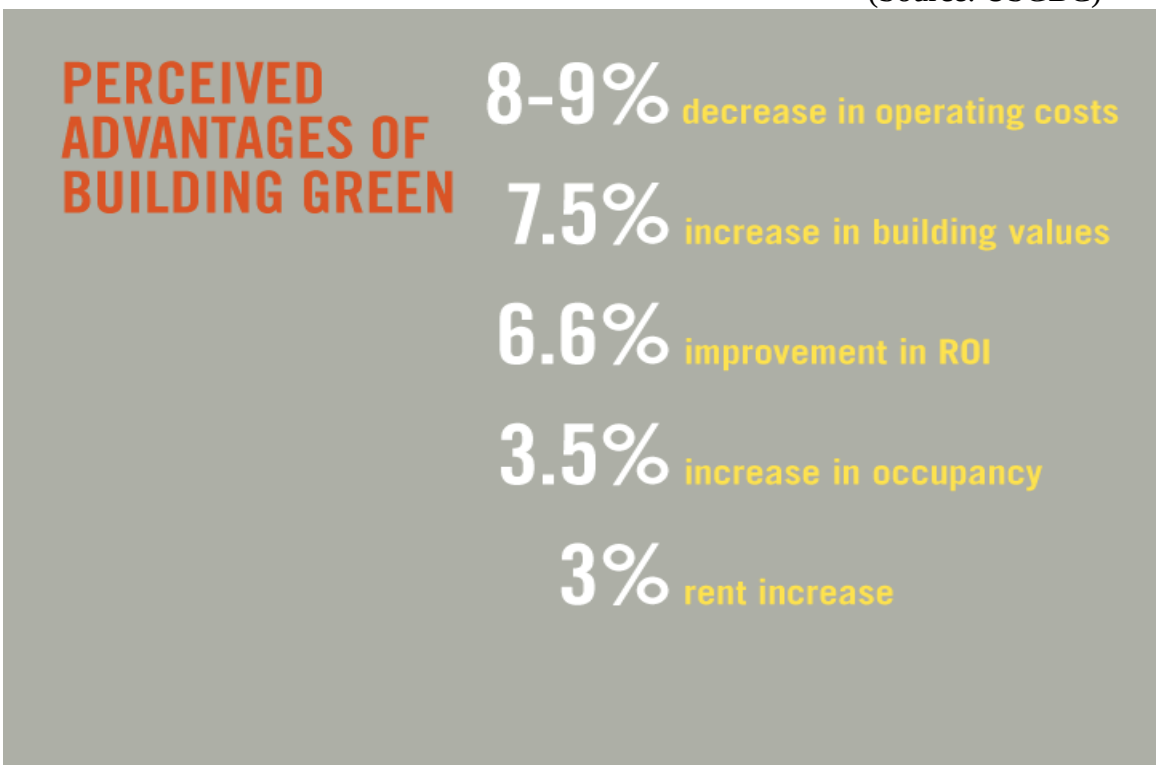

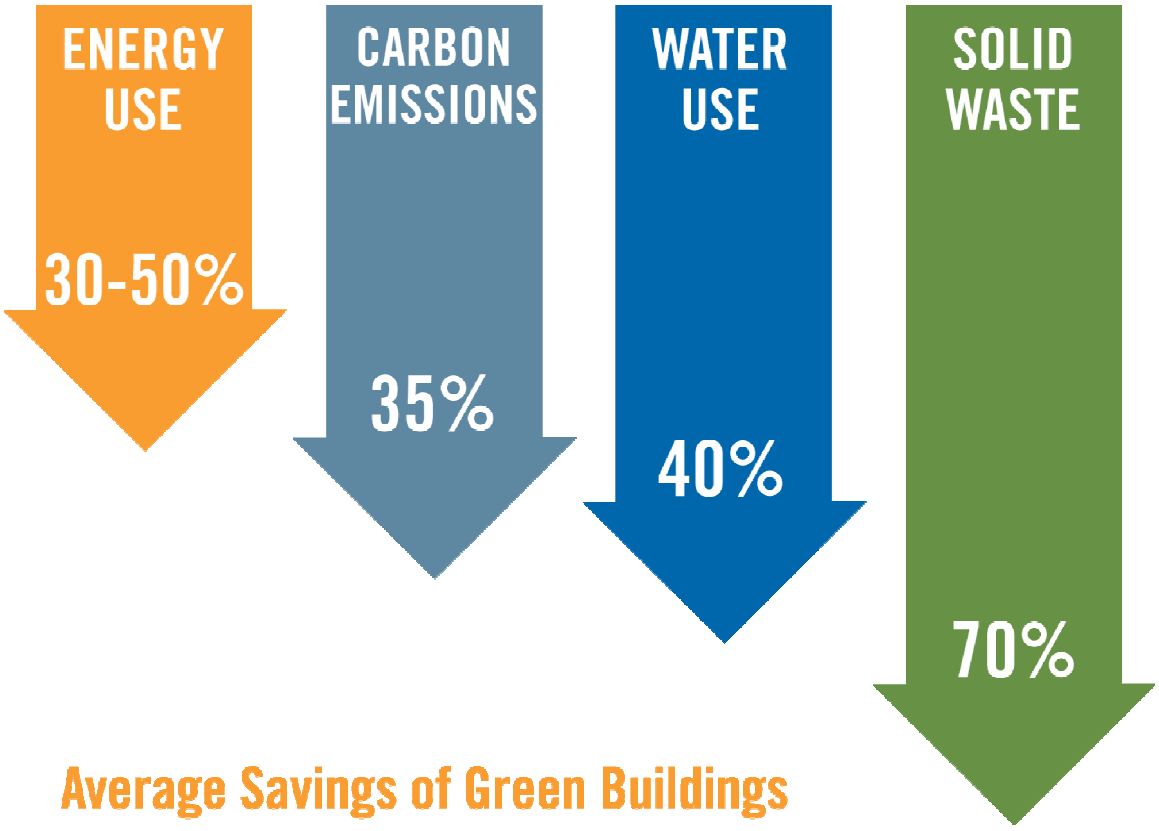

(Source: USGBC)

