

* M-DCPS Eco-Sustainability



A Superintendent Initiative: Learning and Living Green

Millennium Access Platform (MAP) Focused on Environmental Education, and Environmental Awareness and Stewardship



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Launch of Sustainability Initiatives

In 2009 the Superintendent of Schools launched his *Millennial Access Platforms to Third Millennium Learning* which included an Eco-Awareness Platform consisting of two main initiatives:

- (1) implementation of a green education program; and
- (2) projects and programs aimed at achieving a carbon neutral footprint for the District over time.




* M-DCPS Eco-awareness Platform Mission Statement

M-DCPS is committed to providing a world-class education to its students. In doing so, it recognizes and embraces its leadership role in environmental sustainability through implementation of a ‘green education program’ and incorporation of ‘green’ and sustainable practices into its operations to achieve a carbon neutral footprint.



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Eco-Sustainability-9 Focus Areas

- Focus Area 1: Eco-Ed Awareness
- Focus Area 2: Sustainable Procurement
- Focus Area 3: Sustainable Transportation
- Focus Area 4: Sustainable Food and Nutrition
- Focus Area 5: Sustainable Buildings
- Focus Area 6: **Operational Efficiencies:**
 **Reducing, Reusing and Recycling**
- Focus Area 7: Eco-Partnering
- Focus Area 8: Eco-Outreach
- Focus Area 9: Carbon Footprint Assessment Action Plan



Achieving Operational Efficiencies

Quick Overview of Energy Conservation Rebate Program Elements

- ✓ FY 2008-09 set as the baseline year
- ✓ FY 2009-10 was year 1 of program implementation
- ✓ District-wide goal was to reduce energy usage by an average of 10%-15% from the baseline year's approximate consumption of 709 million kwh and reduce costs by approximately \$7-\$8 million (District-wide energy bill in FY 08-09 was roughly \$74 million)
- ✓ Targets were established by the Energy Management Department at each site based on a review of:
 - Size of facility (sq. ft.) and/or # of students served
 - Patterns of usage over time (load factor)
 - Age/condition of facility and condition of relevant systems affecting consumption, if known
 - Special programs/activities affecting consumption, e.g. nighttime vocational education programs



Achieving Operational Efficiencies

Initial Program Visibility

- ✓ Energy Conservation Rebate Program given initial and immediate high visibility by the Office of Superintendent with official launch at his August 2009-10 Opening of Schools Address
- ✓ In his Address, the Superintendent included remarks that clearly articulated the program's objective with specific emphasis on the rebate aspect, i.e. sites beating their assigned kwh consumption target would be eligible to receive 75% of the cost savings related to the delta for their discretionary use



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Achieving Operational Efficiencies

Program Rollout - Initial Requirements

- ✓ Establishment of data warehouse to store electrical consumption in kwh by individual site (relies still today on timely manual entries by Energy Department)
- ✓ Development of IT application to generate monthly graphs for deployment to the individual sites comparing target with actual consumption and tracking rebate amount or overages (Energy Dashboard)
- ✓ Creation of separate 'energy conservation mailbox' to issue and receive all correspondence relayed to the rebate program
- ✓ Issuance of initial Weekly Briefing to Principals explaining the program, expectations and potential rewards (pushed out electronically to all sites)
- ✓ Subsequent issuance of Weekly Briefing updates with energy conservation tips



Achieving Operational Efficiencies

Program Rollout - Parameters

- ✓ Targets issued based on a 10-month period, September through June of the following year, and results are also measured based on that timeframe
- ✓ Decision was made upfront to exclude July and August from the program based on desire to more closely follow school calendar and actual full occupancy of buildings (sites are neither unduly credited or penalized for summer months when most buildings are out of active use)
- ✓ To maintain consistency of measurement and tracking, protocol for capturing data sets the 15th of the month as the trigger for determining the month to which the data will be applied
- ✓ Each year the targets are revisited: for those schools beating the target, their actual consumption becomes their new target; all others retain their initial target



