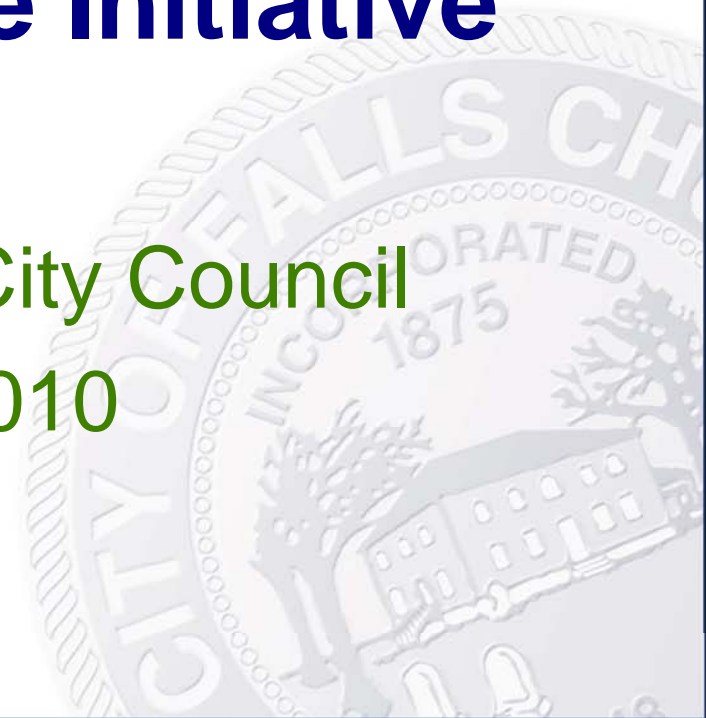


Energy and Climate Initiative

Recommendations to City Council

December 6, 2010



Energy and Climate Initiative

- Background
- Work to Date
- Milestone 1: Greenhouse Gas Inventories
- Milestones 2 and 3: Reduction Targets and Community Energy Plan



Background

Resolution 2008-41:

- International Council on Local Environmental Initiatives (ICLEI) Membership – software, technical assistance
- Financial Benefits – cost savings, economic development, “green” jobs
- Environmental Benefits – air pollution and climate change mitigation, sustainability



Background

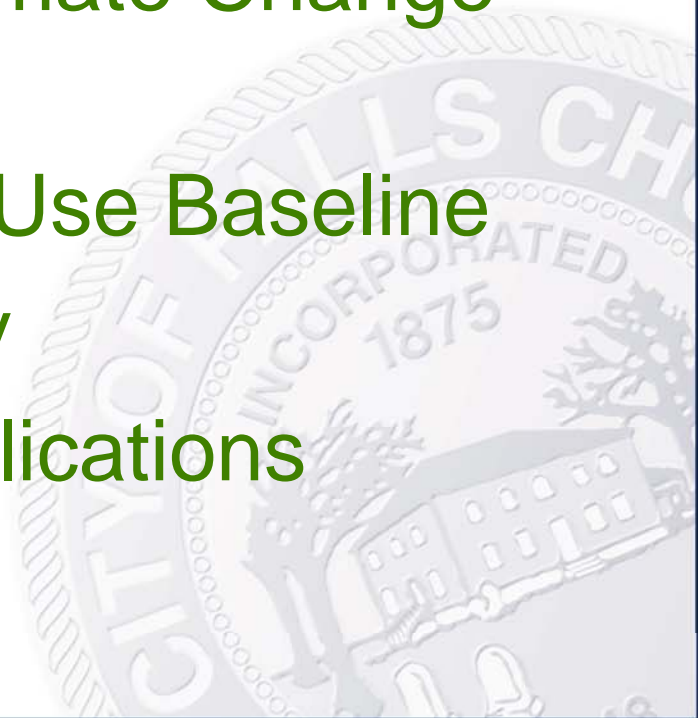
ICLEI 5 Milestone Process:

