

**MEMORANDUM**

April 17, 2012

TO: Transportation, Infrastructure, Energy & Environment Committee  
FROM: *KL* Keith Levchenko, Senior Legislative Analyst  
SUBJECT: FY13 Operating Budget: Utilities Non-Departmental Account

**County Council Staff Recommendation: Approve the FY13 Utilities NDA with the following change to the County Executive's recommendation:**

- **Move \$250,000 related to County Government utility payments for non-profit tenants to the Reconciliation List pending further Council review of the issue of the County paying utility costs for non-profit arts tenants of County facilities.**

***NOTE: Agency utility budgets may need to be revised, depending on Council action on the Energy Tax sunset issue.***

Attachments to this Memorandum

- County Executive's FY13 Recommended Budget Section for Utilities (©1-6)
- Executive Summary for FY13 County Agency Resource Conservation Plans (©7-13)
- FY13 County Government (Department of General Services) Resource Conservation Plan (©14-23)

Agency representatives from County Government, Montgomery College, MCPS, M-NCPPC, and WSSC have been invited to attend this worksession. The following officials and staff are confirmed to be attending this worksession:

- David Dise, Director, Department of General Services (DGS)
- Richard Taylor, DGS
- Annette Cheng, DGS
- Marianne Stevenson, DGS
- Eric Coffman, Senior Energy Planner, Department of Environmental Protection
- Angela Dizelos, Office of Management and Budget (OMB)

- Adam Damin, OMB
- Sean Gallagher, Assistant Director, Department of Facilities Management, Montgomery County Public Schools
- Mike Whitcomb, Energy Manager, Department of Central Facilities, Montgomery College

As part of the annual Operating Budget review process, the Council reviews utility costs across all agencies and policy issues associated with utility<sup>1</sup> costs. This review covers utility costs for electricity, natural gas, water & sewer, fuel oil, and propane for the County Government, the College, MCPS, Park and Planning, and the entire bi-County area of WSSC.

Utility costs associated with County Government General Fund departments are included in the Utilities Non-Departmental Account. Utility costs associated with Tax and Non-Tax Supported Special Funds, as well as with the outside agencies, are budgeted separately in each of those funds and agencies. The “Utilities” section from the Recommended Operating Budget is attached on ©1-6.

Agency representatives meet periodically through the Interagency Committee on Energy and Utilities Management (ICEUM) to discuss energy issues, including rate assumption ceilings for budget preparation. Given the volatility of energy and fuel prices, and the unique circumstances of each agency in terms of its short- and long-term contracting practices for energy, adopting specific rates applicable to all agencies is not feasible. However, the rate ceilings provide some helpful guidance to the agencies.

Utility budgets are based on rate assumptions as well as on projected changes in energy consumption at existing facilities and estimated energy requirements for new facilities coming on-line during FY13. Energy efficiency measures are taken into account as well. It is important to note that energy use is also greatly affected by the severity of weather conditions in a given year. The utilities budgets presented here assume a typical weather year.

The outside agencies and DGS recently completed their FY13 Resource Conservation Plans, which summarize energy consumption trends as well as past, present, and planned energy conservation initiatives and their expected impacts in terms of consumption and cost savings. The full DGS Resource Conservation Plan is attached on ©15-24. An Executive Summary, looking at all of the Agency plans, is attached on ©7-14.

### **Fiscal Summary (All Agencies)**

The FY13 budgets for utilities by agency are summarized below.

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<sup>1</sup> Motor fuel costs are not included in the numbers presented in this memorandum. General Fund costs for motor fuels are budgeted in the Department of General Services-Division of Fleet Management Services. Motor fuel costs are also included in the various special funds and outside agency budgets.

**Table 1:  
Utility Costs by Agency**

Agency	Actual			Approved	CE Rec	Change (FY13 vs. FY12)	
	FY09	FY10	FY11	FY12	FY13	\$	%
County Government	34,201,405	34,311,128	37,987,067	37,909,670	33,664,982	(4,244,688)	-11.2%
MCPS	40,350,189	40,664,814	41,329,506	41,687,370	38,315,819	(3,371,551)	-8.1%
Montgomery College	6,236,514	6,906,351	7,711,568	8,467,370	6,560,471	(1,906,899)	-22.5%
WSSC	26,617,000	28,550,000	28,527,669	25,644,000	24,582,052	(1,061,948)	-4.1%
M-NCPPC	3,411,679	3,548,140	3,432,845	4,018,250	3,830,300	(187,950)	-4.7%
<b>Total</b>	<b>110,816,787</b>	<b>113,980,433</b>	<b>118,988,655</b>	<b>117,726,660</b>	<b>106,953,624</b>	<b>(10,773,036)</b>	<b>-9.2%</b>

Note: FY10 actuals shown for County Government are for 11 months of costs instead of 12 due to a change in the timing of year-end close-out practices as a result of the new ERP system.

Overall, utility costs are recommended to decrease substantially by nearly \$10.8 million (or 9.2 percent) from FY12 Approved levels. This is the second straight year of an overall decrease in utility costs. However, the level of decrease varies greatly, with Montgomery College and County Government experiencing the biggest percentage decrease. However, all of the agencies are assuming significant decreases for FY13.<sup>2</sup>

The following chart presents utility costs by type.

**Table 2:  
Utility Costs by Type (All Agencies)**

Type of Utility	Actual			Approved	CE Rec	FY13	Change (FY13 vs. FY12)	
	FY09	FY10	FY11	FY12	FY13	% of Total	\$	%
Electricity	88,230,639	92,665,703	98,012,737	94,917,535	87,036,454	81.0%	(7,881,081)	-8.3%
Water and Sewer	5,653,148	5,199,035	5,758,621	7,514,720	7,597,771	7.1%	83,051	1.1%
Fuel Oil	494,202	561,770	331,242	547,122	1,074,780	1.0%	527,658	96.4%
Natural Gas	16,227,906	15,278,097	14,594,891	14,416,885	11,481,609	10.7%	(2,935,276)	-20.4%
Propane	210,891	275,780	291,164	330,398	318,410	0.3%	(11,988)	-3.6%
<b>Total</b>	<b>110,816,786</b>	<b>113,980,385</b>	<b>118,988,655</b>	<b>117,726,660</b>	<b>107,509,024</b>	<b>100.0%</b>	<b>(10,217,636)</b>	<b>-8.7%</b>

As in past years, electricity costs (approximately 81 percent of the total) and natural gas costs (about 10.7% of the total) account for the bulk of all utility costs. Across all agencies, electricity costs and natural gas costs are projected to decline. The only categories assumed to increase are fuel oil and water and sewer.

### Fiscal Summary: (General Fund Non-Departmental Account)

The Department of General Services (which manages County Government utility costs) is responsible for 247 facilities and about 4.5 million square feet of space.

For the General Fund NDA (which accounts for the tax-supported General Fund portion of the County Government's utility costs), utilities are recommended to decrease by approximately \$2.4 million (or 8.3 percent), as shown in the following chart.

<sup>2</sup> Comparisons between agencies are problematic, given the differences in each agency's energy usage profile and differing opportunities to achieve energy savings. Comparing a particular agency over time is a fairer measure of progress.

**Table 3:  
NDA Utility Costs by Type (General Fund Only)**

Type of Utility	Actual			Approved	CE Rec	FY13	Change (FY13 vs. FY12)	
	FY09	FY10	FY11	FY12	FY13	% of Total	\$\$	%
Electricity	21,571,183	22,927,239	24,441,500	23,991,280	22,630,630	86.5%	(1,360,650)	-5.7%
Water and Sewer	1,675,841	822,039	1,881,230	2,135,590	2,090,500	8.0%	(45,090)	-2.1%
Fuel Oil	96,935	167,465	106,000	104,000	210,000	0.8%	106,000	101.9%
Natural Gas	2,174,604	1,801,882	2,199,260	2,291,450	1,168,730	4.5%	(1,122,720)	-49.0%
Propane	2,457	5,426	2,450	4,060	60,000	0.2%	55,940	1377.8%
<b>Total</b>	<b>25,521,020</b>	<b>25,724,051</b>	<b>28,630,440</b>	<b>28,526,380</b>	<b>26,159,860</b>	<b>100.0%</b>	<b>(2,366,520)</b>	<b>-8.3%</b>

Note: FY10 actuals shown are for 11 months of costs instead of 12 due to a change in the timing of year-end close-out practices as a result of the new ERP system.

Fuel oil and propane are both up substantially in percentage terms. However, electricity (which makes up 86.5 percent of all expenditures) and natural gas (which makes up 4.5% of all expenditures) are both down (5.7 percent and 49 percent respectively).

