



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
Fax: 804-698-4019 - TDD (804) 698-4021
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

April 30, 2014

Ozone Advance
c/o Laura Bunte, Mail Code C304-01
109 TW Alexander Drive
Research Triangle Park, NC 27711

Reference: Ozone Advance Action Plan -
2014 Annual Reports

Dear Ms. Bunte,

The purpose of this letter is to transmit to you the annual reports for the Fredericksburg, Hampton Roads, and Richmond-Petersburg Ozone Advance Action Plans. These annual reports are due to your office by April 30 of each year, as mutually agreed upon by EPA and VDEQ staff.

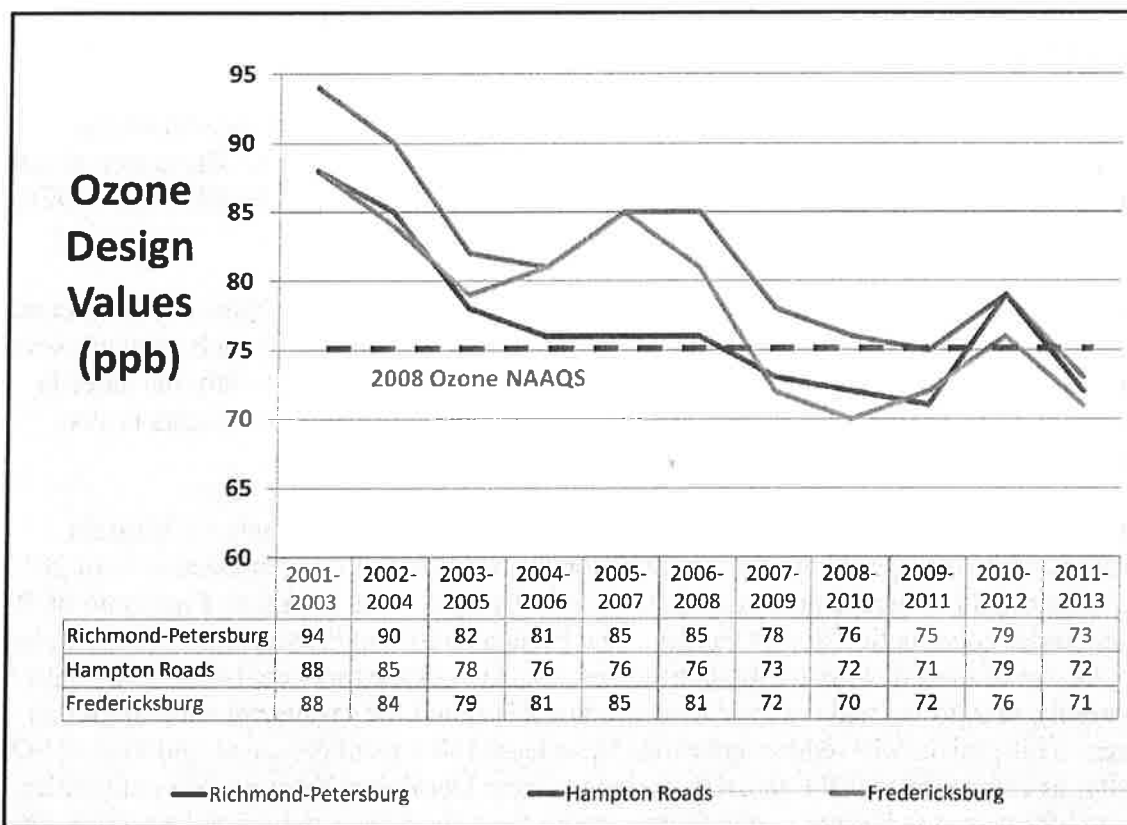
The annual reports follow the reporting structure included in the Action Plans under Appendix D. Since the structure of Appendix D allows for only a brief overview of each element, several documents and spreadsheets providing in-depth information are included with this letter in electronic format. A table of contents providing a description of these documents is also attached to this letter, for your convenience.

These reports include much good news. For instance, Honeywell in Hopewell, Virginia, completed and began operating two new SCR for the reduction of NO_x in December of 2012. These units should reduce annual emissions of NO_x by 2,000 tons or more. Two more SCR units are under construction at that facility. The Invista facility in Waynesboro, Virginia, has begun the use of their new, natural-gas fired boilers. Two of the three coal-fired units have been permanently shut down, and the third coal-fired unit is slated for permanent shut down this summer. This project will reduce emissions by at least 180 tons of NO_x and 560 tons of SO₂ annually, as compared to 2011 actual emissions. Three Dominion-Virginia Power facilities have converted from coal to biomass, greatly decreasing their short term and annual emission rates of NO_x.

