Table ES-1. Recommendations: Summary and Qualitative Assessment

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
I. Regional Greenhouse Gas Reduction Goals					
1. 2012: Reduce 10 percent below BAU	Medium	Immediate	Low	Medium–High	COG members; fleet, energy, and building managers; general public; boards of trade; procurement officers; water and wastewater utilities, electric utilities, PUCs; state legislatures; federal government; private sector; others
2. 2020: Reduce 20 percent below 2005	High	Mid-range–Long-term	Low–Medium	Medium–High	COG members; fleet, energy, and building managers; general public; boards of trade; procurement officers; water and wastewater utilities, electric utilities, PUCs; state legislatures; federal government; private sector; others
3. 2050: Reduce 80 percent below 2005	High	Mid-range–Long-term	Medium–High	Medium–High	COG members; fleet, energy, and building managers; general public; boards of trade; procurement officers; water and wastewater utilities, electric utilities, PUCs; state legislatures; federal government; private sector; others
II. Energy					
Local/Regional Strategies for Government and Business					
A. Improve Energy Efficiency in Buildings					
1. Implement a COG Green Building Policy.	High	Immediate–Mid-range	Varies	Medium–High	COG members, IGBG, facilities managers, GSA, USGBC, private sector
2. Set energy performance goals for new and existing govt. buildings.	High	Immediate–Mid-range	Varies	Medium–High	COG members, IGBG, facilities managers
3. Identify best practices to reduce local govt. energy use by 15 percent by 2012.	Medium–High	Immediate–Mid-range	Low–Medium	High	COG members, COG Energy Advisory Committee, state energy offices, utilities, universities, businesses, general public, ACEEE
4. Develop incentives for retrofitting existing commercial and residential buildings.	High	Immediate–Mid-range	Varies	Medium–High	COG members, IGBG, facilities managers, GSA, USGBC
5. Develop affordable energy efficiency programs for homeowners and businesses.	Medium–High	Immediate–Mid-range	Low-Medium	High	COG members, utilities, state energy offices
6. Promote use of energy-efficient appliances.	Medium–High	Immediate-Mid-range	Medium–High	Low-Medium	COG, Clean Air Partners, Commuter Connections, Wise Water, COG Recycling Committee, IGBG
7. Revise state and/or local building codes to promote energy efficiency.	Medium–High	Immediate–Mid-range	Low–Medium	High	COG members, COG Energy Advisory Committee, state energy offices, utilities, universities, businesses, general public, ACEEE
8. Develop green affordable housing policies/programs.	Medium–High	Immediate–Mid-range	Varies	Medium–High	COG members, IGBG, facilities managers, housing directors, MDPC, planning directors, GSA, USGBC
9. Identify best practices for improving efficiency for public and private buildings.	High	Immediate–Mid-range	Varies	Medium–High	COG members, IGBG, facilities managers, GSA, USGBC
B. Reduce Demand for Energy					
1. Partner with electric, gas, and water utilities on regional energy conservation.	Medium–High	Immediate–Mid-range	Low–Medium	Medium–High	COG members, EPA ENERGY STAR®, USGBC, boards of trade, utilities
2. Expand recycling programs.	Low–Medium	Immediate–Mid-range	Varies	High	COG members, COG Recycling Committee

Table ES-1. Recommendations: Summary and Qualitative Assessment, *continued*

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
B. Reduce Demand for Energy, continued					
3. Reduce energy use at area water and wastewater treatment plants and landfills.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	COG members, wastewater treatment facilities, landfills, EPA
4. Promote energy-efficient street lights across the region.	Low–Medium	Immediate	Medium–High	Medium	COG members, energy managers, utilities, boards of trade, private sector
5. Promote regional energy performance contracting and cooperative purchasing.	Low–Medium	Immediate–Mid-range	Medium–High	Medium	COG members, energy managers, state energy offices, utilities, private sector
6. Explore opportunities to remove the disincentive for utilities to invest in energy conservation.	Medium–High	Immediate–Mid-range	Low–Medium	High	State energy offices, state PUCs, utilities, state legislatures
C. Promote Clean Energy Sources					
1. Adopt a goal of 20 percent renewable energy purchase by local governments by 2015.	Medium–High	Immediate–Mid-range	Medium–High	Medium	COG members, COG Energy Advisory Committee, EPA Green Power Partnership, energy managers, utilities, procurement officers
2. Evaluate regional cooperative purchase to meet the 20 percent local government renewable energy purchase goal.	Low–Medium	Immediate–Mid-range	Medium–High	Medium	COG members, COG Energy Advisory Committee, EPA Green Power Partnership, energy managers, utilities, procurement officers
3. Examine options for removing barriers to implementing renewable energy (e.g., solar panels).	Low–Medium	Immediate–Mid-range	Medium–High	Medium	State legislatures, county leadership, state PUCs, utilities, COG Energy Advisory Committee, DOE
4. Explore the possibility of implementing a community energy planning process in the region.	Medium–High	Mid-range–Long-term	Medium	Medium–High	COG Energy Advisory Committee, utilities, energy managers
5. Develop a regional inventory of renewable energy capacity and production, including solar, geothermal, district heating/cooling, wind, and biofuels.	Low	Immediate–Mid-range	Low	Medium	COG Energy Advisory Committee, utilities, energy managers
D. Reduce Greenhouse Gas Emissions					
1. Identify and implement best practices to reduce methane and biosolids from wastewater treatment facilities.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	COG members, water and wastewater treatment facilities, landfills, EPA
2. Develop industry standard protocols to quantify greenhouse gas emissions and reductions for drinking water and wastewater utilities.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	COG members, water and wastewater treatment facilities, landfills, EPA, ICLEI, WRI

III. Transportation and Land Use

Local and Regional Strategies for Government and Business

A. Increase Fuel Efficiency and Use of Clean-Fuel Vehicles

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
1. Promote clean-fuel vehicles (cars, trucks, buses).	High	Immediate–Mid-range	Medium–High	High	COG members, state legislatures, fleet managers, auto manufacturers, AFV partnerships
2. Adopt a regional green fleet policy.	Medium–High	Immediate–Mid-range	Medium–High	Medium–High	COG members, state legislatures, fleet managers, auto manufacturers, AFV partnerships
3. Promote the use of clean fuels.	Medium–	Immediate–Mid-range	Medium–High	Medium–High	COG members, state legislatures, fleet managers, auto manufacturers, AFV partnerships

