

PUBLIC-FACING ENERGY INITIATIVES

Joint Environmental Quality Advisory Council /
Environmental Coordinating Committee Meeting
March 9, 2016

Discussion Items

- New *Energy* landing page
- New *Energy Data* pages
- *Energy Action Fairfax* update
- *Green Business Partners* program update

Easy Access to Energy Information

Related Links

[Animal Control/Animal Shelter](#)
[Environmental Quality Advisory Council](#)
[Health Department](#)
[Northern Virginia Soil and Water Conservation District](#)
[Park Authority](#)
[Planning and Zoning](#)
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Environment & Energy

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Topics

- Air Quality
- Dumping and Filling
- **Energy**
- Electric Vehicles
- Green Buildings
- Greenhouse Gas Inventory
- Health and the Environment
- Land Use and Development
- Litter
- Noise
- Parks
- Recycling, Trash and Hazardous Waste
- Sanitary Sewers
- Soil
- Stormwater
- Sustainability Initiatives
- Transportation
- Trees
- Volunteer
- Walkways and Trails
- Water
- Watersheds

Environmental Videos



- Energy Efficient Fairfax County
- Electric Vehicle Basics
- Stormwater Management

New Energy Landing Page

www.fairfaxcounty.gov/energy

Related Links

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[Channel 16 !\[\]\(aa53ad6fea213b8b2226d3077e30533a_img.jpg\) !\[\]\(a1c2189b125458bd8fa8822d0c2da6bc_img.jpg\)](#)
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Maps, Facts & Stats

[Demographics & Data](#)

Energy

Efficient energy use benefits both your wallet and the environment. On this page, you can learn about the county's energy efficiency initiatives, as well as energy-saving tips for home, work, and your commute.

Fairfax County Initiatives

- [Energy Data Since 2006](#)
- [Energy Policy](#)
- [Green Building](#)
- [FY 2016 Sustainability Initiatives](#)
- [Community Greenhouse Gas Inventory](#)
- [Building a Sustainable Future - Energy Efficient Fairfax County !\[\]\(3292f5442e3b4027aa0bb60988f9fc82_img.jpg\)](#)



Resources for Home or Work

- [Energy Action Fairfax](#)
- [Virginia Energy Sense](#)
- [ENERGY STAR](#)
- [Department of Energy's EnergySaver Program](#)
- [US Energy Information Administration Guide to Understanding Energy](#)
- [Fairfax Water Conservation](#)



Resources for on the Road

- [Commuting in Fairfax County](#)
- [RideSources Program: Car/Van Pools](#)
- [Employer Services Program](#)
- [SmartBenefits](#)
- [TeleworkVA](#)
- [Fuel Economy](#)



Fairfax County Energy Data Pages

A Multi-Phase Project

- Phase 1 (active):
 - Provide overview of county government electricity and natural gas use from 2006 to 2014
 - Present data on overall basis and in four service areas
- Phase 2 (planned):
 - Provide energy data from 2006 to 2014 for certain building categories
 - Include information on agency energy improvements
- Phase 3 (possible):
 - Highlight properties of general community interest

Energy Data Pages

www.fairfaxcounty.gov/energy/energydata

The screenshot shows the Fairfax County Virginia website. At the top left is the Fairfax County logo with a portrait of a man. Below the logo is a navigation bar with buttons for Home, Living Here, Doing Business, Visiting, and Departments & Agencies. To the right of the navigation bar is a search box with a 'Go' button and an 'Advanced Search' link. Below the navigation bar is a sidebar with an 'Index' section containing links for Contacts/Directions, Energy Data Home, County Overall, Government Buildings, Public Works, Parks, and Housing and Human Services. Below the Index are several red buttons with dropdown arrows for Online Services, Our Government, News and Events, Maps, Facts & Stats, and State & Federal. The main content area features a breadcrumb trail 'homepage > energy' and a 'Printer Friendly' icon. The main heading is 'Energy Data Home'. Below the heading is a paragraph about Fairfax County's commitment to environmental and corporate stewardship, stating that reducing energy use saves on utility bills and avoids greenhouse gas emissions. Below this paragraph is a sentence: 'Fairfax County has been tracking its energy use since 2006. Click on the links below to learn more.' At the bottom of the main content area are five image-based links: 'County Overall' (a map of the county), 'Government Buildings' (a brick building), 'Public Works' (two workers in safety vests), 'Parks' (a lake with a boat), and 'Housing & Human Services' (a hand holding a small object).