In the mobile source sector, the metropolitan planning organizations are continuing to support a variety of innovative and environmentally beneficial projects through the use of CMAQ funding. Additionally, the Virginia Get Ready project, an effort of Virginia Clean Cities and Virginia DMME, has been very successful in helping to increase the number of publically available charging stations for electric vehicles. In 2011, Virginia had 47 such stations. In 2012, the number increased to 140 such stations, and in 2013, the number nearly doubled, to 212 such stations. The number of public charging stations in Virginia will continue to grow as localities and citizens embrace this new paradigm in transportation.

In other arenas, the Virginia Port Authority continues to show leadership within and outside of the Commonwealth in regards to developing innovative approaches to reducing air emissions and improving fuel economy of the equipment used at its facilities. Virginia Commonwealth University remains committed to its sustainability programs, and Old Dominion University in Norfolk, Virginia, is joining the effort, with a new solar power program they have developed in cooperation with Dominion-Virginia Power.

These efforts and many more have helped to reduce ozone concentrations to beneath the 2008 ozone NAAQS of 75 ppb in these areas of the Commonwealth as shown in the chart below.



The reductions in NO_x from the recently finalized Tier 3 program for cars and light duty trucks and the upcoming NO_x reductions as described in the Ozone Advance Action Plans will further improve ozone air quality in these areas going forward.

Ozone Advance Action Plan Annual Reports

April 30, 2014

Page 3

If you have any questions on the information in these annual reports or in the information provided electronically, please do not hesitate to call me or Doris McLeod at 804-698-4197.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas R. Ballou", followed by a long horizontal flourish.

Thomas R. Ballou
Director, Air Data Analysis and Planning

Enclosures:

Fredericksburg Ozone Advance Action Plan Annual Report
Hampton Roads Ozone Advance Action Plan Annual Report
Richmond-Petersburg Ozone Advance Action Plan Annual Report
Table of Contents
Data disk

**COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD**

**OZONE ADVANCE ACTION PLAN
FREDERICKSBURG, VIRGINIA**

**Annual Report
April 30, 2014**

Fredericksburg Area Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Fredericksburg Area Metropolitan Planning Organization</i>				
CMAQ Projects	FAMPO	2012-2018	<ul style="list-style-type: none"> Programs initiated? 	<ul style="list-style-type: none"> See FAMPO-Resolution-13-13-Allocaiton-FY14-19-RSTP-CMAQ-Funds.pdf
GWRideConnect	FAMPO GWRideConnect	On going	<ul style="list-style-type: none"> VMT avoided annually Vehicle trips avoided annually Vanpools formed 	<ul style="list-style-type: none"> Programs ongoing http://www.gwrideconnect.org
<i>Virginia Department of Environmental Quality</i>				
Expansion of ORE	VDEQ	Full Implementation: 2014	<ul style="list-style-type: none"> Program implemented? 	<ul style="list-style-type: none"> DEQ received one proposal for an expanded On-Road Emissions (ORE) program, which will enable up to 30% of the vehicles currently requiring a biennial test at an inspection station to pay for an optional "clean screen" pass. DEQ is currently in the process of negotiating the final terms of the contact and expects implementation by the end of this year.
<i>DMME-Division of Energy</i>				
VEMP	DMME	Ongoing through 2020	<ul style="list-style-type: none"> SF of public buildings retrofitted? Private capital deployed? Energy savings? Funds awarded? Programs to be implemented? 	<ul style="list-style-type: none"> Total value of contracts through FY 2012 is nearly \$537 million. More information for FY2013 is being collected from contractors, including building square footage and quantification of avoided energy units. http://www.dmme.virginia.gov/DE/PerformanceContractingSupport.shtml See VEMP-All ESCOs and Contract totals Through FY12.xlsx More than \$10M awarded. Projects include energy performance contracts, and a solar thermal system. See DMME-Performance Measures FY14Q1.xlsx, tab RLF 1.01.03
Energize Virginia	DMME	2011-2016		
<i>Virginia Clean Cities</i>				
Virginia Get Ready	VCC	Ongoing	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Deployed two EV planning docs in 2013 as well as tools for advancing electric vehicles and infrastructure. See http://www.virginiaev.org/ VA registrations of electric vehicles increased form 729 in 2012 to 1,257 in 2013. VA public charging stations increased in number from 140 in 2012 to 212 in 2013. See va_electric+hybrid_vehicles_and_stations_2008-2013.xlsx