Table ES-1. Recommendations: Summary and Qualitative Assessment, *continued*

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
B. Reduce Vehicle Miles Traveled (VMT)					
1. Adopt VMT reduction goals.	Medium–High	Mid-range–Long-term	Medium–High	Low–Medium	COG members, TPB, DOTs, local govt., transit authorities
2. Expand transit use.	Low–Medium	Immediate–Mid-range	Low–Medium	Medium–High	COG members, Commuter Connections, TPB, DOTs, local govt., transit authorities
3. Invest/expand transit infra-structure.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	COG members, transit authorities, TPB, DOTs
4. Expand commuter options.	Low–Medium	Immediate–Mid-range	Medium–High	Low–Medium	COG members, local govt., Zipcar, Flexcar
5. Promote transit-oriented development.	Low–Medium	Immediate–Mid-range	Medium–High	Medium–High	COG members, TPB, DOTs, local govt., transit authorities
6. Examine parking policies to reduce VMT.	Low–Medium	Immediate–Mid-range	Medium–High	Low–Medium	COG members, state/local govt.
C. Increase Travel Efficiency					
1. Adopt best practices for traffic engineering improvements and road management to reduce VMT and congestion.	Low–Medium	Mid-range–Long-term	Varies	High	COG members, DOTs, TPB
2. Implement the Metropolitan Area Transportation Operations Coordination Program.	Low	Immediate	Medium	High	COG members, DOTs, TPB
3. Enforce existing idling regulations.	Low–Medium	Immediate	Low–Medium	Low–Medium	COG members, local govt., police
4. Explore opportunities to reduce emissions from the aviation sector.	Medium	Immediate–Mid-range	Medium–High	Medium–High	Airlines, MWAA, fleet managers
5. Explore opportunities to reduce emissions from the freight sector.	Medium	Immediate–Mid-range	Medium–High	Medium–High	Railroads, American Trucking Association, shippers, TPB, DOT
D. Improve Land Use					
1. Develop plan to meet goal of increased tree canopy.	Low–Medium	Mid-range–Long-term	Low–Medium	High	COG members, state and local forestry agencies, U.S. Forest Service, Casey Trees, Center for Chesapeake Communities
2. Evaluate LEED-ND standards for new development.	Medium–High	Immediate–Mid-range	Medium	Varies	COG members, planning directors, MDPC, TPB, boards of trade, DOTs, WMATA
3. Carefully plan the location and design of new, infill, and redevelopment projects.	Low–Medium	Midrange–Long-term	Medium–High	Varies	COG members, MDPC, planning directors, local planning agencies, local developers
4. Integrate GHG analyses into comprehensive planning and new capital projects.	Low–Medium	Immediate–Mid-range	Low–Medium	Medium–High	COG members, MDPC, planning directors, local planning agencies, local developers
E. Develop a Regional Metropolitan Planning Process					
1. Develop a regional metropolitan planning process for addressing greenhouse gases.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	TPB, MWAQC, DOT, EPA, state air agencies, state legislatures, Congress
2. Make greenhouse gas reduction a stated goal of regional trans-portation planning activities.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	TPB, DOTs, boards of trade, NVTC, WMATA
3. Consult with other regions around the country to broadly evaluate options for regional approaches to greenhouse gas reductions.	Medium–High	Mid-range–Long-term	Medium–High	Medium–High	TPB, DOTs

Table ES-1. Recommendations: Summary and Qualitative Assessment, *continued*

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
IV. Economic Development					
Local and Regional Strategies for Government and Business					
1. Promote green businesses and green jobs.	Low	Immediate–Mid-range	Medium–High	Medium–High	COG members, boards of trade, universities, Sustainable Business Alliance
2. Promote eco-business zones.	Low	Immediate–Mid-range	Medium–High	Medium–High	COG members, boards of trade, universities
3. Promote cooperative green purchasing.	Low–Medium	Immediate–Mid-range	Low–Medium	Medium–High	COG members, procurement officers, boards of trade
4. Promote local vendors and suppliers.	Low–Medium	Immediate–Mid-range	Low–Medium	Medium–High	COG members, state/local govt., farmers' cooperatives, economic development authorities, COG Regional Agricultural Workgroup, community-supported agriculture, Freshfarm Markets
5. Promote regional green jobs analysis.	Low	Immediate	Low–Medium	Medium–High	COG members, boards of trade, universities, Sustainable Business Alliance
V. Adaptation					
Local and Regional Strategies for Government and Business					
1. Research best practices to prepare for effects of climate change.	Low	Immediate–Mid-range	Medium	Medium	COG members, universities, NOAA
2. Develop a regional climate adaptation plan to assist localities with vulnerability assessments, adaptation planning, and emergency preparedness.	Low	Mid-range–Long-term	Medium	Medium	COG members, utilities, state and federal govt., NOAA, private sector, universities
3. Partner with universities to research climate change and adaptation strategies.	Low	Immediate–Mid-range	Medium	Medium	COG members, universities, NOAA
4. Analyze impacts on and risks to the region's transportation infrastructure, buildings, and populations in low-lying areas.	Low	Immediate–Mid-range	Medium	Medium	COG members, universities, NOAA
5. Develop regional adaptation policies.	Low	Mid-range–Long-term	Medium	Medium	COG members, utilities, private sector, state and federal govt.
6. Conduct adaptation workshops.	Low–Medium	Mid-range–Long-term	Medium	Medium	COG members, universities, NOAA
VI. Financing Mechanisms					
Local and Regional Strategies for Government and Business					
1. Evaluate financing mechanisms for energy efficiency projects (energy fee, tax, other).	Medium–High	Immediate–Mid-range	Low–Medium	High	COG members, Chicago Climate Exchange, MD Strategic Energy Fund, block grants, Energy Efficiency Partnership of Greater Washington
2. Establish a clean energy fund.	Medium–High	Immediate–Mid-range	Low–Medium	High	COG members, Chicago Climate Exchange, MD Strategic Energy Fund, block grants, Energy Efficiency Partnership of Greater Washington
3. Participate in cap-and-trade program revenues.	Medium–High	Immediate–Mid-range	Low–Medium	High	COG members, Chicago Climate Exchange, MD Strategic Energy Fund, block grants, Energy Efficiency Partnership of Greater Washington
4. Develop a regional carbon offset fund for preserving tree canopy.	Medium	Immediate–Mid-range	Medium	Medium	COG members, state and local forestry agencies, U.S. Forest Service, Casey Trees, Center for Chesapeake Communities