Fairfax County
VIRGINIA

Home Living Here Doing Business Visiting Departments & Agencies

Search Site: Go Advanced Search

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- Public Works
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- Housing and Human Services

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homepage > energy

Printer Friendly

Energy Data Home

Fairfax County's commitment to environmental and corporate stewardship is demonstrated by policies, programs, and projects that reduce the electricity and natural gas used in county buildings and operations. Reducing the amount of energy used saves on the county's utility bills while also avoiding the emission of greenhouse gases.

Fairfax County has been tracking its energy use since 2006. Click on the links below to learn more.

County Overall

Government Buildings

Public Works

Parks

Housing & Human Services

Overall County Energy Use

2006 - 2014

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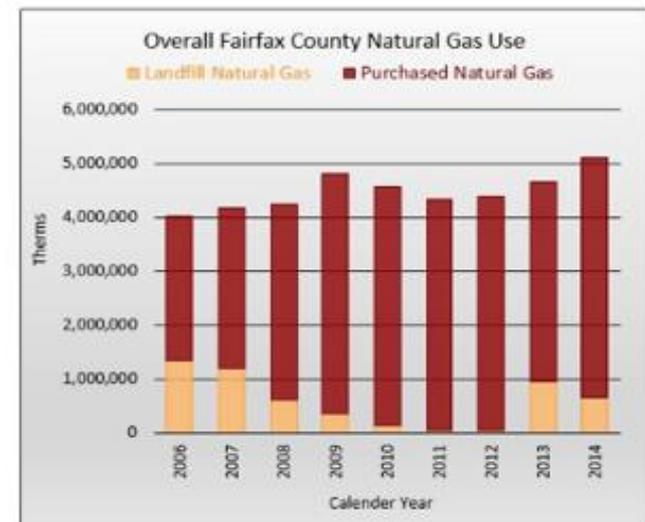
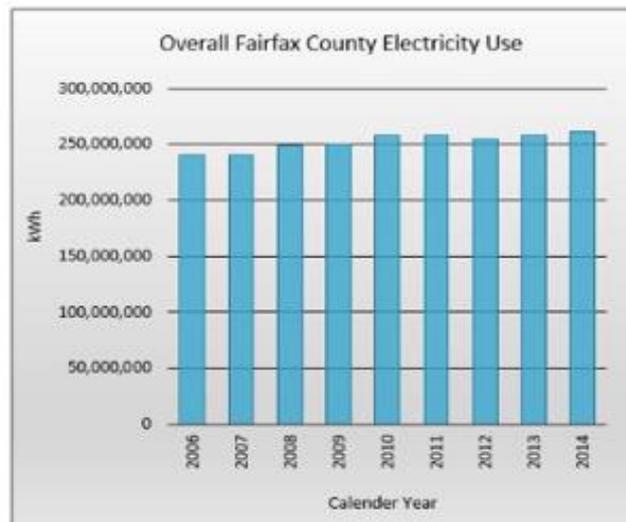
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Fairfax County Overall

Fairfax County uses electricity and natural gas throughout its operations. Much of that energy use allows the county to heat and cool its facilities and power the lights and equipment in them. Some of the county's energy use helps ensure adequate night-time lighting on streets and ball fields. Other energy uses are less visible but just as essential, such as wastewater pumping and treatment.