Fredericksburg Area Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
Propane Autogas Program	VCC	Ongoing	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Program concluded in 2013. Converted 117 vehicles to autogas in VA Alternative fuel vehicles estimated to reduce NO_x emissions 273 tons annually in VA See VCCC-2013report-NOxCalculations.xlsx
Regional Reductions				
Honeywell SCR Installation	VDEQ	12/2012 through 06/2019	<ul style="list-style-type: none"> # of SCR installed? Annual emissions of NO_x? 	<ul style="list-style-type: none"> Two SCR commenced operation December of 2012. Two additional SCR under construction.
Invista Powerhouse Project	VDEQ	Estimated construction completion date of 2014	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> New boilers started operation in January of 2014. Shutdown request for existing boilers 1 and 2 effective January 9, 2014. Shutdown request for existing boiler 3 expected summer of 2014.
Celco Powerhouse Project	VDEQ	Estimated construction completion date of 2015	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> The facility informed VDEQ that construction commenced for the six natural gas boilers on 7/16/2013.
Fort A.P. Hill	Fort A.P Hill	Ongoing	<ul style="list-style-type: none"> Annual emission estimates New programs implemented or studied? 	<ul style="list-style-type: none"> New Army Reserve Center Complex-LEED Certified Gold July 2013 AWG Complex certified LEED Silver in near term. See Updated_figures_for OAPP_3-16-14.docx
Generating unit retrofits and fuel switches	Dominion	2013-2016	<ul style="list-style-type: none"> Facilities converted to gas or biomass? Facilities retired? Facilities retrofitted? 	<ul style="list-style-type: none"> Bremo Bluff permit for gas conversion finalized 5/24/2013. Station ceased burning coal in fall of 2013. Outage and work commenced for unit fuel switch this winter. Project is expected to be completed in the next few months. See Title V permit for Bremo Bluff.pdf Permits received for Hopewell, Altavista, and Southampton fuel switch from coal to biomass. Units have begun burning biomass and no longer burn coal. Installation of SO₂ scrubbers has been completed for all coal units at the Chesterfield Power Station near Richmond, VA.

Fredericksburg Area Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Other</i>				
Virginia Offshore Wind Technology Advancement Project	Dominion	2017-2018	n/a	<ul style="list-style-type: none"> • Dominion is planning an offshore wind technology testing facility, which will consist of two offshore wind turbines with a combined capacity of approximately 12 MW. https://www.dom.com/about/stations/renewable/vowtap.jsp • On September 4, 2013, Dominion bid \$1.6 million to win the lease for 112,800 acres off the Virginia coast to develop an off-shore wind farm capable of generating up to 2,000 MW of electricity, and is actively developing this large-scale commercial off-shore wind project. https://www.dom.com/about/stations/renewable/commercial-offshore-wind-development-project.jsp • See Dominion Wind Power.pdf
National Parks	VCC, NPS	On going		<ul style="list-style-type: none"> • NPS is adding 12 prone lawn mowers and 2 electric vehicles to fleet, along with a public EV charging station and 2 private EV charging stations.

**COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD**

**OZONE ADVANCE ACTION PLAN
HAMPTON ROADS, VIRGINIA**

**Annual Report
April 30, 2014**

Hampton Roads Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Virginia Port Authority</i>				
GO Program	VPA	On going DERA2 funds received for 2013	<ul style="list-style-type: none"> Vehicles retrofitted or repowered 	<ul style="list-style-type: none"> Program is ongoing
Maersk Low Sulfur Fuel	VPA	2012-2015	<ul style="list-style-type: none"> Program report 	<ul style="list-style-type: none"> Program is ongoing
Terminal Operations	VPA	On going	<ul style="list-style-type: none"> Program Report 	<ul style="list-style-type: none"> Program is ongoing
<i>Metropolitan Planning Organizations</i>				
I-64 Express/Inter-Terminal Barge Service	VPA, RAMPO, HRTPO	On going	<ul style="list-style-type: none"> TEUs transported annually 	<ul style="list-style-type: none"> In 2013, 7,965 containers moved by the barge service.
TRAFFIX	TRAFFIX	On going	<ul style="list-style-type: none"> VMT avoided annually Trips avoided annually 	<ul style="list-style-type: none"> Increase in GoPass365 ridership 9,900,000 VMT reduced through NuRide See FY2013 TRAFFIX Annual Report – final.pdf
The Tide	HRTPO	On going	<ul style="list-style-type: none"> Program Report 	<ul style="list-style-type: none"> Program is on going http://www.gohrt.com/services/the-tide/
<i>DMME-Division of Energy</i>				
VEMP	DMME	On going	<ul style="list-style-type: none"> SF of public buildings retrofitted? Private capital deployed? Energy savings? 	<ul style="list-style-type: none"> Total value of contracts through FY 2012 is nearly \$537 million. More information for FY2013 is being collected from contractors, including building square footage and quantification of avoided energy units. http://www.dmme.virginia.gov/DE/PerformanceContractingSupport.shtm See VEMP-All ESCOs and Contract totals Through FY12.xlsx
Energize Virginia	DMME	2011-2016	<ul style="list-style-type: none"> Funds awarded? Programs to be implemented? 	<ul style="list-style-type: none"> More than \$10M awarded. Projects include energy performance contracts, and a solar thermal system. See DMME-Performance Measures FY14Q1.xlsx, tab RLF 1.01.03

