Climate, Energy, and Air Survey Results

2016 Local Government Surveys

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Metropolitan Washington Air Quality Committee (MWAQC)
September 28, 2016

Agenda Item #3

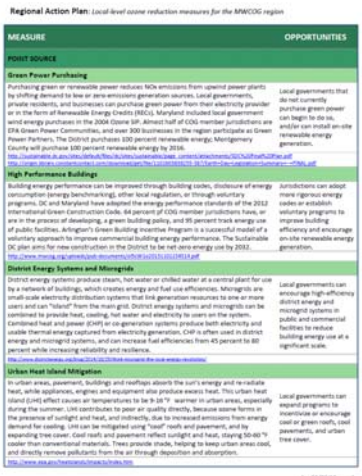
Metropolitan Washington Council of Governments

Regional Air Quality Action Plan

MWAQC Adopted May 2015

Purpose:

- Address the current and the future ozone NAAQS and to better protect public health
- Commitment to achieving reductions in air pollutant emissions through a broad range of cost-effective control measures across multiple sectors
- Request COG staff to provide periodic updates on the status of implementation of the Plan



Regional Action Plan: *Local-level ozone reduction measures for the MWCOG region*

MEASURE	OPPORTUNITIES
POINT SOURCE	
Green Power Purchasing	
Purchasing green or renewable power reduces NOx emissions from upwind power plants by shifting demand to low or zero-emissions generation sources. Local governments, private residents, and businesses can purchase green power from their electricity provider or in the form of Renewable Energy Credits (RECs). Maryland included local government wind energy purchases in the 2004 Ozone SIP. Almost half of COG member jurisdictions are EPA Green Power Communities, and over 300 businesses in the region participate as Green Power Partners. The District purchases 100 percent renewable energy; Montgomery County will purchase 100 percent renewable energy by 2016.	Local governments that do not currently purchase green power can begin to do so, and/or can install on-site renewable energy generation.
High Performance Buildings	
Building energy performance can be improved through building codes, disclosure of energy consumption (energy benchmarking), other local regulation, or through voluntary programs. DC and Maryland have adopted the energy performance standards of the 2012 International Green Construction Code. 64 percent of COG member jurisdictions have, or are in the process of developing, a green building policy, and 95 percent track energy use of public facilities. Arlington's Green Building Incentive Program is a successful model of a voluntary approach to improve commercial building energy performance. The Sustainable DC plan aims for new construction in the District to be net-zero energy use by 2032.	Jurisdictions can adopt more rigorous energy codes or establish voluntary programs to improve building efficiency and encourage on-site renewable energy generation.
District Energy Systems and Microgrids	
District energy systems produce steam, hot water or chilled water at a central plant for use by a network of buildings, which creates energy and fuel use efficiencies. Microgrids are small-scale electricity distribution systems that link generation resources to one or more users and can "island" from the main grid. District energy systems and microgrids can be combined to provide heat, cooling, hot water and electricity to users on the system. Combined heat and power (CHP) or co-generation systems produce both electricity and usable thermal energy captured from electricity generation. CHP is often used in district energy and microgrid systems, and can increase fuel efficiencies from 45 percent to 80 percent while increasing reliability and resilience.	Local governments can encourage high-efficiency district energy and microgrid systems in public and commercial facilities to reduce building energy use at a significant scale.
Urban Heat Island Mitigation	
In urban areas, pavement, buildings and rooftops absorb the sun's energy and re-radiate heat, while appliances, engines and equipment also produce excess heat. This urban heat island (UHI) effect causes air temperatures to be 9-16 °F warmer in urban areas, especially during the summer. UHI contributes to poor air quality directly, because ozone forms in the presence of sunlight and heat, and indirectly, due to increased emissions from energy demand for cooling. UHI can be mitigated using "cool" roofs and pavement, and by expanding tree cover. Cool roofs and pavement reflect sunlight and heat, staying 50-60 °F cooler than conventional materials. Trees provide shade, helping to keep urban areas cool, and directly remove pollutants from the air through deposition and absorption.	Local governments can expand programs to incentivize or encourage cool or green roofs, cool pavements, and urban tree cover.

As of 5/20/15 1

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Survey Background

- Annual surveys are designed to consolidate and streamline local government surveying on climate, energy, and air quality actions.
- Expanded 2016 survey to address all local actions in the MWAQC and CEEPC Regional Plans.
- 18 out of 22 surveys returned. Previous responses were used for the jurisdictions that did not respond.

