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Energy Conservation Initiatives

By: Najib Salehi, Energy Manager

November 10, 2008



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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.

Ad Hoc Energy Efficiency Committee

Members



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Supervisor Andrea McGimsey, Loudoun County
Committee Chairperson

Chairman Scott York, Loudoun County

Chairman Robert DuPree, Loudoun County Public Schools

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

Loudoun County Energy Profile



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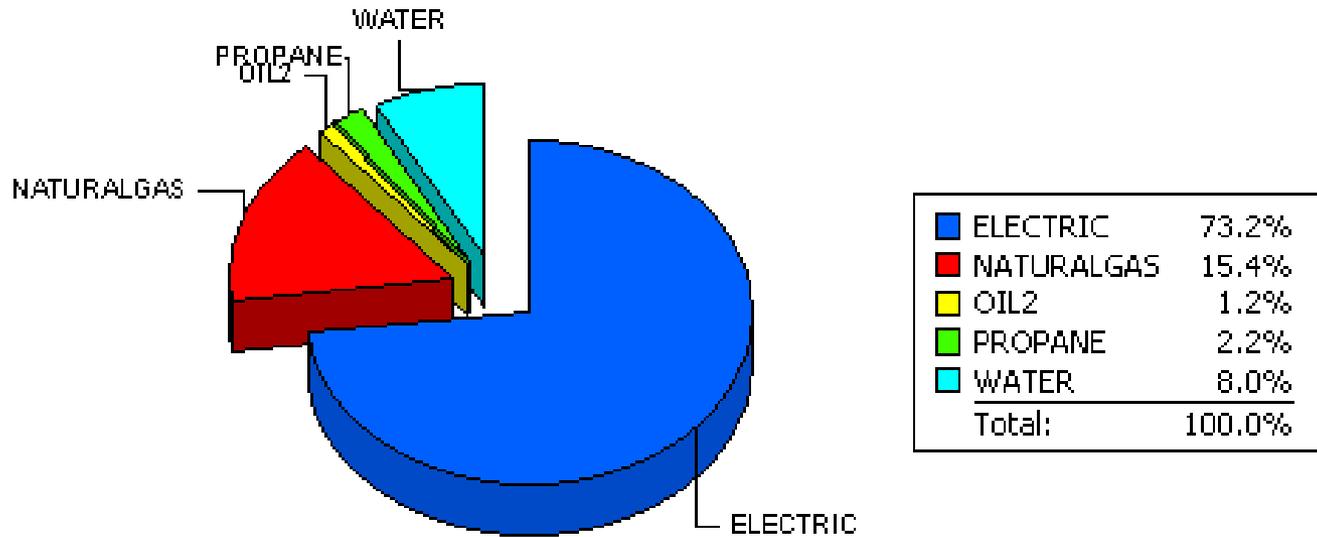


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Cost Percentage



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**



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Meeting Our Pledge

- Reduce Vehicle Miles Traveled
 - Teleworking, more buses, ridesharing
- Use More Efficient Vehicles
 - Buying 15 more hybrids; 3 in the car pool
- Green Procurement
 - Specifying Energy Star products where possible
- Greening our Buildings
 - Selected investments based on energy audit results
- Recycling more
 - More recycle bins, publicize events
- Becoming more aware

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

Special reward for best energy saving suggestion



- Top winner received a sports bike
- Other good suggestions received cash award, a day off with Pay, and Letter of Recognition

Loudoun County Energy Initiatives & Accomplishments



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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-08 calculated \$150,000 in savings from lighting retrofits, software implementations and other measures
 - FY-08 savings achieved as a result of utility coordination for all project estimated at \$200,000.
- **Renewed focus on energy awareness and conservation among employees as part of year-long campaign**
- **Solicited energy saving inputs from the community in “Listening Sessions”**



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We develop energy savings habits within all County Employees

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



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We implement energy saving programs and best practices.

- Light switch stickers
- Computer on/off guidelines
- Holiday shut down processes
- 5 major energy saving opportunities
 - Lights in unoccupied rooms
 - Exterior lights during the day
 - Open doors & windows
 - Water leaks
 - Computer use guidelines



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We evaluate and utilize the most effective energy providers and rates.