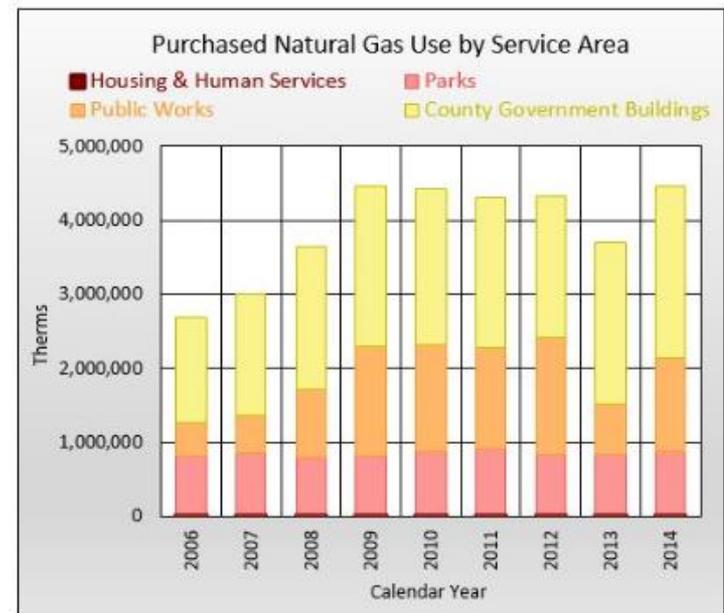
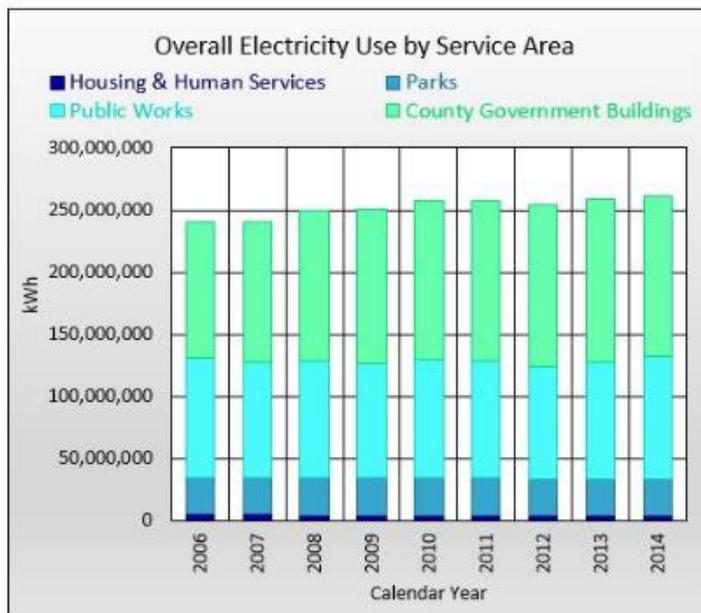
Four graphs are provided below. The graphs on the left show annual electricity use from 2006 through 2014, while the graphs on the right show annual natural gas use. The second row of graphs breaks down the usage into four service areas – Housing & Human Services, Parks, Public Works, and County Government Buildings. Refer to the [Energy Data homepage](#) or the index in the top left corner for more information on a specific service area's usage.

The first Natural Gas Use graph shows both purchased gas and landfill gas produced by the county's two closed sanitary landfills. Each bar in this graph is cumulative, showing the total units of heat (therms) from both fuel sources used by the county in that year. The county uses landfill gas as an alternative to purchased natural gas whenever possible. For more information visit our [Landfill Gas Capture and Utilization](#) webpage. Note that any Natural Gas Use by Service Area graphs do not include landfill gas usage.



Overall County Energy Use

Continued from prior page



**Approximately 10% of the landfill gas data was estimated from 2008-2009 based usage from other years.*

Government Buildings

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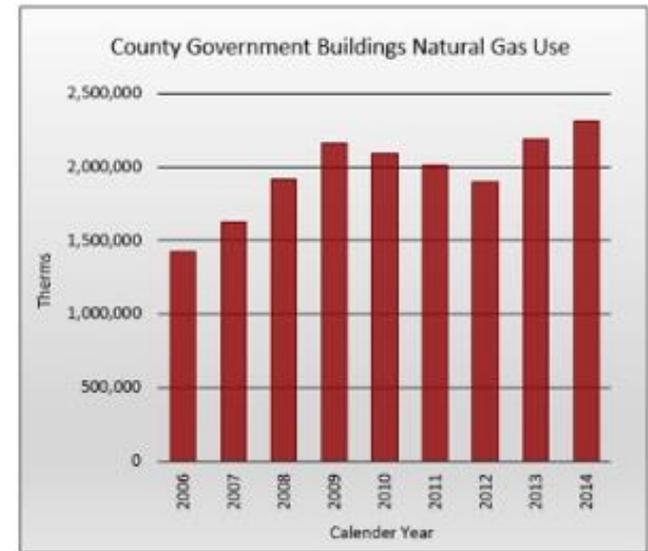
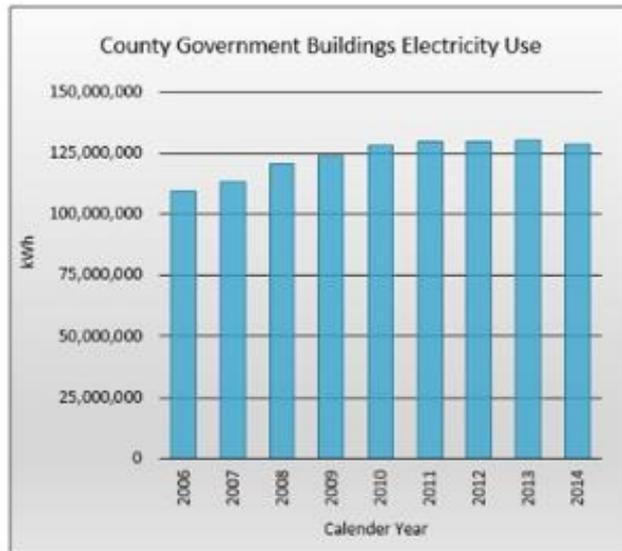
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County Government Buildings

The category of County Government Buildings includes all Fairfax County government facilities that are maintained by the Facilities Management Department (FMD). This category encompasses several different types of facilities including police and fire stations, libraries, health clinics, courthouse buildings and administrative offices.