The Executive’s recommendation (as shown on the chart on ©4) provides a crosswalk from FY12 to FY13. The major changes and some policy issues are discussed below.

Also, the County’s Energy Policy (established under Resolution 16-757 in October 2008) called for the County to achieve 20 percent or more of its energy portfolio from clean energy purchases by 2011, which all of the County agencies have achieved. For FY12 and FY13, County Government is assuming to achieve a 30 percent level of clean energy purchases. The FY13 Executive Summary for the Agency Resource Conservation Plans notes that all of the agencies will meet or exceed the 20 percent policy level in FY13.

### Discussion

#### New Energy Rates for County Government

The County recently finalized a fixed price contract for electricity effective July 1, 2012 through January 2015. The County manages 1,013 electricity accounts, of which 695 are streetlights or traffic signals.

According to the FY13 County Government Resource Conservation Plan (see ©16), this new contract is expected to save approximately \$6.4 million across all County Government electricity accounts and almost \$4.0 million in the Utilities NDA. Most of the savings (nearly \$5.7 million across all County Government) results from a rate change in Pepco Type II and III rates (rates related to facilities) from 0.1124/KWh to 0.0795/KWh (a reduction of 35 percent). Savings in Pepco electricity rates for streetlights and traffic lights are also significant (\$443,615), but lower in percentage terms (a 15.5 percent reduction). Combining the Pepco and Allegheny Power Type 1 and maintenance savings, DGS estimates total savings for its streetlights and traffic lights of \$657,760.

Savings of \$500,000 in the Utilities NDA are also assumed from changes in natural gas rates. This reduction reflects the ten year low in natural gas pricing that DGS expects to capture in a COG contract to be signed this year.

In past years, the T&E Committee has discussed, with Executive staff and MCPS staff,

MCPS' approach of doing more frequent wholesale block purchasing of electricity rather than pursuing long-term fixed price contracts. Fixed price contracts are more sensitive to market timing in that, if your timing is good, you may lock in low rates for your entire electricity portfolio for a long period of time. However, conversely, if you happen to lock in at a high rate, your entire electricity portfolio is subject to high rates for a long period of time. MCPS' approach is more akin to a cash management strategy, where an electricity portfolio is managed on a regular basis (pursuing short, medium, and long-term purchases). This approach, in theory, reduces deviations from average costs over time. One is reducing the risk of "buying high" but also reducing somewhat the potential windfall from locking in large amounts of energy at low rates for a long time as well. The MCPS approach also requires more active management (i.e., more staff time). The County has been looking at the MCPS model, but chose to move forward with the new fixed price contract given the guaranteed savings available based on current rates.

**County Staff recommends that, during this next electricity fixed price period, ICEUM identify different purchasing options that County Government should consider in the future and how these would compare in cost and operation to the current fixed price approach of the County. This suggestion is consistent with the ongoing CARS effort (discussed later) which identified cooperative energy purchasing as a strategy that should be further studied. Consultant services may ultimately be needed to flesh out these different options, and the cost and scope of such a contract should be presented to the Council for consideration.**

#### Fuel/Energy Tax Sunset Issue

Two years ago, the Council approved a major increase to the Fuel/Energy Tax, which was above what had originally been recommended by the County Executive. The increase is scheduled (by legislation) to sunset after FY12. However, the County Executive's FY13 Recommended Budget (including the NDA for Utilities) assumes the sunset does not occur in FY13. Council Staff has asked Executive Staff to identify the savings in overall County Government utility costs and the NDA. When the tax increase was approved in FY11, \$900,000 was added to the NDA, but this was based on rate and consumption assumptions at that time.

The MCPS and WSSC budgets also assume the sunset does not occur. MCPS estimates a savings of about \$2.2 million if the sunset occurs. WSSC staff have been asked to estimate its savings as well.

The Montgomery College budget is in the opposite position in that its budget assumes the sunset occurs. Montgomery College staff estimate the increase in its budget would be about \$400,000 if the sunset does not occur.

Council Staff has asked M-NCPPC staff whether its utilities budget assumes the sunset or not, and what the fiscal implications would be if their assumption were to change.

**Council Staff recommends that, after the Council makes a decision with regard to the sunset issue, agency budgets be adjusted (as needed) for FY13.**

### Gray Courthouse and Public Safety Headquarters

As shown on page 67-4 of the Executive's Utilities NDA recommendation (see ©4), the Utilities NDA for FY13 includes an additional \$3.009 million for energy costs associated with the Gray Courthouse and the Public Safety Headquarters. Combined, these items make up the single largest cost increase affecting the Utilities NDA for FY13.

When the District Court moved to its new building across Route 28, the County assumed ownership of the Gray Courthouse and responsibility for the utilities. The County now occupies three out of four floors. The Sheriff occupies two floors and the County Circuit Court occupies one.

With regard to the Public Safety Headquarters (GE Building), the Department of Transportation is the only occupant (on the 4<sup>th</sup> floor). According to DGS, the construction within the rest of the building is almost complete, and the other departments will start moving in on April 30th and continue through the end of May.

### Utilities Payments for Arts and Humanities Organizations in County-Owned Space

During the FY12 budget process last year, the County Executive recommended, and the Council ultimately approved, \$100,000 in the Utilities NDA to pay a portion of the utilities costs for Imagination Stage (a tenant located in a building which is part of Parking Garage 36 on Auburn Avenue in downtown Bethesda). The minutes from the action last year on May 18 note:

*"This is part of a process to execute a consistent County policy that provides for utilities to be paid by the County government for Arts and Humanities organizations that were selected through a competitive process to operate in County-owned buildings. Mr. Leventhal made the motion, which carried without objection."*

The Council's intent last year was for a policy to be established that would clarify which County tenants are eligible to receive utility assistance and how that assistance would be fairly awarded.

The FY13 Recommended Budget for the Utilities NDA includes a \$100,000 increase for utilities payments for Imagination Stage (for a total of \$200,000 in FY13) plus a new \$50,000 payment of utilities for the Round House Theatre mainstage. However, the Council has not received the policy document referenced in the minutes.

**Council Staff believes the Council's intent last year was clear and that utility payment support in the FY13 Budget should be dependent on the Council having an opportunity to review the County Executive's policy. The Council's Health and Human Services Committee discussed this issue last year and would appear to be the appropriate Committee to review this policy, since the key issue is how best to equitably support arts organizations. Pending this review, Council Staff recommends placing all non-profit utility payments included in the FY13 Recommended Budget (\$250,000) on the reconciliation list.**

Energy Usage Trends

Agency representatives will be available to discuss their specific circumstances, how their energy consumption is trending in FY12, and what their projections are for FY13.

DEP staff have also prepared some interesting charts in the Resource Conservation Plan Executive Summary (see ©8-9), which presents energy usage trends (using BTUs, which covers all sources of energy) over time.

*Energy Consumption by Agency FY07 through FY11 (million BTU)*

	FY07	FY08	FY09	FY10	FY11
DGS	436,801	441,190	446,395	438,319	441,624
MCPS	1,395,463	1,327,831	1,438,491	1,365,029	1,420,741
MNCPPC	98,379	97,994	97,610	91,722	88,893
Montgomery College	176,630	176,630	194,715	192,480	208,520
WSSC	772,643	763,522	Not Reported	793,810	804,270

Another chart below (also from the Executive Summary) shows that County Government facilities have an “energy use intensity” that is about average nationwide. MCPS’ usage is far below the national average for education facilities. Montgomery College (which has a very different energy usage profile from MCPS) also has an energy use intensity below the national average for education facilities. *(NOTE: National Averages are based on the U.S. Energy Information Administration’s Commercial Building Energy Consumption Survey applied across the “typical” building of each portfolio.)*

*Energy Use Intensity by Agency (kBtu/sq. ft.)*

	FY10	FY11	National Average <sup>1</sup>
DGS	99	98	98 (Office)
MNCPPC	76	74	
MCPS	57	59	103 (Education)
Montgomery College	84	91	

With regard to the General Fund NDA, the following table presents some actual kWh data as well as the assumed kWhs for the FY12 Budget (original approved and estimated) and the FY13 projected kWhs.