- VEPGA agreement with Dominion
- NOVEC Customer Group
- PJM demand response program
- MWCOCG natural gas reverse auction
- Ongoing rate comparison and analysis



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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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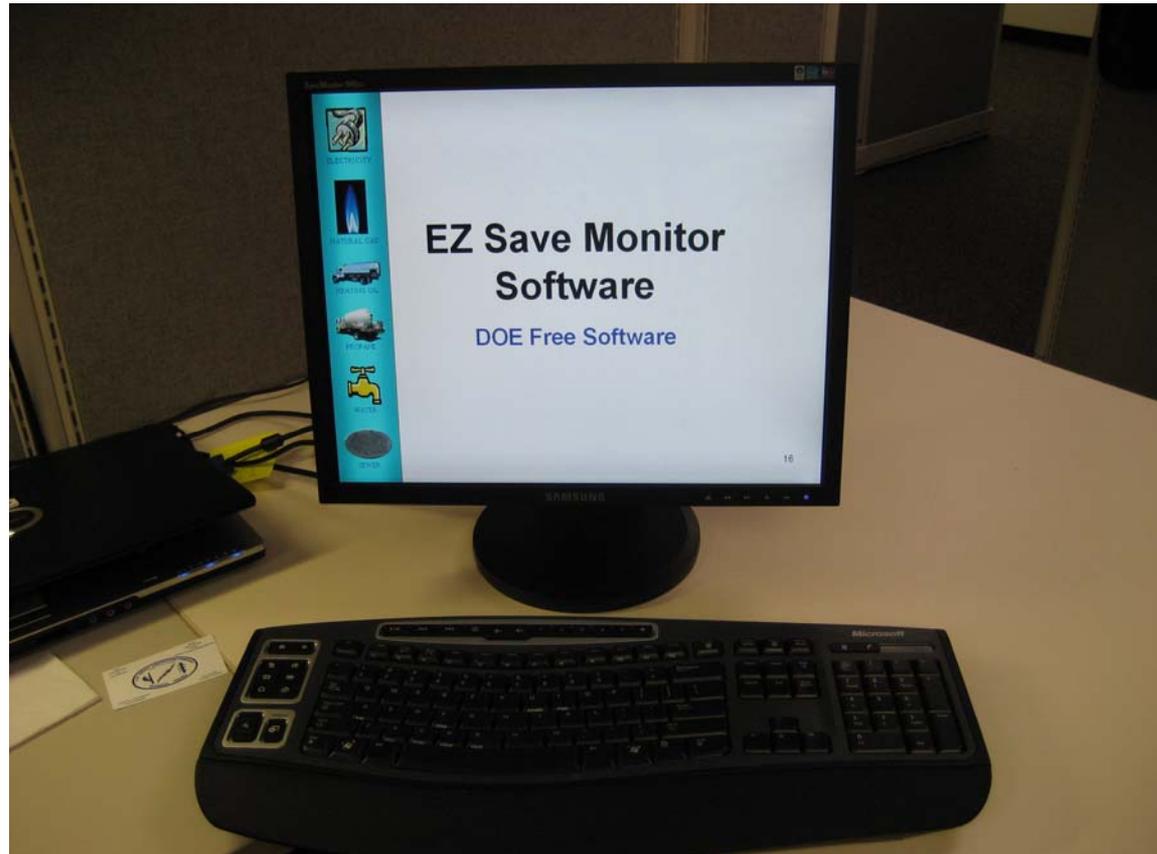
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EZ-Save Monitor Software

Total annual savings = \$4,600.00



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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Fuel Efficient Vehicles



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- Number of county Hybrid vehicles = 25
- Additional hybrids to be added in FY-09 = 15
- Commuter buses driven 32% over the fiscal average
- FY-08 utilization of hybrids = 2,400 miles more than average of all County vehicles
- Three Prius hybrids are in the county car pool driven 2,000 miles each month
- 11% of county sedan/small SUV fleet is hybrid