Table ES-1. Recommendations: Summary and Qualitative Assessment, *continued*

Recommendations	Emission Impact	Implementation Timing	Cost	Economic Co-Benefits	Potential Partners
VI. Financing Mechanisms, Local and Regional Strategies for Government and Business, *continued*					
5. Secure additional financing for public transit.	Medium–High	Immediate–Mid-range	High	High	COG members, state and federal govt., WMATA
6. Establish funding for building retrofits.	Medium–High	Immediate–Mid-range	High	High	COG members, state and federal govt., ESCOs
VII. Regional Outreach and Education					
Local and Regional Strategies for Government and Business					
1. Implement a regional public education campaign.	Medium–High	Immediate–Mid-range	Medium–High	Low-Medium	COG members, Clean Air Partners, Commuter Connections, Wise Water, Recycling Committee, IGBG
2. Develop partnerships with private-sector and other organizations.	Medium–High	Immediate–Mid-range	Medium–High	Low-Medium	COG members, boards of trade, federal government, WMATA, MWAA, Cool Capitol Challenge
3. Support COG member outreach efforts.	Low–Medium	Immediate–Mid-range	Low–Medium	Low-Medium	COG members, Cool Capitol Challenge, EPA, ICLEI, Sierra Club
VIII. COG Climate Change Program					
Local and Regional Strategies for Government and Business					
1. Establish a COG Climate and Energy Policy Committee.	—	Immediate	Low–Medium	—	COG members, state/local govt.
2. Develop work program priorities, schedule, staffing plan, and budget.	—	Immediate	Low–Medium	—	COG members, state/local govt.
3. Prepare regional plans to achieve the 2012 and 2020 goals.	—	Immediate	Low–Medium	—	COG members, state/local govt.
4. Evaluate the cost-effectiveness of the proposed measures.	—	Immediate	Low–Medium	—	COG members, state/local govt.
5. Design an outreach and education program.	—	Immediate	Low–Medium	—	COG members, state/local govt.
6. Track state and federal initiatives, and develop and advance regional advocacy positions.	—	Immediate	Low–Medium	—	COG members, state/local govt.
7. Develop a system for tracking progress toward GHG goals and periodically review targets.	—	Immediate–Mid-range	Low–Medium	—	COG members, state/local govt., EPA, ICLEI, WRI, state air agencies, state energy offices, state PUCs, utilities
8. Develop a regional standardized analytical methodology for use by individual local governments in developing their greenhouse gas emission inventories.	—	Immediate–Mid-range	Low–Medium	—	COG members, state/local govt., EPA, ICLEI, WRI, state air agencies, state energy offices
9. Prepare an annual progress report to the COG Board of Directors on implementation progress for COG's Climate Change Initiative.	—	Immediate–Mid-range	Low–Medium	—	COG members, state/local govt.

Abbreviations: ACEEE = American Council for an Energy Efficient Economy; AFV = alternative-fuel vehicle; COG = Metropolitan Washington Council of Governments; DOE = U.S. Department of Energy; DOTs = state departments of transportation; ESCO = energy service company; EPA = U.S. Environmental Protection Agency; GHG = greenhouse gas; govt. = government; GSA = General Services Administration; ICLEI = Local Governments for Sustainability; IGBG = Intergovernmental Green Building Group; LEED-ND = Leadership in Energy and Environmental Design for Neighborhood Development; MD = Maryland; MDPC = Metropolitan Development Policy Committee; MWAA = Metropolitan Washington Airports Authority; MWAQC = Metropolitan Washington Air Quality Committee; NOAA = National Oceanic and Atmospheric Administration; NVTC = Northern Virginia Transportation Commission; PUC = public utility commission; TPB = National Capital Region Transportation Planning Board; USGBC = United States Green Building Council; WMATA = Washington Metropolitan Area Transit Authority; WRI = World Resources Institute.

Timing: Immediate = present to June 2009; Mid-range = 3 years; Long Term = more than 3 years.

Emission Impact: Low = minimal emission reduction expected; Medium = some emission reduction anticipated; High = significant emission reduction anticipated.

Cost: Low = relatively low cost; Medium = moderate financial costs; High = expensive option to implement.

Economic Co-Benefits: Low = action will have limited impact on other areas of the economy; Medium = some economic synergies are anticipated; High = significant enhancements to the economy or sector are possible.

Table ES-2. Recommendations for Local Governments to Lead by Example

Local governments are taking steps to reduce emissions from their operations and are creating the framework, vision, and guidance to bring about changes in the community.

Energy

Increase Energy Efficiency

Implement the 2007 Metropolitan Washington Council of Governments (COG) Regional Green Building Policy: All new government buildings meet the Leadership in Energy and Environmental Design (LEED) Silver standard, ENERGY STAR®, or equivalent.

Identify best practices to support reducing overall local government energy use by 15% by 2012.

Examine options and develop plans for replacing street lights with energy-efficient lighting (LED [light-emitting diode] or other options) across the region.

Promote regional energy performance contracting to reduce energy use in public buildings.

Consider a regional cooperative purchase approach to facilitate cost-effective implementation.

Develop a long-term goal for carbon neutrality for all government buildings.

Enhance and expand existing recycling programs.

Encourage provision of energy audits and energy retrofits for individuals and businesses through a regional cooperative effort.

In collaboration with local governments and area wastewater utilities, identify best practices and evaluate the potential for reducing greenhouse gas emissions through methane recapture and use of biosolids as a fuel as means for reducing energy requirements for operations at area wastewater treatment plants and landfills.

Reduce Energy Consumption/Demand Management

Partner with electric, gas, and water utilities on regional energy conservation and energy efficiency program outreach.

Partner with the Greater Washington Board of Trade Green Committee and Potomac Conference to assist businesses with taking action to reduce greenhouse gas emissions and implement best practices.

Expand Use of Clean Energy Sources

Establish a 2015 regional goal of having renewable energy comprise 20% of the energy purchased by local governments.

Evaluate regional cooperative purchase and/or reverse auctions to facilitate green power implementation among COG membership.

Work with jurisdictions exporting electricity into the metropolitan Washington region to encourage investments in clean low-emitting energy sources.

Transportation and Land Use

Increase Fuel Efficiency

Establish a regional green fleet policy with measurable goals and timetables.

Promote transit-supportive street designs.

Increase enforcement of existing idling regulations to prevent extended vehicle idling.

Promote Low-Carbon "Clean" Fuels

Promote adoption of CA LEV-II (California Low-Emission Vehicle Phase II) standards for all jurisdictions in the region.

Promote/accelerate adoption of efficient clean-fuel vehicles, including hybrids (cars, trucks, buses).

Target public and private fleets, transit, taxicabs, rental cars, and refuse haulers.

Evaluate the benefits of specific "green fleet" conversion percentages. Provide incentives for purchase of clean-fuel vehicles.

Assess benefits from a "Cash-for-Clunkers" program and rebates or tax incentives for the purchase of hybrid vehicles.

Reduce Vehicle Miles Traveled (VMT)

Expand existing and fund new programs to enhance access to transit and alternative modes, Commuter Connections, guaranteed ride home, telework programs, bike/pedestrian access, park-and-ride lots.

Evaluate the greenhouse gas reduction benefits of expanding existing and establishing new exclusive bus transit routes, lanes, on-ramps, and corridors.

Promote equalization of transit and parking benefits.

Promote car sharing.

Examine parking policies and their relationship to VMT. Implement new parking policies to reduce VMT.

Fully fund construction of bicycle/pedestrian paths in the region, as outlined in the regional bicycle/pedestrian plan. Provide incentives to developments that speed improvements to bicycle/pedestrian access, including improvements to sidewalks, curb ramps, crosswalks, lighting, etc.

Promote a regional Smart Bike program.

Design a regional program to promote bike sharing.

Land-Use Planning

Establish a goal and develop a program and plan to increase the region's tree canopy.

Consider associated issues related to density and height requirements for buildings.

Research and develop specific regional goals (up to 95%) to significantly increase the percentage of new development located in regional activity centers.

Promote regional policies that support walkable communities and affordable housing near transit.

Identify best practices for local governments to include greenhouse gas reduction and energy as an element in their local comprehensive planning. Such efforts should include practices that address climate change risk reduction to guide local zoning, building codes, site planning, and review.

Table ES-3. Advocacy Positions

CCSC recommends a number of advocacy positions for state and federal action to achieve maximum regional greenhouse gas reductions from improved energy efficiency, reduced energy consumption, use of low-carbon fuels, and improved vehicle efficiency.