Hampton Roads Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Dominion Virginia Power</i>				
Energy Conservation Programs	Dominion	On going	Program ongoing?	<ul style="list-style-type: none"> Company currently offers several energy conservation programs to its residential and non-residential utility customers in Virginia and continues to evaluate opportunities to redesign current and develop new demand-side management initiatives. https://www.dom.com/dominion-virginia-power/customer-service/energy-conservation/ec-programs.jsp
Generating unit retrofits, fuel conversions, and retirements	Dominion	2012-2016	<ul style="list-style-type: none"> Retrofits installed? Units where fuels have been successfully changed? Units retired 	<ul style="list-style-type: none"> Permits received for Hopewell, Altavista, and Southampton fuel switch from coal to biomass. Units have begun burning biomass and no longer burn coal. Installation of SO₂ scrubbers has been completed for all coal units at the Chesterfield Power Station near Richmond, VA.
Solar Partnership Program	Dominion	2013-2018	<ul style="list-style-type: none"> Program ongoing? MW owned/installed? 	<ul style="list-style-type: none"> Dominion announced 12/9/2013 the installation of more than 2,000 solar panels on the rooftop of Canon Virginia Inc, in Gloucester County, VA. The panels will generate more than 500 kw of electricity. https://www.dom.com/about/media-downloads.jsp See Dominion Solar Roof Top.pdf. Company has begun installation of 600 rooftop solar panels on the campus of Old Dominion University in Norfolk, VA that are expected to be operational in Spring 2014 and will generate 132 kW of electricity.
Renewable Generation Tariffs	Dominion	Currently pending approval	<ul style="list-style-type: none"> Program approval received? 	<ul style="list-style-type: none"> Company received approval of program from SCC in December 2012. Company began accepting applications in June 2013. https://www.dom.com/about/stations/renewable/solar/solar-purchase-program.jsp
Alternative Vehicles and Fuels Program	Dominion	Ongoing	<ul style="list-style-type: none"> % of fleet powered by alternative fuels? 	<ul style="list-style-type: none"> Vehicles powered by alternative fuels (AVFs) now make up about 28% of Company's on-road fleet of about 5,700 cars and trucks.

Hampton Roads Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Virginia Clean Cities</i>				
Virginia Get Ready	VCC	On going	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Deployed two EV planning docs in 2013 as well as tools for advancing electric vehicles and infrastructure. See http://www.virginiaev.org/ VA registrations of electric vehicles increased from 729 in 2012 to 1,257 in 2013. VA public charging stations increased in number from 140 in 2012 to 212 in 2013. See va_electric+hybrid_vehicles_and_stations_2008-2013.xlsx Program concluded in 2013. Converted 117 vehicles to autogas in VA Alternative fuel vehicles estimated to reduce NO_x emissions 273 tons annually in VA See VCCC-2013report-NOxCalculations.xlsx
Propane Autogas Program	VCC	On going	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Program continues to be funded and operating
<i>Virginia Department of Environmental Quality – Ozone Forecasting</i>				
Ozone Forecasting	VDEQ	Ongoing	Program funded?	
<i>Regional Reductions</i>				
Invista Powerhouse Project	DEQ	2013-2014	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> New boilers started operation in January of 2014. Shutdown request for existing boilers 1 and 2 effective January 9, 2014. Shutdown request for existing boiler 3 expected summer of 2014.
Celco Powerhouse Project	DEQ	2015	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> The facility informed VDEQ that construction commenced for the six natural gas boilers on 7/16/2013.
Honeywell SCR Installation	DEQ	12/2012 through 06/2019	<ul style="list-style-type: none"> # of SCR installed? Annual emissions of NO_x? 	<ul style="list-style-type: none"> Two SCR commenced operation December of 2012. Two additional SCR under construction.