The graphs below show annual electricity and natural gas use for County Government Buildings from 2006 through 2014. Over this time period, the County Government Building portfolio grew from 7.6 million to 8.6 million square feet.



*April 2014 gas data from the county's utility bill tracking software showed an error for one building. An average of March and May for that building was used instead.

Public Works

2006 - 2014

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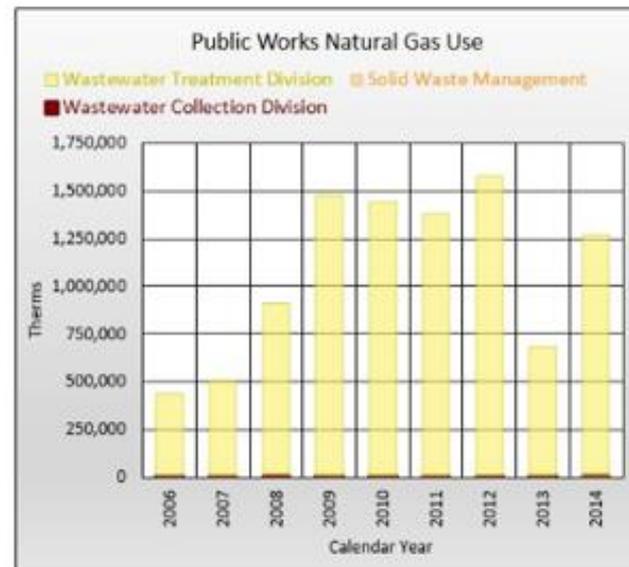
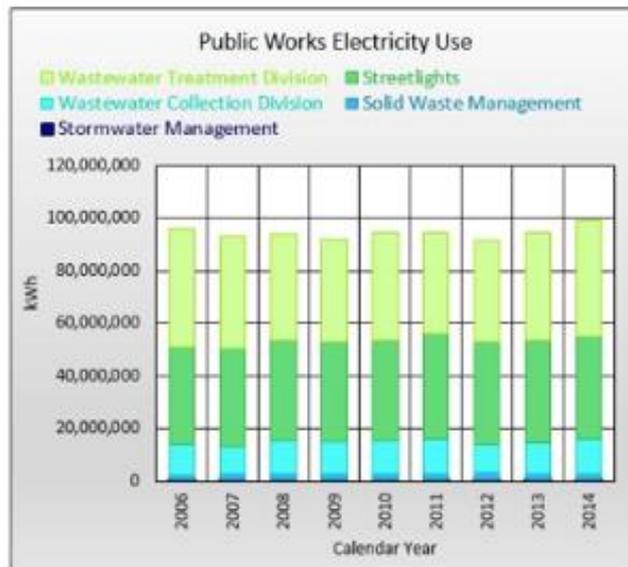
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Public Works

Fairfax County's Department of Public Works and Environmental Services (DPWES) has a wide-ranging set of responsibilities, including those associated with the construction and maintenance of the county's infrastructure. Groups within Public Works that purchase energy include Wastewater Treatment, Wastewater Collection, Solid Waste Management, Stormwater Management, and the Streetlights branch of Capital Facilities. Most of the energy used is for the collection and treatment of wastewater. DPWES also purchases a significant amount of electricity for streetlighting, although the streetlights themselves are owned and maintained by local electric utilities.

The graphs below show the annual electricity and natural gas used by Public Works from 2006 through 2014.



*2006 electricity was data incomplete for Stormwater Management. 2007 data was used instead. **Most of the county's landfill gas is used by Public Works. To view the landfill gas usage, refer to the Fairfax County Overall page.

