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Energy Conservation Initiatives

By: Najib Salehi, Energy Manager

November 13, 2009



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Background

1. Energy Manager's position was created in 2002
2. Board of Supervisors formed an Ad Hoc Energy Efficiency Committee in Jan 2008
3. In April, the Board approved 4 green initiatives:
 - a. Adopted LEED Green Building standard
 - b. Joined VML Green Government Challenge
 - c. Joined "Cool Capital" Challenge
 - d. Became an Energy Star partner
4. Energy Efficiency Committee became a joint effort between the County and LCPS in May 2008
5. An Energy Task Force was created by the County Administrator in May 2008.

Permanent Energy Efficiency Committee

Members



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Supervisor Andrea McGimsey, Loudoun County
Committee Chairperson

Supervisor Sally Kurtz

Supervisor Kelly Burk, Loudoun County

Supervisor Stevens Miller, Loudoun County

Primary Goals Of The Committee



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1. Perform energy audits on buildings & fleets
2. Create a plan to upgrade existing structures
3. Propose standards to incorporate best practices for new buildings
4. Research and utilize appropriate new technologies
5. Cooperate with Regional, State and Federal conservation efforts
6. Track program performance in terms of dollars saved and energy reduction impact
7. Engage businesses and residents in efforts to increase energy efficiency throughout the County
8. Incorporate life-cycle costs in all purchasing decisions

MWCOG “Cool Capital” Challenge



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- Metropolitan region-wide effort to reduce CO₂ emissions
- Pledges made by individuals and all types of entities
- Goal: Take a billion-pound bite out of the Capital Region’s carbon dioxide emissions by April 2009.
- Loudoun County has pledged to reduce CO₂ emissions by 1,365,810 pounds (approx. 3%)

VML Green Government Challenge



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- Statewide competition
- Loudoun County signed up in April, 2008
- Program ended on September 30th, 2008
- Implemented actions that reduce carbon emissions
- Total allowable points = 200
- Loudoun County earned 185 points
- **Tied for 1st place with the City of Roanoke for being a Green Government, 2008 challenge**
- **Received Platinum Award, 2009 challenge, earned 193 points**

October - Energy Awareness Month



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- Involved employees, citizens, businesses, students, everyone
- Vendors such as Dominion Virginia Power and Washington Gas participated
- Become more mindful of when and how we use energy and explored ways to conserve energy
- Provided tips and education
- Solicited good energy conservation ideas from employees



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Energy Awareness Month

Energy Conservation Quizzes and Outreach



Top winner received \$250

Loudoun County Energy Initiatives & Accomplishments



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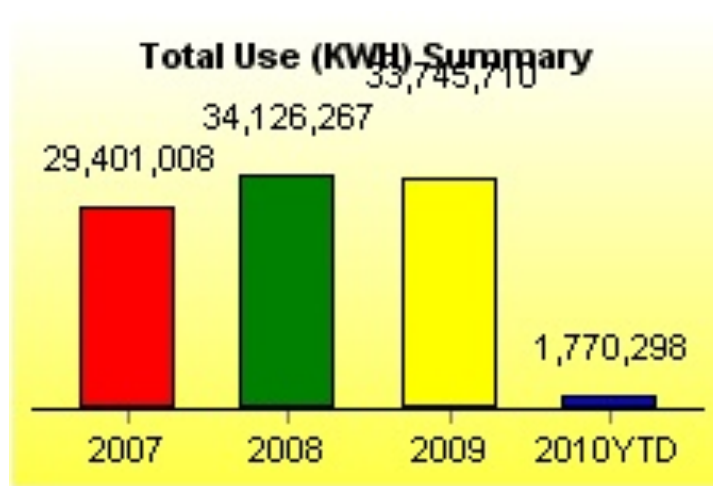


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- **New County-wide Green Guidelines for construction**
 - Endorsed LEED Silver as the standard
- **Identified current energy-saving actions, quantified dollar savings, and solicited additional ideas from all departments**
 - FY-09 Reduced electrical usage by 386,000 kWh through Energy Conservation Cabinet efforts.



