

Draft Regional Action Plan – Potential state-level ozone reduction measures for the MWCOG region

MEASURE	REDUCTION POTENTIAL	STATUS (as of 2/26/2015)
POINT SOURCE		
Power Plant Controls Updates*		
State limits can significantly reduce NOx emissions, especially from coal-burning power plants. Maryland has proposed updated regulations that would apply to two power plants in the region. In Virginia, emissions from the utility sector are dropping due to consent agreement requirements, fuel switches from coal to natural gas or biomass, coal retirements, and the increased use of new units, which are well controlled.	Large NOx Reductions	MD - Proposed
http://www.dsd.state.md.us/MDRegister/4124/Assembled.htm		
NOx Reasonably Available Control Technology (RACT) Updates		
The Clean Air Act requires states to adopt Reasonably Available Control Technology (RACT) for all major stationary sources of NOx. DC and MD are developing and will soon propose updated NOx RACT regulations. VA will evaluate affected facilities and determine what regulation is needed.	Large NOx Reductions	DC - In Development
		MD - Proposed
		VA - Planning to Adopt
http://www.epa.gov/region1/airquality/noxract.html		
OTC Natural Gas Ultra Low NOx Burners (ULNBs)		
OTC has developed a model rule for reducing NOx emissions from new natural gas-fired boilers, steam generators and water heaters. The model rule can be implemented as a manufacturing restriction, a sales restriction, a use restriction, or a combination. DC and Maryland are considering this measure.	Large NOx Reductions	DC - Under Consideration
		MD - Under Consideration
http://www.otcair.org/upload/Documents/Model%20Rules/Techncial%20Revisions%20to%20Model%20Rule%20for%20New%20Small%20Boilers%20110831.doc		
Energy Efficiency and Renewable Energy Programs*		
All three states and many of the local jurisdictions in the region have regulatory, voluntary and/or financial incentive programs for energy efficiency and renewable energy deployment, including Renewable Portfolio Standards, tax credits, high-performance building codes and green building certifications. COG can provide assistance for scaling up or expanding these programs.	Small NOx Reductions	DC - Existing
		MD - Existing
		VA - Existing

AREA SOURCE**Demand Response Emissions Controls**

Equipment used for demand response may be a significant source of NOx, especially on high electricity demand days. DC is developing a rule to require best available control technology (BACT) for demand response equipment. Virginia has implemented a general permit for large demand response units requiring Tier 4 equivalent controls.

Large NOx reductions
On Peak Days

DC - In Development
VA - Existing

<http://lms.dccouncil.us/Download/29524/B20-0368-SignedAct.pdf>
http://www.deq.virginia.gov/Portals/0/DEQ/Air/Forms/VDR_Generator_GP_Form-530.doc

Distributed Generator Limits*

Generators used for emergency power, peak shaving and/or demand response may be a significant source of NOx, especially on high electricity demand days. Maryland is developing a rule to require generator owners to submit hourly usage data.	Large NOx Reductions On Peak Days	MD - In Development
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<http://www.mwcog.org/uploads/committee-documents/ZV1aV1Y20131209141112.pdf>

OTC Architectural and Industrial Maintenance Coatings (AIM)*

OTC has developed a model rule for setting a limit on VOC emissions from architectural coatings, such as paint, lacquer, enamel and asphalt. DC and Maryland are planning to adopt regulations. Credit in VA may be available without a regulation due to the regional nature of market response.	Large VOC Reductions	DC - Planning to Adopt
		MD - Planning to Adopt

http://www.otcair.org/upload/Documents/Model%20Rules/OTC_model%20rule_AIM_2010_v15.pdf

OTC Consumer Products Update*

OTC has developed a model rule for setting a limit on VOC emissions from consumer products and requiring VOC content reductions over time. DC and Maryland are planning to adopt regulations. Credit in Virginia may be available without a regulation due to the regional nature of market response.	Large VOC Reductions	DC - Planning to Adopt
		MD - Planning to Adopt

http://www.otcair.org/upload/Documents/Model%20Rules/OTC%20CP%20Model%20Rule%202012%20CLEAN_vs2010.2012%2005%2010.pdf

OTC Mobile Equipment Repair/Auto Body Refinishing (MMVER)*

OTC has developed a model rule for limiting VOC emissions from automotive coatings and cleaning solvents associated with auto body and equipment refinishing. DC and Maryland are planning to adopt regulations. Credit in Virginia may be available without a regulation due to regional market response.	Large VOC Reductions	DC - Planning to Adopt
		MD - Planning to Adopt

<http://www.otcair.org/upload/Documents/Model%20Rules/OTC%202009%20MVMERR%20Model%20Rule%20approved%20November%202009.doc>

OTC Solvent Degreasing

OTC has developed a model rule for reducing VOC emissions from cleaning and degreasing operations, by using solvents with low VOC content, air-tight cleaning systems and/or an approved VOC capture and control device.	Small VOC Reductions	DC - Planning to Adopt
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<http://www.otcair.org/upload/Documents/Model%20Rules/2011%20OTC%20Model%20Rule%20for%20Solvent%20Degreasing.pdf>