Costs of LEED (one of a few rating systems) and Green Buildings

	Less than 50,000 Square Feet	50,000-500,000 Square Feet	More than 500,000 Square Feet
LEED for: New Construction, Commercial Interiors, Core and Shell, and Schools	**Fixed Rate**	**Based on Sq. Ft.**	**Fixed Rate**
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Chart shows cost of review process.
Registration Fee of $450 for members and $600 for non-members
For cities of pop. Under 500,000 $500 annual fee to be member
For cities 500,000- 1,000,000 $750 annual fee to be member
If receive Platinum certification, get full rebate

Figure 3
Financial Benefits of Green Buildings
Summary of Findings (per ft^2)

Category	20-year Net Present Value
Energy Savings	$5.80
Emissions Savings	$1.20
Water Savings	$0.50
Operations and Maintenance Savings	$8.50
Productivity and Health Benefits	$36.90 to $55.30
Subtotal	$52.90 to $71.30
Average Extra Cost of Building Green	(-3.00 to -$5.00)
Total 20-year Net Benefit	$50 to $65

Source: Capital E Analysis

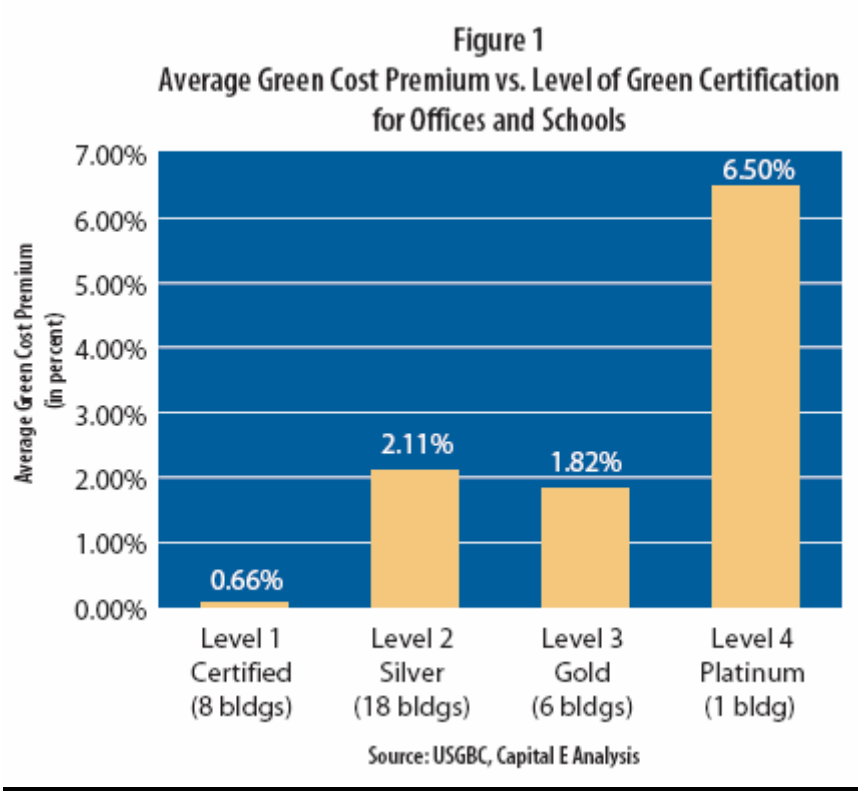
Figure 2
Reduced Energy Use in Green Buildings as Compared with Conventional Buildings

	Certified	Silver	Gold	Average
Energy Efficiency (above standard code)	18%	30%	37%	28%
On-Site Renewable Energy	0%	0%	4%	2%
Green Power	10%	0%	7%	6%
Total	28%	30%	48%	36%

Source: USGBC, Capital E Analysis

Table 2. Cost Comparisons between CFLs and Incandescents

	27-Watt Compact Fluorescent	100-Watt Incandescent
Cost of Lamps	$14.00	$0.50
Lamp Life	1642.5 days (4.5 years)	167 days
Annual Energy Cost	$5.91	$21.90
Lamps Replaced in 4.5 years	0	10
Total Cost	$40.60	$103.55
Savings Over Lamp Life	$62.95	0



Advantages of Green Schools:

Healthier Students, Cheaper Running Costs, Cleaner Environment

In a Study of 30 LEED certified schools the following results were found:

- 33.4% Average direct energy savings
- 50% Average indirect energy savings
- 32.1% Average water savings
- $47,880 Annual Direct Energy Savings Per School
- $95,760 Annual Total Direct Savings per school
- +3% increase in productivity, learning, and performance
- -3% decrease in teacher turnover