- Conduct Greenhouse Gas (GHG) Baseline Inventory and Forecast
- Establish Emissions Reduction Target
- Develop Action/Energy Plan
- Implement Plan
- Monitor Progress



Work to Date

- Environmental Services Council (ESC) Energy Efficiency and Climate Change Task Group formed
- GHG Inventories/Energy Use Baseline
- Communications Strategy
- Federal ARRA Grant Applications



Energy and Climate Web Page

Welcome to www.FallsChurchVA.gov, the Official Website of the City of Falls Church, Virginia

En Español | Tiếng Viet | Printer Friendly | Text Size: [A] [A] [A]

Home | Online Services | Residential Services | Business Services | Recreation & Culture | Government | News

Home - Government - Departments - Environmental Services - Climate Change Initiative

Friday, June 18, 2010

Climate Change and Energy Efficiency

By Resolution 2008-41, the City has pledged to take a leadership role in promoting public awareness regarding climate change and energy efficiency. City actions to reduce greenhouse gas emissions and increase energy efficiency provide multiple benefits by decreasing air pollution, creating jobs, increasing energy security, and saving money for City government and schools, residents and businesses.

Further, the City has partnered with ICLEI's Cities for Climate Protection Campaign to reduce greenhouse gas and air pollution emissions through ICLEI's Five Milestone process. The City, through the efforts of the Environmental Services Council Climate Change and Energy Efficiency Task Group, has initiated work to:

1. Conduct a greenhouse gas emissions inventory and forecast to determine the source and quantity of greenhouse gas emissions in the City
2. Establish a greenhouse gas emissions reduction target
3. Develop an action plan with both existing and future actions which when implemented will meet the local greenhouse gas reductions target
4. Implement the action plan
5. Monitor and report progress.

The ESC Climate Change and Energy Efficiency Task Group meets monthly with staff support and liaison provided through the Department of Environmental Services. Task Group efforts to date include:

- Input and guidance regarding development of greenhouse gas emissions inventory by City staff
- Outreach to public and private climate change and energy efficiency experts
- Technical and other assistance in preparing ARRA and other grants for energy efficiency projects and programs
- Sponsorship of energy efficiency demonstration projects with installation of motion sensor lighting and bike racks at City facilities
- Sponsorship of CFL Give Away in recognition of City's Energy Independence Day
- Sponsorship of Earth Hour in Falls Church in partnership with World Wildlife Fund and others
- Partnership with ICLEI to develop community outreach and engagement strategy
- Participation in related regional efforts, including Metropolitan Washington Council of Governments (COG) Climate Action Work Plan

Climate Change/Energy Efficiency Task Force Roster
 Brenda Creel, Staff Liaison
 Ralph Yatsko, Chair
 Dan Sze, Council Liaison
 Juanita Bowman
 Laurie Huber
 Robert Loftur-Thun
 Travis Michalke

In This Section

- ICLEI Resolution
- Staff Report for ICLEI Resolution
- VML Award Information
- Governor's Commission Climate Change Action Plan
- 2009 Earth Hour Proclamation
- Status of Federal Funding Requests
- 2010 Earth Hour Proclamation
- Guidance for Creation of a Climate Protection Initiative

Related Links

- ICLEI USA
- Metropolitan Washington Council of Governments
- Read More >>

Agendas

- November 19, 2008
- December 8, 2008
- January 7, 2009
- March 18, 2009
- April 15, 2009
- April 29, 2009
- May 27, 2009
- July 8, 2009
- August 6, 2009
- October 1, 2009
- November 18, 2009
- December 8, 2009
- January 7, 2010

BUG (Bicycle Users Group) Program Support



Motion Sensor Lighting

Light Motion Sensors In Use

Do Not Use Switch!



**If Lights Go Out While In Room,
Create Motion by the Switch to
Trigger the Sensor.**

**To report a problem with a sensor,
please call 248-5081 (TTY 711).**

2009 Energy Independence Day

The City of Falls Church Celebrates
Energy Independence Day!