Energy

A. Improve Energy Efficiency

1. Adopt energy performance goals for state and federal government buildings.
2. Develop state and federal financial incentives for renewable energy.
3. Support state and federal climate change legislation, including a cap-and-trade system, that would provide funds for local government energy efficiency programs.
4. Organize a consortium of local governments to apply for Energy Efficiency Block Grant funds as they become available.

B. Reduce Demand for Energy

1. Implement policies to remove the disincentive for utilities to invest in energy efficiency, demand management, and renewable energy.
2. Advocate for adoption of Cool Schools or the equivalent by local school boards or local governments.
3.   Support the establishment of and funding for programs designed to supply locally produced food to schools (e.g., statewide farms-to-schools program).
4. Identify best practices for improving energy efficiency for public buildings.

C. Promote Clean Energy Sources

1. Adopt a 20 percent renewable portfolio standard in the District of Columbia and Virginia by 2020.
2. Urge state public utility commissions to prioritize energy efficiency, demand reduction, and renewable energy sources.
3. Urge state and federal governments to establish new policies to remove the disincentive for utilities to invest in energy efficiency, demand management, and renewable energy.
4. Create federal and state financial incentives for energy efficiency and renewable energy, including federal tax subsidies for renewable energy production.
5. Urge federal support for technology development, including solar energy, battery technologies, and clean vehicles.
6. Expand the Regional Greenhouse Gas Initiative to the District of Columbia and Virginia.
7. Work with jurisdictions exporting electricity into the metropolitan Washington region to encourage investments in clean, low-greenhouse-gas-emitting energy sources.
8. Promote equitable subsidies for different sources of energy (e.g., nuclear versus renewable).

Transportation and Land Use

A. Increase Fuel Efficiency and Use of Clean-Fuel Vehicles

1. Promote the California Low-Emission Vehicle Phase II (CA LEV-II) program.
2. Extend corporate average fuel economy requirements past 2020 and include heavy-duty trucks.
3. Support incentives for fuel-efficient and alternative-fuel vehicles.
4. Support incentives for early vehicle retirement.

B. Reduce Vehicle Miles Traveled (VMT)

1. Urge lawmakers to increase investment in transit.
2. Evaluate financial incentives, such as pay-as-you-travel insurance, and road management to reduce VMT and congestion.
3. Advocate for federal income tax benefits for transit use that equal or exceed the benefits of employer-provided or -subsidized parking.

Figure 11. Recommended Regional Greenhouse Gas Emission Reduction Targets Compared to Regional Greenhouse Gas Emissions Under BAU: 2005–2050

As a compromise between IPCC recommended reduction levels and those adopted by COG member local governments, the Climate Change Steering Committee chose to set three targets for reducing greenhouse gas emissions: 10 percent below business as usual (BAU) levels by 2012, 20 percent below 2005 levels by 2020, and 80 percent below 2005 levels by 2050.
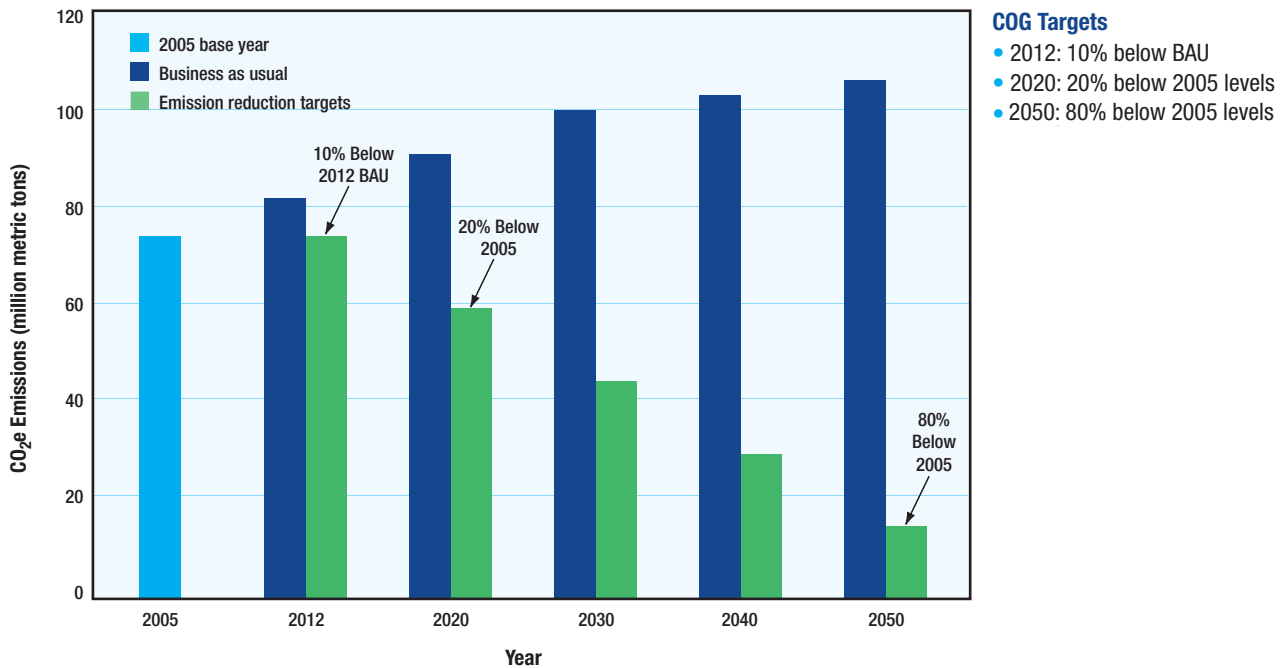

COG Targets
- 2012: 10% below BAU
- 2020: 20% below 2005 levels
- 2050: 80% below 2005 levels

Table 4. Targets for Reducing Greenhouse Gases in the Metropolitan Washington Region

Several jurisdictions in the metropolitan Washington region, along with the District of Columbia and the states of Maryland and Virginia, have set targets to reduce their greenhouse gas emissions by specific percentages within specific time frames.

Organization/Jurisdiction	Short-Term Target (2010–2015)	Medium-Term Target (2020–2025)	Long-Term Target (2050)
IPCC			50–85% below 1990 levels
District of Columbia	2012: 7% below 1990 levels	In development	In development
State of Maryland	2012: 10% below 2006 levels 2015: 15% below 2006 levels	2020: 25%–50% below 2006 levels	90% below 2006 levels
Montgomery County*	2010: stop emissions growth		80% below 2006 levels
Takoma Park	2012: 7% below 1990 levels		
College Park	2012: 7% below 1990 levels		
Rockville	2012: 7% below 1990 levels		
State of Virginia		2025: 30% below BAU	In development
Arlington County*	2010: stop emissions growth		80% below 2006 levels
Fairfax County*	2010: stop emissions growth		80% below 2006 levels
City of Alexandria	2012: 7% below 1990 levels		
COG	2012: 10% below BAU**	2020: 20% below 2005 levels	80% below 2005 levels

BAU = business as usual; COG= Metropolitan Washington Council of Governments; IPCC = Intergovernmental Panel on Climate Change.