Hampton Roads Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
Dominion-Bremo Power Station Conversion to Natural Gas	Dominion	2013-2014	<ul style="list-style-type: none"> • Permit received? • Construction commenced? • Coal pile removed? 	<ul style="list-style-type: none"> • Bremo Bluff permit for gas conversion finalized 5/24/2013. Station ceased burning coal in fall of 2013. Outage and work commenced for unit fuel switch this winter. Project is expected to be completed in the next few months. • See Title V permit for Bremo Bluff.pdf
Other				
Ocean-going Vessel Hybridization & Fuel Switching Demo Project	HR TPO, VPA	Ongoing	n/a	<ul style="list-style-type: none"> • Two commercial container vessels entering the Port of Virginia will be hybridized with either FlexGen Energy Management System or to use alternative fuels • 50-100 containerships will be incentivized to use ultra-low sulfur marine diesel fuel (0.1%) while at berth.
Virginia Offshore Wind Technology Advancement Project	Dominion	2017-2018	n/a	<ul style="list-style-type: none"> • Dominion is planning an offshore wind technology testing facility, which will consist of two offshore wind turbines with a combined capacity of approximately 12 MW. https://www.dom.com/about/stations/renewable/vowtap.jsp • On September 4, 2013, Dominion bid \$1.6 million to win the lease for 112,800 acres off the Virginia coast to develop an off-shore wind farm capable of generating up to 2,000 MW of electricity, and is actively developing this large-scale commercial off-shore wind project. https://www.dom.com/about/stations/renewable/commercial-offshore-wind-development-project.jsp • See Dominion Wind Power.pdf
Hybrid Shuttle Carrier Demonstration Project	VPA	2014-2016	n/a	<ul style="list-style-type: none"> • In February of 2014 the VPA submitted a DERA proposal for a hybrid shuttle carrier demonstration project. The project will replace eight straddle carriers equipped with Tier 1 engines. The replacement equipment will have Tier 4 hybrid engines. VPA is providing \$7.1M in funding, and requested \$2M from DERA. This equipment will save over 32,000 gallons of fuel per year and will reduce NO_x emissions by nearly 6 tons annually.
National Parks	VCC, NPS	On going		<ul style="list-style-type: none"> • NPS is adding 12 prone lawn mowers and 2 electric vehicles to fleet, along with a public EV charging station and 2 private EV charging stations.

**COMMONWEALTH OF VIRGINIA
STATE AIR POLLUTION CONTROL BOARD**

**OZONE ADVANCE ACTION PLAN
RICHMOND-PETERSBURG, VIRGINIA**

**Annual Report
April 30, 2014**

Richmond-Petersburg Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
<i>Metropolitan Planning Organizations</i>				
64 Express	VPA, RAMPO, HRTTO	On going	<ul style="list-style-type: none"> TEUs transported annually 	<ul style="list-style-type: none"> In 2013, 7,965 containers moved by the barge service.
RideFinders	Ridefinders, RAMPO	On going	<ul style="list-style-type: none"> VMT avoided annually Vehicle trips avoided annually 	<ul style="list-style-type: none"> Developed a mobile app: http://www.ridefinders.com/FrontEnd/HTML/all-about-ridesharing.asp?id=140 FY 2013 estimate of 46,748,952 VMT reduced annually. See <i>Evaluation of RideFinders' FY2013 Transportation Demand Management Program Impact</i>
<i>Virginia Commonwealth University</i>				
Solar Energy	VCU	On going	Program ongoing?	<ul style="list-style-type: none"> Program ongoing; No new projects planned at this time.
Dashboard	VCU	On going	Program ongoing?	<ul style="list-style-type: none"> Program ongoing.
Sustainable Building Program	VCU	2013-2015	<ul style="list-style-type: none"> Program ongoing? Further facilities planned? 	<ul style="list-style-type: none"> Program ongoing.
Wind Turbine Study	VCU	2013-2015	<ul style="list-style-type: none"> Study complete? Findings published? More turbines installed? 	<ul style="list-style-type: none"> Project and study complete; No new wind turbines planned at this time.
Micro-Grid	VCU, Dominion	On going	<ul style="list-style-type: none"> Equipment installed? Data gathering efforts? Findings published? Energy savings annually? 	<ul style="list-style-type: none"> Program ongoing.