Residents are encouraged to redeem this coupon for

1 free energy-saving CFL bulb

One CFL bulb uses 75 percent less energy than one incandescent bulb and will cut your electric bill by about \$35.

- One original coupon per household (no copies)
- Limited supply, first come, first served
- Bring coupon to Treasurer's Office, 1st floor City Hall, 300 Park Avenue
- Redeem July 24-30 ONLY 9 a.m. - 4 p.m.

Saving Energy Saves Money. 

The Benefits of CFL Bulbs

ENERGY STAR qualified compact fluorescent light bulbs (CFL) provide bright, warm light and uses about 75 percent less energy than standard lighting, produces 75 percent less heat, and lasts up to 10 times longer than an incandescent bulb.

Visit www.energystar.gov to find the right light bulbs for your fixtures. They are available in sizes and shapes to fit in almost any fixture, for both indoor and outdoor uses.

ENERGY STAR is a federal program designed to identify and promote energy efficient products.

PROCLAMATION

WHEREAS, the City of Falls Church has adopted a goal to be zero-net energy by 2050 (as defined to be so efficient in energy consumption and production of on-site renewable energy generation that we offset our energy use from the grid); and

WHEREAS, the City of Falls Church strives to be a living laboratory for integrating green energy technology deployment and quantifying the benefits in terms of greenhouse gas emission reductions; and

WHEREAS, the City of Falls Church actively creates and provides training for green collar jobs that provide living wages and contributes to the economic development of our City and region; and

WHEREAS, the City of Falls Church strives to improve the energy performance of the City's buildings and public schools by 30 percent over the next five years; and

WHEREAS, the City will identify and share best practices in energy efficiency with residents and businesses to educate and build awareness of the value of improved energy and environmental performance of buildings; and

WHEREAS, the City will explore powering the city's buildings and public schools with renewable energy (electricity generated from solar power, geothermal, hydrogen, and biomass) and procure green power in order to improve the region's air quality and stimulate the investment in the domestic renewables market.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Falls Church, that in honor and respect for our nation's forefathers and in order to preserve a healthy neighborhood and high quality of life for ourselves, our children, and our grandchildren, July 4, 2009 is hereby proclaimed as

Energy Independence Day

in the City of Falls Church and all citizens are urged to follow this example of reducing the United States' dependence on foreign oil, thus increasing the nation's energy security and promoting cleaner air.

IN WITNESS WHEREOF, I DANIEL X. SZE, have hereunto set my hand and cause the Seal of the City to be affixed this 22nd day of June 2009.


Daniel X. Sze, City Council Member



2009 and 2010 Earth Hour Proclamations



PROCLAMATION

WHEREAS, our community is concerned about the impact of climate change and the future health and well-being of our planet and believes energy efficiency, natural resource conservation, and collective action are important elements in the effort to combat climate change; and

WHEREAS, the City of Falls Church has assumed a leadership role through the Climate Protection Initiative and the work of the Environmental Services Council to promote public awareness about the causes and impacts of climate change; and

WHEREAS, the City has taken steps to reduce greenhouse gas emissions and to increase energy efficiency, including purchasing hybrid vehicles, using biodiesel fuel, expanding recycling programs, and requiring green roofs and/or LEED elements in special exception projects; and

WHEREAS, Earth Hour is both an international and local symbolic event organized by the World Wildlife Fund to raise awareness about climate change issues, and to encourage businesses, individuals and governments to take actions to reduce their carbon emissions and their impact on the environment in their daily lives and operations; and

WHEREAS, Earth Hour asks all citizens, businesses, organizations and government agencies to turn off all non-essential lighting for one hour beginning at 8:30 pm on March 27, 2010 and to encourage citizens and businesses to commit to actions they can take in the coming year to reduce their carbon footprints and conserve energy; and,

WHEREAS, turning off non-essential lights in public buildings will serve as an example for city-wide energy conservation; and

WHEREAS, non-essential lighting in Falls Church City Hall and other public buildings will be extinguished for the hour between 8:30 and 9:30 PM on March 27, 2010 to conserve energy and raise awareness about global climate change as part of Earth Hour.