Loudoun County Energy Initiatives & Accomplishments



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Energy Savings in Equivalents

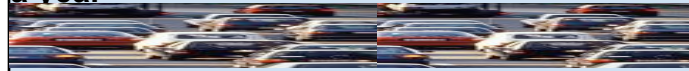

Assumption:

11,500 lbs of CO₂ = removing one car per year off the roads

7,530 lbs of CO₂ = planting one acre of trees

Upto date as of	11//12/2009
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Buildings Name	Co2 Reduction in pounds
All Facilities	2,911,789.00
Building xxxxxxxx	
Building xxxxxxxx	

		Building	Building	Total
Co2 Reduction (lb)	2,911,789	0	0	2,911,789
Equivalents				
Number of cars removed from the roads for a year				
	253	0	0	253
Acres of trees planted				
	387	0	0	387

We develop energy savings habits within all County Employees



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- Once a month Energy Conservation Cabinet meeting
- Face to face conversations
- Email, newsletters, handouts, posters
- Internet site

Green Business Challenge



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- Kick-off, November 19, Government Center
- Businesses can earn a certificate



	Small Business (< 49 employees)	Medium Business (50 - 999 employees)	Large Business (1000+ employees)
Certification	100-149 points	100-149 points	100-149 points
Silver	150-199 points	150-199 points	150-199 points
Gold	200-224 points	200-224 points	200-224 points
Platinum	225-250 points	225-250 points	225-250 points

Community-wide Energy Strategy



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- Receiving 2.2 M as part of the EECSBG
- Hired Northern Virginia Regional Commission to do a study
- Energy strategy 30 to 40 years County-wide
- CES recommends a list of projects for the EECSBG



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Energy Saving Tips and Ideas





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Turned off vending machine lights

Total annual savings = \$4100.00





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Implemented Vending Machine Energy Miser

Total annual savings = \$7,400.00





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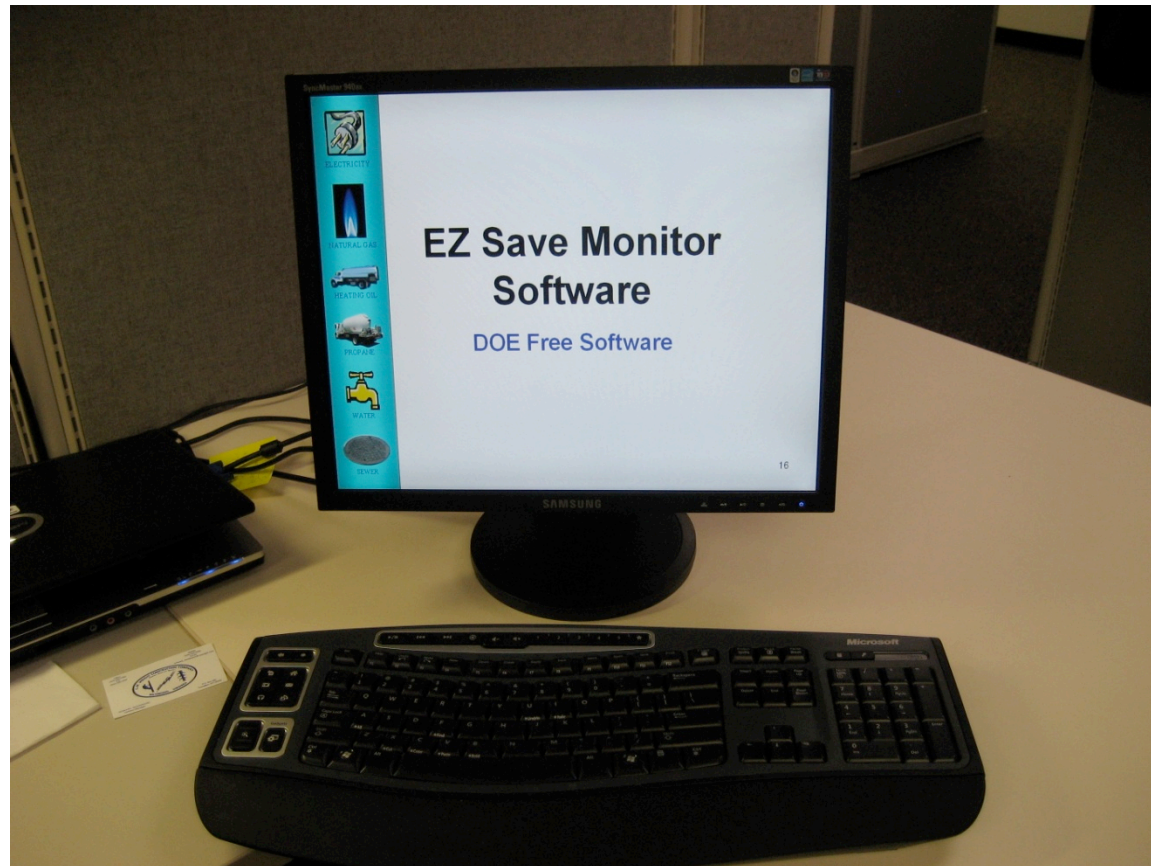
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EZ-Save Monitor Software