Green Dictionary

KENTUCKY
SUSTAINABILITY
INSTITUTE
Practically Green

Green Dictionary

- Biomass- Any organic material made from plants or animals. Domestic biomass resources include agricultural and forestry residues, municipal solid wastes, and industrial wastes. Biomass can be converted to other usable forms of energy and is an attractive petroleum alternative.
- Brownfield Remediation- Practice of redeveloping previous industrial sites to be used for a variety of options.
- Carbon Footprint- A measure of the impact human activities have on the environment in terms of the amount of greenhouse gases produced, measure in units of carbon dioxide.
- Compact Fluorescent Lamp (CFL) - Compact Fluorescent Lamps combine the energy efficiency of fluorescent lighting with the convenience and popularity of incandescent lamps. CFLs can replace incandescents that are roughly three-to-four times their wattage, saving up to 75 percent of the initial lighting energy. Although CFLs cost 3-10 times more than comparable incandescent bulbs, they last 6-15 times as long.
- Energy efficient- Energy efficient is a joint program of the U.S. Environmental Protection Agency (EPA) and the U.S Department of Energy helping us all save money and protect that environment through energy efficient products and practices. In 1992 EPA introduced ENERGY EFFICIENT as a voluntary labeling program designed to identify and promote energy-efficient products to reduce greenhouse gas emissions.
- Green- Practices that are environmentally friendly
- Incandescent Lamps- Lamps that operate without ballast. They light up instantly, providing a warm light and excellent color rendition. Light is emitted when electricity flows through-and heats- a tungsten filament. These lamps have a low efficacy compared to other lighting options, and a short operating life.
- LEED- Leadership in Energy and Environmental Design, a benchmark standard used to evaluate high-performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performances. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.
- New Urbanism- Promotes mixed-use communities which have a diverse population and uses. They should be designed to be walker and biker friendly. These places should also preserve local architecture and ecology.
- Renewable Energy- Refers to electricity supplied from renewable energy sources, such as wind and solar power, geothermal, hydropower, and various forms of biomass. These energy sources are considered renewable sources because their fuel sources are continuously replenished.
- Smart Growth- Promotes growth in city center to prevent urban sprawl and preserve land
- Sustainability- A lifestyle that meets present needs without compromising the needs of future generations

Resources

Cities in Kentucky Going Green Websites:

- Lexington
  - http://www.lfucg.com/environmental/initiatives.asp
- Louisville
  - http://www.louisvilleky.gov/GoGreen/
  - http://www.jefferson.k12.ky.us/Departments/EnvironmentalEd/GreenCity/index.html
- Green Organizations
  - http://www.uky.edu/sustainability/greencities/index.htm

Local Government Organizations and Examples

- ICLEI Local Government for Sustainability
  - http://www.iclei.org/
- Mayor's Climate Protection Center
  - http://www.mayors.org/climateprotection/
- National Association of Counties Green Government Coalition
  - http://www.naco.org/Content/NavigationMenu/County_Resource_Center/New_Technical_Assistance/Green_Government_Initiative1/Green_Government_Initiative.htm
- Montgomery County, Maryland Green Schools
  - http://www.montgomeryschoolsmd.org/departments/facilities/greenschoolsfocus/
- Fairfax, Virginia
  - http://www.fairfaxcounty.gov/living/environment/
- Santa Monica, California
  - http://www.smgov.net/epd/index.htm
- Portland, Oregon
  - http://www.portlandonline.com/osd/
  - http://www.portlandonline.com/omf/index.cfm?c=44701&
  - http://www.portlandonline.com/osd/index.cfm?c=42439

State Departments

- Department For Environmental Protection
  - http://www.dep.ky.gov/
- Kentucky Energy and Environment Cabinet
  - http://www.eppc.ky.gov/
- The Kentucky Environmental Education Council
  - http://keec.ky.gov/
- Division of Compliance Assistance
  - www.dca.ky.gov

Federal Departments

- Department of Energy Efficiency and Renewable Energy
  - http://www.eere.energy.gov/
  - Energy Smart Schools
    - http://www.eere.energy.gov/buildings/energysmartschools/

    - Consumer's guide
        - http://www.eere.energy.gov/consumer/
- Energy Information Administration
    - http://www.eia.doe.gov/
- Energy efficient
    - www.energystar.gov
- Environmental Protection Agency
    - www.epa.gov
    - Smart Growth
        - http://www.epa.gov/smartgrowth/index.htm
    - Green Communities
        - http://www.epa.gov/greenkit/index.htm

Green Building

- US Green Building Council
    - http://www.usgbc.org/
    - http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1718
- Green Roofs
    - http://www.greenroofs.org/
    - http://www.greengeek.ca/2006/08/30/green-roofs-made-easy/
    - http://www.toyota.co.jp/en/more_than_cars/bio_afforest/rooftopgreening.html
    - http://www.edcmag.com/CDA/Archives/d568f635d8697010VgnVCM100000f932a8c0____
- Case Studies
    - http://www.ciwmb.ca.gov/GREENBUILDING/CaseStudies/

Green Purchasing

- Responsible Purchasing Network
    - http://www.responsiblepurchasing.org/purchasing_guides/all/
- U.S. Communities
    - http://www.uscommunities.org/green/
- Los Angeles Policy
    - http://www.uscommunities.org/gpa/lib/pdf/resources/green/p1050.pdf

Energy Efficiency

- Energy Saving Tips
    - http://www1.eere.energy.gov/consumer/tips/index.html
- Home Improvement Toolbox
    - http://www.energystar.gov/index.cfm?c=home_improvement.hm_improvement_index

Transportation and Land Use

- Urban Land Institute
    - http://www.uli.org//AM/Template.cfm?Section=Home

- Coalition for Smarter Growth
  - http://www.smartergrowth.net/anx/
- California Driving Program
  - http://www.driveclean.ca.gov/

Acoustical Systems

- Armstrong Ceiling Systems
  - www.armstrong.com/ceilings
- Epic Metals Corporation
  - http://www.epicmetals.com/
- Gordon, Inc.
  - http://www.gordonceilings.com/default.asp
- Homasote Company
  - www.homasote.com
- IBPNA
  - www.ibpna.com
- Maxxon Corp
  - http://www.maxxoncorporation.com/
- Modernfold, inc.
  - www.modernfold.com
- Pinta acoustic, inc.
  - www.pinta-acoustic.com
- Roos International Ltd.
  - www.roosintl.com
- SEMCO Incorporated
  - www.semcoinc.com
- Serious Materials
  - www.seriousmaterials.com
- Steelcase Inc.
  - www.steelcase.com
- USG Corporation
  - www.usg.com