Park Authority

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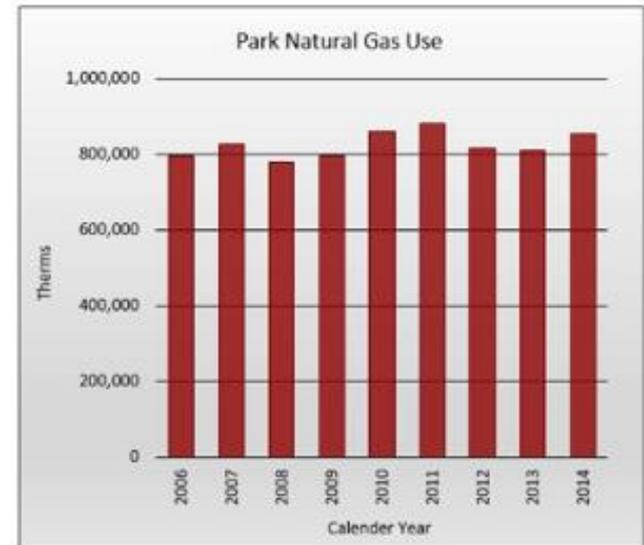
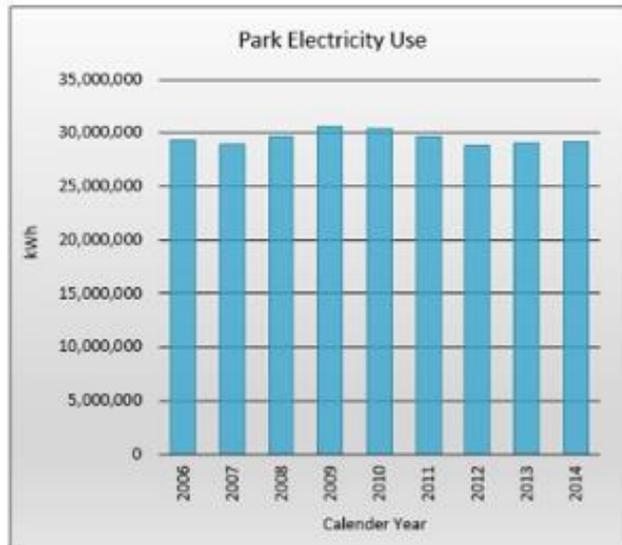
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Parks

The Fairfax County Park Authority (FCPA) operates and manages over 23,000 acres of county parks. FCPA facilities include RECenters, golf courses, nature and visitor centers, historic properties, lakefront parks, and hundreds of athletic fields and athletic courts.

The graphs below show annual electricity and natural gas use at FCPA facilities from 2006 through 2014. Over this time period the number of parks increased from 388 to 423.



Housing and Human Services

2006 - 2014

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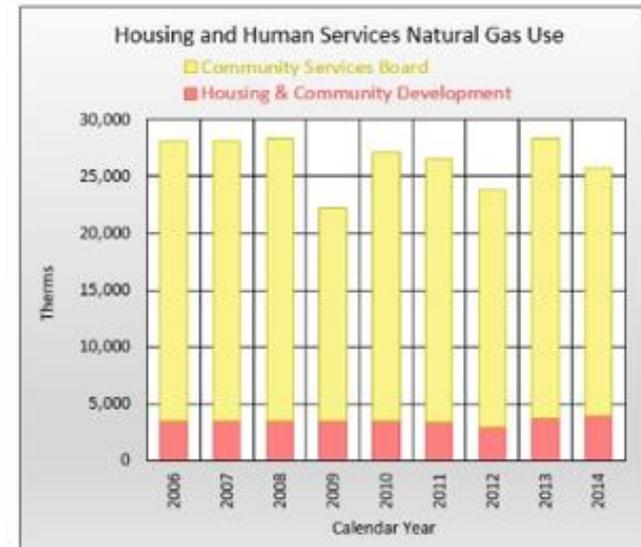
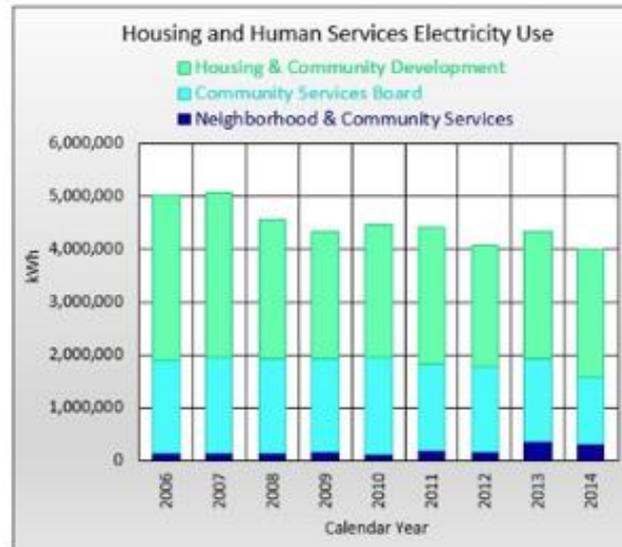
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Housing and Human Services

The Housing and Human Services category includes three county agencies that purchase energy: Housing & Community Development (HCD), the Fairfax-Falls Church Community Services Board (CSB), and Neighborhood & Community Services (NCS). Energy consumption in this category is primarily attributable to HCD, which administers affordable housing and community revitalization programs, and CSB, which provides support to residents for mental illness, substance abuse, and intellectual and developmental disabilities.