Richmond-Petersburg Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
DMME-Division of Energy				
VEMP	DMME	On going	<ul style="list-style-type: none"> SF of public buildings retrofitted? Private capital deployed? Energy savings? 	<ul style="list-style-type: none"> Total value of contracts through FY 2012 is nearly \$537 million. More information for FY2013 is being collected from contractors, including building square footage and quantification of avoided energy units. http://www.dmme.virginia.gov/DE/PerformanceContractingSupport.shtm See VEMP-All ESCOs and Contract totals Through FY12.xlsx
Energize Virginia	DMME	2011-2016	<ul style="list-style-type: none"> Funds awarded? Programs to be implemented? 	<ul style="list-style-type: none"> More than \$10M awarded. Projects include energy performance contracts, and a solar thermal system. See DMME-Performance Measures FY14Q1.xlsx, tab RLF 1.01.03
Residential Retrofit Program	DMME, RREA, LEAP	2013	<ul style="list-style-type: none"> # of homes evaluated Energy savings? 	<ul style="list-style-type: none"> 109 jobs in FY14Q1. See DMME-Performance Measures FY14Q1.xlsx, tab Building Retrofits 1.02.06 http://leap-va.org/success-stories/
United States Army Base - Fort Lee				
Low NO _x Burner Requirements	Fort Lee	On going	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Program is ongoing. Estimated NO_x reductions of 15,260 lbs in 2013.
Sustainable Building Practices	Fort Lee	On going	<ul style="list-style-type: none"> Program ongoing? New certifications? 	<ul style="list-style-type: none"> Since 2005, the LEED Silver standard has been applied to all new construction and major renovation on Fort Lee, saving thousands of dollars from reduced energy and water consumption. Construction during the last five years includes over 60 buildings 13 silver buildings, and four gold building. Of those 60 registered buildings, there are 11 buildings pursuing silver certification and 10 buildings pursuing gold certification.
Renewable Energy	Fort Lee	On going	<ul style="list-style-type: none"> Program ongoing? New installations? 	<ul style="list-style-type: none"> Fort Lee currently has two large barracks, totaling 217,000 SF, equipped with GSHP. The current GSHPs provide 3,342 mmbtus of thermal energy each year (0.7% of demand) with an annual energy cost savings of \$21,000. Two other major barracks projects and three battalion headquarters were funded in FY13 and will reap much of the same energy savings and air pollution reductions from harnessing geothermal energy and reducing reliance on natural gas. The previous facilities as the locations where the new barracks will be constructed have already been demolished and the new facilities should be constructed by the end of the calendar year.

Richmond-Petersburg Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
Transportation and Mobile Emissions	Fort Lee	On going	<ul style="list-style-type: none"> TMP drafted? Hybrids purchased? NEVs purchased? Fuel saved? Other metrics? 	<ul style="list-style-type: none"> In process of implementing TMP. Hybrid/NEV purchases phased out; new fuel efficient conventional vehicles purchased.
Dominion Virginia Power				
Energy Conservation Programs	Dominion	On going	Program ongoing?	<ul style="list-style-type: none"> Company currently offers several energy conservation programs to its residential and non-residential utility customers in Virginia and continues to evaluate opportunities to redesign current and develop new demand-side management initiatives. https://www.dom.com/dominion-virginia-power/customer-service/energy-conservation/ec-programs.jsp
Generating unit retrofits and fuel switches	Dominion	2012-2016	<ul style="list-style-type: none"> Retrofits installed? Units where fuels have been successfully changed? 	<ul style="list-style-type: none"> Permits received for Hopewell, Altavista, and Southampton fuel switch from coal to biomass. Units have begun burning biomass and no longer burn coal. Installation of SO₂ scrubbers has been completed for all coal units at the Chesterfield Power Station near Richmond, VA.
Solar Partnership Program	Dominion	2013-2018	<ul style="list-style-type: none"> Program ongoing? MW owned/installed? 	<ul style="list-style-type: none"> Dominion announced 12/9/2013 the installation of more than 2,000 solar panels on the rooftop of Canon Virginia Inc, in Gloucester County, VA. The panels will generate more than 500 kw of electricity. https://www.dom.com/about/media-downloads.jsp See Dominion Solar Roof Top.pdf Company has begun installation of 600 rooftop solar panels on the campus of Old Dominion University in Norfolk, VA that are expected to be operational in Spring 2014 and will generate 132 kW of electricity.
Renewable Generation Tariffs	Dominion	Currently pending approval	Program approval received?	<ul style="list-style-type: none"> Company received approval of program from SCC in December 2012. Company began accepting applications in June 2013. https://www.dom.com/about/stations/renewable/solar/solar-purchase-program.jsp
Alternative Vehicles and Fuels Program	Dominion	Ongoing	% of fleet powered by alternative fuels?	<ul style="list-style-type: none"> Vehicles powered by alternative fuels (AVFs) now make up about 28% of Company's on-road fleet of about 5,700 cars and trucks.