Adhesive/Coatings/Sealants

- AFM- American Formulating & Manufacturing
  - http://www.afmsafecoat.com/
- Azrock by Tarkett
  - www.tarkett.com
- Carlisle- Carlisle SinTec Eco Star Carlisle Coatings & Waterproofing
  - www.carlisle-syntec.com
- Chem Link
  - www.chemlinkinc.com
- Chemtura Corporation
  - www.chemtura.com
- Controlled Release Technologies
  - http://cleanac.com/
- Dow Building Solutions
  - www.dowbuildingsolutions.com
- DriTac Flooring Products LLC
  - www.dritac.com
- Dryvit Systems
  - www.dryvitisgreen.com
- ERSystems/Prairie Technologies
  - www.ersystems.com
- F.D. Sterritt Lumber Co.
  - www.fscwood.com
- Franklin International
  - www.titebond.com
- Gaco Western
  - www.gaco.com
- Henkel Corp
  - www.henkel.com
- Hohmann & Barnard, Inc.
- Neogard
  - www.neogard.com
- Polyguard Products
  - www.polyguardproducts.com
- Pro-Link, Inc.
  - www.prolinkhq.com
- Retro Plate- Advanced Floor Products
  - www.retroplatesystem.com

- Sherwin- Williams
  - www.sherwin-williams.com
- Tnemec Company, Inc.
  - www.tnemec.com
- United Soybean Board
  - www.unitedsoybean.org
- Vermont Natural Coatings
  - www.vermontnaturalcoatings.com

Appliances

- ACT Inc. Metlund Systems
  - www.gothotwater.com
- Noritz America
  - www.NORITZ.com
- Rinnai Corporation
  - www.foreverhotwater.com
- Southwest Windpower
  - www.windenergy.com
- Whirlpool Corporation
  - www.InsideAdvantage.com

Architectural Services

- Algoma Hardwoods
  - www.algomahardwoods.com
- Alpolic Materials
  - www.alpolic-usa.com
- ARCAT, Inc.
  - www.arcat.com
- Architectural Energy Corporation
  - www.archenergy.com
- ARCOM- MasterSpec Specifications
  - www.masterspec.com
- Boston Architectural College
  - www.the-bac.edu/green
- CH2M Hill
  - www.ch2m.com
- CPFilms
  - www.vista.com
- Eggers Industries
  - www.eggersindustries.com
- Epstein-ISI
  - www.epstein-isi.com
- Farnsworth Group, Inc.
  - www.f-w.com
- Gensler
  - www.gensler.com
- Heery International
  - www.heery.com
- HOK
  - www.hoksustainabledesign.com
- International Association of Lighting Designers
  - www.iald.org
- Kawneer Company, Inc.
  - www.kawneer.com
- LPA, Inc.
  - www.lpainc.com
- PeaPod Homes
  - www.peapodhomes.com
- Reed Construction Data
  - www.reedconstructiondata.com
- Roofscapes Inc.
  - www.roofmeadow.com
- Sani Glaze International, LLC
  - www.saniglaze.com
- Solaleya
  - www.solaleya.com
- Steven Winters Associates, Inc.
  - www.swinter.com

Associations/Foundations

- Pro-Link, Inc.
  - www.prolinkhq.com
- International Association of Lighting Designers
  - www.iald.org
- Design-Build Institute of America
  - www.dbia.org

- Yellowstone Business Partnership
  - www.yellowstonebusiness.org
- Appraisal Institute
  - www.appraisalinstitute.org
- AABC Commissioning Group
  - www.comissioning.org
- American Concrete Institute
  - www.concrete.org
- Interlocking Concrete Pavement Institution
  - www.icpi.org
- Portland Cement Association
  - www.cement.org
- Precast / Prestressed Concrete Institute
  - www.pci.org

Building Automation & Controls

- ABB Inc
  - www.abb.us/drives
- Acuity Brands Lighting
  - www.acuitybrandslighting.com
- Aircuity, Inc.
  - www.aircuity.com
- Alerton
  - www.alerton.com
- Automated Logic Corporation
  - www.automatedlogic.com
- Earthshade- Natural Window Fashions
  - www.earthshade.com
- HCI- Hydronic Components, Inc./ Jomar International
  - www.hciterminator.com
- Ipex Inc.
  - www.ipexinc.com
- Johnson Controls, Inc.
  - www.johnsoncontrols.com
- KMC Controls
  - www.kmccontrols.com
- Lutron Electronics
  - www.lutron.com
- Osram Sylvania
  - www.sylvania.com
- Savannah Trims inc
  - www.savannahtrims.com
- Somfy Systems
  - www.somfysystems.com
- TAC
  - www.tac.com/us

Business/Professional Services

- Bainbridge Graduate Institute
- Building Services Consultants Inc.
  - www.bsc-worldwide.com
- Corporate Express- Sustainable Earth
  - www.sustainable-earth.com
- Design-Build Institute of America
  - www.dbia.org
- Hugh Lofting Timber Framing, Inc.
  - www.hughloftingtimberframe.com
- McGraw-Hill Construction
  - www.construction.com
- Professional Publications, Inc. (PPI)
  - www.ppi2pass.com
- Timmons Design Engineers
  - www.timmonsdesigneng.com
- Turner Construction Company
  - www.turnerconstruction.com
- VFA, Inc.
  - www.vfa.com

