CIR1518

UF UNIVERSITY of FLORIDA
IFAS Extension

Policies that Address Sustainable Building Practices[1]

Marisa Romero and Mark E. Hostetler[2]

Green building, Gainesville, FL.. Credits: Mark Hostetler, 2006.

Policies of local governments can play a major role in creating opportunities for sustainable practices. In addition, governments can take the lead in sustainable planning and development in designing public facilities or government office buildings according to sustainable design standards. By taking the lead in crafting unique policies and implementing ways for government to reduce energy consumption or negative environmental impacts, a local government can initiate small changes that will lead to a sustainable community.

The purpose of this document is to compile and summarize city and county ordinances that provide incentives or regulations to promote sustainable buildings. City or county officials can use this document to aid in drafting sustainable development policies for their local area. The goal of this document is to increase knowledge and awareness of current policies and ordinances developed around the theme of sustainable development and conservation.

Of the energy consumed in the U.S., 38% is for residential & commercial use, in other words where we live and non-manufacturing entities; 34% is for industrial use – making things; and 28% is for transportation. Energy-efficient buildings reduce the amount of energy consumed and save the building owners thousands of dollars over the life of the building.

The term g*reen building* refers to any development that promotes reduced energy consumption, utilizes renewable resources, conserves water, promotes the best use of building materials, encourages efficient waste management, conserves natural habitat and focuses on health and environmental quality (Heekin and Meyers 2001).

Several communities across the nation have successfully implemented green building and best management practices. Green building programs below include Gainesville Green Building Program in Gainesville, FL; Sarasota County Green Building Program in Sarasota County, FL; Green Building

1. This document is Circular 1518, one of a series of the Wildlife Ecology and Conservation Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First published: May 2007. Visit the EDIS Web Site at http://edis.ifas.ufl.edu.

2. Marisa Romero, Graduate Assistant; Mark E. Hostetler, Wildlife Extension Specialist and Associate Professor; University of Florida, Wildlife Ecology and Conservation Department, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, FL 32611.

Program in Frisco, TX; Green Points Program in Boulder, CO; Resource Efficiency Requirements and Green Building Standards from San Francisco, CA; Arlington County Green Building Program in Virginia; and Targeted Jobs Incentive Fund Program in Miami-Dade County, FL.

The green building programs in Gainesville, Sarasota County, and Miami-Dade County's programs are incentive-based and voluntary. Frisco, Boulder, and San Francisco's programs include mandatory standards for both public and private development projects.

I. Gainesville Green Building Ordinance

Implemented: 14 October 2002, Gainesville, FL

Population 2002: 109,361

Population 2005: 108,184

(U.S. Census Bureau)

Purpose

To promote energy efficient construction and design practices through incentive-based rewards for private sector developers and mandatory compliance for city owned facilities.

Summary

To promote energy efficient construction, this ordinance provides the following incentives for building new energy efficient homes 1) Fast-track permitting for building permits and, 2) 50% reduction in building permit fee. To receive these incentives, an independent third party must certify the building. The city government also provides marketing incentives including erection of building signs at the site, placing participants on city Web site and press releases. Finally, a Green Building Award from the City of Gainesville recognizes one participant each year that demonstrates commitment to the program.

Standards for development certification follow the Florida Green Building Coalition and the U. S. Green Building Council standards and can be found at the following sites:

- Florida Green Building Coalition: http://www.floridagreenbuilding.org/
- U.S. Green Building Council: http://www.usgbc.org/

Tom Ankersen, Director of University of Florida Conservation Clinic, along with two law students, developed the language for the ordinance. A member of the Gainesville City Council presented the idea for the ordinance to members at the University of Florida. The authors intended to give Building and Inspection Department officials authority to provide incentives for new residential, commercial buildings and residential remodeling that comply with green building standards.

Current Impact

Currently a total of 28 green building permits have been issued and eleven of these permits have been finalized. The first was issued in January 2003. Nearly half of the total number of green building permits was applied for January to April of 2006. One commercial project, Kangaroo Station, is currently undergoing the green building process. A new cancer ward for Shands Hospital also intends to construct an energy-efficient building according to the ordinance standards.

A projected 88 energy-efficient homes are to be built in the Madera community. Currently 9 homes have been built in the community.

