



February 11, 2009

RODNEY J. LONG
PRESIDENT
ALACHUA

ILENE LIEBERMAN
PRESIDENT ELECT
BROWARD

DOUG SMITH
FIRST VICE PRESIDENT
MARTIN

SUSAN LATVALA
IMMEDIATE PAST PRESIDENT
PINELLAS

CHRISTOPHER L. HOLLEY
EXECUTIVE DIRECTOR

Senator Jim King, Chair
Policy and Steering Committee on
Energy, Environment, and Land
Use
420 Senate Office Building
404 South Monroe Street
Tallahassee, Florida 32399-1100

Representative Baxter Troutman,
Chair
General Government Policy
Council
317 House Office Building
402 South Monroe Street
Tallahassee, Florida 32399-1300

Representative Paige Kreegel,
Chair
Energy and Utilities Policy
Committee
303 House Office Building
402 South Monroe Street
Tallahassee, Florida 32399-1300

Representative Rick Kriseman,
Democratic Ranking Member
Energy & Utilities Policy
Committee
303 House Office Building
402 South Monroe Street
Tallahassee, Florida 32399-1300

Re: County Efforts in Energy Efficiency and Conservation

Dear Senator King and Representatives Troutman, Kreegel and Kriseman:

The Florida Association of Counties is pleased to present you with the attached information relating to County Efforts in Energy Efficiency and Conservation. We look forward to continuing to work with you and your committees on energy policies that benefit the citizens of Florida.

Sincerely,

Diana Ferguson
Legislative Staff Attorney

DF/vm

cc: Craig Varn, Staff Director, Policy and Steering Committee on Energy,
Environment, and Land Use
Diana Caldwell, Staff Director, Communications, Energy, and Public
Utilities Committee
Tom Hamby, Council Director, General Government Policy Council
Lucretia Shaw Collins, Staff Director, Energy and Utilities Policy
Committee

Attachment

80
YEARS
1929-2009

County Efforts in Energy Efficiency and Conservation



**Florida Association of Counties
2009 Legislative Session**



For More Information Contact:

**Diana Ferguson, Legislative Staff Attorney
Florida Association of Counties
P.O. Box 549
Tallahassee, Florida 32302
850-922-4300**

This Report Authored by:

**Yesenia Acosta, Legislative Intern
Florida Association of Counties**

County Awards and Recognitions

Several counties have received awards and recognition for their energy efforts. Broward County's nationally recognized Energy & Building Automation Section is at the forefront of promoting and implementing energy efficiency. Broward County was one of 14 organizations chosen by the Environmental Protection Agency (EPA) for its success in global climate protection through the voluntary installation of energy-efficient technologies in its buildings, reducing its annual operating cost by more than \$635,000. In January 2000, Broward's north regional courthouse was qualified as the first *Energy Star Label for Buildings* for a public office building in the state of Florida. The annual environmental achievements are equal to 4,252 cars removed from the road or planting 5,825 acres of trees. Three buildings located at the Pinellas County solid waste facility meet LEED¹ requirements. Hillsborough County has received Energy Star recognition for Water Resource Services Administration (2001), County Center (2008), and Annex Court Complex (2008).

Energy Reduction Efforts

Many counties throughout the state of Florida have initiated energy reduction programs that aim to reduce county energy consumption. Traffic signal efficiency has been implemented by both Sarasota and Broward Counties. Sarasota has implemented athletic field lighting, which helps with energy conservation as well as the elimination of excess photo pollution. Sarasota's permitting process incentivizes green building and development. New Fire Stations in Sarasota use grey-water² and rain water for various uses rather than ground water which has recently generated much concern about dwindling reserves. Sarasota has taken on the 2030 Challenge, setting a goal to build carbon neutral buildings³ by 2030. In implementing *Priority Dispatch*, Sarasota has changed the number and type of vehicles that respond to an incident based on the type of call. The implementation of priority dispatch has resulted in the reduction of fuel consumption.

Collier County has implemented various energy reduction and cost reduction strategies. Collier produces ice at night when the electric rates are cheaper, county offices are maintained at standard temperature, and the county has installed energy efficient lighting.

Alachua County has focused on the implementation of policies that enhance energy efficiency. Alachua is investing in renewable power generation and has focused its efforts on climate change mitigation strategies. The new courthouse in Alachua has been built to LEED standards.

