Energy Conservation Committee Annual Report

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Management Services Division

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MARYLAND ENERGY ADMINISTRATION

Agenda

- Members of the Energy Conservation Committee
- Maryland Energy Administration Grant Awarded Projects
- Additional Initiatives Implemented in FY09 - FY10
- Fuel Conservation Plan
- Outlook for FY11

Members of the Energy Conservation Committee

- **Austin Abraham** – Management Services
- **Charlie Dalphon** – BOE
- **David Ennis** – DPW
- **Doug Pearre** – Maintenance
- **Hal Good** – Purchasing
- **Hilari Varnadore** – Office of Environmental Sustainability
- **Jeannine Jennings** – Social Services
- **Jessica Stoner** – Management Services
- **Kevin Demosky** – DUSWM
- **Kevin Fisher** – Facility Services
- **Mike Butler** – Maintenance
- **Pat Hannah** – Fleet Services
- **Steve Logsdon** – Maintenance
- **Steve Moriarty** – IIT
- **Tim Clarke** – Sheriff's Office
- **Todd Oyster** – Maintenance
- **Wayne Roach** – Facility Services

Maryland Energy Administration Grant Award Projects

Maryland Energy Administration Grant Award Projects

- Awarded $80,000
- 21 Projects Related to Energy Conservation
  - *Lighting*
  - *Occupancy & ambient lighting sensors*
  - *Energy Management Systems*
  - *HVAC replacements*
  - *Controls, programmable thermostats & timers*
  - *Building Energy Assessments*

Upgrades to Lighting

110 lights upgraded from metal halide or mercury vapor to T-8 fluorescent

- Locations: Courthouse, Health Dept., Transit, Westview Fire station, and Fleet Services
- Grant Award: $13,850 *(17% of funds)*
- Estimated Savings: $10,500/yr.
- Payback: 1.32 years

Occupancy & Ambient Lighting Sensors

75 occupancy sensors installed in storerooms, mechanical rooms, and other selected areas

41 ambient lighting sensors installed in front lobby and stair towers at the LEC

- Locations: Courthouse, DPW, Health Dept., LEC, Westview Fire station
- Grant Award: $6,120 *(8% of funds)*
- Estimated Savings: $5,800/yr.
- Payback: 1.06 years

Energy Management Systems

Upgraded HVAC controls, installed new programming and reconfigured existing software

- Locations: Health Dept. and Urbana Library/Senior Center
- Grant Award: $29,860 *(37% of grant)*
- Estimated Savings: $16,665/yr.
- Payback: 1.79 years

HVAC Replacements

Replaced 3 aging HVAC units increasing the energy efficiency rating of the equipment

- Locations: ADC and Senior Center
- Grant Award: $21,000 *(26% of funds)*
- Estimated Savings: $1,135/yr.
- Payback: 18.50 years

Programmable Controls

CO sensors & controls to manage exhaust fans; programmable thermostats on radiant heaters; and timer on air compressor

- Locations: Courthouse, Transit, and Westview Fire station
- Grant Award: $2,180 *(3% of funds)*
- Estimated Savings: $2,280/yr.
- Payback: 0.96 years

Building Assessments

Evaluated operating systems and their impact on energy consumption

Identified programs and projects to reduce energy consumption and costs

- Locations: ADC, Hwy/Fleet Services, C. Burr Artz Library, Emmitsburg Community Center
- Grant Award: $9,000 *(11% of funds)*
- Savings: Priceless
- Benefit: Provides guidance and direction for future projects

MEA Recap

- Total spent: **$80,000**
- Future on-going savings: **$36,320/yr.**
- ENERGY Saved:

  356,665 kWh annually

  925 therms (natural gas) annually

EmPOWER CLEAN ENERGY COMMUNITIES

MEA MARYLAND ENERGY ADMINISTRATION

Additional Energy Initiatives in FY09-FY10

TPO Roof Replacements

Thermoplastic polyolefin (TPO) roofing is usually a light or white colored roof, which absorbs less heat, reducing the amount of heat absorbed into a building's conditioned space.

- Location: Health Dept., Parks and ALS
- Savings: Combined = $1,360/yr. (30 years = $40,800)

Lighting Replacement & Conservation

- **Metal halide to fluorescent at LEC**
- **Incandescent to LED at Courthouse**
- **32-watt to 28-watt fluorescent replacements County-wide**
- **Modifications of light controls at the Health Department**
- Total savings = 81,477 kWh
  $8,960 annually

Downsizing Fleet Vehicles

- **8 Fleet vehicles downsized**
- **11 Fleet vehicles replaced with hybrid equivalent**
- <u>Total Savings</u> = 3,985 gallons of fuel and $9,480 annually

Other Projects Showing Savings

- **Rooftop unit replacements**
- **Air temperature equalizers in classrooms**
- **Dual flush handles in restrooms**
- **IIT's Data Center Renovation**
- <u>Total Savings</u> = $19,760 annually

FY2009 & FY2010

On-going Annual Energy Savings Achieved…

$75,880

Fuel Conservation Results

	Total Gallons Saved	52-Week % Change
1st 52-Weeks (FY09)	77,191	-7.1%
2nd 52-Weeks (FY10)	66,394	-6.2%
Total	**143,585**	