* Arlington, Montgomery, and Prince George's counties have signed the Cool Counties agreement, committing to halt the growth of GHG emissions by 2010, and to reduce GHG emissions by 10% every five years thereafter until 2050, to achieve an 80% reduction goal between 2006 and 2050.

**Corresponding to returning regional emissions back to 2005 levels by 2012.

Table 8. Recommendations for Mitigating Regional Greenhouse Gas Emissions From Energy Consumption

Local/Regional Strategies for Government and Business

A. Improve Energy Efficiency in Buildings

1. Implement the COG Green Building Policy (LEED Silver for government buildings).
   - Implement the 2007 COG regional Green Building Policy requiring all new public-sector buildings to achieve LEED Silver levels and all private-sector commercial buildings to meet a regional LEED-certified-plus standard or equivalent.

2. Set energy performance goals for government buildings, new and existing.
   - Benchmark energy performance in all buildings using common metrics (such as kilowatt-hours per square foot or British thermal units per square foot) and readily available tools (such as ENERGY STAR®'s Portfolio Manager).
   - Set a goal for improving the energy performance of existing public-sector buildings, to be achieved through retrofits for greater energy efficiency.
   - Develop educational campaigns for public-sector employees to encourage energy conservation as a smart business practice.

3. Identify best practices to reduce local government energy use by 15 percent by 2012.

4. Develop incentives for retrofitting existing buildings, commercial and residential.

5. Develop affordable energy efficiency programs for homeowners and businesses.
   - Develop a regional program for utilities to pay for home weatherization and other energy efficiency measures, and recoup investment costs through utility bills.
   - Explore provision of energy audits and energy retrofits for individuals and businesses through a regional cooperative effort.

6. Promote use of energy-efficient appliances.
   - Examine the feasibility of setting a regional percentage goal for incorporating ENERGY STAR® standards in new buildings.

7. Revise state and/or local building codes to promote energy efficiency.

8. Develop green affordable housing policies/programs.

9. Identify best practices for improving efficiency for public and private buildings.
   - Collaborate with the Regional Greenhouse Gas Initiative (RGGI) to support implementation of energy conservation and renewable energy projects in the metropolitan Washington region.
   - Examine the potential for expanding regional energy performance contracting to reduce energy use in public buildings.
   - Develop a long-term goal for carbon neutrality for all government buildings.

B. Reduce Demand for Energy

1. Partner with electric, gas, and water utilities on regional energy conservation.
   - Develop regional energy conservation goals and timetables.
   - Develop a regional energy conservation and efficiency plan that supports meeting regional greenhouse gas emission reduction goals.
   - Partner with the Greater Washington Board of Trade Green Committee and Potomac Conference to assist businesses with taking action to reduce greenhouse gas emissions and implement best practices.
   - Identify regional environmental and community group partners.
   - Partner with electric, gas, and water utilities on regional energy conservation and energy efficiency program outreach.
   - Partner with schools, universities, and local governments to find and apply best practices to reducing energy use and greenhouse gas emissions.
   - Identify and consider leading models in European metropolitan regions to inform the region on effective application of renewable energy from solar, wind, and biomass sources.

2. Expand recycling programs.

3. Reduce energy use at area water and wastewater treatment plants and landfills.

4. Promote energy-efficient street lights across the region.
   - Examine options and develop plans for replacing street lights with energy-efficient lighting (LED [light-emitting diode] or other options) across the region. Consider addressing other related lighting issues, such as globe-type and ground-level lighting, and developing a regional street-lighting standard.

5. Promote regional energy performance contracting and cooperative purchasing.

6. Explore opportunities to remove the disincentive for utilities to invest in energy conservation. Develop incentives for utilities to focus on effective energy efficiency programs and invest in activities that reduce load.

C. Promote Clean Energy Sources

1. Adopt a regional goal of 20 percent purchase of renewable energy by local governments by 2015.

2. Evaluate regional cooperative purchase to meet the 20 percent local government renewable energy purchase goal.

3. Examine options for removing barriers to implementing renewable energy (e.g., solar panels).
   - Consider options to increase deployment of solar technology and other renewable energy throughout the region, including large flat roofs, parking lots/canopies, school and other municipal property. Consider cooperative purchasing to reduce the cost of acquiring the technology.
   - Consider promoting more equitable subsidies for different sources of energy (e.g., nuclear versus renewable).

4. Explore the possibility of implementing a community energy planning process in the region.

5. Develop a regional inventory of renewable energy capacity and production, including solar, geothermal, district heating/cooling, wind, and biofuels.

Table 8. Recommendations for Mitigating Regional Greenhouse Gas Emissions From Energy Consumption, *continued*

D. Reduce Greenhouse Gas Emissions

1. Identify and implement best practices to reduce methane and biosolids from wastewater treatment facilities.
   - In collaboration with local governments, as well as area wastewater and drinking water utilities, identify best practices and evaluate the potential for reducing greenhouse gas emissions through methane recapture, use of biosolids as a fuel as means for reducing energy requirements for operations, and overall process improvements that can reduce energy consumption at area wastewater and drinking water treatment plants and landfills.

2. In collaboration with local governments, as well as area wastewater and drinking water utilities, work with state and federal governments and national organizations to develop industry standard protocols to quantify greenhouse gas emissions and reductions.

Advocacy (State and Federal Levels)

A. Improve Energy Efficiency

1. Adopt energy performance goals for state and federal government buildings.

2. Develop state and federal financial incentives for renewable energy.

3. Support state and federal climate change legislation, including a cap-and-trade system, that would provide funds for local government energy efficiency programs.

4. Organize a consortium of local governments to apply for Energy Efficiency Block Grant funds as they become available.

B. Reduce Demand for Energy

1. Implement policies to remove the disincentive for utilities to invest in energy efficiency, demand management, and renewable energy.

2. Advocate for adoption of Cool Schools[1] or the equivalent by local school boards or local governments.

3. Support the establishment of and funding for programs designed to supply locally produced food to schools (e.g., statewide farms-to-schools program).[2]

4. Identify best practices for improving energy efficiency for public buildings.

C. Promote Clean Energy Sources

1. Adopt a 20 percent renewable portfolio standard in the District and Virginia by 2020.

2. Urge state public utility commissions to prioritize energy efficiency, demand reduction, and renewable energy sources.

3. Urge state and federal governments to establish new policies to remove the disincentive for utilities to invest in energy efficiency, demand management, and renewable energy.

4. Create federal and state financial incentives for energy efficiency and renewable energy, including federal tax subsidies for renewable energy production.

5. Urge federal support for technology development, including solar energy, battery technologies, and clean vehicles.

6. Expand the Regional Greenhouse Gas Initiative to the District of Columbia and Virginia.

7. Work with jurisdictions exporting electricity into the metropolitan Washington region to encourage investments in clean, low-greenhouse-gas-emitting energy sources.

8. Promote equitable subsidies for different sources of energy (e.g., nuclear versus renewable).

[1] Cool School programs are designed after Cool Cities or Cool Counties programs, with the goal of enlisting organizations to set and achieve greenhouse gas emission reduction goals.

