



Implementation Table

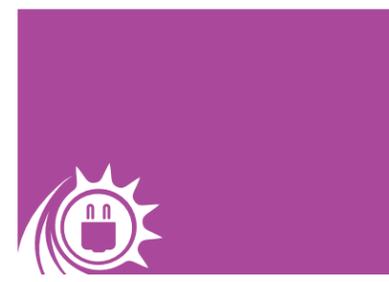
The Implementation Table contains actionable and measureable initiatives designed to achieve our 2015 sustainability goals. As *GreenPrint* is the umbrella for many existing plans, existing sustainability initiatives are included when deemed critical to accomplishing the goal area strategy. Other initiatives were developed through the planning process to address specific sustainability challenges or to expand on strengths. The Planning Process and Acknowledgements chapters highlight that our effort to identify and develop initiatives has been collaborative. It represents the culmination of work completed by the Mayor's Sustainability Advisory Board, the Interdepartmental Team, the Climate Change Advisory Task Force, community stakeholders, cities, the Southeast Florida Regional Climate Change Compact partners, and of course the core planning team. Miami-Dade County is the implementation lead on many initiatives and others are owned by community stakeholders.

The Implementation Table is organized by each *GreenPrint* Goal Area

The table presents information for each initiative such as the lead entity and partners (internal or external to Miami-Dade County government), funding scenarios, legislative action needed, key five-year milestones, impact on carbon emissions or the value of carbon storage, and performance indicators and targets. It is our action plan and will be used to monitor progress and determine success.

Mutually Beneficial and Inter-related Goals

The sustainability pillars are overlapping. Benefits in one goal area are often inter-related with benefits in another. Although there are seven different goal areas, the plan is holistic and the order of the goals is purposeful...starting with strong leadership, connections, and commitment to ultimately creating healthy communities. Each area contributes to a solid foundation for the Climate Change Action Plan to adapt and reduce our greenhouse gas emissions. Plans are important, but implementation is crucial for a sustainable Miami-Dade County.





Water and Energy Efficiency

Initiative	Lead & Partners	Funded and Unfunded Costs		Funding Sources	New Legislative Action	Milestones	Emissions Impacts	Performance Indicators and Targets
		Capital	Operating					
STRATEGY: Reduce energy and water consumption through increasing efficiency								
13. Continue to implement the Water Use Efficiency Plan and the Non-Revenue Water Loss Plan initiatives to meet established reduction targets	<p>Lead Water and Sewer Department (WASD)</p> <p>Partners Office of Sustainability (OOS)</p>	<p>Funded: Water Conservation Approximately \$1.5 million for water saving devices. Water efficiency audits</p> <p>Unfunded: Replacement and repair of piping for water loss Water audit retrofits</p>	<p>Funded: Water Conservation outreach and audit reduction</p>	WASD revenue	No, however code changes may be needed to ensure increased water efficiencies such as rainwater harvesting and new construction that does not require 100% landscape irrigation	<p>Water use efficiency plan Year 1: Implement plan to reach water efficiency reduction target (1.5 MGD for 5 years). Implement the water efficiency audit program: Restore program to 150 homes per year Year 2: Expand program to reach 200 homes per year, 50 commercial sites per year and 10 industrial sites (or a combination thereof) Year 3-5: Develop monitoring mechanism to track water retrofits undertaken and associated reductions</p> <p>Non revenue water loss reduction program Year 1-3: Perform audits, meter testing and Pilot projects aimed at reducing annual real water and apparent water losses Year 4-5: Develop and implement leakage reduction plan and evaluate plan effectiveness Future: Expand plan and encourage wholesale customers to implement similar programs</p>	16,000 mt CO ₂ over five years	<p>Audit performance indicators would be based on funding. Number of audits Estimated annual water savings: 3.2 billion gallons per year Estimated annual cost savings Estimated annual electricity savings in kwh: 3.6 million kWh per year retrofits performed post audit</p>
14. Incentivize energy efficient development	<p>Lead Building and Neighborhood Compliance (BNC) and</p>	Existing resources and funding TBD based on incentive mechanisms		TBD based on recommendations from Sustainable Code and Permitting Project (EECBG)	May require BCC action	<p>Existing Buildings Year 1: Implement recommendations from Sustainable Code and</p>	Year 1-5: Residential Sector: 583 mt CO ₂ e (over 5	Estimated annual electricity savings