Richmond-Petersburg Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
Virginia Clean Cities				
Luck Stone	VCC, Luck Stone	Completed in 2012	<ul style="list-style-type: none"> Repowered/retrofitted equipment in use? Problems reported? 	<ul style="list-style-type: none"> No reports of equipment problems
Virginia Get Ready	VCC	On going	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Deployed two EV planning docs in 2013 as well as tools for advancing electric vehicles and infrastructure. VA registrations of electric vehicles increased from 729 in 2012 to 1,257 in 2013. VA public charging stations increased in number from 140 in 2012 to 212 in 2013. See http://www.virginiaev.org/ See va_electric-hybrid_vehicles_and_stations_2008-2013.xlsx
Propane Autogas Program	VCC	2009-2013	<ul style="list-style-type: none"> Program ongoing? 	<ul style="list-style-type: none"> Program concluded in 2013. Converted 117 vehicles to autogas in VA Alternative fuel vehicles estimated to reduce NO_x emissions 273 tons annually in VA See VCCC-2013report-NOxCalculations.xlsx
Honeywell Permitting/NO_x Reductions				
Honeywell SCR Installation	VDEQ	12/2012 through 06/2019	<ul style="list-style-type: none"> # of SCR installed? Annual emissions of NO_x? 	<ul style="list-style-type: none"> Two SCR commenced operation December of 2012. Two additional SCR under construction.
Virginia Department of Environmental Quality – Ozone Forecasting				
Ozone Forecasting	VDEQ	Ongoing	Program funded?	<ul style="list-style-type: none"> Program continues to be funded and operating Forecasts were integrated into the new RideFinders mobile app: http://www.ridefinders.com/FrontEnd/HTML/all-about-ridessharing.asp?id=140
Regional Reductions				
Invista Powerhouse Project	VDEQ	2013-2014	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> New boilers started operation in January of 2014. Shutdown request for existing boilers 1 and 2 effective January 9, 2014. Shutdown request for existing boiler 3 expected summer of 2014.

Richmond-Petersburg Ozone Advance Action Plan - Annual Report

Control Program	Stakeholders	Time Frame	Milestones	Feedback & Comments
Celco Powerhouse Project	VDEQ	2015	<ul style="list-style-type: none"> Construction begun? New units operational? Coal units retired? 	<ul style="list-style-type: none"> The facility informed VDEQ that construction commenced for the six natural gas boilers on 7/16/2013.
Dominion-Bremo Power Station Conversion to Natural Gas	Dominion	2013-2014	<ul style="list-style-type: none"> Permit received? Construction commenced? Coal pile removed? 	<ul style="list-style-type: none"> Bremo Bluff permit for gas conversion finalized 5/24/2013. Station ceased burning coal in fall of 2013. Outage and work commenced for unit fuel switch this winter. Project is expected to be completed in the next few months. See Title V permit for Bremo Bluff.pdf
Other				
Virginia Offshore Wind Technology Advancement Project	Dominion	2017-2018	n/a	<ul style="list-style-type: none"> Dominion is planning an offshore wind technology testing facility, which will consist of two offshore wind turbines with a combined capacity of approximately 12 MW. https://www.dom.com/about/stations/renewable/vowtap.jsp On September 4, 2013, Dominion bid \$1.6 million to win the lease for 112,800 acres off the Virginia coast to develop an off-shore wind farm capable of generating up to 2,000 MW of electricity, and is actively developing this large-scale commercial off-shore wind project. https://www.dom.com/about/stations/renewable/commercial-offshore-wind-development-project.jsp See Dominion Wind Power.pdf
Green Operators Program at the Port of Richmond	VPA, RAMPO	2013-2015	n/a	<ul style="list-style-type: none"> Funds requested from CMAQ to begin a retrofit/replacement operation for 100 Class 8b dray trucks that are 2003 MY or older; Estimated emission reductions of 107 tpy VOC and 4 tpy NO_x. See CMAQ_VPA_RichmondDrayTrucks_CraneProject.pdf
Crane Acquisition at Port of Richmond	VPA, RAMPO	2013-2015		<ul style="list-style-type: none"> Funds requested from CMAQ to purchase new, Tier 4 crane. Estimated emission reductions of 3.99 tpy NO_x. See CMAQ_VPA_RichmondDrayTrucks_CraneProject.pdf
GRTC Bus Conversion	RAMPO	2013-2016	n/a	<ul style="list-style-type: none"> GRTC is converting its fleet of diesel powered buses to compressed natural gas.
National Parks	VCC, NPS	On going		<ul style="list-style-type: none"> NPS is adding 12 prone lawn mowers and 2 electric vehicles to fleet, along with a public EV charging station and 2 private EV charging stations.