[2] See: http://www.farmtoschool.org/index.php. Such programs connect schools with local farms with the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing health and nutrition education opportunities, and supporting local small farmers.

Table 10. Recommendations for Reducing Regional Greenhouse Gas Emissions from Transportation and Land Use

Local and Regional Strategies for Government and Business

A. Increase Fuel Efficiency and Use of Clean Fuel Vehicles

1. Promote clean-fuel vehicles (cars, trucks, buses).
   - Promote/accelerate the adoption of efficient clean-fuel vehicles, including hybrids (cars, trucks, and buses). Identify and implement incentive programs to promote purchase of new high-mileage vehicles.
   - Evaluate options for promoting California Low-Emission Vehicle Phase II (CA LEV-II) standards that reduce greenhouse gas emissions, or extending federal corporate average fuel economy (CAFE) requirements past 2020 and expand to cover heavy trucks.
   - Evaluate facilitating adoption of high-mileage vehicles through incentives and tax policies.
   - Assess the benefits from a "Cash-for-Clunkers" program and rebates or tax incentives for the purchase of hybrid vehicles.

2. Adopt a regional green fleet policy.
   - Establish a regional green fleet policy with measurable goals and timetables. Target public and private fleets, transit, tax cabs, rental cars, and refuse haulers. Evaluate the benefits of specific "green fleet" conversion percentages.
   - Evaluate a regional goal for public fleets of accelerating achievement of federal CAFE standards.

3. Promote the use of clean fuels.
   - Further explore alternative-fuel vehicles, such as biofuel-, electric-, or hydrogenpowered vehicles.
   - Strengthen financial and other incentives (e.g., tax rebates) to encourage residents to purchase alternative-fuel vehicles.
   - Conduct planning for alternative-fuel infrastructure needed to support alternative-fuel vehicle technology implementation (e.g., natural gas, hydrogen, electricity).
   - Strengthen financial and other incentives to encourage development of alternative-fuel infrastructure.
   - Explore a state or regional renewable fuels standard.

B. Reduce Vehicle Miles Traveled (VMT)

1. Adopt VMT reduction goals.
   - Collaborate with the TPB to develop cost-effective VMT reduction goals for 2012 and 2020 and associated options for meeting the goals that help achieve regional greenhouse gas emission reduction targets.
   - Evaluate the potential greenhouse gas emission reduction benefits and costs of using financial incentives (e.g., pay-as-you-travel insurance, tolling, or congestion pricing) to reduce VMT.
   - Identify the percentage of auto trips under 3, 2, 1, and ½ miles; develop a strategy to shift half of these trips to bike, pedestrian, or transit modes; and evaluate the benefits of such a shift.

2. Expand transit use (incentives, exclusive transit lanes).
   - Examine options to promote the increased use of existing transit capacity.
   - Evaluate funding requirements for transit incentives and an expanded metrocheck program.

3. Invest in expanding transit infrastructure.
   - With the Washington Metropolitan Area Transit Authority, MARC, VRE, and the local transit operators, evaluate the greenhouse gas reduction benefits of specific incremental expansion of transit capacity and commuter rail service.
   - Evaluate the greenhouse gas reduction benefits of expanding existing and establishing new exclusive bus transit routes, lanes, on-ramps, corridors, and intercity high-speed rail.

4. Expand commuter options (car sharing, bicycle/pedestrian, financial incentives).
   - Building on the accomplishments of Commuter Connections, develop specific targets for shifting modes from single-occupancy vehicles to transit, walking, and bicycling for commuting and noncommuting trips.
   - Expand existing and fund new programs to enhance access to transit and alternativemodes, Commuter Connections, guaranteed ride home, telework programs, bike/pedestrian access, and park/ride lots.
   - Fully fund the construction of bicycle/pedestrian paths in the region, as outlined in the regional bicycle/pedestrian plan. (See: *http://www.mwcog.org/transportation/activities/planning/*.
   - Provide incentives to developments that speed improvements in bicycle/pedestrian access, including improvements in sidewalks, curb ramps, crosswalks, and lighting.
   - Address the need for on-road bicycle accommodations and facilities.
   - Promote regional implementation of a SmartBike program similar to the Zipcar concept.

5. Promote transit-oriented development (TOD) and concentrate future growth in regional activity centers.
   - Evaluate the benefits from achieving a range of possible goals (up to 95 percent) for directing new residential and commercial growth to designated regional activity centers, including growth around transit as well mixed-use, higher-density development.
   - Encourage local governments to evaluate opportunities to provide incentives (including zoning changes) to encourage mixed-use development, including workforce housing at transit stations and hubs to reduce sprawl and VMT.
   - Encourage localities to revisit current land-use plans, in light of current shifts in the real estate market, coupled with high energy costs.
   - Establish TOD as the region's preferred growth strategy.

6. Examine parking policies to reduce VMT.
   - Examine parking policies and their relation to VMT, and implement new parking policies to reduce VMT.
   - Strengthen financial and other incentives (e.g., tax rebates, higher parking costs, and transit benefits) to encourage residents to drive less.
   - Advocate for federal income tax benefits for transit use that equal or exceed the benefits for employer-provided or -subsidized parking.

Table 10. Recommendations for Reducing Regional Greenhouse Gas Emissions from Transportation and Land Use, *continued*

C. Increase Travel Efficiency

1. Adopt best practices for traffic engineering improvements and road management to reduce VMT and congestion. Identify locations of significant recurrent congestion, and prioritize investments to reduce congestion.

2. Implement the Metropolitan Area Transportation Operations Coordination Program to improve coordination among transportation agencies for data sharing and incident management.

3. Enforce existing idling regulations.

4. Explore opportunities to reduce emissions from the aviation sector.

5. Explore opportunities to reduce emissions from the freight sector, including considerations of shifting freight from trucks to rail.

D. Improve Land Use

1. Prepare a tree canopy preservation plan to meet the goal of increased tree canopy.
   - Evaluate the associated benefits and costs.
   - Consider associated issues related to density and height requirements for buildings.

2. Evaluate Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) standards for new development.

3. Carefully plan the location and design of new, infill, and redevelopment projects.
   - Promote regional policies that support walkable communities and affordable housing near transit, and that protect green infrastructure.

4. Integrate greenhouse gas analyses into comprehensive planning and new capital projects.
   - Quantify projected greenhouse gas emissions from major new transportation and other new capital projects.
   - Identify best practices enabling local governments to include greenhouse gas reduction and energy efficiency and conservation as elements in their local comprehensive planning.
   - Include practices in local comprehensive plans that address climate change risk reduction and guide local zoning, building codes, site planning, and review.
   - In cooperation with COG's Planning Directors Technical Advisory Committee and local government environmental and energy planners, convene a working group to devise a consistent, standard methodology for evaluating the greenhouse gas emissions from proposed individual development projects.
   - Encourage new commercial construction to include a "travel management plan."

E. Develop a Regional Metropolitan Planning Process

1. Develop a regional metropolitan planning process for addressing greenhouse gases.
   - Collaborate with the TPB to evaluate how a process modeled after the current regional metropolitan planning process for transportation and air quality planning might be adapted to address greenhouse gas emissions.