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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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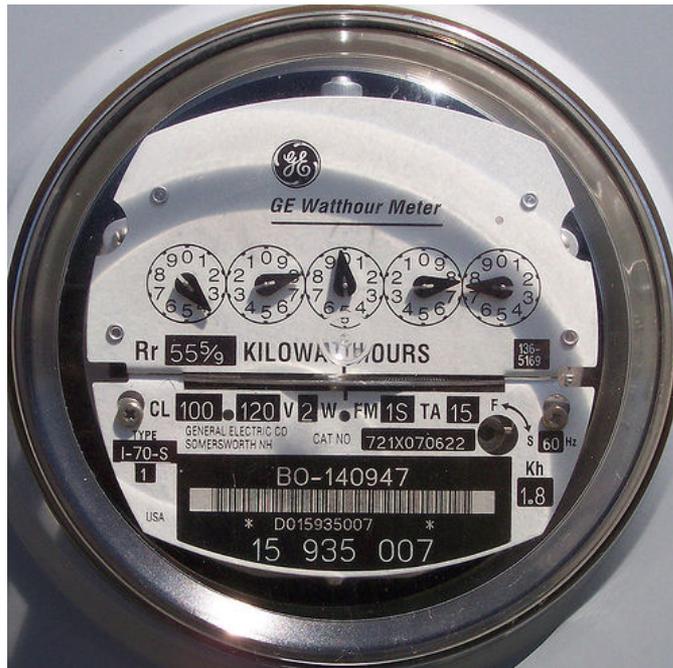
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The electric meter is a cash register.

When energy is used, a purchase is made.

Everyone in a facility is authorized to make such a purchase.

Make a wise purchase every time.





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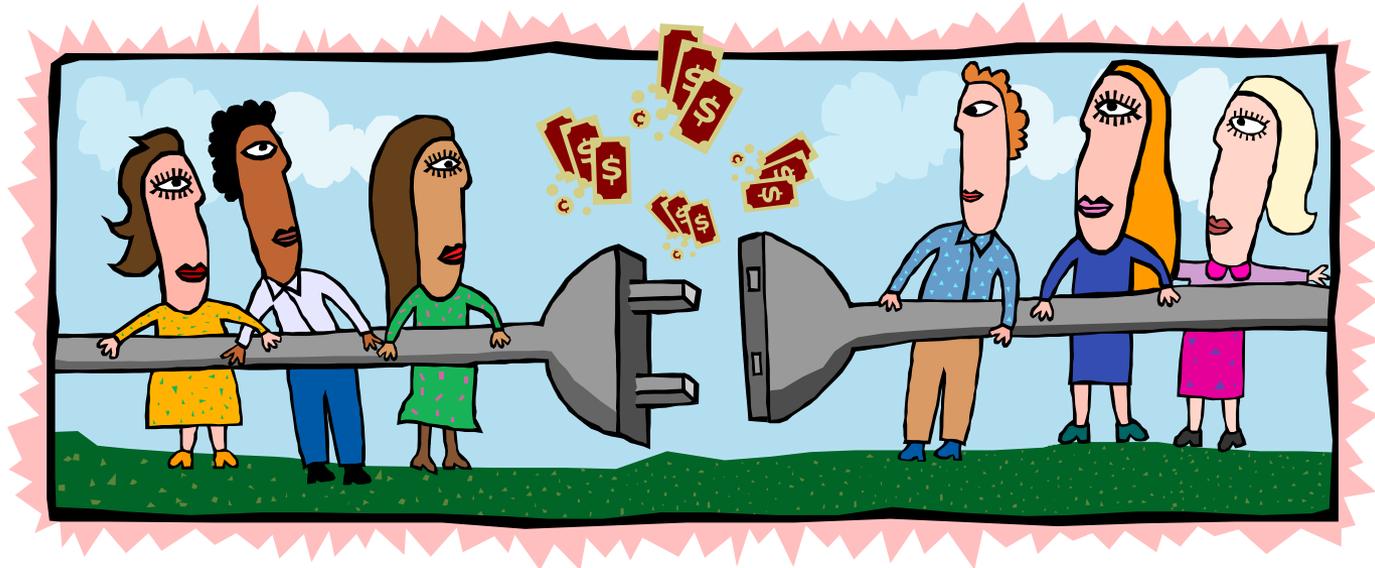


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With everyone taking a part in conserving energy, we reduce global warming and reduce demand for energy





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