**Table 5:  
NDA Electricity Consumption (KWh)**

Agency	Actual			Approved FY12	Estimated FY12	Projected FY13	Change (FY13 vs. FY12)	
	FY09	FY10	FY11				KWh	%
Street Lights	38,518,045	38,610,505	30,829,016	38,700,000	31,175,173	31,349,302	174,129	0.6%
Traffic Signals	10,780,462	10,850,810	11,683,547	9,463,892	11,776,055	11,796,537	20,482	0.2%
Traffic Engineering			274,496		246,305	250,000	3,695	1.3%
Facilities	84,147,744	85,449,896	91,822,442	82,652,178	93,657,808	114,875,916	21,218,108	23.1%
<b>Total</b>	<b>133,446,251</b>	<b>134,911,211</b>	<b>134,609,501</b>	<b>130,816,070</b>	<b>136,855,341</b>	<b>158,271,755</b>	<b>21,416,414</b>	<b>15.9%</b>

There are some major swings from FY12 data (as projected last year) and FY12 estimated now. The change in street light KWhs is especially pronounced. Given the actuals (such as in the streetlight totals). Council Staff will need to work further with DGS staff to confirm these numbers.

In past years, the Council has approved percentage reductions in the Utilities NDA budget with the expectation that aggressive energy conservation measures will reduce these costs. Last year, the Executive assumed a 10 percent reduction in electricity consumption for County facilities as a result of planned conservation and energy retrofits occurring in FY11 and FY12.

For FY13, energy consumption is projected to increase substantially above latest FY12 estimated levels (which in turn are higher overall than the FY12 assumptions discussed last year). While the FY11 and FY12 energy efficiency measures may be having some annual savings effect (perhaps in the range of \$200,000 per year; see ©17 and ©19), it appears that fixed price rate changes and additional square footage in DGS' inventory are driving costs in the NDA far more than energy conservation at this point. DGS staff will be available at the T&E worksession to discuss these electricity trends.

County Government Facility Retrofits

Consistent with Council Bill 30-07, Buildings – Energy Efficiency (enacted in April 2008) and Montgomery County's Climate Protection Plan (transmitted to the Council in January 2009), the Department of General Services (DGS) hired a consultant (EMG) to do an energy analysis of Montgomery County facilities. The report identified what the consultant believes are reasonable targets for potential cost savings (60%), energy savings (45%), and greenhouse gas reductions (58,000 metric tons) by 2015. These annual cost savings would result in a payback period on the upfront capital costs (\$57 to \$67 million) of 8 to 10 years.

DGS developed a priority list of work from this effort. Funding for this work is coming from multiple sources, including: the Energy Conservation: MCG project (\$150,000 per year in current revenue funding), American Recovery and Reinvestment Act of 2009 Federal grant dollars (\$548,000 to DGS), and \$42,000 in State grant dollars. DGS used these funds for two parking garage lighting projects in the Rockville core and Heating and Cooling plant upgrades for the Strathmore Concert Hall in FY12 (see ©17 for more details). Planned measures for FY13 in the Resource Conservation Plan are presented on ©22.

## Cross Agency Resource Sharing (CARS) Committee – Utilities Workgroup

On March 24, 2010, the Chief Administrative Officer announced an interagency initiative to look at possible efficiencies from better coordination and possible consolidation of similar efforts across agencies. In addition to the creation of a high level Executive Committee, nine subject specific interagency workgroups were convened, including one for utilities. While the agencies already share information via ICEUM, the goal of CARS was to go beyond current practices.

Last year, the Utilities workgroup identified a number of short- and long-term initiatives. Three immediate initiatives included: a multi-agency energy service contract agreement for energy efficiency and renewable energy retrofits<sup>3</sup>, an interagency energy conservation campaign (never formally rolled out), fluorescent light retrofits across the agencies (ongoing), and building operator certification (BOC) training (ongoing). Future potential projects include expanding and enhancing the cooperative purchasing of utilities, participating in PJM load management programs, and several other cooperative efforts.

### **Council Staff Recommendations – Utilities NDA**

**Council Staff recommends approval of the FY13 Utilities NDA with the following change to the County Executive's recommendation:**

- **Move \$250,000 related to County Government utility payments for non-profit tenants to the Reconciliation List pending further Council review of the issue of the County paying utility costs for non-profit arts tenants of County facilities.**

***NOTE: Agency utility budgets may need to be revised depending on Council action on the Energy Tax sunset issue.***

#### Attachments

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<sup>3</sup> Council Staff asked DGS staff for an update on the energy performance contract work. Here is DGS' response: "The RFP for energy performance contracting was pulled after comments were received from prospective bidders that the scope was too broad and the County should issue separate solicitations for (1) energy (utility) management and (2) services of an Energy Services Company (ESCO). An ESCO is a company that contracts on a performance basis to implement energy saving measures that reduce energy consumption with the resulting cost savings paying for the cost of the measures employed. DGS initiated a pilot ESCO contract at HHS headquarters building (401 Hungerford Drive) in FY12. The pilot has been very instructive in the development of the RFP for these services that will cover retrofits in all county buildings. The pilot is underway and should be completed this summer. The RFP for ESCO services will be issued in May 2012 and include cooperative contracting language for all Montgomery County agencies."

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# Utilities

## MISSION STATEMENT

The goals of the County Government relating to utility consumption are to:

- achieve energy savings by the elimination of wasteful or inefficient operation of building systems;
- continue improvements in energy efficiency in all County operations; and
- obtain required energy fuels at the most favorable cost to the County.

## HIGHLIGHTS

This budget funds the utility costs for 236 (General Fund) facilities with approximately 5,592,578 total square feet, and over 67,359 streetlights and 822 traffic controlled signalized intersections.

## BUDGET OVERVIEW

The FY13 Recommended Budget for the tax-supported Utilities non-departmental account (NDA) is \$26,159,860, a decrease of \$2,366,520 or -8.3 percent from the FY12 Approved Budget of \$28,526,380. Allocation of these utilities expenditures is approximately: electricity, 86.5 percent; natural gas, 4.5 percent; water and sewer, 8.0 percent; fuel oil, 0.8 percent, and propane, .2 percent.

The FY13 Recommended Budget includes County government utilities expenditures for both tax and non-tax supported operations. Tax-supported utilities expenditures related to the General Fund departments are budgeted in the Utilities NDA, while utilities expenditures related to special fund departments are budgeted in those funds. Some of these special funds, such as Recreation and portions of the Department of Transportation, are tax supported. Other special funds, such as Solid Waste, are not supported by taxes, but through user fees or charges for services.

Utilities expenditures are also found in the budgets of other County agencies: Montgomery County Public Schools (MCPS), Montgomery College, the Washington Suburban Sanitary Commission (WSSC), and the Maryland-National Capital Park and Planning Commission (M-NCPPC). The total budget request for these "outside" agencies is \$73,288,642 which includes the entire bi-county area of WSSC.

The FY13 Recommended tax-supported budget for Utilities Management, including both the General Fund NDA (\$26,159,860) and the other tax supported funds (\$2,830,922), is \$28,990,782, a decrease of \$2,902,848 or approximately -9.0 percent from the FY12 Approved utilities budget. The FY13 Recommended budget for non-tax supported utilities expenditures is \$4,674,200, a decrease of \$1,341,840 or -22.3 percent from the FY12 Approved Budget.

In both the tax and non-tax supported funds, increased utilities expenditures result primarily from higher commodity unit costs due to market price fluctuations; greater consumption due to new facilities or services; and in some cases, a more precise alignment of budgeted costs with actual prior-year expenditures by utility type; decreases in utility expenditures result primarily from reductions in consumption. Energy conservation and cost-saving measures (e.g., new building design, lighting technology, energy, and HVAC management systems) help offset increased utility consumption or unit costs.

The County's Interagency Committee on Energy and Utility Management (ICEUM) is currently projecting a cost change potential for Electricity (-19.5%), Fuel Oil (-5.4%), Natural Gas (-6.7%), and Water and Sewer (11.2%). These projections reflect market concern about current world events on the commodities futures markets, or anticipated unit price changes by service providers. According to ICEUM, Motor Fuels, consisting of Unleaded Gasoline, Diesel, and Compressed Natural Gas, are expected to fluctuate upward based on current market trends. These fuels are purchased from various providers, and are budgeted in the Department of General Services, Division of Fleet Management Services; not the General Fund Utilities NDA. ICEUM also monitors changes in energy costs in the current year and will recommend appropriate changes, if necessary, prior to final Council approval of the FY13 Budget.

The following is a description of utility service requirements for departments which receive tax or non-tax supported appropriations for utilities expenditures. The utilities expenditures for the non-tax supported operations are appropriated within their respective operating funds but are described in the combined utilities presentation for reader convenience.

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## **TAX SUPPORTED**

### **Department of General Services**

The Department of General Services is responsible for managing all utilities for general County operations including all County office buildings, police stations, libraries, health and human services facilities, correctional facilities, maintenance buildings, and warehouses.