- Yellowstone Business Partnership
  - www.yellowstonebusiness.org

Ceilings/Ceiling Products

- USG Corporation
  - www.usg.com
- Serious Materials
  - www.seriousmaterials.com
- Pinta acoustic, inc.
  - www.pinta-acoustic.com
- Armstrong Ceiling Systems
  - www.armstrong.com/ceilings
- Epic Metals Corporation
  - http://www.epicmetals.com/
- Gordon, Inc.
  - http://www.gordonceilings.com/default.asp
- 3-Form
  - www.3-form.com
- Big Ass Fans
  - www.bigassfans.com
- Contact Industries
  - www.contactind.com
- Duo-Guard Industries Inc.
  - www.duo-guard.com
- FlexForm Technologies LLC
  - www.flexformtech.com
- PCF Group
  - www.ecobeams.com

Codes, Standards, & Certification Organizations

- Boston Architectural College
  - www.the-bac.edu/green
- Code Green
  - www.codegreensolutions.com
- Building Materials Reuse Association
  - www.buildingreuse.org
- AABC Commissioning Group
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- American Concrete Institute
  - www.concrete.org
- Precast / Prestressed Concrete Institute
  - www.pci.org
- Green Building Educational Resources & Grelen Advantage

Commercial Real Estate Services

- Appraisal Institute
  - www.appraisalinstitute.org
- Code Green
  - www.codegreensolutions.com
- Fireman's Fund Insurance Company
  - www.firemansfund.com/green
- Mortenson Construction
  - www.mortenson.com
- SiteStuff
  - www.sitestuff.com
- Solar Dock
  - www.solardock.com

Commissioning & Testing

- Architectural Energy Corporation
  - www.archenergy.com
- Farnsworth Group, Inc.
  - www.f-w.com
- Heery International
  - www.heery.com
- Steven Winters Associates, Inc.
  - www.swinter.com
- HCI- Hydronic Components, Inc./ Jomar International
  - www.hciterminator.com
- Building Services Consultants Inc.
  - www.bsc-worldwide.com
- AABC Commissioning Group
  - www.comissioning.org

- Affiliated Engineers, Inc.
  - www.aeieng.com
- AHA Consulting Engineers, Inc.
  - www.aha-engineers.com
- Beaudin Ganze Consulting Engineers
  - www.bgce.com
- BuildClean
  - www.buildclean.org
- Commissioning Agents, Inc.
  - www.commissioningagents.com
- E M C Engineers, Inc.
  - www.emcengineers.com
- Glumac
  - www.glumac.com
- Green Living LLC
  - www.greenlivingllc.com
- Horizon Engineering Associates, LLP
  - www.horizon-engineering.com
- Interface Engineering
  - www.interfaceengineering.com
- MAS Certified Green
  - www.mastest.com
- Quality Attributes Software/Green Touchscreen
  - www.greenscreen.com
- SSRCx, LLC
  - www.ssrcx.com
- Fireman's Fund Insurance Company
  - www.firemansfund.com/green

Concrete

- Retro Plate- Advanced Floor Products
  - www.retroplatesystem.com
- Enviro-Systems, Inc.
  - www.envirosys.us
- Altusgroup
  - www.altusprecast.com
- American Coal Ash Association (ACAA)
  - www.acaa-usa.org
- American Concrete Institute
  - www.concrete.org
- American PolySteel
  - www.polysteel.com
- BASF- The Chemical Company
  - www.basf.com/usa
- Earl Composite Systems
  - www.metalcrete.com
- Eldorado Stone
  - www.eldoradostone.com
- Essroc/Axim Italcementi Group
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  - www.foxblocks.com
- Greenblock Worldwide Corp
  - www.greenblock.com
- Hambro Structural Systems
  - www.hambro.ws
- Hanover Architectural Products
  - www.hanoverpavers.com
- Heckman Building Products, Inc.
  - www.heckmannanchors.com
- Heritage Glass
  - www.heritageglass.net
- Holcim (US) Inc.
  - www.holcim.us
- Hycrete, Inc.
  - www.hycrete.com
- IceStone, LLC
  - www.icestone.biz
- Interlocking Concrete Pavement Institute
  - www.icpi.org
- L & M Construction Chemicals, Inc.
  - www.lmcc.com
- Lafarge
  - www.lafarge-na.com

- Lehigh Cement Company
  - www.lehighcement.com
- Maxxon Corp
  - www.maxxoncorporation.com
- Mineral Resource Technologies, Inc.
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  - www.prosoco.com
- Slag Cement Association
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- Stego Industries
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- T. Clear Corp
  - www.tclear.net
- Thermomass /Composite Technologies
  - www.thermomass.com
- Tournesol Siteworks, LLC
  - www.tournesolsiteworks.com
- UNI-Group U.S.A.
  - www.uni-groupusa.org
- VAST Enterprises, LLC
  - www.vastpavers.com

Construction Services

- Reed Construction Data
  - www.reedconstructiondata.com
- McGraw-Hill Construction
  - www.construction.com
- Turner Construction Company
  - www.turnerconstruction.com
- Mortenson Construction
  - www.mortenson.com
- Enviro-Systems, Inc.
  - www.envirosys.us
- American Coal Ash Association (ACAA)
  - www.acaa-usa.org
- Thermomass /Composite Technologies
  - www.thermomass.com
- Butler Manufacturing Company
  - www.butlermfg.com
- Clark Construction Group, LLC
  - www.clarkconstruction.com
- Dimeo Construction Company
  - www.dimeo.com
- DPR Construction
  - www.dprinc.com
- Filtrexx International
  - www.filtrexx.com
- Fisher Development, Inc
  - www.fisherinc.com
- Gilbane Building Company
  - www.gilbaneco.com
- Green Building Educational Resources & Grelen Advantage
- Green-Source Products
  - www.greensourceproducts.com
- Hearthstone, Inc.
  - www.hearthstonehomes.com
- Hensel Phelps Construction Co.
  - www.henselphelps.com
- Mold Solutions International
  - www.microbeguardinc.com
- North American Green
  - www.nagreen.com
- Oldcastle Glass
  - www.oldcastleglass.com