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prioritizing walkable, transit-oriented areas	<p>Building Code Compliance (BCCO)</p> <p>Partners Office of Sustainability (OOS) Builders Association of South Florida (BASF) Latin Builders Association of South Florida (LBA)</p>			Project)		<p>Permitting Project (EECBG Project) pertaining to sustainable development.</p> <p>Year 1-2: Develop incentive package for property owners to incorporate high energy performance strategies in renovation/expansion projects.</p> <p>Year 2-5: Market program to property owners through website and/or educational workshops</p> <p>New Construction</p> <p>Year 1: Implement recommendations from Sustainable Code and Permitting Project (EECBG Project) pertaining to sustainable development</p> <p>Year 1-2: Develop inspectors training program in order to attain one hundred percent compliance with the Florida Energy Code.</p> <p>Year 2-5: Enforce compliance and market green building rating standards.</p>	<p>years)</p> <p>Commercial Sector: 1,950 mt CO₂e (over 5 years)</p>	<p>Residential Sector: 209,000 kWh per year;</p> <p>Commercial Sector: 699,000 kWh per year</p>
15. Implement EECBG projects	<p>Lead Office of Sustainability (OOS)</p> <p>Partners Department of Environmental Resource Management (DERM), General Services</p>	<p>Funded thru 2012</p> <p>Unfunded beyond 2012</p>	<p>Department of Energy's Energy Efficiency and Conservation Block Grant (EECBG) program</p>	<p>Yes – adoption of federal legislation to appropriate EECBG continuation funding</p>	<p>Years 1-3: 12 projects must be completed by August 2012. Projects listed in the Water and Energy Efficiency Chapter.</p> <p>Years 4-5: No action</p>	<p>54,000 mt CO₂e over five years</p>	<p>Estimated annual electricity savings in kwh: 19 million kWh per year</p> <p>Estimated</p>	



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	Administration (GSA), Libraries, Miami Dade Parks & Recreation (MDPR), Public Works Department (PWD), Water & Sewer Department (WASD), Enterprise Technology Service Department (ETSD), Office of Grants Coordination (OGC), Office of Capital Improvements (OCI), Department of Procurement Management (DPM), Office of Strategic Business Management (OSBM), Government Information Center (GIC), Finance Department							jobs created
16. Promote and create innovative financing for energy efficiency	<p>Lead Office of Sustainability (OOS)</p> <p>Partners Finance Department, PWD (Special Taxing District), BNC, Property Appraiser</p>	Self sustaining depending on mechanism		Federal, local	<p>Year 1: Continue to monitor progress of PACE legislation on a federal level to determine by end of 2011 how program will take shape (specifically, whether it will be PACE or have another structure)</p> <p>Enact Energy Program ordinance (leaving room for flexibility in ordinance)</p> <p>Year 2: Form financing mechanism for voluntary energy efficiency and renewable energy program</p> <p>Year 2-5: Develop program out; MDC's role will be a facilitator as opposed to a program administrator</p>	<p>Residential Sector savings: 3,100 mt CO₂e over 5 years</p> <p>Commercial Sector savings: 12,000 mt CO₂e over 5 years</p>	<p>Estimated annual electricity savings in kwh: 1 million kWh per year</p> <p>Estimated jobs created</p>	



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STRATEGY: Improve energy planning through public-private partnerships								
17. Create a Miami-Dade Energy Alliance with a diverse group of stakeholders to implement sustainable energy and building management system retrofits and practices that conserve energy, natural resources, and provide reinvestment savings	<p>Lead Initiated by the County with a diverse group of internal and external stakeholders. Leadership of the group could be rotated year to year to the different external stakeholders</p> <p>Partners Miami-Dade County Municipalities, Florida Power and Light (FPL), Gas companies, Clean Cities, Building Owners & Managers Association (BOMA), General Services Administration (GSA), Florida Green Building Coalition (FGBC), US Green Building Council (USGBC), Miami Dade County Schools, Other County Departments, Local Universities</p>	Capital	Operating	To be determined though implementation		<p>Year 1: Form the Alliance. Identify and recruit a group of community stakeholders</p> <p>Year 2: Hold meeting and develop agenda and strategies Collaborate with utilities to for smart grid initiatives</p> <p>Year 3: Identify feasible retrofit/energy performance improvement projects and how to fund them</p> <p>Year 4-5: Implement projects and track their energy and financial benefits</p>	This will be estimated using the multiplier factor of 2 and emissions reductions from the campaigns initiative. 190,00 mt CO ₂ e over 5 years	
STRATEGY: Continue water and energy efficiency and conservation campaigns								
18. Continue to implement current campaigns and pursue additional funding	<p>Lead Water and Sewer Department (WASD), Office of Sustainability (OOS)</p> <p>Partners Government Information Center(GIC), Department of Environmental Resources Management</p>	Water Campaign: Total Budget: \$223,000 Web SLA: \$96,000 Marketing: \$127,000	Water conservation programs are funded through end of FY2010 and will continue to be funded by WASD at a lesser level. For the energy conservation	The water conservation program is funded through ratepayer's fees and grants from the SFWMD. The energy conservation projects are funded by the federal government through the Department of Energy's Energy Efficiency and Conservation Block Grant	Yes . Adoption of federal legislation to ensure EECBG continuation funding is required past the initial three	<p>Year 1: Allocate funding across existing energy efficiency (OOS EECBG) and water efficiency (DERM) outreach programs and Implement workshops and campaigns</p> <p>Year 2-5: If possible, expand these programs</p>	190,000 mt CO ₂ e over 5 years	<p>Estimated water savings: 230,000 gal per year</p> <p>Estimated annual fuel savings in gallons: 240,000 gal UNL per year</p>