### **Department of Transportation**

The Department of Transportation manages all County streetlights, traffic signals, traffic count stations, and flashing school signs. The utilities expenditures for these devices are budgeted here as this Department designs, installs, controls, and maintains them. In addition, minimal utility costs for the Operations Center and Highway Maintenance Depots are budgeted in the Traffic Engineering component of the General Fund non-departmental account.

### **Division of Transit Services - Mass Transit**

The Department of Transportation Mass Transit Facilities Fund supports all utilities associated with the Ride On transit centers and Park and Ride Lots.

### **Department of Recreation**

The Department of Recreation funds all utility costs for its recreational facilities located throughout the County, such as swimming pools, community recreation centers, and senior citizen centers.

### **Urban Districts**

Urban District utilities are supported by Urban District Funds, which are included in the operating budget for Regional Services Centers.

## **NON-TAX SUPPORTED**

### **Fleet Management Services**

The Department of General Services - Fleet Management Services utility expenditures are displayed in the Special Fund Agencies - Non-Tax Supported section, to reflect that Fleet Management Services expenditures are not appropriated directly but in the budgets of other departments.

The Department of General Services - Fleet Management Services Motor Pool Internal Service Fund supports all utilities associated with the vehicle maintenance garages in Rockville, Silver Spring, and Gaithersburg. Fuel for the County's fleet is also budgeted in that special fund, but these costs are not included in the utilities expenditures displayed in this section.

### **Parking Districts**

The Parking Districts funds utility expenditures associated with the operation of all County-owned parking garages and parking lots.

### **Liquor Control**

The Department of Liquor Control funds utility expenditures associated with the operation of the liquor warehouse, administrative offices, and the County-owned and contractor-operated retail liquor stores.

### **Department of Environmental Protection, Solid Waste Services**

Solid Waste Services funds utility expenditures associated with the operation of the County's Solid Waste Management System. Utilities expenditures associated with the operation of the Oaks Sanitary Landfill maintenance building, the County's Recycling Center, the Resource Recovery Facility, and most of the Solid Waste Transfer Station are currently the responsibility of the operators. Only the site office and maintenance depot costs continue to be budgeted as an identifiable utilities expenditure in the Solid Waste Disposal Fund.

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## **Other Agencies**

Utilities for MCPS, Montgomery College, (bi-county) WSSC, and M-NCPPC are displayed in the charts on the following pages. These are the amounts requested in the budgets of those agencies.

## **LINKAGE TO COUNTY RESULT AREAS**

While this program area supports all eight of the County Result Areas, the following are emphasized:

❖ *An Effective and Efficient Transportation Network*

❖ *Safe Streets and Secure Neighborhoods*

## **PROGRAM CONTACTS**

Contact Adam Damin of the Office of Management and Budget at 240.777.2794 for more information regarding this department's operating budget.

## **PROGRAM DESCRIPTIONS**

### ***Utilities (for All General Fund Departments)***

The Utilities non-departmental account provides the General Fund utilities operating expense appropriations for the facilities maintained by the Department of General Services and the Department of Transportation. The utilities expenditures for other non-tax supported operations and other agencies are appropriated within their respective department or agency.

## BUDGET SUMMARY

	Actual FY11	Budget FY12	Estimated FY12	Recommended FY13	% Chg Bud/Rec
<b>COUNTY GENERAL FUND</b>					
<b>EXPENDITURES</b>					
Salaries and Wages	0	0	0	0	—
Employee Benefits	0	0	0	0	—
<b>County General Fund Personnel Costs</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>—</b>
Operating Expenses	26,800,937	28,526,380	28,355,024	26,159,860	-8.3%
Capital Outlay	0	0	0	0	—
<b>County General Fund Expenditures</b>	<b>26,800,937</b>	<b>28,526,380</b>	<b>28,355,024</b>	<b>26,159,860</b>	<b>-8.3%</b>
<b>PERSONNEL</b>					
Full-Time	0	0	0	0	—
Part-Time	0	0	0	0	—
FTEs	0.00	0.00	0.00	0.00	—

## FY13 RECOMMENDED CHANGES

	Expenditures	FTEs
<b>COUNTY GENERAL FUND</b>		
<b>FY12 ORIGINAL APPROPRIATION</b>	<b>28,526,380</b>	<b>0.00</b>
<b>Changes (with service impacts)</b>		
Add: Outside Attorney Representation- Public Service Commission	100,000	0.00
<b>Other Adjustments (with no service impacts)</b>		
Increase Cost: Electricity Consumption Increase Due to Gray Courthouse and the Public Safety Headquarters Coming Online	3,008,500	0.00
Increase Cost: Imagination Stage Utilities	100,000	0.00
Increase Cost: Round House Theatre Utilities	50,000	0.00
Decrease Cost: Due to Consumption and Rate Changes: Water and Sewer, Fuel Oil, and Natural Gas	-496,380	0.00
Decrease Cost: Natural Gas Rate Savings	-500,000	0.00
Decrease Cost: Due to Rate Changes: Street Lights and Street Light Maintenance	-657,760	0.00
Decrease Cost: Electricity Rate Savings	-3,970,880	0.00
<b>FY13 RECOMMENDED:</b>	<b>26,159,860</b>	<b>0.00</b>

## FUTURE FISCAL IMPACTS

Title	(5000's)					
	CE REC. FY13	FY14	FY15	FY16	FY17	FY18
<b>This table is intended to present significant future fiscal impacts of the department's programs.</b>						
<b>COUNTY GENERAL FUND</b>						
<b>Expenditures</b>						
FY13 Recommended	26,160	26,160	26,160	26,160	26,160	26,160
No inflation or compensation change is included in outyear projections.						
<b>Subtotal Expenditures</b>	<b>26,160</b>	<b>26,160</b>	<b>26,160</b>	<b>26,160</b>	<b>26,160</b>	<b>26,160</b>

**COUNTY UTILITIES EXPENDITURES**

**EXPENDITURES BY DEPARTMENT/AGENCY**

	ACTUAL FY10	ACTUAL FY11	BUDGET FY12	RECOMMENDED FY13	CHANGE BUD/APPR	% CHANGE REC/APPR
<b>COUNTY GOVERNMENT TAX SUPPORTED OPERATIONS</b>						
<b>NON-DEPARTMENTAL ACCOUNT</b>						
Facilities	16,394,254	18,539,080	18,375,060	17,126,420	(1,248,640)	-6.8%
Traffic Signals and Streetlighting	9,329,797	10,091,360	10,151,320	9,033,440	(1,117,880)	-11.0%
<b>GENERAL FUND NDA EXPENDITURES</b>	<b>25,724,051</b>	<b>28,630,440</b>	<b>28,526,380</b>	<b>26,159,860</b>	<b>(2,366,520)</b>	<b>-8.3%</b>
<b>OTHER TAX SUPPORTED OPERATIONS</b>						
Transit Services	76,069	89,089	115,130	91,730	(23,400)	-20.3%
Recreation	3,307,996	3,547,595	3,252,120	2,739,192	(512,928)	-15.8%
<b>SUBTOTAL</b>	<b>3,384,065</b>	<b>3,636,684</b>	<b>3,367,250</b>	<b>2,830,922</b>	<b>(536,328)</b>	<b>-15.9%</b>
<b>TOTAL TAX SUPPORTED</b>	<b>29,108,116</b>	<b>32,267,124</b>	<b>31,893,630</b>	<b>28,990,782</b>	<b>(2,902,848)</b>	<b>-9.1%</b>
<b>COUNTY GOVERNMENT NON-TAX SUPPORTED OPERATIONS</b>						
Fleet Management Services	778,004	899,648	1,133,120	916,010	(217,110)	-19.2%
Parking Districts	3,385,997	3,730,870	3,718,120	2,860,708	(857,412)	-23.1%
Liquor Control	902,668	945,997	1,000,490	765,810	(234,680)	-23.5%
Solid Waste Services	136,343	143,428	164,310	131,672	(32,638)	-19.9%
<b>TOTAL NON-TAX SUPPORTED</b>	<b>5,203,012</b>	<b>5,719,943</b>	<b>6,016,040</b>	<b>4,674,200</b>	<b>(1,341,840)</b>	<b>-22.3%</b>
<b>SUMMARY - COUNTY GOVERNMENT</b>						
TOTAL TAX SUPPORTED	29,108,116	32,267,124	31,893,630	28,990,782	(2,902,848)	-9.1%
TOTAL NON-TAX SUPPORTED	5,203,012	5,719,943	6,016,040	4,674,200	(1,341,840)	-22.3%
<b>TOTAL COUNTY GOVERNMENT</b>	<b>34,311,128</b>	<b>37,987,067</b>	<b>37,909,670</b>	<b>33,664,982</b>	<b>(4,244,688)</b>	<b>-11.2%</b>
<b>OUTSIDE AGENCIES TAX AND NON-TAX SUPPORTED OPERATIONS</b>						
Montgomery County Public Schools	40,664,814	41,329,506	41,687,370	38,315,819	(3,371,551)	-8.1%
Montgomery College	6,906,351	7,711,568	8,467,370	6,560,471	(1,906,899)	-22.5%
Washington Suburban Sanitary Commission	28,550,000	28,527,669	25,644,000	24,582,052	(1,061,948)	-4.1%
M-NCPPC	3,548,140	3,432,845	4,018,250	3,830,300	(187,950)	-4.7%
<b>TOTAL OTHER AGENCIES EXPENDITURES</b>	<b>79,669,305</b>	<b>81,001,588</b>	<b>79,816,990</b>	<b>73,288,642</b>	<b>(6,528,348)</b>	<b>-8.2%</b>
<b>TOTAL UTILITIES EXPENDITURES</b>	<b>113,980,433</b>	<b>118,988,655</b>	<b>117,726,660</b>	<b>106,953,624</b>	<b>(10,773,036)</b>	<b>-1.1%</b>