Consulting Services

- CH2M Hill
  - www.ch2m.com

- LPA, Inc.
  - www.lpainc.com
- Steven Winters Associates, Inc.
  - www.swinter.com
- Building Services Consultants Inc.
  - www.bsc-worldwide.com
- Hugh Lofting Timber Framing, Inc.
  - www.hughloftingtimberframe.com
- VFA, Inc.
  - www.vfa.com
- Code Green
  - www.codegreensolutions.com
- Commissioning Agents, Inc.
  - www.commissioningagents.com
- E M C Engineers, Inc.
  - www.emcengineers.com
- Green Living LLC
  - www.greenlivingllc.com
- Horizon Engineering Associates, LLP
  - www.horizon-engineering.com
- MAS Certified Green
  - www.mastest.com
- SSRCx, LLC
  - www.ssrcx.com
- Filtrexx International
  - www.filtrexx.com
- Gilbane Building Company
  - www.gilbaneco.com

Education

- Bainbridge Graduate Institute
- Boston Architectural College
  - www.the-bac.edu/green
- Design-Build Institute of America
  - www.dbia.org
- Professional Publications, Inc. (PPI)
  - www.ppi2pass.com
- Yellowstone Business Partnership
  - www.yellowstonebusiness.org
- Building Materials Reuse Association
  - www.buildingreuse.org
- Green Building Educational Resources & Grelen Advantage
- Hearthstone, Inc.
  - www.hearthstonehomes.com

Electrical

- Southwest Windpower
  - www.windenergy.com
- ABB Inc
  - www.abb.us/drives
- Beaudin Ganze Consulting Engineers
  - www.bgce.com
- BuildClean
  - www.buildclean.org
- Scheider Electric
  - www.scheiner-electric.com
- Snake Tray
  - www.snaketray.com

Engineering Services

- Architectural Energy Corporation
  - www.archenergy.com
- CH2M Hill
  - www.ch2m.com
- Epstein-ISI
  - www.epstein-isi.com
- Farnsworth Group, Inc.
  - www.f-w.com
- Heery International
  - www.heery.com
- LPA, Inc.
  - www.lpainc.com

- Roofscapes Inc.
  - www.roofmeadow.com
- Timmons Design Engineers
  - www.timmonsdesigneng.com
- Affiliated Engineers, Inc.
  - www.aeieng.com
- AHA Consulting Engineers, Inc.
  - www.aha-engineers.com
- Beaudin Ganze Consulting Engineers
  - www.bgce.com
- E M C Engineers, Inc.
  - www.emcengineers.com
- Glumac
  - www.glumac.com
- Horizon Engineering Associates, LLP
  - www.horizon-engineering.com
- Interface Engineering
  - www.interfaceengineering.com
- SSRCx, LLC
  - www.ssrcx.com
- Scheider Electric
  - www.scheiner-electric.com

Facility Management Services

- KMC Controls
  - www.kmccontrols.com
- Osram Sylvania
  - www.sylvania.com
- TAC
  - www.tac.com/us
- Turner Construction Company
  - www.turnerconstruction.com
- RENTACRATE
  - www.rentacrate.com
- SBM Site Services
  - www.thesbmgroup.com
- UGL Unicco
  - www.ugl-unicco.com
- Mold Solutions International
  - www.microbeguardinc.com

Finance & Insurance

- Fireman's Fund Insurance Company
  - www.firemansfund.com/green

Flooring/Floor Systems

- Dow Building Solutions
  - www.dowbuildingsolutions.com
- Neogard
  - www.neogard.com
- Retro Plate- Advanced Floor Products
  - www.retroplatesystem.com
- Tnemec Company, Inc.
  - www.tnemec.com
- Sani Glaze International, LLC
  - www.saniglaze.com
- FlexForm Technologies LLC
  - www.flexformtech.com
- Serious Materials
  - www.seriousmaterials.com
- INVISTA/Antron® carpet fiber
  - www.antron.net
- StarNet Commercial Flooring
  - www.starnetfloorin.com
- Hambro Structural Systems
  - www.hambro.ws
- Heritage Glass
  - www.heritageglass.net
- L & M Construction Chemicals, Inc.
  - www.lmcc.com
- Maxxon Corp
  - www.maxxoncorporation.com

Furnishings & Fabrics

- Earthshade- Natural Window Fashions
  - www.earthshade.com
- Corporate Express- Sustainable Earth
  - www.sustainable-earth.com
- FlexForm Technologies LLC
  - www.flexformtech.com
- Green Design Furniture Co.
  - www.greendesigns.com
- LIVE Textiles, Inc.
  - www.livetextiles.com

Glass Products

- CPFilms
  - www.vista.com
- Savannah Trims inc
  - www.savannahtrims.com
- Heritage Glass
  - www.heritageglass.net
- IceStone, LLC
  - www.icestone.biz
- Oldcastle Glass
  - www.oldcastleglass.com
- EnviroGLAS
  - www.enviroglasproducts.com

Government Agencies

- EPA WaterSense
  - www.epa.gov/watersense
- Excel Dryer
  - www.exceldryer.com

Gypsum

- Georgia-Pacific
  - www.gp.com
- USG Corporation
  - www.usg.com
- American Coal Ash Association (ACAA)
  - www.acaa-usa.org

Heating, Ventilation, and Air Conditioning Systems and Products

- Noritz America
  - www.NORITZ.com
- Rinnai Corporation
  - www.foreverhotwater.com
- ABB Inc
  - www.abb.us/drives
- Aircuity, Inc.
  - www.aircuity.com
- HCI- Hydronic Components, Inc./ Jomar International
  - www.hciterminator.com
- Ipex Inc.
  - www.ipexinc.com
- Johnson Controls, Inc.
  - www.johnsoncontrols.com
- Big Ass Fans
  - www.bigassfans.com
- SiteStuff
  - www.sitestuff.com
- AHA Consulting Engineers, Inc.
  - www.aha-engineers.com