**Additional Information for Ozone Advance Action Plan Annual Reports
Submitted 4/30/2014**

Document Title	File Name	Comments
Virginia Electric and Hybrid Vehicles	Va_electric+hybrid_vehicles_and_stations_2008-2013.xlsx	Spreadsheet containing information by county in vehicle registrations for hybrid and electric vehicles. Data from 2008 through 2013. Public EV charging station census for same time periods.
Virginia Clean Cities 2014 Annual Operating Plan October 2013-September 2014	VCC-Annual-Operating-Plan-2014.pdf	Information on past and upcoming VCC programs.
2013 NO _x Calculations for a Variety of VCCC Programs (VDEQ Generated)	VCCC-2013report-NO _x Calculations.xlsx	NO _x emission reduction estimates for alternative fuel vehicles, hybrids, EVs, etc.
FAMPO Resolution 13-13	FAMPO-Resolution-13-13-Allocation-FY14-19-RSTP-CMAQ-Funds.pdf	Resolution and table showing CMAQ and RSTP projects for the Fredericksburg area.
Hampton Roads Transportation Planning Organization CMAQ/RSTP Projects and Allocations 2011	T12-01_2011_CMAQ_RSTP_PSP_Report-Final.pdf	Summary of the CMAQ projects through FY 2018 for Hampton Roads
Metro Richmond FY 2014-2019 CMAQ Allocations 3/21/2013	Rich_FY14_19RSTP_CMAQ.pdf	Summary of RSTP and CMAQ projects for the Richmond area, through FY 2019.
Crater/Tri-Cities FY 2014-2019 CMAQ Allocations	Tri-CitiesMPO_CMAQ_Allocations_Final_DRAFT_3-29-13.xlsx	Summary of CMAQ projects for the Tri-Cities/Petersburg area through FY 2019.

**Additional Information for Ozone Advance Action Plan Annual Reports
Submitted 4/30/2014**

Document Title	File Name	Comments
CMAQ Form A: Richmond Area MPO RSTP and CMAQ Project Selection- Application (VPA GO Program for Port of Richmond, Crane Acquisition for Port of Richmond)	CMAQ_VPA_RichmondDrayTrucks_CraneProject.pdf	Application showing emission benefits for expanding the GO Program drayage truck rebate program to Port of Richmond for 100 trucks and new crane acquisition. Funded through CMAQ/MPO.
RSTP/CMAQ emission calculations for the VPA Go Program and Crane Acquisition projects	RSTP CM rank ERA -3-14-13 (Crane and Go Program).xlsx	Estimates showing NO _x reductions of about 4 tpy from each project.
Evaluation of RideFinders' FY 2013 Transportation Demand Management (TDM) Program Impact <i>Draft Report: 12-6-13</i>	RF_2013-Impact-DraftReport-12-06-13.docx	Information on the impact of RideFinders in Richmond, including estimates of VMT avoided in 2013.
A.P.Hill Energy and Emissions Data	Updated_figures_for_OAPP_3-16-2014.docx	Updated information regarding emissions, fuel consumption, and energy consumption at Fort A.P. Hill.
Ridership Report for the March 2014 Operations & Oversight Committee Meeting	February-2013-Ridership-Summary- Report_HR_transit.pdf	Provides information on Hampton Roads Transit ridership.
George Washington Regional Commission: FY-2014 Rural Transportation Planning Work Program July 01, 2013 – June 30, 2014	FY-14-RWP-George-Washington- PDC_work_program.pdf	Provides the work elements supporting the TDM program in the Fredericksburg/ Caroline areas.
VEMP-Contract Information	VEMP-All ESCOs and Contract totals Through FY12.xlsx	Information from DMME on public building upgrades.
Performance Measures for DMME-Division of Energy	DMME-Performance Measures FY 14 Q1.xlsx	Information from DMME/Division of Energy on various programs and performance measures.

**Additional Information for Ozone Advance Action Plan Annual Reports
Submitted 4/30/2014**

Document Title	File Name	Comments
Title V permit for Bremono Bluff	Bremono 40199 TV permit with nat gas.pdf	Federally enforceable natural gas conditions for the conversion from coal to gas.
VA DEQ ozone design values, 2011-2013	VA 11-13 8-Hour Ozone.xlsx	Design values for Virginia monitors using 2011 through 2013 certified ozone data.
FY 2013 Annual Report for Hampton Roads TRAFFIX	FY2013 TRAFFIX Annual Report – final.pdf	Data for travel demand management program in Hampton Roads
Construction commencement letter for Celco boiler project	Celco 20304 Boiler-Commence Construction notification.pdf	Required notification by the facility to VDEQ announcing start of construction on the 6 new gas fired boilers.
Richmond Area MPO RSTP and CMAQ Project Selection Process	CMAQ_VPA_GO Program.pdf	Application for CMAQ money to fund 100 rebates that incentivize owners of 2003 and older trucks servicing the Port of Richmond to scrap and replace with newer MY engines.
Commence start up letter for Invista boiler project	Invista 80517 Boilers-Commence Start-Up.pdf	Required notification by facility to VDEQ announcing start up of new gas fired boilers
Press Release-Dominion Solar Roof Top	Dominion Solar Roof Top.pdf	Press release describing efforts at the Canon facility in Gloucester County.
Press Release-Dominion Wind Power Efforts	Dominion Wind Power.pdf	Press release/web info on Dominion efforts to increasing wind capacity