NOW, THEREFORE, I, ROBIN S. GARDNER, Mayor of the City of Falls Church, Virginia, do hereby proclaim March 27, 2010 between 8:30 and 9:30 PM as

Earth Hour in Falls Church

and encourage residents, businesses and organizations to participate in this event and to commit to actions to conserve energy and reduce carbon emissions.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the City of Falls Church, Virginia to be affixed this 22nd day of March 2010.

Robin S. Gardner, Mayor



Work to Date

Other Related Activities

- COG 2010-2012 Regional Climate Action Workplan
- Dominion Virginia Power Smart Meters/Energy Conservation Initiatives
- Arlington Community Energy Plan (CEP) Task Force Liaison



Milestone 1

GHG Inventory: Community

- Guided by Clean Air and Climate Protection (CACCP) software and ICLEI protocol
- Amount of electricity and fuel used in residential, commercial, industrial, transportation and solid waste sectors
- Quantity of GHG emissions produced by each sector
- Baseline year: 2008

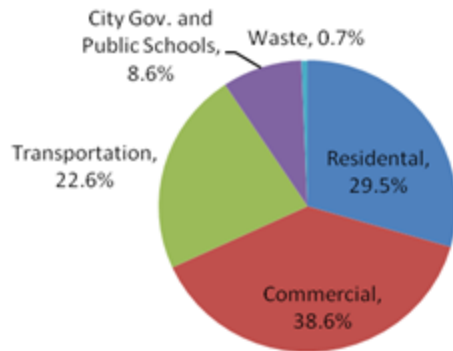


Milestone 1

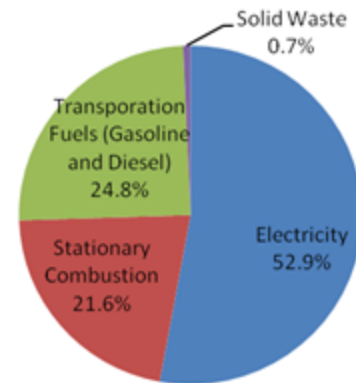
GHG Inventory: Community

Preliminary Results

Fall Church City Greenhouse Gas Emissions,
2008 Emissions by Functional Sector



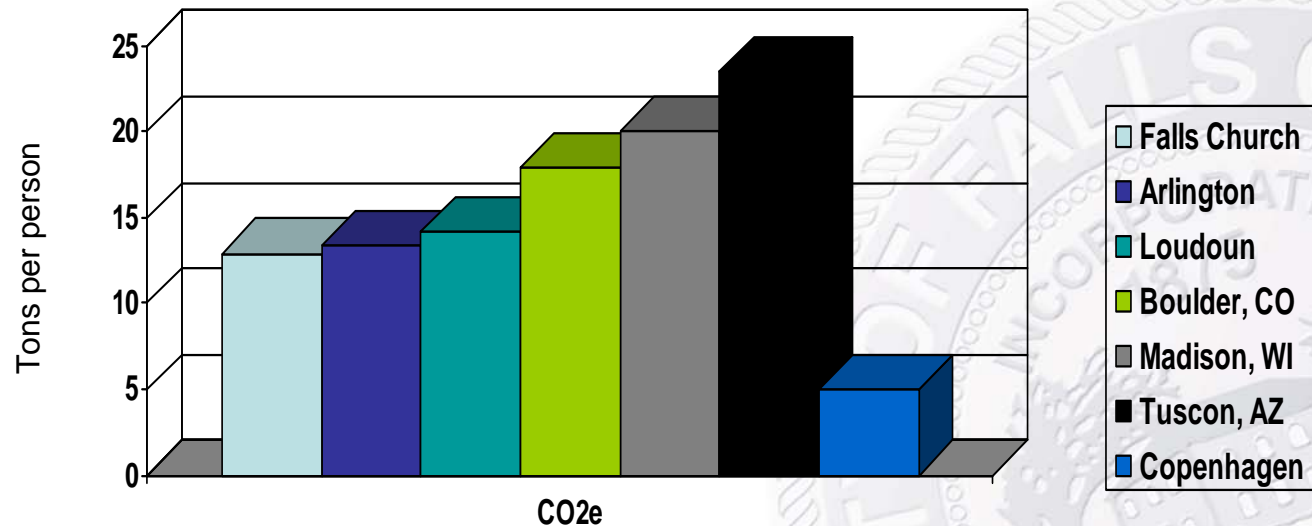
Falls Church City Greenhouse Gas Emissions
Emission by Source