The graphs below show annual electricity and natural gas use at Housing and Human Services sites from 2006 through 2014.

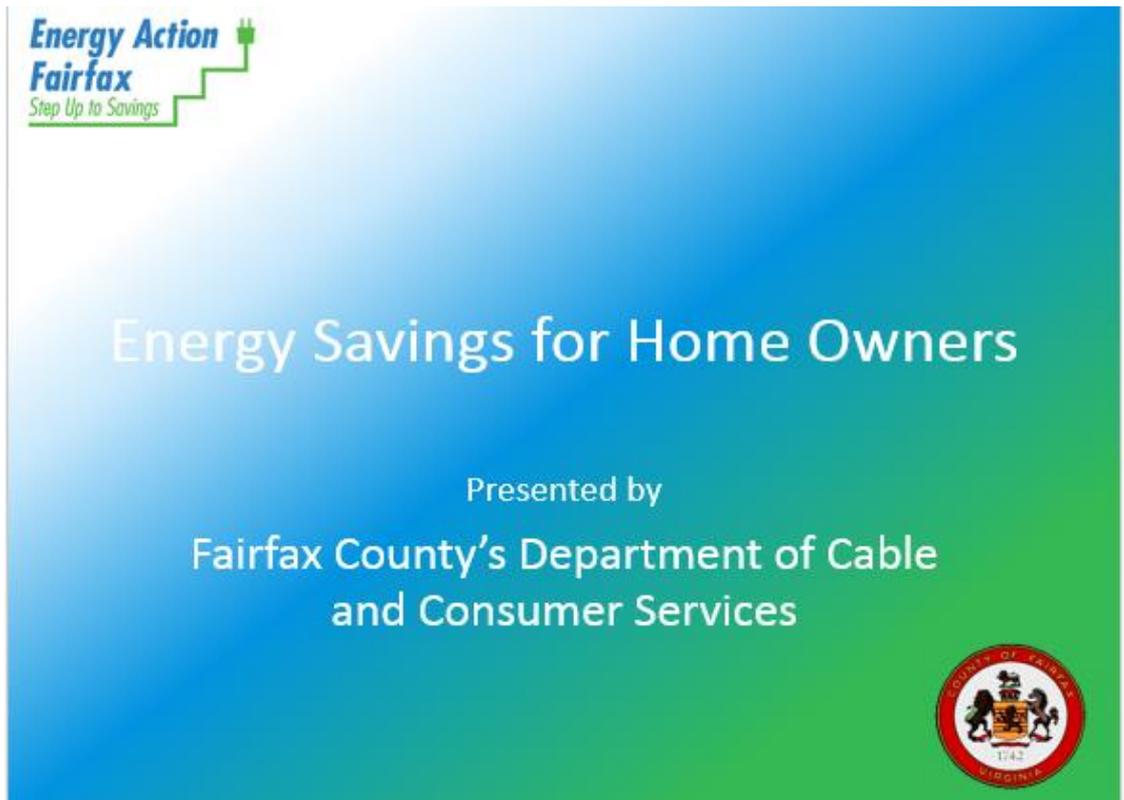


*2006-2007 electricity and gas data were unavailable for some CSB and NCS facilities. Values were estimated based on 2008 usage. **2006 electricity data was unavailable for HCD. Values were estimated based on 2007 usage. 2006-2009 gas data was unavailable for HCD. Values were estimated based on 2010-2014 usage.

Energy Action Fairfax

www.fairfaxcounty.gov/energyactionfairfax

- Updated presentations
- More tips



Energy Action Fairfax

New Information

Lighting: LEDs Are Ready

Lamp Type	Wattage	Annual Usage per Lamp	Annual Cost per Lamp	Lifetime
Old Incandescent	60 W	72 kWh	\$6.60	1 year
Incandescent	43 W	52 kWh	\$4.73	2 years
	15 W	18 kWh	\$1.65	8 years
	9.5 W	11 kWh	\$1.05	21 years