Pros and Cons

The authors held a stakeholder workshop before drafting the ordinance. In that workshop the majority of the stakeholders expressed interest in a voluntary program. The city council members decided to make the program mandatory for all new government buildings and voluntary for private construction. Because the program was voluntary in the private sector, the ordinance was accepted with open arms.

The first builder to use the program found the process confusing because the entire program was new. The clerks at the city department did not know

how to process the first permit. Confusion in the initial stages added to the time for permitting. Now, the program is faster and can take 1-2 weeks to receive a permit, as opposed to 6-8 weeks.

The only hesitation came from Gainesville Regional Utilities (GRU) over providing incentives for remodeling and retrofitting (a sub-program in the ordinance). GRU did not immediately agree to include incentives in the local ordinance because of funding issues. As a compromise, the wording in the actual ordinances states that the incentives are "subject to availability of funds."

Viewpoints from the Developers

The first developer to use the Gainesville Green Building Ordinance found the initial process slow and cumbersome. The program was so new that the clerks in the city building department needed assistance to complete the paper work. The fast tracking did not occur initially because the process was new, but now the city can turn around a building permit within 1-2 weeks. This developer has built 5 single family resident homes as of summer 2006 under the Gainesville Green Building Program.

The 50% permit fee reduction is the largest incentive. This roughly pays for the green building certification process that would otherwise come out of the developer's pocket.

One developer mentioned that the checklist was cumbersome and even redundant with the Energy Star certification. Initially, some developers needed help understanding the checklist and other forms to submit for the certification. A smaller, more concise checklist would appeal more to developers. Several developers would like to see the county adopt similar incentives when building green developments.

The majority of developers interviewed (2 out of 3) had been using some green building techniques before the ordinance was passed. These two developers were already using Energy Star construction standards as a minimum. One developer also used Florida Yards and Neighbors Program (http://hort.ufl.edu/fyn/) as a landscaping standard.

These developers believe that others have not taken advantage of the Green Building Program because they may not even know about it. One suggestion to spread the word would be to present the program at the monthly Builder s Association meeting. Other developers may choose not to use the program because they believe that using these techniques is cumbersome and not worth changing current building practices. Some also see certification of a green building as an additional obstacle.

Contact Information

Doug Murdock, City of Gainesville Building Official, 352-334-5050

Tom Ankersen, University of Florida Director of Conservation Clinic, 352-273-0835, ankersen@law.ufl.edu

Pierce Jones, Program for Resource Efficient Communities, 352-392-8074, ez@energy.ufl.edu

Original Ordinance Language

http://www.municode.com/resources/gateway.asp?pid=10819&sid=9

Search Under: Chapter 6 Buildings and Building Regulations; Article I.5. Gainesville Green Building Program

II. Sarasota Green Building Program Resolution

Implemented: 15 March 2005, Sarasota County, FL

Population 2005: 366,256

(U.S. Census Bureau)

Purpose

To provide the Sarasota County community with a certification-based "green building" program. This ordinance encourages the county to design and construct sustainable, energy-efficient buildings through mandatory compliance of new county buildings. It also encourages voluntary green building in private development through incentive-based programs.

Summary

To promote energy efficient construction, this ordinance provides the following incentives for building new energy efficient homes: (1) fast-track permitting for building permits; and (2) 50% reduction in building permit fee with a maximum of $1,000 per building, but no person or organization shall receive more than $5,000 in permit fee refunds. The government will also provide marketing incentives, including erection of building signs at the site, placing participants on the city Web site, and press releases. Finally, a Green Building Award from the Board of County Commissioners will recognize one participant each year that demonstrates commitment to the program. An independent third party must certify buildings in order to retain the above benefits.

Standards for development certification follow the Florida Green Building Coalition and the U. S. Green Building Council standards and can be found at the following sites:

- Florida Green Building Coalition: http://floridagreenbuilding.org/
- U.S. Green Building Council: http://www.usgbc.org/

The resolution was adopted from the Gainesville Green Building Ordinance in Gainesville, FL. The language is nearly identical with only a few modifications in order to adjust the resolution to meet the needs of the area.