Milestone 1

GHG Inventory: Community

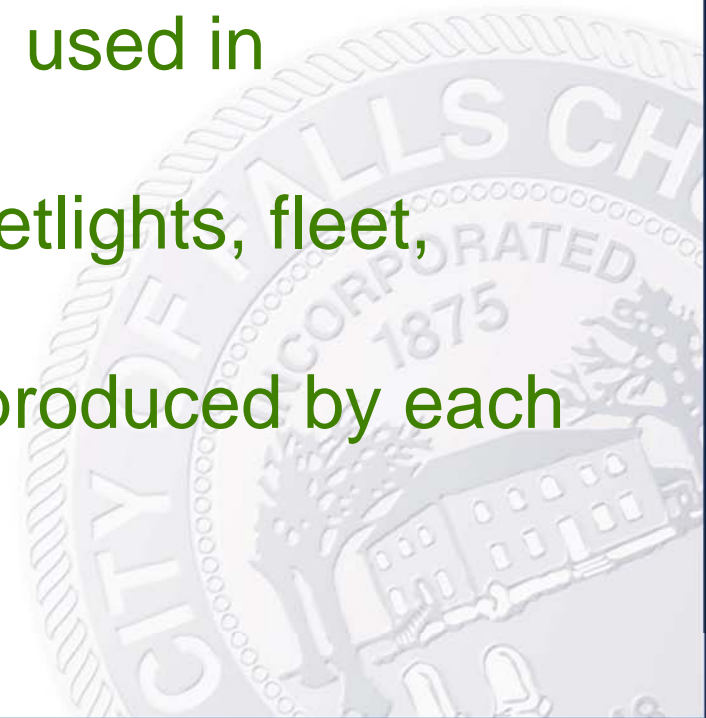
- City wide emissions: 152,290 metric tons CO₂e
- City per capita: 12.9 metric tons CO₂e