2. Make greenhouse gas reduction a stated goal of regional transportation planning activities, including the newly launched multi-stakeholder Greater Washington 2050 initiative,[1] poised to generate additional growth scenarios, a growth compact, and quality growth strategies.

3. Consult with other regions around the country to broadly evaluate options for regional approaches to greenhouse gas reductions that include cap-and-trade and other approaches that might be relevant to our region (e.g., California SB 375), or that might be under consideration in upcoming national climate, energy, or transportation legislation.

Advocacy (State and Federal Levels)

A. Increase Fuel Efficiency and Use of Clean-Fuel Vehicles

1. Promote CAL LEV-II.

2. Extend CAFE past 2020 and include heavy-duty trucks.

3. Support incentives for fuel-efficient and alternative-fuel vehicles.

4. Support incentives for early vehicle retirement.

B. Reduce VMT

1. Urge lawmakers to increase investment in transit.

2. Evaluate financial incentives, such as pay-as-you-travel insurance, and road management to reduce VMT and congestion.

3. Advocate for federal income tax benefits for transit use that equal or exceed the benefits of employer-provided or -subsidized parking.

[1] Available at: http://www.greaterwashington2050.org/.

state climate change legislation, is shifting the economics of the green sector, and it appears we are on the brink of a major green economic explosion, both nationally and regionally.

The District of Columbia Office of Planning has recently evaluated the employment needs of emerging and existing environmental industries and has determined how they can create career ladders for unemployed or underemployed residents of Washington, D.C. The analysis could be expanded to the entire region, and would most likely demonstrate a huge economic opportunity.

The Delaware Valley Regional Planning Commission conducted an economic analysis in 2006 of new economic development opportunities for the Philadelphia region. The analysis concluded the commission needed to develop "eco-industry clusters," promote location efficiency and smart growth, and "eco-brand" the Delaware Valley. The commission is currently working on a green jobs inventory, to evaluate the different categories and classes of potential jobs. An economic analysis of this type would be beneficial for the Washington region.

Based on recommendations from stakeholders in the region, it is envisioned that COG could draw on its economic development expertise to identify appropriate private-sector actors (e.g., chambers of commerce, (local) trade associations, (local) labor unions, D.C. Business Improvement Districts, neighborhood business associations, and (local) professional associations), and convene a meeting under the auspices of the COG Climate Change Program to identify green job goals and criteria.

Table 11. Recommendations for Promoting Green Jobs and Green Economic Development in the Metropolitan Washington Region

Economic Development
1. Promote green businesses and jobs.   - In collaboration with the business community, support and identify programs to promote green businesses and green-collar job development in the region, including a green jobs inventory.   - Examine incentives for promotion of green businesses, and develop an information database.
2. Promote eco-business zones.   Develop best practices or model regional policies to promote local government implementation of eco-business or green business zones.
3. Promote cooperative green purchasing.
4. Promote local vendors and suppliers.   - Identify best practices to promote local vendors.   - Promote local vendors and suppliers to reduce transportation-related emissions associated with imports of goods and services.   - Promote local food production options to reduce emissions. Coordinate with the statewide farm-to-school programs.
5. Promote green jobs analysis.   - Evaluate the potential for expanding the District of Columbia's green jobs analysis to the region.   - Identify green job goals and criteria.

Workshop 1: Capacity of the Regional Water Supply to Withstand a Prolonged Drought

Explore the long-term (2030 and beyond) prospects for sufficient water supply in the event of an unprecedented drought, coupled with the anticipated regional population growth-related rise in demand.

Workshop 2: Vulnerability of Infrastructure, Residences, and Other Buildings to Increased Wind and Flood Risks

Assess the risk that current building codes may be inadequate for future conditions. (Site-planning regulations generally prohibit development in flood-prone areas, as delineated by Federal Emergency Management Agency floodplain maps.)

Workshop 3: Vulnerability to Spikes in Heat and Air Pollution

Assess the capacity of the region's emergency response and health care systems to respond to acute increases in heat and air pollution.

Workshop 4: Opportunities for "No Regret Actions"[9] That Provide Benefits Beyond Climate Change

Drawing on the experience of other locales, explore opportunities to take actions (such as reducing demand for energy and water and expanding tree cover) that generally align with other program priorities, and also provide mitigation and/or adaptation benefits.

Table 12. Recommendations for Adapting to the Risks of Climate Change in the Region

Adaptation
1. Research best practices to prepare for effects of climate change.
2. Develop a regional climate adaptation plan to assist localities with vulnerability assessments, adaptation planning, and emergency preparedness.
3. Partner with universities to research climate change and adaptation strategies. • Review analysis of the expected changes in the region prepared by area universities. • Prepare a report on the expected changes to the region between now and 2050 as a result of climate change and possible adaptation strategies.
4. Analyze impacts on and risks to the region's transportation infrastructure, buildings, and populations in low-lying areas.
5. Develop regional adaptation policies. • Inventory academic resources and develop partnerships with area universities and others to develop recommendations for possible adaptation strategies based on the results of the adaptation research efforts, including policies for infrastructure, land use, and emergency response planning.
6. Conduct adaptation workshops. Partnering would include insurance companies and the area's major infrastructure agencies (wastewater, water supply, storm water, transit).

[9] This term was coined by Dr. Robert Wilkinson, University of California–Santa Barbara. It is descriptive of such initiatives as Los Angeles's massive tree-planting campaign.

REDIRECT UTILITY SAVINGS INTO NEW MITIGATION EFFORTS

When energy prices rise, the savings a local government can incur through energy efficiency improvements and the installation of renewable energy could be considerable. Instead of crediting the general fund, savings on local government utility bills could be redirected to new climate change mitigation activities.

FUND UP-FRONT IMPROVEMENTS THROUGH A THIRD-PARTY CONTRACTOR

Using energy performance contracting and the energy savings, for example, an energy services company can supply up-front financing for local government energy efficiency/renewable energy improvements, with the associated benefits shared between the contractor and the local government to repay the initial investment.

CREATE A DEDICATED FUND FROM A VARIETY OF SOURCES

The District of Columbia is considering a measure that would create a Sustainable Energy Utility, funded by an assessment on the electric and natural gas utilities, to incentivize and help fund energy efficiency and renewable energy improvements on the consumer level. Maryland has established a Strategic Energy Fund to support energy enhancements (including "early action items"), which will be supported by proceeds from RGGI, a cap-and-trade system for electricity-generating plants in participating states in the Northeast and Mid-Atlantic regions.

CREATE PARTNERSHIPS WITH LOCAL UTILITIES

Pepco, in conjunction with Hannon Armstrong and the Virginia Polytechnic Institute and State University, has created the Energy Efficiency Partnership of Greater Washington, which has dedicated $500 million to finance energy efficiency improvements in buildings over the next five years. Expanding this partnership and creating other innovative financing partnerships with utilities to implement energy efficiency improvements and demand management activities show tremendous promise for reducing greenhouse gas emissions and saving energy.