Current Impact

The County Building office addition in Twin Lakes Park received a Leadership in Energy and Environmental Design (LEED) gold rating from the U.S. Green Building Council standards. North Sarasota Library also achieved the LEED gold rating. The Girl Scouts building and a Whole Foods Store are both certified under the LEED standards.

Pros and Cons

Before the resolution, the county already had several green building projects underway. The county commission hopes to encourage even more builders to use green building standards for future developments. The ordinance was accepted with open arms because the program was voluntary in the private sector. Sarasota County was already a progressive community with certified green developments before the adoption of this resolution such as the Venetian Golf and River Club, Lakewood Ranch community and Waterford development.

The county commissioners hope to encourage more green building by setting maximum monetary allotment in building permit fee reductions. Only $50,000 per year shall be spent on permit fee refunds. The resolution limits $1,000 per building and $5,000 per person or organization. This limitation will allow more refunds to be spread across a higher number of different developers.

The program has guaranteed that the fast track permitting will be processed in two days. Also, the building department gives priority to all inspections to any green building.

Contact Information

Paul Radauskas, County Building Chief, pradauskas@scgov.net, 941-861-6637

Original Ordinance Language

Contact Paul Radauskas

III. Green Building Program Ordinance

Implemented: 2 May 2001, Frisco, TX

Population 2001: 41,990

Population 2005: 70,793

(U.S. Census Bureau)

Purpose

To create a green building program that mandates minimum energy efficiency, water conservation, indoor air quality and waste recycling standards for all residential buildings.

Summary

The ordinance sets forth minimum standards in four categories: energy efficiency, water conservation, indoor air quality and waste recycling.

The energy efficiency standards followed the Environmental Protection Agency s Energy Star designation
(
http://www.energystar.gov/
index.cfm?c=bldrs_lenders_raters.pt_bldr).

Water conservation standards include: (1) provide drought tolerant landscaping; (2) provide information in model home about xeriscaping benefits and water conservation practices; (3) if bedding areas exist they must be mulched; (4) irrigation systems must include rain and freeze sensor; and (5) irrigation system must be zoned.

Indoor air quality standards include: (1) mechanical room walls exposed to living area must be insulated to R-11; (2) provide range hood vented to outside; (3) unvented fireplaces and gas logs with fan blowing gases into living space are prohibited; (4) one carbon monoxide detector hardwired per 1,000 sq. ft. where home has an attached garage or any combustion appliance; (5) all joints in air distribution system must be sealed with duct mastic; (6) duct leakage shall be less than or equal to 5% of square footage served by unit or less than or equal to 10% if a fan flow high-speed system is installed; (7) airflow in each room will match with +/- 10% of designated airflow calculations; (8) exterior ventilation system installed must perform at certain standards in ordinance; (9) provide option for furnace and/or duct-mounted electronic/electrostatic air cleaner; (10) central vacuum system must exhaust outside; and (11) HVAC plenums on the supply side must be constructed of sheet metal with external insulation.

Waste recycling standards include: (1) construction waste from a building site must be taken to a recycling facility approved by the county or state; (2) construction waste reduction and reuse plan must be written and followed by builder; (3) donate unwanted building materials to non-profit building organization; (4) provide built in recycling center option for homebuyers; and (5) provide composting system option in yard for homebuyers.

The ordinance was innovative in 2001 and did not have any model language on which to base the new policy. The small city was growing so rapidly that city staff began work to develop a green building program after a green builder spurred the idea during a conversation at a local conference. The city staff wanted to apply green building to the entire city. The staff created a volunteer committee that would be tasked to create the ordinance. After the committee consulted with builders, they determined that a short list of prescriptive minimum standards that did not include an exhaustive checklist of requirements would give the builders the flexibility they need to comply with the ordinance. For example, the water conservation element in the ordinance only includes five components that encourage efficient landscaping techniques instead of a long checklist that details every component of landscaping.

Current Impact

Overall

- 7,097 Green Homes/Energy Star Homes built since May 2001
- 15,289 Green Homes platted since 2001
- CO_2 reduced - 16,819.89 tons
- NO_x reduced - 48.12 tons
- SO_2 reduced - 52.26 tons

Per Home

- Average kWh savings - 4,650 per year
- Approximate utility savings per year -$436

Awards

- Texas Environmental Excellence Awards Finalist 2003
- North Texas Clean Air Coalition grant recipient 2002 and 2003

- Celebrating Leadership in Developmental Excellence (CLIDE) Award winner 2005

Pros and Cons

Initially builders were concerned that by establishing a standard, their current building practices would be altered and it would increase building costs and affect their ability to do business. This led to the adoption of fewer prescriptive methods and more performance-based measures. For example, airflow in each room had to be within +/- 10 percent of designed airflow calculations. The ordinance does not require builders to use specific building practices as long as they meet these requirements.