Insulation

- ERSystems/Prairie Technologies
  - www.ersystems.com
- Gaco Western
  - www.gaco.com
- United Soybean Board
  - www.unitedsoybean.org
- American PolySteel
  - www.polysteel.com
- BASF- The Chemical Company
  - www.basf.com/usa
- Fox Blocks by Airlite Plastics Company
  - www.foxblocks.com
- Greenblock Worldwide Corp
  - www.greenblock.com
- T. Clear Corp
  - www.tclear.net

- Thermomass /Composite Technologies
  - www.thermomass.com
- Green-Source Products
  - www.greensourceproducts.com

Interior Design Services

- Davies Office Refurbishing, Inc.
  - www.daviesoffice.com
- Green Design Co.
  - www.greendesign.com
- Modular Millwork- IOPC
  - www.modularmillwork.com
- Epstein-ISI
  - www.epstein-isi.com
- HOK
  - www.hoksustainabledesign.com
- Solaleya
  - www.solaleya.com

Lighting/Daylighting Products & Services

- International Association of Lighting Designers
  - www.iald.org
- Acuity Brands Lighting
  - www.acuitybrandslighting.com
- Earthshade- Natural Window Fashions
  - www.earthshade.com
- KMC Controls
  - www.kmccontrols.com
- Lutron Electronics
  - www.lutron.com
- Osram Sylvania
  - www.sylvania.com
- Savannah Trims inc
  - www.savannahtrims.com
- Somfy Systems
  - www.somfysystems.com
  -

- Timmons Design Engineers
  - www.timmonsdesigneng.com
- Duo-Guard Industries Inc.
  - www.duo-guard.com
- SiteStuff
  - www.sitestuff.com
- Affiliated Engineers, Inc.
  - www.aeieng.com
- Glumac
  - www.glumac.com
- Green Living LLC
  - www.greenlivingllc.com
- Interface Engineering
  - www.interfaceengineering.com
- Scheider Electric
  - www.scheiner-electric.com

Lumber/WoodProducts

- F.D. Sterritt Lumber Co.
  - www.fscwood.com
- Vermont Natural Coatings
  - www.vermontnaturalcoatings.com
- Algoma Hardwoods
  - www.algomahardwoods.com
- PeaPod Homes
  - www.peapodhomes.com
- Solaleya
  - www.solaleya.com
- Hugh Lofting Timber Framing, Inc.
  - www.hughloftingtimberframe.com
- PCF Group
  - www.ecobeams.com
- VAST Enterprises, LLC
  - www.vastpavers.com
- Hearthstone, Inc.
  - www.hearthstonehomes.com

- Mold Solutions International
  - www.microbeguardinc.com

Maintenance Equipment, Products and Services

- EcoSolutions by Crane Plumbing
  - www.ecosolutionsbycrane.com
- Pro-Link, Inc.
  - www.prolinkhq.com
- Sani Glaze International, LLC
  - www.saniglaze.com
- Corporate Express- Sustainable Earth
  - www.sustainable-earth.com
- StarNet Commercial Flooring
  - www.starnetfloorin.com
- L & M Construction Chemicals, Inc.
  - www.lmcc.com

Masonry & Stone

- Eldorado Stone
  - www.eldoradostone.com
- Hanover Architectural Products
  - www.hanoverpavers.com
- Heckman Building Products, Inc.
  - www.heckmannanchors.com
- Holcim (US) Inc.
  - www.holcim.us
- Lafarge
  - www.lafarge-na.com
- Lehigh Cement Company
  - www.lehighcement.com
- Prosoco, Inc.
  - www.prosoco.com

Metals

- Alpolic Materials
  - www.alpolic-usa.com
- Epic Metals Corporation
  - http://www.epicmetals.com/
- Pinta acoustic, inc.
  - www.pinta-acoustic.com
- Hambro Structural Systems
  - www.hambro.ws
- Heckman Building Products, Inc.
  - www.heckmannanchors.com
- Butler Manufacturing Company
  - www.butlermfg.com

Millwork

- Sierra Pine
  - www.sierrapine.com
- Sustainable Flooring, Inc.
  - www.sustainableflooring.com
- Vetrazzo, LLC
  - www.vetrazzo.com
- Eggers Industries
  - www.eggersindustries.com
- Contact Industries
  - www.contactind.com

Miscellaneous

- DriTac Flooring Products LLC
  - www.dritac.com
- ACT Inc. Metlund Systems
  - www.gothotwater.com
- PeaPod Homes
  - www.peapodhomes.com
- RENTACRATE
  - www.rentacrate.com
- American PolySteel
  - www.polysteel.com
- Mineral Resource Technologies, Inc.
  - www.mrtus.com
- MonierLifetile
  - www.monierlifetile.com

- Green-Source Products
  - www.greensourceproducts.com

Openings (Doors, Windows, Skylights)

- Algoma Hardwoods
  - www.algomahardwoods.com
- Eggers Industries
  - www.eggersindustries.com
- Kawneer Company, Inc.
  - www.kawneer.com
- Somfy Systems
  - www.somfysystems.com
- 3-Form
  - www.3-form.com
- Contact Industries
  - www.contactind.com
- Duo-Guard Industries Inc.
  - www.duo-guard.com
- Oldcastle Glass
  - www.oldcastleglass.com

Paint

- Sherwin- Williams
  - www.sherwin-williams.com
- American Clay Enterprises
  - www.americanclay,com
- Benjamin Moore & Co.
  - www.benjaminmoore.com
- IBPNA
  - www.ibpna.com
- Tnemec Company, Inc.
  - www.tnemec.com
- United Soybean Board
  - www.unitedsoybean.org