Point Source Action Progress

Local Government Actions	Goal	Implemented + In Progress
POINT SOURCE		
Green Power Purchasing		
Renewable energy system(s) on local government property	100%	86%
EPA Green Power Partner	75%	50%
EPA Green Power Community Partner	25%	23%
High Performance Buildings (Energy Efficiency)		
Adopt green building policy	100%	68%
Affordable housing green rehab program	50%	41%
Green building incentives	35%	41%
Green or "energy-aligned" lease terms	35%	18%
Track or benchmark government building energy performance	100%	95%
Disclose government building energy performance	75%	55%
Energy plan for government facilities	75%	77%
Conduct walk-through energy audits of government facilities	75%	91%
District Energy Systems and Microgrids		
Community energy planning initiative(s)	27%	23%
Urban Heat Island Mitigation		
Cool roof on government property	-	36%
Green roof on government property	75%	41%
Adopt a tree canopy/forest cover goal	75%	82%
Tree City USA	100%	73%
Plan(s) for ecologically valuable green spaces	75%	82%
Promote or incentivize heat island mitigation (e.g. green roofs, cool roofs, cool pavements, urban tree cover)	-	45%
Adopt a green streets policy	50%	36%

Mobile Source Action Progress

Local Government Actions	Goal	Implemented + In Progress
MOBILE SOURCE		
Eco-Driving		
Eco-driving initiatives (e.g. public awareness campaigns, incentive programs, education or requirements for public fleets and contractors)	-	**32%**
Idling and Emission Enforcement		
Idling regulations	100%	**73%**
Anti-idling and maintenance awareness programs	-	**32%**
Commute option program for local government workers	75%	**77%**
Regional employer-based and general public commute option program in all jurisdictions	100%	**100%**
Bicycle and Pedestrian Programs		
Bicycle/pedestrian plan	75%	**86%**
Complete streets policy	75%	**50%**
Electric and Alternative Fuel Vehicles		
Adopt a green fleet policy	75%	**68%**
Alternative fuel vehicle infrastructure project(s)	75%	**64%**
Parking Management		
Parking management feasibility/cost-benefit studies to identify options to reduce congestion or motorized trips	-	**18%**
Parking policies that reduce vehicle miles traveled	-	**27%**

Additional Survey Results – CEEPC

REGIONAL GREENHOUSE GAS REDUCTION

Goal: To reduce the region's greenhouse gas emissions to 20% below 2005 levels by 2020.

Implementation Actions:

Greenhouse Gas (GHG) Inventories and Plans		Status**	
		2013	2016
1	100% of jurisdictions complete GHG inventories for government operations.	77%	77%
2	100% of jurisdictions complete community-wide GHG inventories.	68%	100%
3	100% of jurisdictions adopt GHG emission reduction plans for government operations.	68%	68%
4	75% of jurisdictions adopt plans to reduce GHG emissions community-wide.	55%	55%

BUILT ENVIRONMENT AND INFRASTRUCTURE

Goal: To reduce non-transportation energy consumption, which accounts for two thirds of the region's greenhouse gas emissions, by 20% below 2005 levels by 2020.

Implementation Actions:

Energy Efficiency		Status**	
		2013	2016
5	100% of jurisdictions track and/or benchmark energy performance in all government buildings.	95%	95%
6*	75% of jurisdictions participate in a regional EPA Portfolio Manager Master Account Sharing.	N/A	36%
7*	75% of jurisdictions disclose energy performance of all government buildings.	50%	55%
8*	75% of jurisdictions prepare an energy plan for local government facilities.	55%	77%
9*	75% of jurisdictions perform walk-through energy audits of local government facilities.	68%	91%
10*	50% of jurisdictions participate in US DOE Better Buildings Challenge which includes pledging to reduce 20% energy use in building(s).	9%	14%
11*	50% of jurisdictions develop a policy or ordinance to increase the energy efficiency of outdoor lighting in appropriate areas such as streets, parking lots, parks and/or signage.	41%	55%

Fleets for the Future

- F4F supports implementation of MWAQC Action Plan.
- Cooperative procurement of advanced and alternative fuel vehicles.
- Kicking off the initiative with a survey of interested public agencies to identify needs and interests.

Discussion Questions

- Does this give you an adequate picture on the status of local action?
- Where do we need to inspire local action?

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