Milestone 1

GHG Inventory: Government

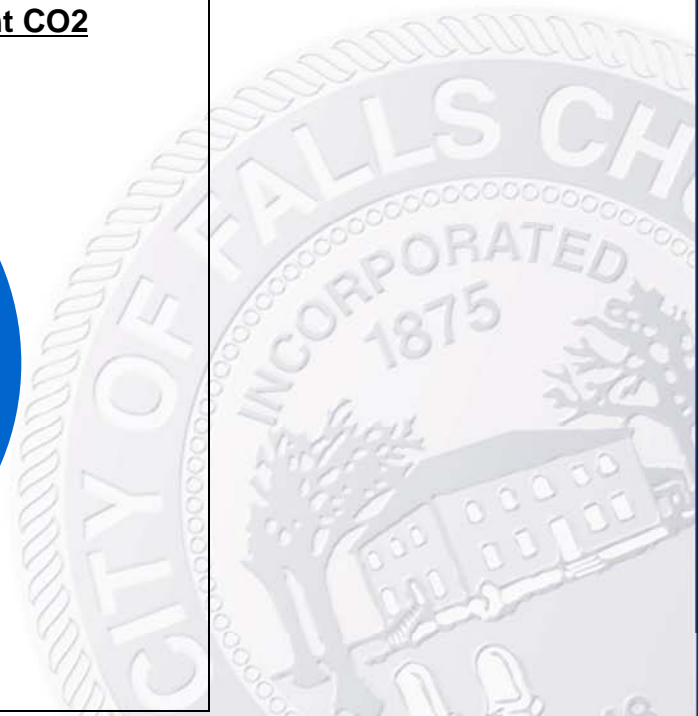
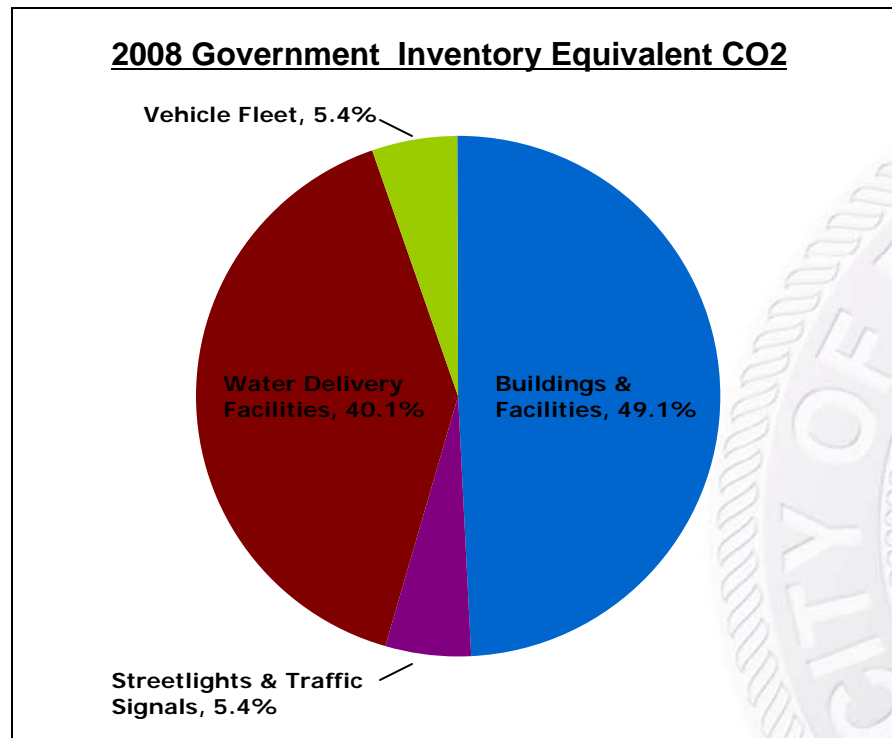
- Guided by Clean Air and Climate Protection software and ICLEI protocol
- Amount of electricity and fuel used in government operations
- Buildings, traffic signals, streetlights, fleet, waste, water pumping
- Quantity of GHG emissions produced by each
- Base year: 2003
- Interim year: 2008



Milestone 1

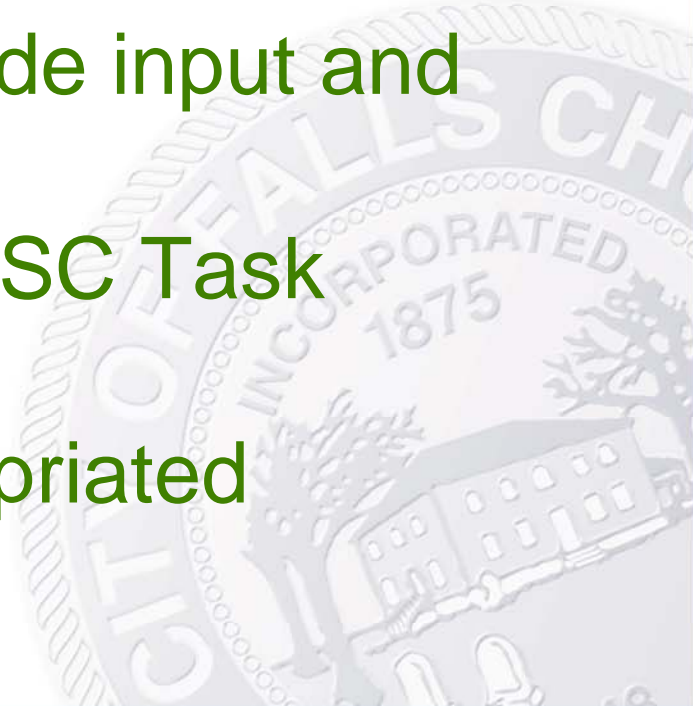
GHG Inventory: Government

Preliminary Results



Milestones 2 and 3: Community Energy Plan Task Force

- CEP Task Force under Council leadership to pursue Milestones 2 and 3
- Key stakeholders to provide input and inspire action
- Technical team of staff, ESC Task Group and consultant
- Consulting funds reappropriated (\$18,000)



