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CHANGE FOR THE BETTER WITH ENERGY STAR

"We selected three energy services companies to work under our guaranteed energy performance contracting program. Rather than having them finance the project at a higher cost, we decided to finance it internally using existing funding mechanisms."

Jaime G. Torrens,
Senior Executive Director,
Division of Energy,
Communications, and
Fiscal Management

ENERGY STAR®

Financing Profile of Success Miami-Dade County Public Schools

Miami-Dade County Public Schools—Stats at a Glance

Finance Vehicle	Tax-exempt lease purchase agreement (via master lease)	
Program Director	Jaime G. Torrens	
Financing	Total amount financed	$ 9.5 million
	Investment per square foot	$3.80/sf
	Financing term	10 years
Cost Savings	Simple payback period	7.9 years
	Annual positive cash flow	$1.2 million
	Total benefit over term	$16.6 million
Energy Savings	Annual energy savings	28 million kWh
Pollution Prevention	Annual CO_2 emissions	48 million lbs.
	Car pollution equivalent	4,860 cars

Focus: This profile showcases how one of the nation's largest school districts improves its facilities and maximizes energy savings by using an existing tax-exempt master lease program to pay for a guaranteed savings performance contract.

Rationale for Efficiency

With a $61 million annual utility budget, Miami-Dade County Public Schools (MDCPS) must carefully manage their energy expenses. This school district is the fourth largest in the country and has one of the most advanced third-party financing programs for its 318 K-12 schools.

Financing Building Upgrades in Miami-Dade County Public Schools

In 1994, having seen other organizations struggle to successfully implement energy efficiency measures, the school district decided to pursue the advantages of a performance contract, while ameliorating risks. Staff developed a plan to finance energy upgrades through guaranteed energy performance contracting (GEPC), using three energy services companies (ESCOs). Rather than finance projects through the ESCOs, however, MDCPS lowered the total project cost by financing the energy upgrades through their existing tax-exempt master lease. The lease was already being used to procure other capital equipment, such as buses, and to fund new school construction and other projects.

The Energy Savings are Real: Miami-Dade County Public Schools' Track Record

Overall, MDCPS have financed approximately $500 million in purchases through the master lease program since 1988, including $9.5 million in energy efficiency measures. The $9.5 million investment yielded operational cost reductions of over $3.5 million in the first 3 years – excess savings that have been used to enhance educational programs.

Creative Financing and Resource Leveraging

The first or "pilot" phase of the district's GEPC program included selecting representative schools, issuing an RFP, choosing the most qualified ESCOs, and installing energy conservation measures in

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18 schools. Once the individual projects were completed, staff began monitoring their performance and verifying that the expected savings were being realized. MDCPS initially worked with three ESCOs to promote competition. Two firms, Siemens Building Technologies and FPL Services, were retained for the second phase.

Of all the district's efforts, the most innovative and productive was its approach to structuring guaranteed energy savings contracts. Rather than use existing energy service agreements offered by the ESCOs, district staff developed a new contract that was applied to the three firms involved. Because the contract requires that savings be proven and documented rather than stipulated, the ESCOs must perform monthly monitoring and verification of actual energy cost reductions–an activity that is included in the overall cost of the project and paid for from the savings. If the recorded savings are less than the guaranteed amount, the ESCOs must reimburse the school district for the shortfall. Also, instead of a traditional performance bond, Chief Financial Officer Richard Hinds and Treasurer Eduardo Alfaro insisted that the ESCOs post a letter of credit to ensure that the district's capital investment was fully protected in the event of under performance.

MDCPS verify compliance with the savings guaranteed in three ways:

- Staff compare actual utility bills to the base year. Diverse adjustments are allowed for changes in energy usage at individual schools, such as expanded educational programs, increases in student population, changes to the physical plant, and weather normalization.
- The energy management system installed at each school detects significant changes in operating schedules that may affect energy usage.
- If necessary, an inspector places monitors on specific equipment onsite to verify actual energy usage. (This has not occurred so far.)

Because of the size of the master lease, the school district has issued Certificates of Participation (COPs). The next COP issue will sell for $128 million, of which about $14.2 million is earmarked for measures to improve the efficiency of lighting, air conditioning, motors, and building envelopes. Money will also be invested in energy management technologies. Energy efficiency improvements have become an increasingly important part of the tax-exempt master lease, rising from about 2 percent of the issue in 1994 to 11 percent in 2001.

MDCPS maintain a strict payback policy for energy retrofits that helps keep financing costs low. Investments in the GEPC program must be recovered within 10 years, including financing and indirect costs. Additionally, the district bases its decisions on life-cycle cost accounting, rather than simple payback, yielding a realistic formulation of the overall value of the projects over the contract term.

Lessons Learned from Miami-Dade County Public Schools

- The existing tax-exempt master lease allowed the district to invest in energy equipment, installation, and monitoring.
- Separating financing from other components of the guaranteed energy savings performance contract lowered the school district's investment costs.
- Strict payback policies and life-cycle cost accounting maximized savings and kept finance costs low, which in turn will allow for a progression of projects until cost-effective measures are implemented in all 318 schools.