**COUNTY UTILITIES EXPENDITURES**

**EXPENDITURES BY ENERGY SOURCE**

	<b>ACTUAL FY10</b>	<b>ACTUAL FY11</b>	<b>APPROVED FY12</b>	<b>RECOMMENDED FY13</b>	<b>CHANGE BUDGET/REC</b>	<b>% CHANGE BUDGET/REC</b>
<b>COUNTY GOVERNMENT TAX SUPPORTED OPERATIONS</b>						
<b>NON-DEPARTMENTAL ACCOUNT</b>						
Electricity	22,927,239	24,441,500	23,991,280	22,630,630	(1,360,650)	-5.7%
Water & Sewer	822,039	1,881,230	2,135,590	2,090,500	(45,090)	-2.1%
Fuel Oil	167,465	106,000	104,000	210,000	106,000	101.9%
Natural Gas	1,801,882	2,199,260	2,291,450	1,168,730	(1,122,720)	-49.0%
Propane	5,426	2,450	4,060	60,000	55,940	1377.8%
<b>GENERAL FUND NDA EXPENDITURES</b>	<b>25,724,051</b>	<b>28,630,440</b>	<b>28,526,380</b>	<b>26,159,860</b>	<b>(2,366,520)</b>	<b>-8.3%</b>
<b>OTHER TAX SUPPORTED OPERATIONS</b>						
Electricity	2,345,720	2,661,046	2,289,530	1,831,222	(458,308)	-20.0%
Water & Sewer	342,157	384,417	360,090	360,090	0	0.0%
Fuel Oil	351	29,622	29,622	0	(29,622)	0.0%
Natural Gas	651,412	513,201	639,610	639,610	0	0.0%
Propane	44,425	48,398	48,398	0	(48,398)	-100.0%
<b>SUBTOTAL</b>	<b>3,384,065</b>	<b>3,636,684</b>	<b>3,367,250</b>	<b>2,830,922</b>	<b>(536,328)</b>	<b>-15.9%</b>
<b>TOTAL TAX SUPPORTED</b>	<b>29,108,116</b>	<b>32,267,124</b>	<b>31,893,630</b>	<b>28,990,782</b>	<b>(2,902,848)</b>	<b>-9.1%</b>
<b>NON-TAX SUPPORTED OPERATIONS</b>						
Electricity	4,615,427	5,156,063	5,386,835	4,009,122	(1,377,713)	-25.6%
Water & Sewer	176,083	110,704	229,010	212,274	(16,736)	-7.3%
Fuel Oil	0	3,122	0	0	0	0.0%
Natural Gas	411,455	450,054	399,155	451,764	52,609	13.2%
Propane	0	0	1,040	1,040	0	0.0%
<b>TOTAL NON-TAX SUPPORTED</b>	<b>5,203,012</b>	<b>5,719,943</b>	<b>6,016,040</b>	<b>4,674,200</b>	<b>(1,341,840)</b>	<b>-22.3%</b>
<b>SUMMARY - COUNTY GOVERNMENT</b>						
Electricity	29,888,386	32,258,609	31,667,645	28,470,974	(3,196,671)	-10.1%
Water & Sewer	1,340,279	2,376,351	2,724,690	2,662,864	(61,826)	-2.3%
Fuel Oil	167,816	138,744	133,622	210,000	76,378	57.2%
Natural Gas	2,864,749	3,162,515	3,330,215	2,260,104	(1,070,111)	-32.1%
Propane	49,851	50,848	53,498	61,040	7,542	14.1%
<b>TOTAL COUNTY GOVERNMENT</b>	<b>34,311,081</b>	<b>37,987,067</b>	<b>37,909,670</b>	<b>33,664,982</b>	<b>(4,244,688)</b>	<b>-11.2%</b>
<b>OUTSIDE AGENCIES TAX AND NON-TAX SUPPORTED OPERATIONS</b>						
Electricity	62,777,317	65,754,128	63,249,890	58,565,480	(4,684,410)	-7.4%
Water & Sewer	3,858,756	3,382,270	4,790,030	4,934,907	144,877	3.0%
Fuel Oil	393,954	192,498	413,500	864,780	451,280	109.1%
Natural Gas	12,413,348	11,432,376	11,086,670	9,221,505	(1,865,165)	-16.8%
Propane	225,929	240,316	276,900	257,370	(19,530)	-7.1%
<b>SUBTOTAL</b>	<b>79,669,305</b>	<b>81,001,588</b>	<b>79,816,990</b>	<b>73,844,042</b>	<b>(5,972,948)</b>	<b>-7.5%</b>
<b>TOTAL UTILITIES EXPENDITURES</b>						
Electricity	92,665,703	98,012,737	94,917,535	87,036,454	(7,881,081)	-8.3%
Water & Sewer	5,199,035	5,758,621	7,514,720	7,597,771	83,051	1.1%
Fuel Oil	561,770	331,242	547,122	1,074,780	527,658	96.4%
Natural Gas	15,278,097	14,594,891	14,416,885	11,481,609	(2,935,276)	-20.4%
Propane	275,780	291,164	330,398	318,410	(11,988)	-3.6%
<b>TOTAL UTILITIES EXPENDITURES</b>	<b>113,980,386</b>	<b>118,988,655</b>	<b>117,726,660</b>	<b>107,509,024</b>	<b>(10,217,636)</b>	<b>-8.7%</b>

# Montgomery County Agency Resource Conservation Plan – 2013

## I. Executive Summary:

### Background:

Resource Conservation Plans (RCP's) are developed annually by five Interagency Committee on Energy and Utilities Management (ICEUM) member agencies, which also serve as the majority of the Cross Agency Resource Sharing Committee, utilities subcommittee (CARS).<sup>1</sup> Each RCP includes content on past and existing energy efficiency measures implemented by the agencies, planned measures, energy consumption data and key achievements. Agencies who contribute RCP's on an annual basis include:

- Montgomery County, Division of General Services (DGS)
- Montgomery County Public Schools (MCPS)
- Montgomery College
- Maryland-National Capital Park and Planning Commission (MNCPPC)
- Washington Suburban Sanitary Commission (WSSC)

The Housing Opportunities Commission (HOC) which is not required to file an annual report participates with the County agencies on several initiatives and relevant efforts consistent with resource conservation may be mentioned in this summary.

The interagency effort is coordinated by the Montgomery County Department of Environmental Protection.

### How to Use the RCP:

The RCP was developed as a tool to encourage coordination between agencies and help County policy makers understand key investments in energy savings and how they relate to agency utility budget. By sharing information, via the RCP, agencies identify joint opportunities and share best practices.

At a minimum each RCP contains:

- Summary of agency achievements,
- Actual energy budget information for the previous fiscal year and projected energy budget information for the current and future fiscal year.
- Summary tables containing the costs and estimated savings of retrofits conducted in previous years, efforts related to the present year, and planned investments one year out. Agencies may voluntarily provide options for future years investments.
- Narrative material

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<sup>1</sup> The Interagency Committee on Energy and Utilities Management is mandated by statute, Section 18A-9. The Cross Agency Resource Sharing Committee was created to provide a forum for sharing resources among County Agencies. <http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/content/EXEC/ACAOs/CARS/index.asp>

Each agency is responsible for developing their own RCP, including quality control of data, and may introduce additional content that they feel is necessary to explain their budgets for both energy costs and investments in energy improvements.