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	(DERM) Consumer Services (Ag Extension Center), Solid Waste Management (SWM), Public Library System, Dream in Green, Florida Power and Light (FPL)	programs, funding needs met for the next two fiscal years or until September 30, 2012. Additional funding for both programs need to be identified.		(EECBG) program.	years	to include greater cross-sections of the economy (ie, residential, commercial and industrial sectors) and continue to Implement workshops and campaigns		Estimated annual electricity savings in kwh: 58 million kWh per year
STRATEGY: Expand alternative fuel (bio-diesel/waste-based bio-diesel) and renewable energy industries								
19. Explore partnerships with large public and private landowners/entities to implement alternative fuel/energy parks and incentivize public and private use	<p>Lead County Executive Office(CEO), Office of Sustainability (OOS)</p> <p>Partners Office of Economic Development & International Trade (OEDIT), DERM, Beacon Council, Potential private sector partners TBD</p>	Within existing resources		TBD through implementation	TBD through implementation	<p>Year 1: Work with OEDIT/Beacon Council to determine what partnerships can be explored</p> <p>Year 2-3: Identify and foster opportunities for partnership with renewable fuel/energy companies</p> <p>Year 4-5: Explore how MDC can facilitate development of local renewable fuel/energy production</p>		TBD through implementation
20. Incentivize local and sustainable alternative energy/fuel industries, and enact legislation to remove obstacles and stimulate the industry	<p>Lead County Executive Office (CEO) Department of Environmental Resources Management (DERM), Solid Waste Department (SWD), Water and Sewer Department (WASD)</p> <p>Partners Office of Sustainability (OOS), Office of Economic Development & International Trade (OEDIT), Florida Power and Light (FPL),Beacon Council</p>	Unfunded			Pursue Black and yellow grease legislation; if not possible, develop voluntary program for separation	<p>Year 1-2: Work with OEDIT/Beacon Council to explore tax incentives Create incentives Develop tax incentives for renewable energy/fuel companies Develop marketing/recruitment program for renewable energy/fuel companies and assist process to ensure that business plans are sustainable and to help stimulate market</p> <p>Year 3-5: Implement</p>	TBD based on incentives created	TBD based on incentives created



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STRATEGY: Be government leaders in energy, fuel and water efficiency								
21. Develop and implement a government energy efficiency master plan	<p>Lead Office of Sustainability (OOS)</p> <p>Partners All (through energy liaisons)</p>	<p>Plan development within existing staff resources</p> <p>Funding may be needed for implementation</p>		No	<p>Year 1-2: Develop framework for plan (QA/QC on baseline and electricity data collection process) and form Energy Conservation Liaisons from all departments Write and distribute plan that empowers departments to monitor and manage their electricity use Year 3-5: Implement reduction strategies identified in plan</p>	85,000 mt CO ₂ e over 5 years	<p>Estimated annual electricity savings in kwh: 30 million kWh per year</p> <p>Percentage of buildings benchmarked annually = 20%</p>	
22. Continue to implement Energy Star Portfolio Manager Benchmarking of County facilities	<p>Lead All Miami-Dade County Departments</p> <p>Partners Office of Sustainability (OOS)</p>	<p>Staff time and training of Energy Conservation Liaisons. Additional funding required to implement retrofits</p>		No	<p>Year 1: Reactivate Energy Liaisons committee and train them on the Energy Star process Year 1-5: Benchmark a minimum 20% of MDC building per year (100% by 5th year)</p>	TBD through implementation	Percentage of buildings included in Miami Dade County Energy Star portfolio	
23. Develop incentives for County employees to save energy through the Idea Machine	<p>Lead Human Resources (HR), Office of Sustainability (OOS)</p> <p>Partners All County Departments</p>	None	County Idea Machine	No	<p>Year 1: Create a process through the Idea Machine. Year 1-5: Implement</p>	TBD through implementation (based on ideas)	Number of pursuable ideas submitted	
24. Create a countywide energy reinvestment fund to capture savings from energy efficiency projects and reinvest in new energy efficiency projects, making the	<p>Lead Office of Sustainability (OOS), Office of Strategic Budget and Management (OSBM)</p> <p>Partners All County Departments</p>	<p>Unfunded Capital Cost: \$1 million in loan capital</p>	To be determined	No	<p>Year 1: Set up reinvestment fund including repayment mechanism; develop application package and selection process Year 1-5: Award first tranche of loans and perform retrofits Collect payments to recharge</p>	TBD through implementation	<p>Number of projects</p> <p>Energy efficiency</p>	



