

**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 for the plan as a prerequisite to consideration for approval. This report was prepared for the Special Council Meeting scheduled before the budget workshop on June 12, 2007. Cost estimates are preliminary and may change before the September budget hearings.

Short-term items (0-3 months to start; within FY 2006-2007):

ITEM	ESTIMATED COST
1. Conduct energy audits and interpret results <ul style="list-style-type: none"> <li>a. Request energy audits immediately from FPL for all municipal buildings (Village Hall, Community Center, Fire Station/Council Chamber).</li> <li>b. Work with Skyline Management Services to interpret audit results and conduct further surveys of Village energy/resource use in buildings and public areas, and by Department, as needed.</li> </ul>	FREE service from FPL  \$?? Skyline expert staff time Village Staff time
2. Calculate the Village's carbon footprint. <ul style="list-style-type: none"> <li>a. Retain the services of Roberta Fernandez, an environmental consultant in Tampa, to help develop overall Village Green plan and begin to calculate the footprint.</li> <li>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).</li> <li>c. Gather data required for ICLEI emissions analysis that has not been collected in Item 1.</li> <li>d. Enter data into ICLEI program to calculate Village carbon footprint.</li> <li>e. Publicize efforts on Village website; post initial footprint measurements.</li> </ul>	\$440.00 (8 hours consulting at \$30/hour plus travel expenses of \$200)  \$600 per year  Village staff time  Village staff time  Village staff time
3. Implement easy energy savers: <ul style="list-style-type: none"> <li>a. Replace incandescent bulbs with compact fluorescent light bulbs (CFLs) as opportunities arise.</li> <li>b. Instruct staff to turn off lights when leaving a room.</li> <li>c. Adjust thermostats seasonally.</li> </ul>	?? Initial cost vs. savings over time??  FREE FREE

<p>4. Implement Village-wide “3 Rs” Program (Reduce, Reuse, Recycle) in public areas.</p> <ul style="list-style-type: none"> <li>a. Place containers for separating recyclable paper, containers, toner cartridges, etc. in offices, conference rooms, kitchens and public areas.</li> <li>b. Provide recycling containers in outdoor public areas where possible.</li> <li>c. Begin program to encourage and reward 3 Rs behavior in Village departments that do and do not currently recycle.</li> </ul>	<p>FREE; Village staff time in cooperation with Waste Management (Public Works staff has initiated program) FREE FREE</p>
<p>5. Review Village recycling program</p> <ul style="list-style-type: none"> <li>a. Curbside service provided as part of our solid waste contract with Waste Management Inc. Investigate fate of recyclables; encourage recycling bag pick-up by residents at Village.</li> <li>b. Investigate feasibility and cost of coordinating hazardous waste/electronic waste pick-up days in the Village with Miami-Dade County and/or approved vendors</li> </ul>	<p>FREE Village staff time</p>

Medium-term to long-term items (3+ months; start in FY 2008):

ITEM	ESTIMATED COST
<p>1. Calculate the Village’s carbon footprint (cont’d) and develop a strategic goal-based energy efficiency plan:</p> <ul style="list-style-type: none"> <li>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.</li> <li>b. Implement public awareness program for individual carbon reduction (participation opportunities for residential and commercial properties).</li> <li>c. Post footprint measurements on the Village website.</li> </ul>	<p>\$900.00 for consultant for FY 2008 (30 hours at \$30/hour plus travel expenses of \$400  Village staff time  Involve FPL to offset costs</p>
<p>2. Integrate carbon footprint reduction goals into a strategic goal-based energy efficiency implementation program.</p> <ul style="list-style-type: none"> <li>a. Work with Skyline Management Services 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.</li> <li>b. Implement energy savers, for example: <ul style="list-style-type: none"> <li>1) Replace incandescent bulbs with compact fluorescent light bulbs (CFLs).</li> <li>2) Install motion sensor light switches.</li> <li>3) Install programmable thermostats.</li> <li>4) Replace existing HVAC systems with highest-efficiency models</li> </ul> </li> </ul>	<p>Village staff time</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> <ul style="list-style-type: none"> <li>a. Review supply lists and find most green product alternatives.</li> <li>b. Consider centralizing efforts to reduce duplication, waste and cost (materials and delivery).</li> </ul>	<p>Village staff time</p>
<p>4. Review water use in public areas: Assess current Village irrigation program vs. water needs of plantings.</p> <ul style="list-style-type: none"> <li>a. Promote zoned plantings (plant water-hungry items near each other) and xeriscaping to save water and money in this era of water restrictions.</li> <li>b. Develop resident-friendly plan showing extent of planned purple pipe (reuse water) irrigation.</li> <li>c. Explore methods for rainwater harvesting and use.</li> </ul>	<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 community, encourage individual participation (residents, business owners)</p>	<p>Village staff time; recruit community partners to help offset costs</p>
<p>6. Renew yearly ICLEI membership</p>	<p>\$600.00</p>