¹ The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ encourages and accelerates global adoption of sustainable green building and development practices through the creation and implementation of universally understood and accepted tools and performance criteria. 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.
<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222>

² Grey-water is non-industrial wastewater generated from domestic processes such as dish washing, laundry, and bathing. Grey-water comprises 50-80% of residential wastewater. Grey-water is comprised of wastewater generated from all of the house's sanitation equipment except for the septic tank (water from toilets being blackwater). Grey-water is distinct from blackwater in the amount and composition of its chemical and biological contaminants (from feces or toxic chemicals).

³ Carbon neutral refers to neutral (meaning zero) total carbon release, brought about by balancing the amount of carbon released with the amount sequestered or offset.

Alachua has a greenhouse reduction plan and first adopted minimum standards for new construction in 1993. Alachua is educating its residents by distributing information about energy conservation, techniques, and related material. Alachua is planning to weatherize all county buildings, ensure optimum energy conservation measures are used in construction or renovation where county funds are used, and provide energy efficient rate disclosures. In order to make these plans more feasible, Alachua created the incentive of a community weatherization / efficiency upgrade bank. Property owners could access this “bank” for efficiency upgrades only after meeting specific requirements (like an energy audit) of their buildings. Alachua is considering financing the “bank” through GRU Biomass Plant ad valorem taxes.

Hillsborough County has many initiatives that aim to reduce energy consumption. These include lighting retrofitting and automatic climate control in buildings. Initiatives include building renovations, utility billing analysis, installation of a green roof at the main courthouse, and recycling antifreeze and Freon. The county is forming county wide Energy Management Teams.

Lee County places a greater emphasis on energy consumption rather than energy cost. The overall drop in cost does not reflect reduced consumption. Focusing on cost does not provide an accurate picture of energy preservation efforts. Lee closely monitors and controls energy consumption for a considerable savings. Using a highly computerized energy monitoring system, they can turn on lights and air conditioning only when meetings are scheduled.

In 2007, Leon County joined ICLEI, the International Council for Local Environmental Initiatives, and adopted a resolution to participate in ICLEI’s Cities for Climate Protection Campaign. Leon has committed to achieve five milestones. The first milestone is to inventory their greenhouse gas emission levels. The second milestone is to set a reduction target and schedule gas emission levels. The third milestone is to develop a local action plan, and the fourth is to implement the action plan. The final milestone is to monitor the progress and report the results.

Leon completed the greenhouse gas inventory of county operations in March 2008. Through this inventory, they found that county facilities and buildings are the source of approximately 76% of their carbon dioxide equivalent emissions. Transportation includes their fleet and employee commuting, and accounted for approximately 23% of their carbon emissions. In June 2008, Leon achieved the second ICLEI milestone when it committed to reducing their carbon contribution 20% by 2017 and 80% by 2050.

In July 2008, Leon adopted an action plan, as part of the third milestone, to meet its carbon reduction goal. The action plan outlines a number of activities that are being implemented this year. Activities include conducting an in depth energy audit of county facilities with the highest opportunities for energy savings, installing sensors to turn off lights when an area is not in use, implementing energy efficient lighting and controls for the Woodville and Miccosukee playfields, and evaluating existing hot water heaters and removing when determined inconsistent with the new policy. Other activities include conducting a study to identify outdoor basketball courts, parks, and playfields for energy efficient lighting retrofit, evaluating the potential of selling carbon credits on the open market or through the Chicago Carbon Market for methane gas at their landfill, and utilizing rain water off the roof of the Leon County Transfer Station to wash

down the tipping floor at the end of the day as required by the Department of Environmental Protection.

Miami-Dade County has unique concerns. According to the Organization for Economic Cooperation and Development (OECD), Miami-Dade is the most exposed urban area in the world for property damage associated with flooding. The assets and infrastructure at risk today in Miami-Dade is valued at \$400 Billion. In the year 2070, the exposed assets in Miami-Dade are estimated to exceed \$3.5 Trillion. OECD has Miami-Dade ranked 9th in the world among urban areas for population exposed to the danger of coastal flooding. In the year 2070, the study suggests 4.75 million people will be at risk in Miami-Dade.

On July 18, 2006 Miami-Dade adopted the Climate Change Advisory Task Force (CCATF). The task force advises the board of commissioners about strategies and policies with respect to adaptation measures. The board consists of 25 members and seven sponsors. In June of 2007, Miami-Dade entered a contract with the Chicago Climate Exchange (CCX)⁴. The cost to purchase carbon credits on the Exchange is estimated at \$325,000. Miami-Dade has established a goal to reduce carbon emission 6% by the year 2010. A 1% reduction will yield \$1 Million in savings. Miami-Dade is building their administrative capacity and knowledge. In the 2007-08 budgets, \$500,000 was allocated to the Office of Sustainability. This office will be responsible for staffing CCATF and for administering the CCX contract. Counties and municipalities are banding together to ensure that climate change legislation includes allocations for local government.