The builders in the community ranged from adverse to indifferent to the new program. The participation process during the ordinance's development was open to all builders. Builders who chose to participate were included in the drafting of minimum standards and the majority of resistance came from those builders who did not participate. The increased sales on green homes versus non green homes (outside the city limits) have encouraged even those builders who were against the ordinance to change their attitude and embrace the program. Many of these builders now build green homes both inside and outside the city limits.

The ordinance is only 3-4 pages long with a mixture of prescriptive and performance based measures. The Web site at http://www.friscotexas.gov/Projects_Programs/Green_Building/index.aspx?id=155 gives builders more detailed practices and strategies to meet the minimum standards. A positive aspect of the building flexibility helps homebuilders to keep their building cost down while following the program. Builders, however, do not receive any additional recognition from the city for going above and beyond the requirements.

Overall, the program requires few resources from the city staff to manage the green building program. Third-party members, paid for by the builders, complete all testing for minimum standards. Builders then present a certificate of inspection by third-party members to the city in order to revive final certificate of occupancy.

However, the program could offer a more comprehensive list of requirements and could offer more specific requirements in certain areas. For example, the program does not require any specific options for landscaping such as micro-irrigation or percentages of irrigated turf. Also, the ordinance does not include any solar energy or other renewable energy requirements. Often the components are so vague that it is difficult to enforce certain standards. Also, no consensus exists in testing procedures for certain standards. Furthermore, builders have no incentives to go above and beyond the minimum requirements or to offer home packages at economically lower rates.

Contact Information

Jeffrey Witt, Comprehensive and Environmental Administrator, 972-335-5580 Ext. 101, jwitt@friscotexas.gov

Ryan J. Middleton, Planning Technician, Comprehensive & Environmental Division, 972-335-5580 Ext. 158

Original Ordinance Language

http://documents.ci.frisco.tx.us/weblink/index.asp?DocumentID=25074&FolderID=28177&SearchHandle=0&DocViewType=ShowImage&LeftPaneType=Hidden&dbid=0&page=1

IV. Green Points Program

Implemented: 1996, Boulder, CO

Population 2000: 94,673

Population 2005: 91,685

(U.S. Census Bureau)

Purpose

To mandate standards that encourage cost-effective and sustainable residential building methods that conserve fossil fuels and water, promote reuse and recycling of construction materials, reduce

solid waste and promote enhanced indoor air quality.

Summary

The ordinance is required for all residential building and is based on a point system to include, (1) new construction up to 1,500 sq. ft. requires 50 points; (2) new construction between 1,501 and 2,500 sq. ft. requires 65 points; (3) new construction over 2,500 sq. ft. requires one additional point for every 50 sq. ft.; (4) interior remodeling ranges from 10 to 25 points depending on size; and (5) additions range from 25 to maximum number of points in ordinance based on size.

Green points fall into 11 categories, including: construction/demolition and use of recycled materials; land use and water conservation; framing; energy code measures; plumbing; electrical; windows and insulation; heating, ventilation, and air conditioning (HVAC); solar; indoor air quality and interior finishes; and innovation in design. Under these categories 71 measures exist to choose from and add up to a maximum of 338 total points. See ordinance for specific design measures and point breakdowns.

The ordinance originated in the late 1970s, when the city of Boulder received a grant to do an energy audit. The results of the audit revealed that the residential sector accounted for 39.5% of the energy use. The city created an Energy Options Points program in the early 1980s. Building permits were granted based on the number of Energy Option Points they implemented in residential building. This program was reevaluated and updated to include a Green Points checklist. Leaders from the homebuilding industry, energy and green building experts, code officials and city staff developed the checklist based on the fact that different features had more value or greater cost than others and should receive more points. The program and code was renamed the Green Points Program.