Total annual savings = \$4,600.00





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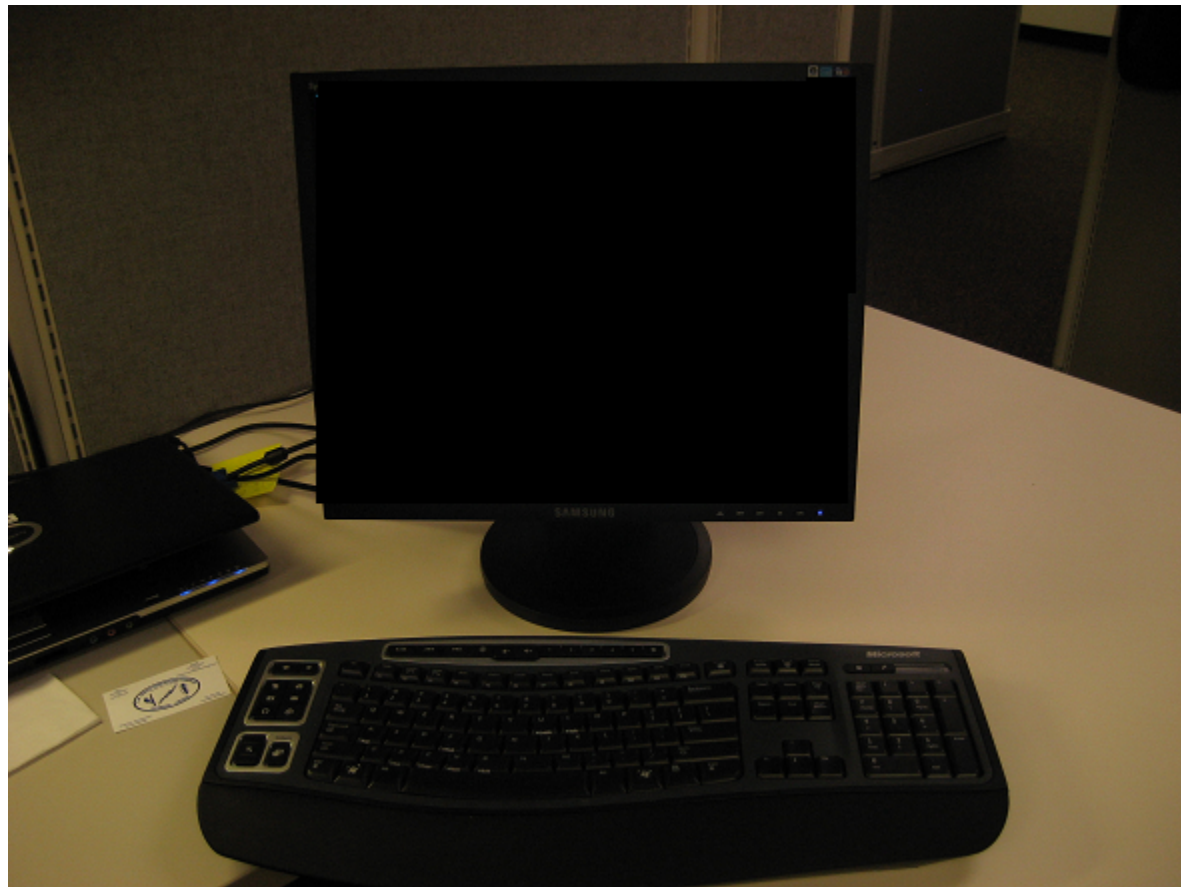
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Turn Off Computers on Weekends