Education

Several counties have established educational efforts as a means of instilling in their residents the importance of energy preservation. The Broward County Environmental Protection Department (EPD) has partnered with Broward County public schools to educate school aged children about the environment and their role in protecting and preserving natural resources for the future. Through this partnership, representatives from environmental agencies speak at Broward County public schools, and try to instill an interest in environmental careers in students. In addition, Broward is educating its residents through their website which promotes “Go Green” efforts⁵. In Sarasota County, North Port High school is host of the first school fuel cell⁶ in the United States and has included hydrogen energy education as a part of the science curriculum. Collier County conducted a one day Green Energy Conference⁷ with five experts from around the country. Pinellas County teaches energy efficient housing to contractors and the public. Alachua County hosted a seventeen month long process of weekly and sometimes daily community discussions of their community challenges and community opportunities.

⁴ Chicago Climate Exchange (CCX) is North America's only cap and trade system for all six greenhouse gases, with global affiliates and projects worldwide. <http://www.chicagoclimatex.com/index.jsf?showSection=/about/>

⁵ <http://www.broward.org/gogreen/>

⁶ A fuel cell is an electrochemical conversion device. It produces electricity from fuel.

⁷ Green energy is a term used to describe sources of energy that are considered to be environmentally friendly and non-polluting, such as geothermal, wind and solar power.

Community Activities & Incentives

Another way in which counties are generating involvement from their residents is through community activities and incentives. Broward County has established Water Cleanup Day and an office paper waste reduction program. When hosting events, Broward contracts local business sponsors, and prizes (such as four tickets to Disney World) have been given away. Broward has established “Green Thursdays” to encourage employees and the public to use transit at least one day a week. By incentivizing participation, Broward has increased community involvement. Scholarships are offered to students who come up with innovative ideas. Broward has also targeted one of its largest sources of revenue, tourism. Hotel guests are greeted with environmentally friendly messages, and the Convention and Visitors Bureau (CVB) supports the Florida Green Lodging Program.

Sarasota County has built more sidewalks to promote walkability, reducing the number of vehicles on the road. Sarasota employees have access to a state sponsored commuter services program that provides commute reduction support through ride-sharing, vanpools, transit information, and emergency ride home. Collier County has instituted a policy requiring all “green” cleaning products in county buildings. Collier has built additional sidewalks on the Main Government Complex, instituted a “turn it off policy”, and is actively promoting telecommuting. In Pinellas County, all affordable housing is Energy Star Certified⁸. Natural lighting and energy efficiency is encouraged in all buildings throughout Pinellas, and the county has expressed additional interest in solar energy. Lee County efforts to educate residents regarding the cost involved in consuming energy resources have resulted in citizens being more willing to assist in energy reduction efforts.

County Fleet⁹

Many counties are focusing on their fleets to help reduce fuel consumption costs. Broward County has added alternative fuel vehicles in their general fleet. As of February 2007, Sarasota County has had ten hybrid¹⁰ Sarasota County Area Transit (SCAT) buses in service. Collier County government has purchased a hybrid utility vehicle. Since November 2000, Pinellas has been converting vehicles to biodiesel. Alachua County has purchased hybrids for the county fleet. One of Hillsborough County’s initiatives is to purchase hybrid vehicles.

There are a total of 4,502 hybrids and alternative fuel vehicles Florida’s county fleet. Polk owns 385 flex fuel vehicles and 6 hybrids. Orange County owns 109 flex fuel vehicles and 42 hybrids.

⁸ “To earn the ENERGY STAR, a home must meet strict guidelines for energy efficiency set by the U.S. Environmental Protection Agency. These homes are at least 15% more energy efficient than homes built to the 2004 International Residential Code (IRC), and include additional energy-saving features that typically make them 20–30% more efficient than standard homes.” http://www.energystar.gov/index.cfm?c=new_homes.hm_index

⁹ See Appendix and B of this report for more information.

¹⁰ Hybrid bus technology is similar to that used in hybrid cars and trucks, with options for both parallel and series drive train designs. These buses employ similar technology including regenerative braking, electric motors, and battery storage. One main difference is that most hybrid buses are coupling diesel-fueled engines with electric motors instead of the typical gasoline-electric hybrid configurations available in light duty vehicles. Maximizing the benefits from these buses requires optimizing the hybrid system for the transit bus routes, which might be affected by the terrain the bus travels or whether the bus frequently travels at freeway speeds or stays on city streets. <http://www.hybridcenter.org/hybrid-transit-buses.html>

Okaloosa and Dixie Counties own 10 and 4 flex fuel vehicles respectively. But Miami-Dade County is truly in the lead, with 457 hybrids and 940 flex fuel vehicles.