After the program was implemented in 1996, it was revised in 2001 to increase the amount of points required and also included a new element for homes over 2,500 sq. ft. These homes required one additional point per 50 sq. ft.

Current Impact

The numbers below are based on a study of 267 homes built under the program in 2003 and 2004.

The average dwelling unit is 1,705 sq. ft. and has 72 Green Points (7 points above the required 65). One home built to these standards achieves an annual savings of 1,222 KWh in electricity, 301 therms of natural gas, and 11,562 gallons of water. These add up to $375 with a majority of monetary savings in natural gas (Figure 1).

A large unit consists of 6,031 sq. ft. and 129 Green Points. Annual savings of this building include 6,517 KWh of electricity, 426 therms of natural gas and 27,410 gallons of water. Total monetary savings add up to $985. Electric savings are highest in the large dwelling unit (Figure 2).

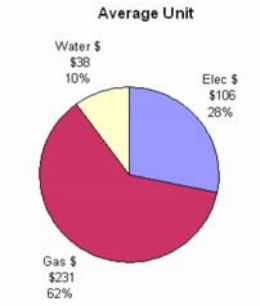

Figure 1. Annual utility savings per 1,705 sq. ft. unit. Credits: Elizabeth Vasatka, Larry Kinney and Cam Marshall, Well Beyond Energy Codes: The Green Points Program in Boulder, Colorado. 2003. Contact City of Boulder Office of Environmental Affairs for a copy of this paper.

Figure 2. Annual utility savings per 6,031 sq. ft. unit. Credits: Elizabeth Vasatka, Larry Kinney and Cam Marshall, Well Beyond Energy Codes: The Green Points Program in Boulder, Colorado. 2003. Contact City of Boulder Office of Environmental Affairs for a copy of this paper.

Pros and Cons

Builders, architects and material suppliers were consulted with a draft of the program and they were able to include their input in how much value to give to each feature and how many points should be required for a building permit. By including builders in the ordinance design process, they increased the acceptance among some builders.

Initially builders and code officials had rough moments in the onset of the program, which included disagreements about points received and total number of points required. Within one year of the program, all certified builders in the city complied with the program and even those who were initially resistant discovered that the program was good for business and even improved their sales. Some builders made their entire line of homes green and continued to build green even outside the Boulder city limits.

In retrospect, one improvement that could have been implemented was to estimate potential savings for each category before assigning points. This will balance the categories of savings and number of points assigned to each category.

One benefit of creating an ordinance based system for green building is that the city gets 100% market penetration for green building. The entire public is made aware of the benefits and this increases the market for green building products and homes. Builders now use Green Points as a marketing feature to sell more homes.

Contact Information

Elizabeth Vasatka, Program Coordinator, Office of Environmental Affairs, 303-441-1964, vasatkae@ci.boulder.co.us

Original Ordinance Language

http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=1619&Itemid=807

V. Resource Efficiency Requirements and Green Building Standards

Implemented: 3 July 1999, San Francisco, CA

Population 2000: 776,733

Population 2005: 739,426

(U.S. Census Bureau)

Purpose

To promote energy and water efficiency and decrease negative environmental impacts that result from conventional construction and maintenance of city-owned buildings. This is a mandatory ordinance for all city-owned buildings and does not apply to private developments.

Summary

The Resource Efficiency Requirement Ordinance created a Resource Efficient Building (REB) Task Force, which consists of members from 10 different city departments who oversee city building projects. The ordinance also created 9 pilot projects to promote resource efficient construction practices.

Resource efficiency requirements for city buildings are presented in the ordinance for 5 categories: (1) Water Conservation, (2) Lighting Efficiency Improvements, (3) Indoor Air Quality Management Plans, (4) Space for Office / Workspace Recycling, and (5) Construction and Demolition Waste Management Plans. City departments must comply with specific requirements presented in the ordinance. Municipal building projects over 5,000 sq. ft. must comply with the following: (1) achieve LEED Silver certification; (2) include a LEED Accredited Professional (LAP) as a member of the design team; and (3) submit an annual report to the REB Task Force by August 1 of each year.

LEED certification standards can be found on the U. S. Green Building Council Web site at http://www.usgbc.org/.