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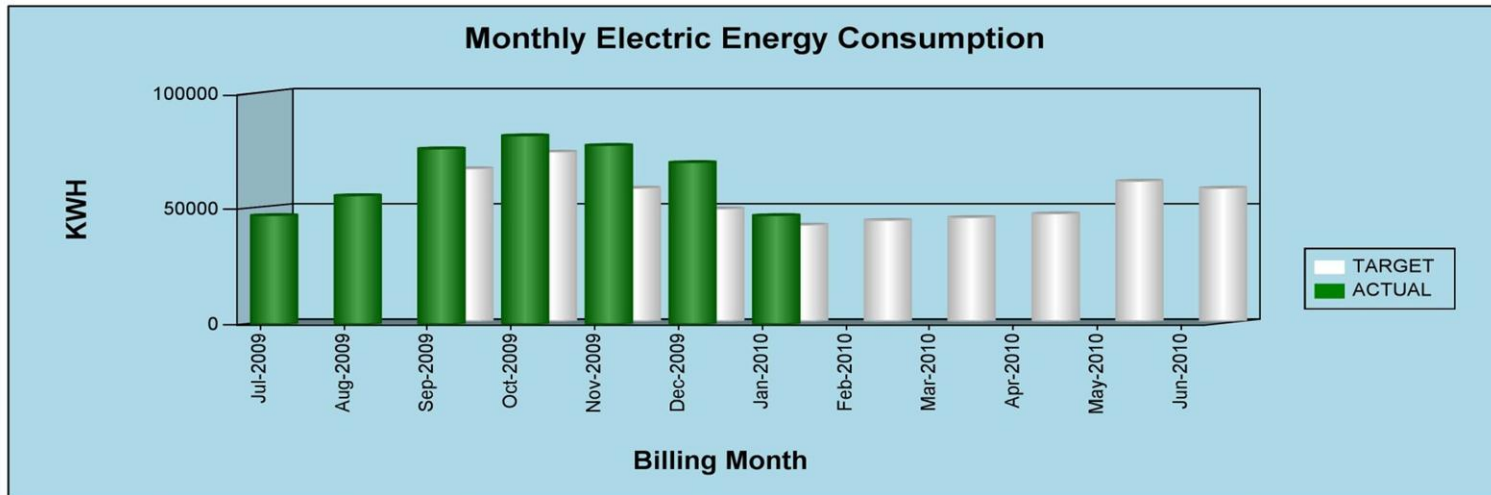
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OFFICE OF SCHOOL FACILITIES

Department of Planning, Design and Sustainability / Department of Energy Management

0441 BLUE LAKES ES - 9250 SW 52ND TERRACE

TARGET (KWH) SEP '09 - JUN '10	BUDGET SEP '09 - JUN '10	FYTD REBATES EARNED
544,782	\$56,112.55	(\$7,287.37)



	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Target	0	0	66504	73746	58038	49062	42024	44064	45288	46920	61098	58038
Actual	47520	56160	76560	82200	78000	70560	47520	0	0	0	0	0
Variance	0.00%	0.00%	-15.12%	-11.46%	-34.39%	-43.82%	-13.08%	0.00%	0.00%	0.00%	0.00%	0.00%