**Summary of Energy Consumption and Performance:**

The tables below illustrate the energy performance and investment trends for each agency. Data is based on previous and current RCPs and other data submissions.

*Energy Consumption by Agency FY07 through FY11 (million BTU)*

	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
DGS	436,801	441,190	446,395	438,319	441,624
MCPS	1,395,463	1,327,831	1,438,491	1,365,029	1,420,741
MNCPPC	98,379	97,994	97,610	91,722	88,893
Montgomery College	176,630	176,630	194,715	192,480	208,520
WSSC	772,643	763,522	Not Reported	793,810	804,270

*Energy Cost by Agency FY07 through FY11*

	<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>
DGS	\$13,963,046	\$14,975,676	\$16,035,333	\$16,613,150	\$17,334,297
MCPS	\$36,707,628	\$40,128,155	\$40,095,246	\$39,697,994	\$41,329,509
MNCPPC	\$2,885,569	\$3,053,410	\$3,330,500	\$2,977,088	\$ 2,921,331
Montgomery College	\$5,008,243	\$5,315,095	\$5,988,752	\$6,636,212	\$7,360,489
WSSC	\$20,336,620	\$22,339,749	\$25,647,073	\$27,630,029	\$28,025,561

*Energy Use Intensity by Agency (kBtu/sq. ft.)*

	<b>FY10</b>	<b>FY11</b>	<b>National Average<sup>2</sup></b>
DGS	99	98	98 (Office)
MNCPPC	76	74	
MCPS	57	59	103 (Education)
Montgomery College	84	91	

<sup>2</sup> National Average based on the U.S. Energy Information Administration's Commercial Building Energy Consumption Survey applied across the "typical" building of each portfolio.



*Investment in Energy Conservation Retrofits FY2011 through FY2013*

	<b>FY11</b>	<b>FY12 Planned</b>	<b>FY13 Planned</b>
DGS	\$344,499	\$765,928	\$454,320
MCPS	\$722,743	\$3,164,317	\$3,851,259
MNCPPC	\$115,000	\$323,000	\$115,000
Montgomery College		\$125,000	\$125,000
WSSC	\$2,000,000	\$5,800,000	\$6,744,000
<b>Total</b>	<b>\$3,067,242</b>	<b>\$10,178,245</b>	<b>\$11,289,579</b>

*Estimated New Avoided Cost from Projects Implemented in FY 11,12 and 13*

	<b>FY11</b>	<b>FY12 Planned</b>	<b>FY13 Planned</b>
DGS	\$68,400	\$106,833	\$115,008
MCPS	\$265,719	\$381,249	\$1,260,903
MNCPPC	\$36,266	\$102,950	\$42,000
Montgomer y College	\$0	\$27,970	\$37,520
WSSC	\$1,120,000	\$1,150,000	\$802,000

*Estimated Return on Investment from Energy Saving Retrofits Implemented in FY11 through FY13.*

	<b>FY11</b>	<b>FY12 Planned</b>	<b>FY13 Planned</b>
DGS	19.85%	13.95%	25.31%
MCPS	36.77%	12.05%	32.74%
MNCPPC	31.59%	31.87%	36.52%
Montgomery College	Unavailable	22.38%	30.02%
WSSC	56.00%	19.83%	11.89%

*EmPower Maryland Incentive Utilization*

	<b>FY11</b>	<b>FY12 Planned</b>
DGS	\$42,000	\$0
MCPS	\$0	\$140,000
MNCPPC	\$39,207	\$71,793

## **Progress on Priority Areas:**

Through ICEUM's efforts and the plan developed by CARS the following priorities have been established:

### *Energy Performance Contracting:*

- WSSC has extensively used performance contracting to execute multi-million dollar projects. In most cases the payback was less than 15 years and the savings exceeded the targets established in the scoping study.
- MCPS has issued a request for qualifications for a firm to provide design, construction and alternative financing for the Rachel Carson Elementary School in Gaithersburg, MD.

### *Utility Purchasing Strategies:*

- Montgomery College, MNCPPC, and MC bridged the MWCOG contract for electricity and natural gas supply at substantial savings to each agency.
- MCPS and WSSC continue to purchase electricity via wholesale markets at substantial potential savings. This includes approximately 30% of WSSC's supply from regional wind energy.
- Most of the agencies will purchase a minimum of 20% clean energy, by extending the current contracts for Renewable Energy Certificates.

### *Building Operator Training:*

- Using ARRA funds, Montgomery County partnered with Workforce Solutions Group and Green Training USA to provide subsidies for building operator training using the Building Operations and Management Institute's (BOMI) training that may lead to designation as a Systems Maintenance Technician. MCPS, HOC, and MNCPPC took advantage of the training.

### *Solar Projects (Including Power Purchase Agreements):*

- MCPS continued operation of over 1.264 megawatts of solar capacity installed between 2009 and 2010. These projects were funded via a Solar Power Purchase Agreement (SPPA) and are expected to provide \$150,000 in savings in FY2013.
- HOC issued an RFP for solar services for several low-income multi-family communities under the organizations management has selected a vendor and is reviewing projects for feasibility.
- The County (DEP) commissioned a 280 kW solar system on the Montgomery County Transfer Station in the fall of 2011. The array is expected to provide 30% of the facilities energy consumption, using a solar power purchase agreement and receiving a \$250,000 grant from the Maryland Energy Administration.
- Leveraging EPA technical support, the Montgomery County Department of Transportation (DOT) began an analysis of the solar potential of DOT parking facilities.
- Montgomery College is planning to incorporate a 35 KW array into the Germantown Campus bioscience Education Center and continues to operate a number of older solar facilities.

## Key 2011 Selected Agency Achievements

### DGS

- Updated lighting in the Executive Office Building and Council Office Building with high efficiency induction lighting using ARRA funds.
- Developed a comprehensive plan for retrofitting the Strathmore Music Center with energy efficient heating and cooling equipment, to be completed by July 31, 2012 using ARRA funds.

### MNCPPC

- Reduced annual consumption and energy costs by 22%
- Completed lighting retrofit projects at Cabin John and Wheaton Ice Rinks reducing consumption by 18%. Project funded in part by the Maryland Energy Administration
- Established a *Comprehensive Energy Management and Green Parks Plan* for the Wheaton Regional Park as a model for use over the next three years at five regional park complexes
- Developed a *Leadership in Energy and Environmental Design for Existing Building* strategy to achieve a Gold U.S. Green Building Council certification for the Brookside Gardens and facilities.

### MC

- Construction was completed on the 140,700 GSF Rockville Science Center and the building was officially opened for the Fall Semester 2011. The building has been submitted for certification as a LEED Gold building, exceeding the County mandate of LEED-Silver.

### MCPS

- MCPS continues to lead the State of Maryland in high performance green buildings with six schools receiving LEED Gold certifications. These facilities employ very energy efficient technologies including geo-exchange heating and air conditioning systems and many other high performance systems.
- MCPS continues to avoid between \$1.4 and \$1.8 million per year through it's Peak Load Management program which limits electricity use during the summer afternoons when electricity prices are highest and annual capacity charges are set.

## II. ICEUM Rates

Interagency Committee on Energy and Utilities Management					
UTILITY RATES					
October 13, 2011					
<u>FY2012- FY2013</u>					
	Actual	Actual	Budget	Projected	Projected
<u>Utilities</u>	<u>FY10</u>	<u>FY11</u>	set 9/4/2010 <u>FY12</u>	<u>FY12</u>	<u>FY13</u>
<b>Electricity</b>	\$0.1594 per kWh	\$0.1675 per kWh	\$0.1758 per kWh	\$0.1717 per kWh	<b>\$0.1350 per kWh</b>
<b>#2 Fuel Oil</b>	\$2.63 per gallon	\$3.70 per gallon	\$2.60 per gallon	\$3.60 per gallon	<b>\$3.50 per gallon</b>
<b>Natural Gas</b>	\$1.51 per therm	\$1.35 per therm	\$1.41 per therm	\$1.33 per therm	<b>\$1.26 per therm</b>
<b>Propane</b>	\$2.07 per gallon	\$2.36 per gallon	\$2.00 per gallon	\$2.30 per gallon	<b>\$2.20 per gallon</b>
<b>Water &amp; Sewer</b>	11.0% increase over Actual Fy09	15.3% increase over Actual Fy10	29.1% increase over Actual Fy10	13.6% increase over Actual Fy11	<b>30.0% increase over Actual Fy11</b>
<u>Motor Fuels</u>					
<b>Unleaded</b>	\$2.31 per gallon	\$2.81 per gallon	\$2.70 per gallon	\$3.32 per gallon	\$3.38 per gallon
<b>Diesel</b>	\$2.36 per gallon	\$3.00 per gallon	\$2.93 per gallon	\$3.56 per gallon	\$3.64 per gallon
<b>CNG</b>	\$2.04 per gallon equivalent	\$2.04 per gallon	\$1.98 per gallon equivalent	\$2.08 per gallon equivalent	\$2.12 per gallon equivalent
<b>E 85</b>	\$2.64 per gallon	\$2.89 per gallon	\$3.34 per gallon	\$3.42 per gallon	\$3.48 per gallon
<b>B5</b>	Unavailable	Unavailable	\$3.00 per gallon	\$3.61 per gallon	\$3.69 per gallon
<b>B20</b>	\$2.59 per gallon	Unavailable	\$3.15 per gallon	\$3.76 per gallon	\$3.84 per gallon
<b>Notes:</b>					
1. Unit cost or percentage change is a cap. Individual Agencies may be below the ICEUM					
2. Energy cost projections for Fy13 assume that the energy tax sunsets and returns to the Fy10					
3. Motor fuels include State tax. CNG rate excludes Federal excise taxes, which the County does not pay.					
4. City of Rockville Stormwater Management Utility Fee is not included in the Water & Sewer rates					
5. Water/Sewer rates Fy13: WSSC 9%; City of Rockville, 24.5/13.0% for water/sewer					