Ultra Low Sulfur Fuel Oil

Combustion of fuels containing sulfur emits pollutants such as fine particulate matter and sulfur dioxide. Ultra-low sulfur (ULS) fuel, containing no more than 15 parts per million of sulfur, is federally required for motor vehicles. DC has proposed regulations to phase-in sulfur limits for home and water-heating fuel oil.	Small NOx Reductions	DC - Proposed
		MD - Under Consideration

<http://ddoe.dc.gov/page/notice-air-quality-comment-period-and-hearing-sulfur-content-requirements-fuel-oil>

MOBILE SOURCE

Diesel Vehicle Inspection Programs*

Inspection and maintenance (I/M) programs help reduce NOx emissions and improve fuel economy. DC, MD, and VA all operate on-road I/M programs. Current federal policy and models do not provide credit for testing diesel engines or equipment in either traditional I/M programs or in smoke opacity programs. OTC and NESCAUM are working with EPA to obtain SIP credit for these programs. DC currently does not test diesel vehicles. MD has a roadside diesel opacity test for heavy duty vehicles, and VA currently tests light duty diesel vehicles through its I/M program.

Medium
NOx and
VOC
Reductions

DC - Under Consideration

MD - Existing

VA - Existing

http://www.otcair.org/upload/Documents/Formal%20Actions/Mobile%20charge%20_Final.pdf

OTC Off-Road Vehicle Idling Reduction*

OTC has developed a model rule for reducing NOx emissions from unnecessary idling of diesel engines, which also improves fuel efficiency. DC and Maryland are working on off-road idling limits. This measure could also be accomplished through a regional program coordinated by COG.

Medium to
Large NOx
Reductions

DC - In Development

MD - Under Consideration

http://www.otcair.org/upload/Documents/Model%20Rules/OTC_Model_Rule_Anti_Idling_Final.pdf

OTC Aftermarket Catalyst Program*

OTC has developed a model rule to ensure greater NOx reductions from motor vehicles by requiring aftermarket catalyst sold or installed to be certified by the California Air Resources Board. This measure can be implemented through state regulations or at the federal level.

Large NOx
reductions

DC - Under Consideration

MD - In Development

http://www.otcair.org/upload/Documents/Meeting%20Materials/Model_Rule_for_Sale_of_Aftermarket_Catalytic_Converters_Draft_%20140401.docx

EPA SmartWay Partnership*

SmartWay is a voluntary EPA program that reduces transportation-related emissions by creating incentives to improve supply chain fuel efficiency. COG could assist in scaling up and expanding participation in the program regionally.

Medium to
Large NOx
Reductions

DC - Under Consideration

MD - Planning to Adopt

<http://www.epa.gov/smartway/>

California Low Emission Vehicle (CAL LEV) Standards

California Low Emission Vehicle (CAL LEV) standards were updated in 2012 to achieve an additional 75% reduction in NOx emissions by model year 2025. Maryland has adopted CAL LEV and its Zero Emissions Vehicle (ZEV) Mandate sets a goal of having 60,000 ZEVs on the road by 2020. The Clean Cars Act of 2008 requires DC to adopt CAL LEV standards, but regulations were not developed due to lack of resources for timely adoption and the federal Tier 3 program.

Small NOx
Reductions

MD - Existing

<http://mde.maryland.gov/programs/Air/MobileSources/CleanCars/Pages/index.aspx>

Electric and Alternative Fuel Vehicles		
Electric and hydrogen-powered vehicles produce no direct tailpipe emissions and can greatly reduce ground level ozone from the mobile sector. Alternative fuel vehicles can reduce tailpipe emissions by up to 80%. AFV and fueling infrastructure programs or incentives are available in all three states. EVs and AFVs could also be deployed through a regional program coordinated by COG and the Clean Cities Coalition.	Small NOx Reductions	DC - Existing
		MD - Existing
		VA - Existing
http://www1.eere.energy.gov/cleancities/ ; http://www.virginiaev.org/		
On and Off-Road Fleet Retrofits and Repowers		
Diesel engines can be retrofitted with emission control devices, repowered to be cleaner burning, rebuilt, or upgraded to run on cleaner fuel. DC has ongoing locomotive and boat engine replacements. Virginia has ongoing programs for trucks, locomotives, and school and transit buses.	Small to Medium NOx Reductions	DC - Existing
		VA - Existing
http://www.epa.gov/cleandiesel/technologies/engines.htm		
* Denotes measure on MDE's proposed "Top 10 Regional Actions" list		

LEGEND			
STATUS		REDUCTION POTENTIAL	
Existing	State has an existing rule or program.	Small	<1 tons per day
Proposed	Rule has appeared in State Register, or program has been announced.	Medium	1-5 tons per day
In Development	Rule or program is in draft stages.	Large	>5 tons per day
Planning to Adopt	Agency plans to or is required to pursue this measure.	NOx	Nitrogen Oxides
Under Consideration	Being considered. Agency has not made decision whether to pursue yet.	VOC	Volatile Organic Compounds
OTC	Ozone Transport Commission - multi-state organization created under the Clean Air Act responsible for advising EPA on transport issues and developing and implementing regional air quality solutions.		
NESCAUM	Northeast States for Coordinated Air Use Management - association of air quality agencies in the Northeast U.S. that assists member states in implementing national air quality standards.		