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EECBG program financially sustainable						fund; begin new application cycle, reissue loans, repeat		
25. Retrofit government facilities according to water efficiency audit recommendations	<p>Lead Office of Sustainability (OOS), Water and Sewer Department (WASD)</p> <p>Partners All County Departments</p>		\$180,000 for 39 audits \$758,730 for implementation of the recommendations	Funding required to continue auditing County facilities and to implement recommendations	No	<p>Year 1: Secure funding for audits and implementation or recommendations</p> <p>Year 1-2: Prioritize buildings to be audited</p> <p>Year 2: Perform audits</p> <p>Year 3-5: Complete retrofits and track savings</p>	18 mt CO ₂ e over 5 years	<p>TBD based on retrofits implemented</p> <p>Number of audits completed</p> <p>Estimated annual electricity savings in kwh: 4,000 kWh per year</p> <p>Estimated annual fuel savings in gallons: 150 gal of diesel equivalent per year</p> <p>Estimated water savings: 3.5 million gal per year</p>
26. Continue fuel reduction and monitoring programs such as Chicago Climate Exchange	<p>Lead Office of Strategic Business Management (OSBM)</p> <p>Partners Department of Environmental Resources Management (DERM), County departments using fuel for operations</p>		Operating/Funded; costs fluctuate over length of 6 year membership with expected annual average cost of \$71,000	Fleet Operations Fund General Fund	Yes, for membership continuance	Years 1-5: Reduce emissions 1.5% annually relative to baseline year 2000	25,000 mt CO ₂ e over 5 yrs assuming renewal	Yearly emissions report
27. Continue to transition	<p>Lead General Services</p>		Within existing budgets	Department budgets	No	Year 1: Prioritize deployment of existing	TBD in implementation	# of active hybrid



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fleet to hybrid electric vehicles	Administration (GSA) Miami Dade Transit (MDT) Partners Additional County departments with fleet					hybrid vehicles Year 2-5: Continue to transition transit fleet to hybrid and expand transit to increase ridership		vehicles: 329 # of inactive hybrids made active: 103 # of hybrid buses purchased: 254 Fuel reduction: 76,000 gallons of DSL/yr; 33,000 gallons of UNL/yr
28. Continue to purchase hybrid-hydraulic diesel garbage trucks	Lead Solid Waste Management (SWM) Partners General Services Administration (GSA)	Capital: \$380,000 per truck Operating: \$13,918 per truck		SWM budget	No	October 2011 for purchase of 10 additional trucks. 126 trucks by 2015	2,700 mt CO ₂ e over 5 years	Estimated annual fuel savings in gallons of diesel: 57,000 gallons per year Trucks Purchased: 126 over five years (10 in Year 1, then 26 each additional year for Years 2 - 5)
29. Create a process to purchase biodiesel that complies with Environmental Protection Agency's biodiesel protocol which requires a minimum 50% GHG lifecycle reduction	Lead Department of Procurement Management (DPM) Partners County Executive Office (CEO) General Services Administration (GSA) Miami Dade Transit (MDT) Office of Sustainability (OOS)	Within existing resources		Within existing resources	No	Year 1 and 2: Develop a procurement process that requires vendor of biodiesel to disclose country of origin and feedstock of biodiesel being purchased.	TBD based on biodiesel purchased	Achievement of milestones



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30. Develop a process that facilitates delivery of diesel fuel to Miami International Airport from Port Everglades through existing aviation fuel pipeline	<p>Lead Miami-Dade Aviation Department (MDAD)</p> <p>Partners General Services Administration (GSA) Private suppliers</p>	<p>Capital cost is \$2 million to upgrade existing tank farm.</p> <p>This cost would be paid for up front by private vendor but could be offset through incentivized lease with the County. Operational costs TBD.</p>	<p>By private vendor through procurement agreement</p>	<p>Yes. Board of County Commission (BCC) action.</p>	<p>Year 1: Hold an “expression of interest meeting” with potentially interested parties Year 1-2: Release the Request for Proposal Year 2-3: Award contract</p>	<p>210 mt CO₂e over 5 years</p>	<p>Estimated annual fuel savings in gallons of diesel fuel: 22,000 gallons per year</p>	