Table 13. Recommendations for Evaluating Alternative Financing Mechanisms for Local Governments

Financing Mechanisms
1. Evaluate financing mechanisms for energy efficiency projects (energy fee, tax, other).
• Redirect savings from energy efficiency to further reduce greenhouse gas emissions.
• Establish an energy fee/carbon tax.
• Use performance contracting.
• Help localities access federal and state climate change funding.
• Develop a financing seminar on creative financing mechanisms, such as energy performance contracting, incentives, subsidies, rebates, tax breaks, and cap-and-trade systems.
2. Establish a clean energy fund.
3. Participate in cap-and-trade program revenues.
4. Develop a regional carbon offset fund for preserving tree canopy.
5. Secure additional financing for public transit.
6. Establish funding for building retrofits, building on the Energy Efficiency Partnership of Greater Washington.
• Conduct a study of regional green economic development opportunities.
• Evaluate a regional program for providing funding for residential energy efficiency and demand reduction retrofits.

The recommendations in Table 14 address the need to improve public understanding and encourage collaborative efforts to address climate change in the region.

Table 14. Recommendations for Regional Outreach and Education

Outreach and Education

1. Implement a regional public education campaign.
   - Encourage participation in Cool Capital Challenge, Cool Counties, Cool Cities, Local Governments for Sustainability, and Climate Communities.
   - Develop a "Top 10 Things You Can Do" list that encourages individual energy efficiency activities; alternative commuting; retiring older, less efficient vehicles; replacing old appliances; replacing incandescent light bulbs with compact fluorescent or LED bulbs; etc.
   - Partner with Clean Air Partners greenhouse gas emission reduction campaign and other regional campaigns.
   - Partner with Commuter Connections on promotion of alternative commuting options.
   - Establish a regional "Climate Action Week" to coincide with September "Car Free" activities or other appropriate events.
   - Host a community outreach event at the COG offices that would be televised to help promote the region's climate change initiative.

2. Develop regional partnerships with private-sector and other organizations.
   - Partner with the Greater Washington Board of Trade Green Committee and the Potomac Conference to assist businesses with taking action to reduce greenhouse gas emissions and implement best practices.
   - Identify regional environmental and community group partners.
   - Partner with electric, gas, and water utilities on regional energy conservation and energy efficiency outreach.
   - Partner with schools, universities, and local governments to establish the region as a leader in green teaching.
   - Partner with schools, universities, and local governments abroad to find and apply innovative lessons about climate mitigation, renewable energy, and energy efficiency.

3. Support COG member outreach efforts.
   - Assist COG members with education and information on climate change, best practices, and related technical assistance.
   - Create a "Regional Climate Leaders" annual awards program to recognize public- and private-sector leadership.
   - Maintain and enhance the COG Climate Change Web site.

Several Other Recommendations May Warrant Consideration

CCSC believes that several of the other recommendations are also potential options for future consideration as regional and national policy evolves.

- A public-private partnership may very well be an outgrowth of this effort, given the huge role the community and private sector must play to achieve the regional climate change goals recommended in this report.
- If federal law and regulation require preparation of regional greenhouse gas reduction plans analogous to regional air quality implementation plans, the responsibility might appropriately be assigned to the Metropolitan Washington Air Quality Committee, perhaps with somewhat augmented representation.
- Once the work of the Greater Washington 2050 Coalition is completed, further consideration of the structure would be appropriate.
- While not the recommended approach at this time, the possibility of creating an overarching regional environmental policy committee or other entity that integrates across the various environmental programs should be reconsidered in the future. As of now, the nature of the work programs for COG's Chesapeake Bay and water resources, air quality, climate and energy, and aviation policy have required dedicated committees to address the significant number of policy and technical issues. However to facilitate effective communication, coordination, and programmatic efficiency, periodic forums or leadership meetings should be considered as a means of ensuring better integration of cross-cutting policy development across the various committees.
- The Climate and Energy Policy Committee should consider and recommend actions to help individual jurisdictions meet the regional goals, including:
  - A regional standardized reporting mechanism for baseline emissions data, on a jurisdictional basis;
  - Voluntary agreement by individual jurisdictions on targeted reductions; and
  - An annual report to the COG Board on progress toward the regional reduction targets.

Table 15. Recommendations for COG Climate Change Initiative

COG Climate Change Initiative
1. Create a permanent COG Climate Change Initiative.
2. Establish a COG Board Climate and Energy Policy Committee to provide oversight and direction for the initiative, with a broad membership from COG members, and participation from state and federal representatives, and broad business and stakeholder representation.

initiatives identified as immediate necessarily will be the focus in the next year. In addition, a list of recommendations for local governments leading by example is provided in Appendix D, and advocacy positions in Appendix E.

Implementation Plans and Tracking and Reporting Progress Will Be Necessary

The establishment of regional greenhouse gas emission reduction goals for 2012, 2020, and 2050 creates an imperative to develop detailed plans for achieving the goals, as well as tracking progress toward the goals.

In the coming year, as the climate change initiative proceeds with implementing actions that can move ahead or are moving ahead now, coupled with evaluating and quantifying additional emission reduction efforts, a plan or building blocks of a plan can be developed that demonstrate how the region is moving toward achieving its goals. Actions by the states as well as by COG's members will need to be enumerated, in some cases reconciled, and incorporated into a regional progress report and ultimately a regional plan. A system for quantitatively tracking progress, through updating the regional greenhouse gas emissions inventory, will need to be devised. CCSC recommends periodic reviews of progress, at least once every three years during the initial phase of the program.

Additional Financing Will Be Necessary for COG's Climate Change Initiative

There is a need for additional funding support to fully execute the work tasks identified in the recommendations. Significant funding exists in COG's fiscal year (FY) 2009 and proposed FY 2010 environmental and transportation planning work programs and budgets to support much of the staff work required to advance the regional climate change initiative and carry out many of the recommendations contained in this report. However, more resources are needed. Additional funding will be sought from foundation sources and government agency grants to enable earlier action and more complete implementation of the program covered in this report. A detailed work program and funding plan should be crafted by early 2009 to help target potential funding sources to support the initiative. In-kind contributions from partners and stakeholders could help carry out some of the work; these opportunities need to be identified. Consultant support may also be needed to supplement the capacity of the COG staff.

Table 16. Recommendations for the COG Climate Change Program

COG Climate Change Program
1. Establish a COG Climate and Energy Policy Committee. Seek additional resources and funding.
2. Develop work program priorities, schedule, staffing plan, and budget.
3. Prepare regional plans to achieve the 2012 and 2020 reduction goals. Prepare the 2012 plan by Fall 2009. Initiate preparation of the 2020 plan by December 2009.
4. Evaluate the cost-effectiveness of the proposed measures.
5. Design an outreach and education program.
6. Track state and federal climate and energy initiatives, and develop and advance regional advocacy positions.
7. Develop a system for tracking progress toward greenhouse gas emission reduction goals and periodically review targets.
8. Develop a regional standardized analytical methodology for use by individual local governments in developing their greenhouse gas emission inventories.
9. Prepare an annual progress report to the COG Board of Directors on implementation progress for COG's Climate Change Initiative.