Total annual savings Per Computer= \$86





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We get involved in utilities coordination

- Natural Gas Expansion Project

Washington Gas Initial Cost = \$148,264

Washington Gas 2nd Cost = \$69,413

Washington Gas Final Cost = \$15,704

County Savings = \$133,160



Teleworking



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- The county offers teleworking to its employees since 1996
- In 2006 the Board of Supervisors and the County Administrator re-launched the program with a participation goal of 20%
- Nearly 19% of the non-public safety employees currently telework
- It is estimated the county's telework program saves 125,300 vehicular miles traveled and 3,676 hours of commuting time each month
- The county is aiming to increase participation to 25% of non public safety employees



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Cost Avoidance

Cost avoidance represents the amount of money that does not have to be spent because of good habits that result in less energy consumption.





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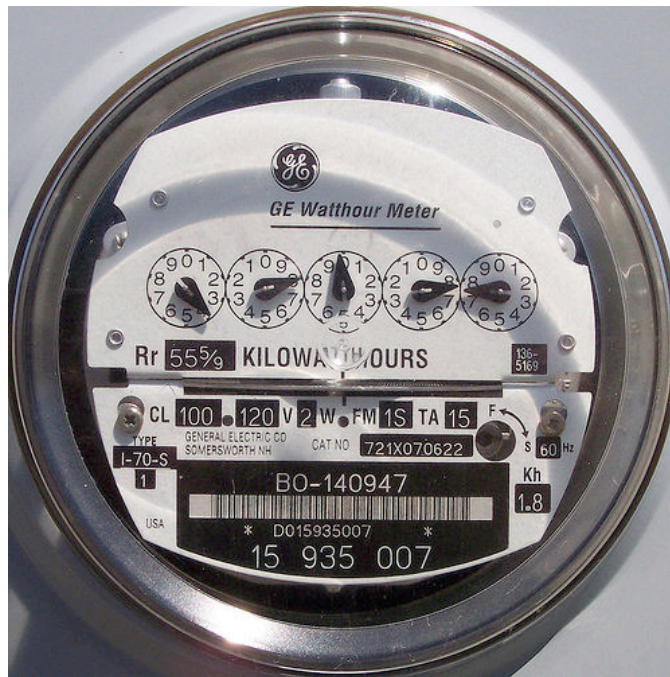


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The electric meter is a cash register.
 When energy is used, a purchase is made.
 Everyone in a facility is authorized to make such a purchase.