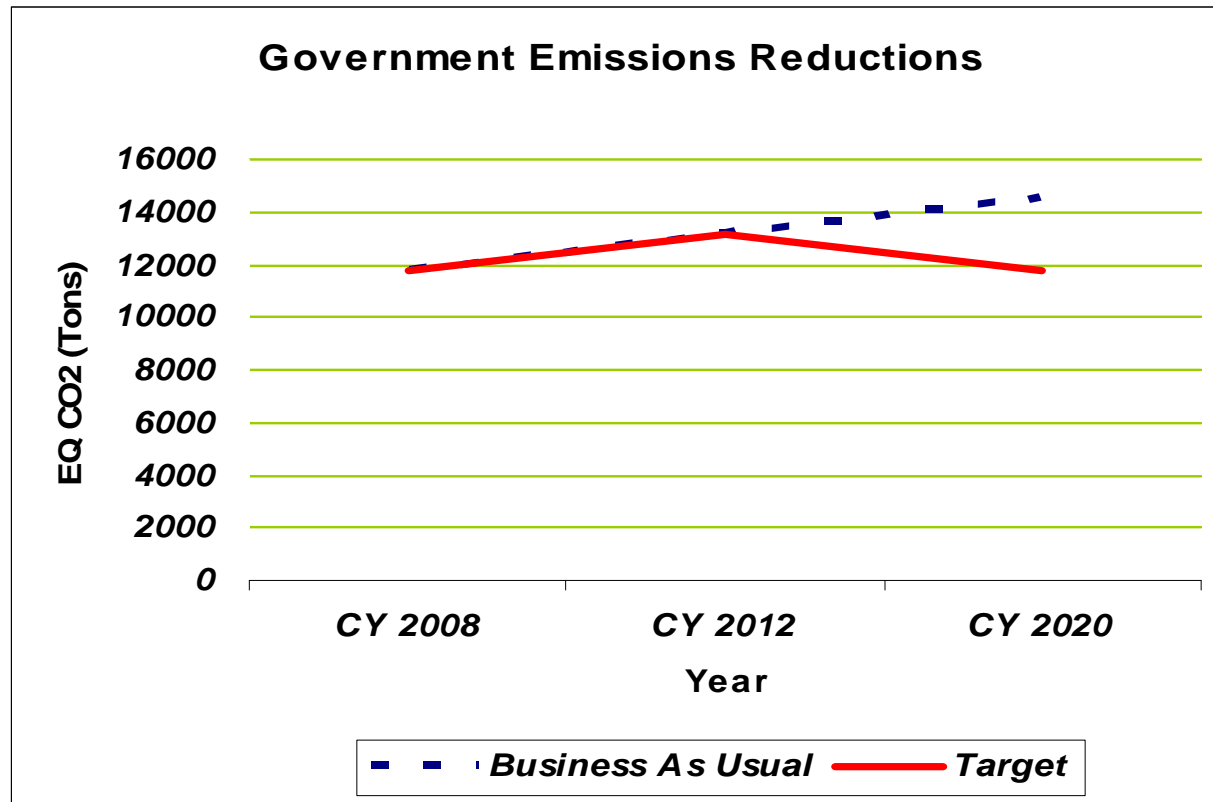
Milestone 2

Reduction Targets

- Recommend City government and community energy and emissions reduction targets
- COG regional targets:
 - Reduce to 2005 levels by 2012
 - Reduce to 20% below 2005 levels by 2020



Reductions to Achieve COG Targets*



- Estimated BAU; for illustration only

Estimated Energy Costs for Selected Sectors – 2008 Base Year

	Natural Gas	Electricity	Totals:
Commercial	\$2,287,754.	\$6,601,419.	\$8,889,173.
Residential	\$4,709,023.	\$5,097,998.	\$9,807,021.
City Government	\$513,725.	\$1,487,516.	\$2,001,242.
Total:	\$7,510,502.	\$13,186,935.	\$20,697,436.