The green building program began when the city's Bureau of Energy Conservation created the

Environmental Department in 1996. This department, in conjunction with several other city departments, drafted the ordinance in 1999. The ordinance was amended in 2004 after recommendations were made to require that city facilities meet a minimum green building standard. These recommendations were the conclusions of San Francisco's Green Building Report 1999-2002.

Current Impact

Only 3 of the 9 pilot projects have been completed. This includes the EcoCenter/San Francisco Department of the Environment Offices, Visitation Valley Clubhouse, and 23rd and Treat Streets New Mission Park and Clubhouse.

Two additional projects are currently under construction and will follow the LEED standards for certification. This includes the Laguna Hospital and New California Academy of Sciences. The other projects are on hold for various reasons including funding issues.

Several projects are currently under review and will all follow at a minimum the LEED certification.

Details about current projects can be viewed on the city website at http://www.sfgreenprint.org/

Pros and Cons

It took three years to draft this ordinance and send through the approval process. This lengthy process is the result of the time required to communicate with other departments and to educate city officials. Indeed, the biggest challenge was educating other city departments so that they would understand the goals of this program.

This ordinance did not meet any difficulties in the approval process since it was voluntary. Initially, the ordinance only provided guidelines for building energy-efficient buildings but did not require any contractors to comply with any standards. The amendments were later accepted to require the green building standards but only for city facilities.

Because the ordinance did not mandate green building with the first draft of the ordinance, it was more difficult to incorporate the green building certification in projects that were already started. Requiring the green building standards up front would have made the process easier. All the pilot programs were started before mandating the LEED Silver rating.

This ordinance only applies to city-based projects and does not encourage green building in the private sector. The city government is currently working on providing incentives such as fast-track permitting to developers in the private sector who use green building standards.

Contact Information

Mark Palmer, SF Environment Staff, Green Building, 415-355-3710

Original Ordinance Language

http://www.sfenvironment.org/downloads/library/rebordinance.pdf

Search Under: Chapter 7 Resource Efficiency Requirements

Additional References

San Francisco's Green Building Report 1999-2002 and Municipal Compliance Guide are both found at the SF Environment Web site under “Innovative Programs” and “Green Building:” at http://www.sfenvironment.org

VI. Arlington County Green Building Program

Implemented: April 2000, Arlington County, VA

Population 2000: 189,453

Population 2005: 195,965

(U.S. Census Bureau)

Purpose

To reduce the environmental impacts of a building and provide a more healthy indoor space. This program is voluntary and offers building density incentives for a larger building to encourage developers to follow LEED standards.

Summary

This program is not a formal ordinance but is a county-established program. The program is a variance on current density regulations based on Section 36 of the Arlington County Zoning Ordinance.

The program includes all types of developments such as commercial, office, and high-rise residential. As an incentive, the County Board is able to consider modifications for additional density between 0.15 and 0.35 FAR (Floor Area Ratio) and/or additional height up to 3 stories for exceptional site plans. The site plan proposal must guarantee a LEED rating at the Certified award level or above (Silver, Gold or Platinum). Developers that incorporate LEED-certified green building components are not guaranteed additional density and/or height, which is determined on a case-by-case basis. Based on the range of the LEED Silver award point system, a range of bonus density will also be considered, from 0.15 FAR for the certified award level, up to 0.25 FAR for LEED Silver, and up to 0.35 FAR for LEED awards of Gold or Platinum. For site plan proposals in which the LEED-certified Gold or Platinum award levels are being sought, a bonus density greater than 0.35 FAR may be considered if they use several of the environmental amenities provision of Section 36.H.5.a. (1) of the Zoning Ordinance.

For those developers that do not commit to achieving LEED certification, the county allows them to still receive density bonuses if they contribute to a Green Building Fund. The contribution is calculated at a rate of $0.03 per square foot. If the developer does receive LEED certification, the fund contributions are refunded upon receipt of final LEED certification.

The origins of this program began in the late 1990s when county staff members wanted to commit the county to incorporate LEED certification into new construction. The county does not have a formal policy to certify all new county projects but has agreed internally to strive for LEED certification on all county projects. Then in 1999 the county adopted a program to encourage commercial office developments to use these standards in order to receive bonus densities or height additions. In 2003, the county updated the program to expand it to all developments and not just commercial office developments.

