

**The Village of Key Biscayne Goes Green:
What Government Can Do to Increase Energy Efficiency and Conserve Resources**

Timeline and Budget Estimate
Prepared for the Village Council and Village Manager Jackie Menendez
by
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June 7, 2007

The agenda package for the June 5, 2007, Village Council meeting included an overview of action items the Village can take to comply with the non-binding provisions of the U.S. Conference of Mayors Climate Protection Agreement. I asked for approval to implement the plan beginning in June 2007. Council requested a timeline and budget estimate prior to consideration for approval. This report was prepared for the Special Council Meeting scheduled before the budget workshop on June 12, 2007.

I will coordinate the program as part of my consulting work for the Village. The proposal enlists the services of Skyline Management Group, including an in-house LEED (Leadership in Energy and Environmental Design) green building expert, and Roberta Fernandez, a Tampa-based environmental consultant who assists municipalities in calculating their carbon footprints and developing carbon emission reduction plans. Estimates are given for outside personnel costs and ICLEI membership. Village staff time and unit costs of expendable supplies/ materials are not included.

Short-term items in FY 2007 (0-3 months to start) - \$1,540.00 total estimated cost:

ITEM	ESTIMATED COST
1. Conduct energy audits and interpret results <ul style="list-style-type: none"> a. Request energy audits immediately from FPL for all municipal buildings (Village Hall, Community Center, Fire Station/Council Chamber). b. Work with Skyline Management Group to interpret audit results and conduct further surveys of Village energy/resource use in buildings and public areas, and by Department, as needed. 	FREE service from FPL \$500.00 Skyline expert staff time Village Staff time
2. Calculate the Village's carbon footprint. <ul style="list-style-type: none"> a. Retain the services of Roberta Fernandez, a consultant in Tampa, to help calculate the footprint and develop a emissions reduction plan. b. Obtain membership in ICLEI – Local Governments for Sustainability's Cities for Climate Protection Campaign (CCP) to access their emissions analysis software program and footprint reduction strategies (see attached PDF file for an overview of the program and benefits of participation). c. Gather data required for ICLEI emissions analysis that has not been collected in Item 1. 	\$440.00 consulting fee (8 hours consulting at \$30/hour plus travel expenses of \$200) \$600.00 per year Village staff time Village staff time Skyline staff time

d. Enter data into ICLEI program. e. Publicize efforts on Village website; post initial carbon footprint measurements.	Village staff time Village staff time
3. Implement easy energy savers: a. Replace incandescent bulbs with compact fluorescent light bulbs (CFLs) as opportunities arise. b. Instruct staff to turn off lights when leaving a room. c. Adjust thermostats seasonally.	Determine initial cost vs. savings over time as part of Green Initiative FREE FREE
4. Implement Village-wide "3 Rs" Program (Reduce, Reuse, Recycle) in public areas. a. Place containers for separating recyclable paper, containers, toner cartridges, etc. in offices, conference rooms, kitchens and public areas. b. Provide recycling containers in outdoor public areas where possible. c. Begin program to encourage and reward 3 Rs behavior in Village departments that do and do not currently recycle.	FREE or minimal cost Village staff time in cooperation with Waste Management (Public Works staff has initiated program) FREE or minimal cost FREE
5. Review Village recycling program a. Curbside service is provided as part of our solid waste contract with Waste Management Inc. Investigate fate of recyclables. b. Encourage greater participation in curbside recycling by having a reserve of extra recycling bags available at Village Hall for pick-up by residents. c. Investigate feasibility and cost of coordinating hazardous waste/electronic waste pick-up days in the Village with Miami-Dade County and/or approved vendors.	FREE Village staff time FREE Village staff time

Medium-term to long-term items in FY 2008 (3+ months to start) - \$1,700.00 to \$2,200.00 estimated cost (higher amount is if a water use consultant is retained):

ITEM	ESTIMATED COST
1. Calculate the Village's carbon footprint (cont'd) and develop a strategic goal-based energy efficiency plan: a. Using results of calculations made with the ICLEI software (see above), set reduction goals with timetables for the Village public areas with assistance from Roberta Fernandez and ICLEI. b. Implement public awareness program for individual carbon reduction (participation opportunities for	\$600.00 for consultant for FY 2008 (20 hours at \$30/hour plus travel expenses of \$300) Village staff time

<p>residential and commercial properties).</p> <p>c. Post footprint measurements on the Village website.</p>	<p>Involve FPL to offset costs</p>
<p>2. Integrate carbon footprint reduction goals into a strategic energy efficiency implementation program.</p> <p>a. Work with Skyline Management Group staff, including their LEED expert, to articulate options for the extent and/or timing of new or improved use of green products and practices (utilities, materials expendables, etc.) in existing and new buildings.</p> <p>b. Implement energy savers, for example:</p> <ol style="list-style-type: none"> 1) Replace incandescent bulbs with compact fluorescent light bulbs (CFLs). 2) Install motion sensor light switches. 3) Install programmable thermostats. 4) Replace existing HVAC systems with highest-efficiency models 	<p>Village staff time</p> <p>\$500.00 Skyline expert staff time</p> <p>Determine Initial cost vs. savings over time as part of Green Initiative.</p>
<p>3. Implement Village-wide Green Purchasing policy. Each department currently does its own purchasing and vendors are paid by the Finance Department.</p> <p>a. Review supply lists and find most green product alternatives.</p> <p>b. Consider centralizing efforts to reduce duplication, waste and cost (materials and delivery).</p>	<p>Village staff time</p>
<p>4. Review water use in public areas: Assess current Village irrigation program vs. water needs of plantings.</p> <p>a. Promote zoned plantings (plant water-hungry items near each other) and xeriscaping to save water and money in this era of water restrictions.</p> <p>b. Develop resident-friendly plan showing extent of planned purple pipe (reuse water) irrigation.</p> <p>c. Explore methods for rainwater harvesting and use.</p>	<p>Village staff time combined with outside consulting advice if necessary (\$500.00 estimate for consulting fees)</p>
<p>5. Coordinate regular meetings with Miami-Dade County, City of Miami and other municipalities to share ideas/solutions/coordinated efforts</p>	<p>Local governments take turns hosting meetings to share costs</p>
<p>6. Communicate program efforts and results to the community. Encourage individual participation among Village residents, business owners and others.</p>	<p>Village staff time; recruit community partners to help offset costs</p>
<p>6. Renew yearly ICLEI membership.</p>	<p>\$600.00</p>