Cost Assumptions (Source: DOE-EIA):

Therm (residential): \$1.58

Therm (commercial): \$1.27

kWh(residential): \$0.11

kWh(commercial): \$0.08



Estimated Cost Savings over 10 Years*

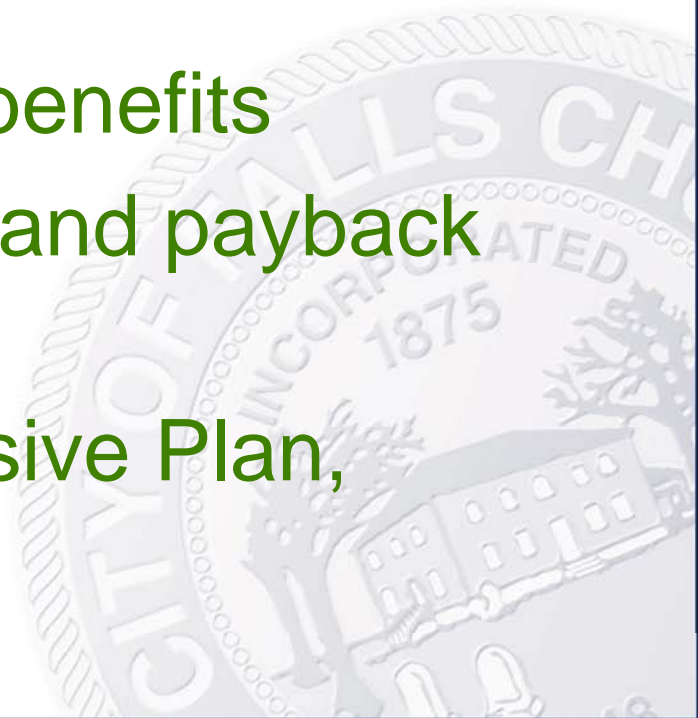
	Commercial	Residential	Government	Total Savings
Year 1	\$177,783	\$196,140	\$40,025	\$413,949
Year 2	\$352,011	\$388,358	\$79,249	\$819,618
Year 3	\$522,754	\$576,731	\$117,689	\$1,217,175
Year 4	\$690,083	\$761,337	\$155,360	\$1,606,780
Year 5	\$854,065	\$942,251	\$192,278	\$1,988,593
Year 6	\$1,014,767	\$1,119,546	\$228,457	\$2,362,770
Year 7	\$1,172,255	\$1,293,296	\$263,913	\$2,729,463
Year 8	\$1,326,593	\$1,463,570	\$298,659	\$3,088,823
Year 9	\$1,477,845	\$1,630,439	\$332,711	\$3,440,995
Year 10	\$1,626,072	\$1,793,971	\$366,082	\$3,786,124
Total Savings	\$9,214,228	\$10,165,640	\$2,074,423	\$21,454,291

*Based on 2% per Year Energy Savings from 2008 Baseline

Milestone 3

Community Energy Plan

- Achievable strategies and projects to meet City's targets
- Expected outcomes and benefits
- Upfront investment costs and payback periods/cost savings
- Inform City's Comprehensive Plan, capital investments



Milestone 3

Community Energy Plan

Considerations:

- Other regional localities are engaged in energy planning
- Consistent with City Council Vision for environmental and financial sustainability
- Scope of CEP may be impacted by resource limitations



“Certified Green”

- Government: Virginia Municipal League Certified Green Government Award Winner
- Residential: Falls Church Green Home Award Program
- Commercial: “Flower Building” Certified LEED Gold