Plumbing, Water Systems and Treatment

- Rainwater Management/ Jay R. Smith Mfg. Co.
  - www.rainwatermanagement.com
- ACT Inc. Metlund Systems
  - www.gothotwater.com
- Noritz America
  - www.NORITZ.com
- Rinnai Corporation
  - www.foreverhotwater.com
- Ipex Inc.
  - www.ipexinc.com
- Mastershield Gutter Protection
  - www.matershield.com

Publications & Media

- Rate It Green
  - www.rateitgreen.com
- ARCAT, Inc.
  - www.arcat.com
- Reed Construction Data
  - www.reedconstructiondata.com
- McGraw-Hill Construction
  - www.construction.com
- Professional Publications, Inc. (PPI)
  - www.ppi2pass.com

Renewable Energy

- ERSystems/Prairie Technologies
  - www.ersystems.com
- Southwest Windpower
  - www.windenergy.com
- Johnson Controls, Inc.
  - www.johnsoncontrols.com
- TAC
  - www.tac.com/us
- Mortenson Construction
  - www.mortenson.com
- Solar Dock
  - www.solardock.com
- BigBelly Solar
  - www.bigbellysolar.com

Research

- GreenBlue
  - www.greenblue.org
- Green Design Furniture Co.
  - www.greendesigns.com
- BuildClean
  - www.buildclean.org
- MAS Certified Green
  - www.mastest.com
- Green Design Co.
  - www.greendesign.com

Roofing

- Gaco Western
  - www.gaco.com
- Neogard
  - www.neogard.com
- ARCOM- MasterSpec Specifications
  - www.masterspec.com
- Roofscapes Inc.
  - www.roofmeadow.com
- Mastershield Gutter Protection
  - www.matershield.com
- BASF- The Chemical Company
  - www.basf.com/usa
- Hanover Architectural Products
  - www.hanoverpavers.com
- MonierLifetile
  - www.monierlifetile.com
- Butler Manufacturing Company
  - www.butlermfg.com

Safety Products

- Acorn Engineering
  - www.acorneng.com
- Ansul Incorporated
  - www.ansulinfo.com/usgb2008
- GrayWolf Sensing Solutions
  - www.wolfsense.com
- CPFilms
  - www.vista.com
- Big Ass Fans
  - www.bigassfans.com

Siding

- Roseburg Forest Products
  - www.roseburg.com
- Sto Corp.
  - www.stocorp.com
- TerraMai
  - www.terramai.com
- Dryvit Systems
  - www.dryvitisgreen.com
- F.D. Sterritt Lumber Co.
  - www.fscwood.com

Signage

- ASI- Modulex
  - www.asimodulex.com
- Cooper Lighting
  - www.cooperlighting.com
- Jakob Inc
  - www.jakob-usa.com
- Prestwick
  - www.greatlakesspecialty.com
- Quality Attributes Software/Green Touchscreen
  - www.greenscreen.com

Site & Landscape Products

- BigBelly Solar
  - www.bigbellysolar.com
- SBM Site Services
  - www.thesbmgroup.com
- UGL Unicco
  - www.ugl-unicco.com
- Lehigh Cement Company
  - www.lehighcement.com
- Tournesol Siteworks, LLC
  - www.tournesolsiteworks.com
- UNI-Group U.S.A.
  - www.uni-groupusa.org
- VAST Enterprises, LLC
  - www.vastpavers.com
- Filtrexx International
  - www.filtrexx.com

- North American Green
    - www.nagreen.com

Site and Landscape Services

- Advanced Pavement Technology
    - www.advancedpavement.com
- Civil & Enviromental Consultants, Inc.
    - www.cecinc.com
- Deep Root Partners, L.P.
    - www.deeproot.com
- SBM Site Services
    - www.thesbmgroup.com
- North American Green
    - www.nagreen.com

Software & Tools

- ARCAT, Inc.
    - www.arcat.com
- ARCOM- MasterSpec Specifications
    - www.masterspec.com
- Acuity Brands Lighting
    - www.acuitybrandslighting.com
- VFA, Inc.
    - www.vfa.com
- Quality Attributes Software/Green Touchscreen
    - www.greenscreen.com

Wall Covering

- Second-Look Recycled WallCovering
    - www.secondlookwc.com
- Dryvit Systems
    - www.dryvitisgreen.com
- Alpolic Materials
    - www.alpolic-usa.com
- 3-Form
    - www.3-form.com
- Armstrong Ceiling Systems
    - www.armstrong.com/ceilings

Waste Management, Salvage & Recycling Services

- BigBelly Solar
    - www.bigbellysolar.com
- Building Materials Reuse Association
    - www.buildingreuse.org
- Enviro-Systems, Inc.
    - www.envirosys.us
- INVISTA/Antron® carpet fiber
    - www.antron.net
- Mastershield Gutter Protection
    - www.matershield.com
- RENTACRATE
    - www.rentacrate.com
- SBM Site Services
    - www.thesbmgroup.com
- StarNet Commercial Flooring
    - www.starnetfloorin.com
- UGL Unicco
    - www.ugl-unicco.com
- Williams Creek Consulting
    - www.williamscreek.net

Contact Information:

Tad Long
NewCities Institute
100 East Vine Street, Suite 800
Lexington, KY 40507
800-876-4552 or 859-977-3700
tlong@newcities.org
www.newcities.org

Joe Ewalt
Kentucky League of Cities
100 East Vine Street, Suite 800
Lexington, KY 40507
800-876-4552 or 859-977-3700
jewalt@klc.org
www.klc.org

Amanda LeFevre or Herb Petitjean
Division of Compliance Assistance
300 Fair Oaks Lane
Frankfort, KY 40601
800-926-8111
amanda.lefevre@ky.gov
www.dca.ky.gov

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Practically Green