↑ START OF PROGRAM



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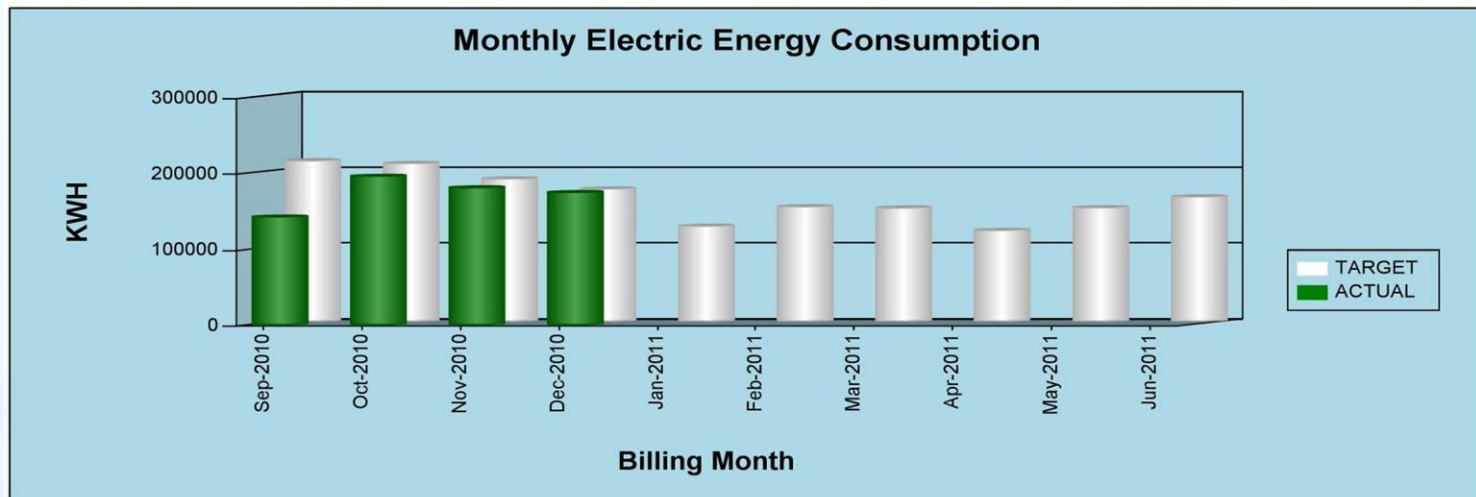
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OFFICE OF SCHOOL FACILITIES

Department of Planning, Design and Sustainability / Department of Energy Management

0092 SUNNY ISLES BEACH COMMUNITY SCHOOL - 201 182 DRIVE

TARGET (KWH) Jul '10 - Jun '11	BUDGET Jul '10 - Jun '11	FYTD REBATES EARNED
1,653,012	\$153,730.12	\$6,478.18



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Target	212976	209304	188904	175644	126480	152184	150552	120972	150756	165240
Actual	143520	197280	182160	175920	0	0	0	0	0	0
Variance	32.61%	5.74%	3.57%	-0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%



Achieving Operational Efficiencies

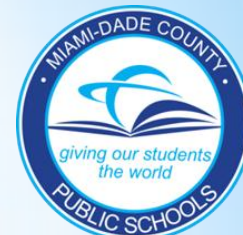
Program Results to Date

- ✓ From 2008-09 (baseline year) through year end 2011-12 (last year is est.), the District is projected to have realized approximately \$14 million in combined cost savings in its budget line item allocation for energy (approx. 50 million kwh)
- ✓ In year one of implementation, 41 schools beat their target and received a combined \$224K in rebates, with another 221 schools also rewarded for reducing their consumption from the prior year, with a combined incentive rebate of over \$157K (total incentive payout of approximately \$381K)
- ✓ In year 2 of implementation, over 70 schools beat their target with an additional 31 schools also rewarded for reducing their consumption from the prior year, with a combined incentive rebate payout of approximately \$430K
- ✓ For 2011-12, yearend reconciliation is on-going; the preliminary indication is that approximately 70 schools beat their targets and will be eligible to receive a rebate

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Program Challenges Going Forward

- Most of the low-hanging fruit has been picked by now, i.e. basic behavior has been modified to the extent possible to reduce consumption, some minor low cost improvements have been implemented, and hard shut downs where possible have been executed during recess periods to curtail and control energy usage
- Without renewed investment in more comprehensive energy efficient projects the level of effort achieved to date will be hard to sustain
- To address this issue, the District is finalizing a Request for Qualifications/Request for Proposals that will seek to pre-qualify and engage Energy Services Companies (ESCOs) to implement energy efficiency retrofit projects in selected District facilities under a guaranteed energy savings program (GEPC)



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Q&A