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### **III. Agency Resource Conservation Plans**

- Montgomery County, Division of General Services (DGS)
- Montgomery County Public Schools (MCPS)
- Montgomery College
- Maryland-National Capital Park and Planning Commission (MNCPPC)
- Washington Suburban Sanitary Commission (WSSC)



**FY 2013  
Resource Conservation Plan**

**Department of General Services  
Division of Real Estate and  
Management Services**

**March 2012**

**Summary**

The information on this page reflects the facilities owned or operated by this agency as of the end of FY 11(June 30, 2011)

Agency	MC Government DPWT Division of Operations		
Number of Facilities	247	Change in number of facilities	0
Total square feet	4,494,585	Change in total ft <sup>2</sup>	48,335
Average operating hrs/year	Not available	Change in avg. operating hrs/year	Not available
Other changes effecting energy consumption			

Utilities:	units	total consumption (actual FY 10)	total consumption (actual FY 11)	Percent change from actual FY 10	total cost (actual FY 10) \$	total cost (actual FY 11) \$	Percent change from actual FY 10
Electricity	kWh	85,449,896	85,275,340	(-)0.09%	12,639,621	13,891,353	(+)9.9%
Natural Gas (firm)	THERMS	1,407,810	1,408,950	(+)0.08%	2,156,339	1,597,930	(-)25.9%
Natural Gas (Irate)	THERMS						
Fuel Oil #2	Gallons	42,667	67,303	(+)58%	125,414	241,371	(+)92.46%
Propane	Gallons	3,044	20,150	(+)563%	5,216	52,394	(+)904%
Water/Sewer	Gallons	105,114	115,825	(+)10.2%	1,159,030	1,487,182	(+)28.3%
Total					16,613,150	17,334,297	(+)4.3%

**Electricity Contracting:**

The County has successfully utilized the existing DC Government electricity contract and negotiated new electricity supply rates for all Montgomery County Government accounts. Also included in the effort were 10 municipalities and townships. The new rates will go into effect starting July 1<sup>st</sup> 2012 and remain unchanged until contract termination due in January 2015.

The total first year savings to include Townships and Municipalities was calculated to be \$11,053,926 for a volume of 523,275,096 kWh. The savings are based on the rate difference that resulted from more favorable current rates as compared with existing rates.

Montgomery County Government first year saving were calculated to be \$6,401,171 for a total volume of 193,992,802 kWh. This endeavor incorporates all Montgomery County accounts, such as NDA facilities and Traffic Engineering, Recreation, Police & Fire, Parking lot District, Fleet and Liquor control.

The NDA facilities (85,275,340 kWh) and Traffic Engineering NDA (43,198,233 kWh) will obtain savings in proportion to their volume and rate allocation for the various Electric Distributing Companies.

<b>Summary - Montgomery County Government Accounts</b>	<b>total Usage (kwh)</b>	<b># of accounts</b>	<b>Current PES rate/kwh</b>	<b>New rate starting July 2012</b>	<b>Annual Savings**</b>
Pepco - Type II and III -	131,974,662	200	0.1224	0.0795	\$5,661,713
BGE - Type II and III -	1,689,671	23	0.1045	0.081	\$39,707
Pepco - Type I - Includes street lights and traffic signals	37,091,554	695	0.07696	0.065	\$443,615
Pepco - New accounts - Pepco	11,111,207	37	0.07500	0.065	\$111,112
Allegheny Power Type I accounts	12,125,708	58	0.07696	0.065	\$145,023
<b>Totals</b>	<b>193,992,802</b>	1013			<b>\$6,401,171</b>

Table 1. Electricity supply contracting details for all Montgomery County Government electricity accounts. The new rates are fixed rates throughout the 31 month duration of the contract starting July, 2012 ending January 2015.

**New Measures (FY12)**  
 ( implemented during FY11)

(July 1, 2011 through June 30, 2012)

Measures - New: (To be implemented during FY 12)  <i>All projects to be funded by ARRA EEGBC and Energy Conservation CIP</i>	date implemented	initial cost (\$)	annual net impact on maintenance	fuel type(s) effected and units	units saved per year	annual Energy cost savings (\$)
	(FY12)					
<b>Capital Improvement Projects</b>						
Replace current light fixtures in the COB garage parking with LED lights	FY12	138,672	(3,696)	Elec (kWh)	237,256	\$30,843
EOB Parking Garage: Replace current light fixtures with Induction lights.	FY12	\$162,256	(3,895)	Elec (kWh)	174,762	\$22,719
Strathmore Concert Hall: Install Dedicated Heat Recovery Chiller (50 Ton Nominal)	FY12	\$280,000	(\$7,499)	Elec (kWh) Nat Gas (therms)	(210,400) 76,108	\$ 34,991
Strathmore Concert Hall – Install VFD & Efficiency controls on two 300 ton chillers- 33% chiller consumption savings	FY12	\$185,000 (1)	(4,625)	Elec (kWh)	213,925	\$18,280
<b>Grand Totals</b>	FY12	\$ 765,928	\$19,715	Elec.(kWh) Nat Gas(TH)	415,543 76,108)	\$106,833

**Note (1):**Initial cost or saving projections Does not include a PEPCO rebate of \$ 42,000 to be credit at completion of the work

**Additional New Measures (FY12)**

**(July 1, 2011 through June 30, 2012)**

( implemented during FY11)

Energy Design Guidelines are credit for long term energy savings as cost avoidance.

Existing Measures	date implemented	Yearly Electricity Consumption NDA Facilities (kWh)	Yearly natural Gas Consumption NDA Facilities (TH)	units saved per year (kWh)	units saved per year (TH)	annual cost savings (\$)
Energy Design Guidelines (1) (2)	FY12	87,110,708	1,426,000	6,533,303	143,000	\$1,106,792

- (1) Savings are based on 7.5% of total electricity consumption at the estimated FY12 rate of 0.167 / kWh .
- (2) Savings are based on 10% of total gas consumption at the estimated FY12 rate of \$1.1 / Therm

Note: Implementation of the Energy Design Guidelines are also responsible for similar savings to recreation facilities to include recreation centers, community centers and indoor pools.

**Existing Measures (FY11)**  
(Projects implemented prior to FY12)

(July 1, 2009 through June 30, 2010)

Measures - New: (Implemented during FY 10)	date implemented	initial cost (\$)	annual net impact on maintenance	fuel type(s) effected and units	units saved per year	annual Energy cost savings
	(mo/yr)					
<b>Capital Improvement Projects:</b>						
<u>Damascus Library &amp; Senior Center</u> – Install VFD on six AHUs, calibrate pneumatic control system, retrofit 20 lights and provide motion sensors.	FY11	\$36,000		Elec (kWh)	45,000	\$7,200
Subtotal		\$ 344,499	\$ (2,600)			\$ 68,400
<b>Grand Totals</b>		<b>\$ 344,499</b>	<b>\$ (2,600)</b>			<b>\$ 68,400</b>

(1) This project was originally slated to be implemented in FY 10, but not yet performed. The project was subsequently combined into the current Pre Release Center kitchen modernization project CIP # 42900

**Energy Design Guidelines  
FY11**

	date implemented	Yearly Electricity Consumption NDA Facilities ( kWh)	Yearly Natural Gas Consumption NDA Facilities ( TH)	units saved per year (kWh)	units saved per year (TH)	annual cost savings (\$)
Existing Measures						
Energy Design Guidelines (1) (2)	FY11	85,275,340	1,408,950	6,408,742	140,781	\$1,163,486

(1) Savings are based on 7.5% of total electricity consumption at the effective FY10 rate.