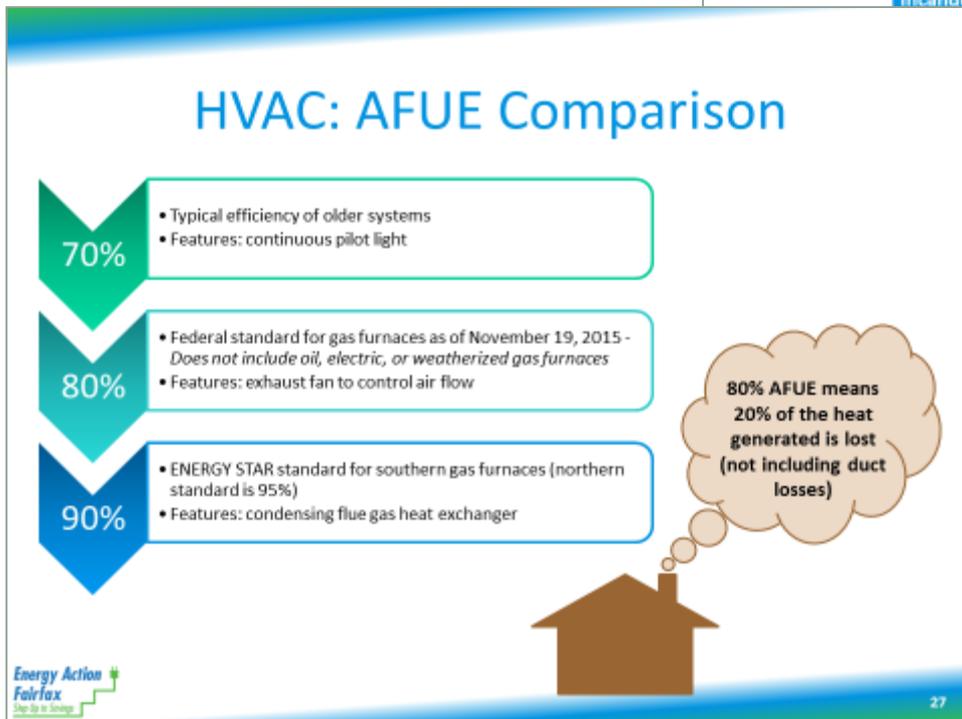
Incandescent lamps are used 100 hours per month (3.3 hours per day). Assumes an electricity price of \$0.11/kWh



Additional Benefits:

- Don't give off heat
- Dim well
- Perform well in the cold

HVAC: AFUE Comparison



70%

- Typical efficiency of older systems
- Features: continuous pilot light

80%

- Federal standard for gas furnaces as of November 19, 2015 - Does not include oil, electric, or weatherized gas furnaces
- Features: exhaust fan to control air flow

90%

- ENERGY STAR standard for southern gas furnaces (northern standard is 95%)
- Features: condensing flue gas heat exchanger

80% AFUE means 20% of the heat generated is lost (not including duct losses)

Energy Action Fairfax
Step Up to Save

Energy Action Fairfax

Reorganize and Refocus Webpages

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Home Energy Assessments



A home energy assessment, also known as a home energy audit, lets you know how energy efficient your home is. It identifies problem areas and recommends improvements so you can save energy and money on your utility bills month after month.



What to Expect

What's Covered: An energy auditor will assess your home's energy performance by examining the home's exterior, each of its rooms, and key components like the heating and cooling system, water heater, appliances and lighting. The energy auditor also will review your past utility bills.

Time: Most assessments take a few hours. Factors that affect the time include the type of assessment requested, the size of the home, and the type of fuels used in the home.

Cost: The lowest cost assessments start around \$250 and rely primarily on a visual examination. More expensive assessments, around \$500, reflect the cost of additional services that help pinpoint energy issues and opportunities. Common additional services include a blower-door test to determine the airtightness of a home, infrared scanning to help identify air leakage, and combustion safety testing for homes with natural gas heating and appliances.

Results: You should receive a written report within a few days of the assessment that summarizes the energy auditor's findings and describes recommended improvements. Often the auditor can make the improvements for you at an additional charge. Some utilities even offer rebates for upgrades performed.

Energy Action Fairfax

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Lighting

- Purchase ENERGY STAR® qualified LEDs (light emitting diodes) when buying new light bulbs, and replace incandescent bulbs with LEDs in frequently used areas. Refer to our [Light Bulb Comparison](#) page for more information.
- Install timers, sensors, or other controls to automatically turn lights off when not in use.
- Install dimmers on indoor lights to save electricity when light levels can be lowered. Before installing, check that the dimmers are compatible with the energy-efficient bulbs you want to use.
- Remember to turn off lights when leaving a room!