Counties are using more than 17,000,000 gallons of Biofuels annually. Sarasota County is purchasing a total of 1,200,000 gallons of biodiesel annually, and Palm Beach County is purchasing 2,100,000 gallons of biodiesel annually. Other counties purchasing biodiesel include Alachua, Brevard, Collier, Duval, Leon, Orange, and Pinellas. Several counties throughout the state of Florida have purchased ethanol. Miami-Dade and Orange Counties purchase the greatest amounts of ethanol annually, 8,400,000 and 1,850,000 gallons per year respectively. Other purchasers of ethanol include Seminole, Sarasota, Brevard, Orange, Sumter, Duval, Palm Beach, Collier, and Gulf. St. Johns is the only county that is producing biodiesel, at a rate of 182,000 gallons annually.

Conclusion

The Florida Association of Counties is excited about the energy efficiency and conservation efforts of our members. We have created an Energy Independence Work Group of several County Commissioners and county staff so that we can continue to make these issues a priority. We look forward to continuing to work with the Legislature on energy policies that will benefit all Floridians.

Appendix A

Hybrids and Alternative Fuel Vehicles in County Fleets						
County	Hybrids	Flex Fuel ⁱ	Biodiesel ⁱⁱ	Electric	Hydrogen	Propane
Alachua	27					
Brevard		6				
Charlotte	4					
Collier	7	34	150			
Dixie		4	20			
Duval	1	500	300			
Escambia	16	17				
Gulf	1					
Lee	12 ⁱⁱⁱ					
Leon	1	10	221			
Marion	5	11				
Miami-Dade	457	940				
Okaloosa		10				
Orange	42	109	653	2	2	
Palm Beach	6	40	147			
Pinellas	1	73	14			
Polk	6	385		3		1
Sarasota	14	57	226			
Seminole	6					
St. Lucie	1					
Sumter			4			
TOTALS	607	2916	1735	5	2	1
Total Number of Hybrids and Alternative Fuel Vehicles in County Fleets						4,502

ⁱ Flex fuel vehicles are designed to run on gasoline or a blend of up to 85% ethanol (E85). Except for a few engine and fuel system modifications, they are identical to gasoline only models.

<http://www.fueleconomy.gov/feg/flextech.shtml>

ⁱⁱ Diesel fuels are generally capable of running on biodiesel with no modifications. Most figures in this column represent vehicles that are currently running on biodiesel. Figures with an asterisk indicate vehicles that are intended for use with biodiesel as it becomes available locally.

ⁱⁱⁱ 11 electric/gasoline; 1 hydrogen/gasoline

Appendix B

Biofuels Purchase and Production			
County	Ethanol Purchased ^{iv}	Biodiesel Purchased ^v	Biodiesel Produced ^{vi}
Alachua		350,000	
Brevard	625,000	386,000	
Collier	12,000	600,000	
Duval ^{vii}	20,000	216,000	
Gulf	1,200		
Lee ^{viii}			
Leon		186,000	
Miami-Dade ^{ix}	8,400,000		
Orange	1,850,000	720,000	
Palm Beach	70,000	2,100,000	
Pinellas		10,000	
Sarasota	395,000	1,200,000	
Seminole	330,000		
St. Lucie ^x			
St. Johns			182,000
Sumter	70,000		
TOTALS	11,473,200	5,768,000	182,000
Total Gallons of Biofuels Purchased and Produced Annually			17,423,200

^{iv} Gallons of ethanol blends purchased annually.

^v Gallons of biodiesel blends purchased annually.

^{vi} Gallons produced annually.

^{vii} The city of Jacksonville is currently in the process of permitting its own biodiesel production facility, and will be making its own biodiesel soon.

^{viii} Lee County recently began purchasing biodiesel, and the county is currently reviewing proposals to produce biodiesel as well. Lee is also developing a vehicle that uses a hydrogen generator to supplement unleaded fuel. The generator is powered by distilled water, and uses only two gallons of water over six months. They have increased miles per gallon from 30 to 19.5 and hope to test the same technology on diesel vehicles.

^{ix} Miami-Dade plans to begin purchasing biodiesel for its mass transit buses in 2009.

^x St. Lucie plans to begin purchasing biodiesel in the near future.



Post Office Box 549
Tallahassee, Florida 32302
Phone: (850) 922-4300
www.fl-counties.com