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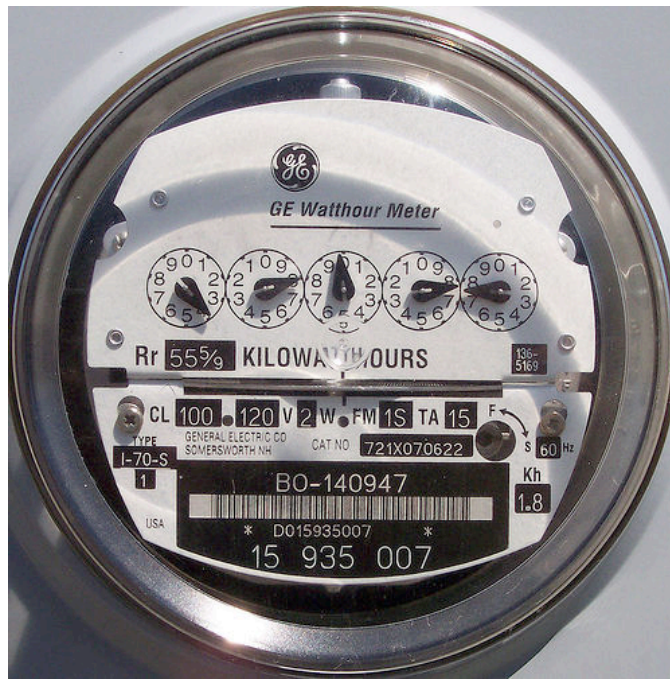
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The electric meter is a cash register.
 When energy is used, a purchase is made.
 Everyone in a facility is authorized to make such a purchase.

Make a wise purchase every time.





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With everyone taking a part in conserving energy, we reduce global warming and reduce demand for energy





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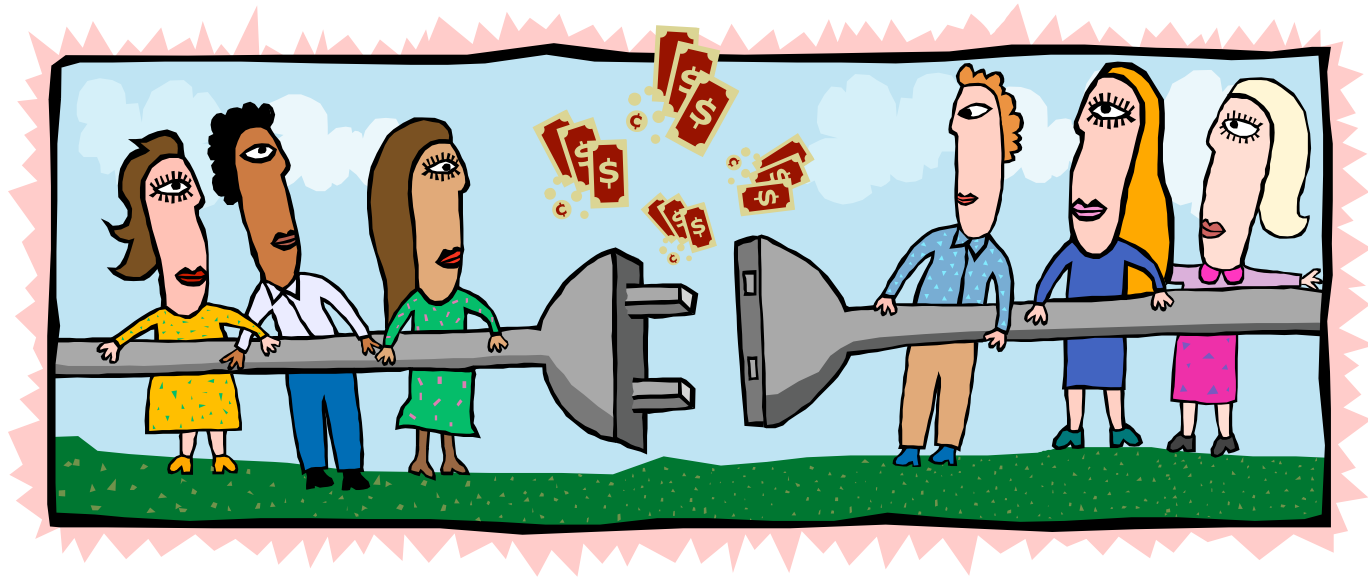


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Contact Information

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