Total 2-year savings = $330,000

$$$ Results…

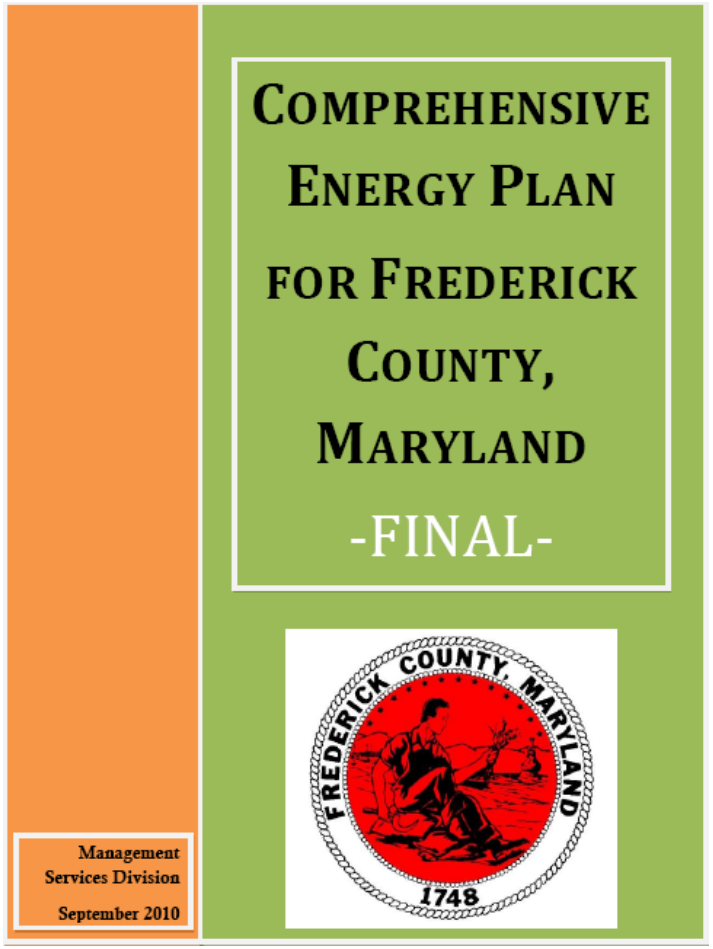
5-Year Cumulative Savings with Fuel Conservation

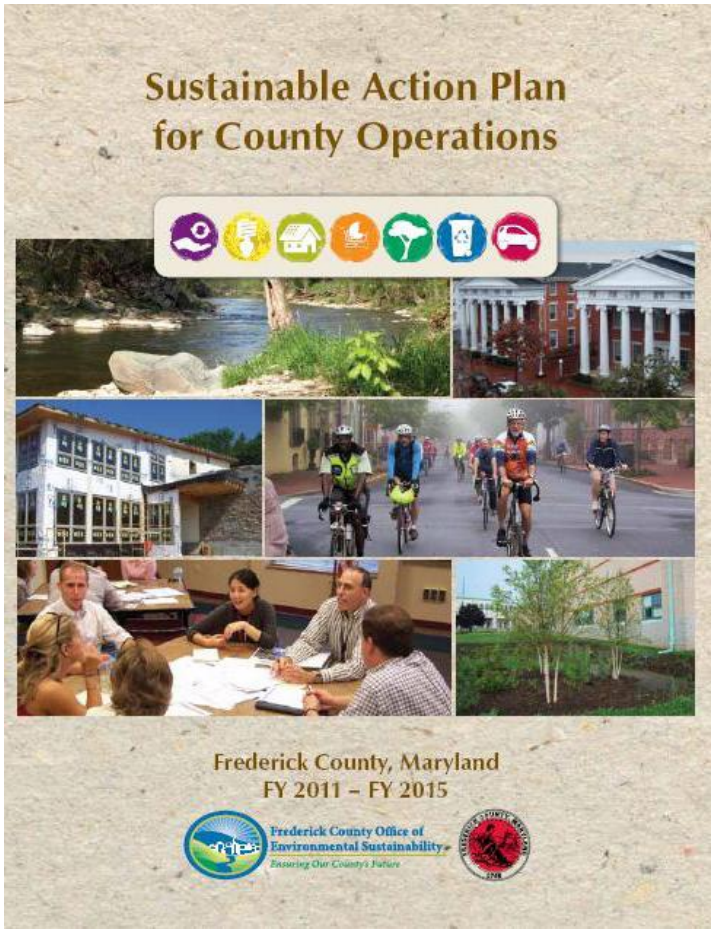
$930,000

On-going Annual Savings with Fuel Conservation

$391,470

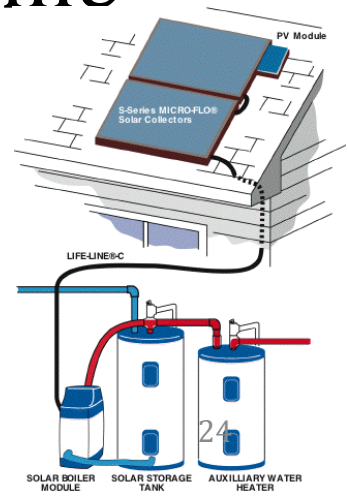
County Energy Conservation Planning





Outlook for FY11

- TransIT's first 2 hybrid buses
- Emmitsburg Community Center TPO roof
- Brunswick Library – LEED Certified
- Catoctin Nature Center – Green roof
- Teleconferencing capabilities

EECBG Projects for FY11

- Solar Domestic Hot Water Preheat Project
- LED lighting conversion in Courtrooms
- LED lighting conversion at Highway Operations/Fleet Services truck shed
- HVAC replacement at Pinecliff A-Frame