Current Impact

- 18 private development projects approved with some LEED components
- 4 of the 18 will be LEED certified
- 10 private development projects currently under construction with some LEED components
- 1 completed private development project under density incentive program LEED Silver (in-review)
- County has completed one LEED certified building (Langston-Brown School and Community Center)

Green Building Fund currently has one contribution of $10,000. The money is used to provide outreach and education to developers and the community about green building techniques and green building issues.

Pros and Cons

Since the program is voluntary, no direct opposition to the program existed. One drawback is that the program is not a formal ordinance or policy. This provides a challenge to the staff when they try to convey the specifics of the program to others. A few developers were hesitant to apply for the program because they were not as familiar with LEED green building components.

At first, the private development projects that applied under the Green Building Fund did not contribute money until after the project was completed. The lag time between project approval and final certificate of occupancy is extended over several years. The county recently changed this provision and will receive funds after the initial permits are approved.

Contact Information

Joan Kelsch, Environmental Planner, 703-228-3599

Original Ordinance Language

Green Building Program Information:

http://www.arlingtonva.us/Departments/EnvironmentalServices/epo/EnvironmentalServicesEpoGreenBuildings.aspx

Arlington County Zoning Ordinance, Section 36:

http://www.arlingtonva.us/Departments/CPHD/planning/zoning/pdfs/Ordinance_Section36.pdf

VII. Targeted Jobs Incentive Fund Program

Implemented: 25 July 2000, amended 3 May 2005, Miami-Dade County, FL

Population 2000: 2,260,317

Population 2005: 2,376,014

(U.S. Census Bureau)

Purpose

To attract businesses to Miami-Dade County through cash incentives. Additional bonus incentives were added to attract solar energy industries and businesses operating in the construction of green buildings. These amendments exist to facilitate the county's goal of remaining competitive in economic growth and creating a positive impact on the environment by promoting environmentally sensitive design and construction.

Summary

This program is only eligible to companies from outside the county undertaking relocation to Miami-Dade and to county companies undertaking business expansion. To promote energy-efficient construction, this ordinance provides up to (1) $1,000 bonus if the company operates out of a certified green building; (2) $500 bonus if the company operates out of a building that incorporates alternate energy systems; (3) $1,500 if the company is a Solar Thermal and Photovoltaic Manufacturing, Installation and Repair business. The bonuses are paid per new job created, which can add up to $3,000 per new job for eligible companies.

Either the Florida Green Building Coalition or U.S. Green Building Council must certify the “green buildings” with the Leadership in Energy and Environmental Design (LEED) rating system. Standards for development certification can be found at the following sites:

- Florida Green Building Coalition: http://floridagreenbuilding.org/
- U.S. Green Building Council: http://www.usgbc.org/

A company must apply each year to receive this award and can apply up to three times. The County Board must approve all applicants prior to receiving any award.

Current Impact

Currently no green buildings exist to take advantage of the program's incentives.

Pros and Cons

This ordinance goes beyond simply rewarding the construction of green building by awarding the companies who operate in the building. The county hopes the ordinance will stimulate the market for green building by encouraging businesses to increase demand for this construction in order to receive additional cash bonuses. Rewards from this ordinance are strictly for companies and do not reward the developer.

Since no certified green buildings exist, no company can take advantage of the additional monetary awards. This county is in the beginning stages of building green. Few designers and architects are even familiar with green building techniques. Also, developers are hesitant to take on additional front-end costs of certifying and building energy-efficient buildings.

Contact Information

Doug Yoder, Assistant Director, Miami-Dade Environmental Resources Management Department, 305-372-6766, http://miamidade.gov

Original Ordinance Language

http://www.municode.com/Resources/gateway.asp?pid=10620&sid=9

Search Under: Chapter 2 Administration; Article LXXXVI. Targeted Jobs Incentive Fund Program

References

Florida Solar Energy Center. Home Energy Ratings. http://www.fsec.ucf.edu/en/consumer/buildings/homes/ratings/improve.htm.

Florida Solar Energy Center. Energy-Saving Buildings. http://www.fsec.ucf.edu/en/consumer/buildings/index.htm.

Heekin, D. and D. Meyers. 2001. *Green Building: Principles and Practice*. University of Florida Levin College of Law.

U.S. Census Bureau. Population Finder. http://www.census.gov/.