(2) Savings are based on 10% pf total gas consumption at the effective FY10 rate

Existing Measures prior to (FY11)

This table shows information on resource conservation measures implemented prior to FY 11

Measures - Existing: (implemented from FY 98 to FY 10)	date implemented	initial cost (\$)	annual net impact on maintenance cost (\$)	units saved per year	units saved per year	annual cost savings (\$)
	(mo/yr)			(kWh)	(TH)	*
<b>Capital Improvement Projects:</b>						
Install Motion Sensors EOB & COB	FY10	\$ 105,500		187,692		24,400
EMS Retrofit White Oak Library	FY09	\$84,179	-\$7,100	76,653	1,684	\$9,260
Install VFD 5 AHU-Dennis Ave Health Center	FY09	\$34,499	-\$2,600	1,203		\$5,445
EMS Upgrades Aspen hill Library	FY08	\$98,532	-\$9,500	19,903	11,430	\$19,692
EMS Upgrade Silver Spring Police	FY07	\$87,604	-\$8,500	17,696	10,162	\$17,508
EMS upgrade Silver Spring Gov't Center	FY07	\$38,000	-\$3,500	7,676	4,408	\$7,595
JC- Install premium motors & Starters	FY07	\$34,500	-\$900	51,852		\$6,264
EMS Upgrades Damascus daycare Center	FY06	\$24,920	-\$2,500	5,034	2,891	\$4,980
EMS Upgrades Red Brick Courthouse	FY06	\$50,000	-\$5,000	10,100	5,800	\$9,993
EMS Upgrades Leland Community Center	FY06	\$80,976	-\$8,000	16,357	9,393	\$16,184
EMS Upgrades Kensington Library	FY06	\$73,867	-\$7,200	14,921	8,569	\$14,763
EMS Upgrades Upper County Community Center	FY05	\$9,598	-\$8,000	16,079	9,233	\$15,908
EOB/JC Energy Assessment	FY05	\$94,873		19,164		\$2,453
Ballast Retrofits	FY05	\$62,261	-\$4,900	5,125		\$619
Parking lots: install photo cells & time clocks for lighting control	FY 04	\$18,000	-\$2,600	17,895		\$2,162
Davis Library Day Daylighting	FY03	\$25,000		12,869		\$1,555
Lighting Retrofits	FY03	\$45,000	-\$4,500	76,500		\$9,180
EOB -VFD Repl (2AHUs)	FY 03	\$42,499	-\$4,000	52,002		\$6,282
JC - VFD Replacement (4AHUs)	FY 03	\$24,540	-\$1,900	28,560		\$3,450
Wheaton Library Day Daylighting	FY03	\$20,000		10,528		\$1,272
COB Parking light levels evaluation	FY 02	\$9,800				\$1,100
Purchase utility billing software and energy consultant assistance	FY 01	\$125,000				\$47,000
EMS Upgrades Hungerford Office Building	FY00	\$57,000	-\$15,000	31,714	18,212	\$31,377
EMS Upgrades Gaithersburg Maint Depot	FY99	\$31,000	-\$3,000	6,262	3,596	\$6,196
EMS Upgrades Council Office Bld	FY99	\$73,000	-\$7,300	14,746	8,468	\$14,589
EMS Upgrades Gaithersburg Library	FY99	\$122,000	-\$12,000	24,644	14,152	\$24,382
Lighting Retrofits	FY98	\$194,000	-\$19,400	329,800		\$39,576
<b>Total Energy Conservation CIP</b>		<b>\$1,666,148</b>	<b>-\$137,400</b>			<b>\$343,185</b>

## Energy Design Guidelines

Existing Measures prior to FY11

Existing Measures	date implemented	Yearly Electricity Consumption NDA Facilities ( kWh)	Yearly Matural Gas Consumption NDA Facilities (TH)	units saved per year (kWh)	units saved per year (TH)	annual cost savings (\$)
Energy Design Guidelines (1) (2)	FY00	60,111,000	710,000	4,508,325	71,000	\$692,582
Energy Design Guidelines (1) (2)	FY01	69,684,000	809,203	5,226,300	80,920	\$800,799
Energy Design Guidelines (1) (2)	FY02	67,032,000	814,188	5,027,400	81,419	\$775,690
Energy Design Guidelines (1) (2)	FY03	71,685,000	778,256	5,376,375	77,826	\$815,667
Energy Design Guidelines (1) (2)	FY04	79,243,000	935,973	5,943,225	93,597	\$913,015
Energy Design Guidelines (1) (2)	FY05	84,401,895	1,114,262	6,330,142	111,426	\$990,058
Energy Design Guidelines (1) (2)	FY06	79,000,000	1,300,000	5,925,000	130,000	\$965,250
Energy Design Guidelines (1) (2)	FY07	84,224,535	1,436,000	6,316,840	143,600	\$1,036,589
Energy Design Guidelines (1) (2)	FY08	89,985,684	1,490,125	6,748,926	149,013	\$1,100,879
Energy Design Guidelines (1) (2)	FY09	84,147,744	1,533,156	6,311,081	153,556	\$1,113,885
Energy Design Guidelines (1) (2)	FY10	85,449,896	1,407,810	6,408,742	140,781	\$1,163,486
<b>Energy Design Guidelines (1) (2) Total</b>	<b>FY00 – FY10</b>			<b>64,122,276</b>	<b>1,233,396</b>	<b>\$10,375,901</b>

(1) Savings are based on 7.5% of total electricity consumption at the effective FY10 rate.

(2) Savings are based on 10% pf total gas consumption at the effective FY11 rate

Note: Implementation of the Energy Design Guidelines (EDG) are also responsible for similar savings to recreation facilities to include recreation centers, community centers and indoor pools. The Recreation department budget averages to approximately 20% of the facilities budget. Thus for FY10, an additional \$233,000 in cost avoidance savings is realized by virtue of implementation of the EDG.

**Planned Measures (FY 13)**

This table shows information on resource conservation measures planned to be implemented in FY 13(July 1, 2012through June 30, 2013)

Measures - Planned:	projected completion date	projected initial cost (\$) Note (1)	projected annual net impact on maintenance cost (\$)	fuel type(s) effected and units	estimated units saved per year	projected annual cost savings (\$)
(for FY13)	FY13					*
<b>Capital Improvement Projects: Description of Activities:</b>						
Kensington Library: Retrofit existing chiller with high efficiency unit	FY13	\$57,000	(15,500)	Elec (kWh)	43,640	\$6,900
Kensington Library: Upgrade control Systems	FY13	89,000	(2255)	Elec (kWh) Nat Gas (therms)		\$7,400
Strathmore Concert Hall –ARRA <u>Optional Project #4</u> Install ultrasonic humidifiers (replace existing electric humidifiers)	FY13	\$230,000	(12,500)	Elec (kWh)	480,000	\$ 64,800
Germantown Indoor Swim center – Replace interior ceiling metal halide lams with dimmable induction lamps where 50% are controlled by photocell	FY13	\$63,850	(\$2,700)	Elec (kWh)	185,520	\$ 29,683
<u>Up County Center</u> -Provide Interlocking controls for the air cooled chiller and existing primary loop circulating pumps (7.5 HP), to operate pumps and chiller whenever there is a call for chilled water. Currently pumps run 24/7 whether or not chilled water is needed.	FY13	\$14,500	(980)	Elec (kWh)	43,910	\$6,225
<b>Total CIP</b>		<b>\$ 454,320</b>	<b>(33,935)</b>			<b>\$ 115,008</b>

Note (1): Projected initial costs for ARRA projects are exclusive of design costs.

**Energy Design Guidelines  
FY 13 Planned Measures**

	date implemented	Yearly Electricity Consumption NDA Facilities ( kWh)	Yearly Natural Gas Consumption NDA Facilities ( TH)	units saved per year (kWh)	units saved per year (TH)	annual cost savings (\$)
Existing Measures						
Energy Design Guidelines (1) (2)	FY13	98,328,814	1,612,950	7,374,661	162,000	\$1,124,393

(1) Savings are based on 7.5% of total electricity consumption at the effective FY08 rate.

(2) Savings are based on 10% pf total gas consumption at the projected FY13 rate

Note: Implementation of the Energy Design Guidelines are also responsible for similar savings to recreation facilities to include recreation centers, community centers and indoor pools.