Electronics

- *Phantom load* refers to power consumed by devices in standby mode, and can account for up to 10% of a home's electricity consumption. You can identify many of these devices by their glowing LED lights. Reduce or eliminate phantom load with one of the following options:
 - ✓ Manually turn off and unplug equipment when not in use.
 - ✓ Use a conventional power strip to manually turn power off to all devices plugged into the strip at one time.
 - ✓ Use a smart strip to automatically disconnect power to equipment that is not in use. This works well for computer or entertainment systems. Different types exist to meet your needs, including strips with occupancy sensors.
- Set your computer's power management options to enter sleep mode after 15 to 60 minutes of inactivity. The lower the setting, the more electricity you save.
- Look for the ENERGY STAR logo when buying electronics and save 10 to 50 percent compared to standard equipment.



Kitchen, Laundry and Hot Water

- Lower your water heater temperature to 120°F. Each 10 °F reduction in water heater temperature saves 3 to 5% in energy costs. Use the vacation setting or turn the temperature down further if you'll be out of the house for extended periods.

Green Business Partners Program

www.fairfaxcounty/energy/greenbusiness

- Voluntary recognition program
 - No third-party or staff verification of submissions
 - Approach minimizes barriers to participation
- Program objectives
 - Recognize leadership and effort in the areas of conservation and sustainability
 - Strengthen ties with the business community
- Participants serve as models for others
 - Posted profiles provide ideas for others
 - Planned success stories and awards highlight initiative

Green Business Partners Program

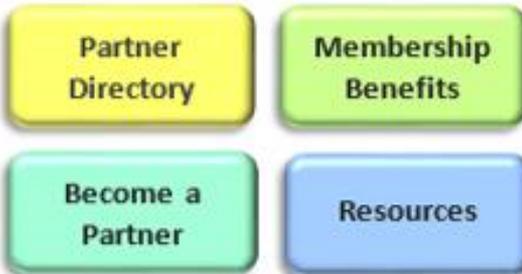
Landing Page Mock-Up

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Fairfax County Green Business Partners Program

The Fairfax County Green Business Partners Program recognizes local businesses that are leaders in environmental stewardship. These businesses are integrating sustainability principles like energy conservation, waste reduction, and smart water use into their day-to-day operations. Visit the [Green Business Partner Directory](#) to find a Partner in your area and learn about ways to save resources and money.

Membership is free and open to any business in Fairfax County. Refer to the [Membership Benefits](#) and [Become a Green Business Partner](#) pages for more information. Helpful links to help you get started, including available incentives, are provided on the [Green Business Resources](#) page.



Green Business Partners Directory

Our first partner's profile

Sustainability Profile

PNC Bank

Certification

PNC first adopted green building standards in the late 1990s. In 2002, PNC made a commitment that all new construction and major renovations would achieve LEED certification. Today, PNC has more than 250 LEED certified projects, including six locations in Fairfax County.

Sustainability Team

In 2009, PNC hired dedicated staff to manage the company's Energy Management & Sustainability program. The team currently has four full time staff, as well as a network of individuals that support the company's environmental commitment.

Annual Sustainability Goals

In 2010, PNC strengthened its commitment to green building by announcing a 30% energy reduction goal from 2009 to 2020. PNC also aims to reduce its greenhouse gas emissions by 30% in the same time frame.

Energy Tracking

PNC tracks energy and water usage for all its facilities with specialized software that enables utility bill analysis, building performance comparisons, and identification of improvement opportunities. They also regularly upload data to ENERGY STAR® Portfolio Manager.

Membership and Awards

PNC is a member of the U.S. Green Building Council (USGBC), the President's Better Buildings Initiative, the Green Building Alliance's 2030 District Challenge, the Association of Energy Engineers (AEE), Emerge Alliance, and the Environmental Bankers Association.

Since constructing the first LEED 2.0-certified building in 2000, PNC has worked with the USGBC to continuously strengthen LEED standards. PNC was the first company to promote the idea of volume building certification, which led the USGBC to launch a Volume Certification program 2010. The program now has more than 50 participating organizations and hundreds of buildings volume-certified.]



www.pnc.com

Organization Type

Banking

Number of Fairfax County Locations

36

Fun Facts

Since 2009, lighting retrofits have contributed to a 15 % reduction in energy costs, while providing many locations with better light quality and longer lamp life.

Over the past four years, PNC has lowered its greenhouse gas emissions by 18% through energy efficiency, better utilization of space, and operational improvements.

Pre-Launch Partner Applicants

- AvalonBay Communities
- Deltek
- Freddie Mac
- Hilton Holdings
- Inova
- KPMG
- MITRE
- Northern Virginia Ass'n of Realtors
- PNC Financial Services
- Regency Centers
- Reston Association
- Sears
- Target

Thank you -

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