

# Overview of Major OTC Mobile Emission Reduction Efforts

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## Overview

The states in the OTC have a long history of developing strategies to reduce emissions from mobile sources beyond what's achieved at the federal level, as well as calling for federal action to reduce emissions when states are preempted from doing so by the Clean Air Act.

In the 1990's OTC states worked with the auto manufacturers and EPA leading to National Low Emission Vehicle Program (NLEV) and later Tier 2. Several OTC states also adopted CA low emission vehicle and heavy duty standards in 2000. The OTC states also have enhanced Inspections and Maintenance programs to ensure emission controls continue to function and the OTC has adopted several mobile source model rules to be implemented by the states.

In addition to program adoption OTC has called on EPA to adopt a variety of federal measures to reduce emissions. This began with a resolution from OTC calling on EPA to develop enhanced I/M in 1991 to calling on EPA to adopt Tier 3 engine and gasoline standards in 2013. Table 1 is a listing of formal actions that the OTC has taken in regards to mobile sources.

**Table 1: History of OTC Mobile Source Actions**

Action	Date
Resolution on Enhanced Vehicle Inspections and Maintenance	Jul. 16, 1991
Resolution on Reformulated Gasoline Throughout the OTR	Oct. 29, 1991
Resolution on Expedited Guidance for Enhanced Vehicle Inspections and Maintenance	Mar. 10, 1992
Resolution on Assisting Motor Vehicle Service Technicians in Performing Proper Emission Control Maintenance in Support of Enhanced I/M Programs	Jan. 8, 1993
Resolution Supporting EPA in its Development of Regulations Controlling Emissions of Ozone Precursors from Nonroad Engines	Jan. 8, 1993
Recommendation to EPA on OTC LEV Program	Sep. 27, 1994
Resolution Requesting EPA to Accelerate Regulations Controlling Emissions of Ozone Precursors from Nonroad Engines	Feb. 1, 1994
Resolution Supporting the EPA's Efforts to Control Emissions from Diesel Engines	Jun. 13, 1995
Resolution Supporting the Concept of a 49-State Clean Car and the Right of States to Choose to Implement Additional Motor Vehicle Emission Control Programs	Feb. 28, 1995
Resolution Calling on EPA to Establish Standards for Continued Pollution Reduction from Motor Vehicles After the National LEV Program	May 22, 1998
Resolution Regarding EPA's Proposed Vehicle Emission and Fuel Sulfur Standards	Jun. 16, 1999
Resolution Regarding Interstate Cooperation on the Testing of Diesel Trucks and Buses	Jun. 16, 1999
Resolution Supporting the U.S. EPA's Proposed Diesel Engine and Fuel Rule	Jun. 1, 2000
Statement of Principals Regarding Emissions From Airports and Aviation Activities	Jul. 24, 2001
Resolution Regarding Emissions from Airports and Aviation Activities	Jul. 9, 2004
Statement Calling on the EPA to Update its Policy on Motor Vehicle Aftermarket Catalytic Converters	Jun. 10, 2009
Statement Calling to Establish Tier 3 Fuel & Emissions Standards	Nov. 10, 2010
Comments on the Retention of NOx Emission Standards in Emission Control Areas	Jan. 31, 2014

A more detailed list of programs currently in place in the OTR states can be found in Table 2 and greater details about selected programs can be found in the Appendix.

Table 2: On the Books (X)/On The Way (OTW) Mobile Source Control Programs in the OTR States

Vehicle Emission Standards													
Passenger Cars and Light Trucks	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Federal		X					X						X
California	X		X	X	X	X		X	X	X	X	X	
ZEV	X			X	X	X		X	X		X	X	
Heavy Duty Trucks	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Federal	X	X	X	X	X		X		X		X	X	X
California				X		X		X		X			
Fuels													
Gasoline	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Federal									X	X		X	X
RFG	X	X	X	X	X	OTW	X	X	X	X	X		X
State Specific Specification						X				X			
Diesel	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Federal	X	X	X	X	X	X	X	X	X	X	X	X	X
State Specific Specification													
Inspection & Maintenance													
Gasoline	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Passenger Cars and Light Trucks	X	X	X	X	X	X	X	X	X	X	X	X	X
Medium Duty	X	X		X	X	X		X					X
Heavy Trucks	X	X			X			X					X
CARB Aftermarket Converters						OTW			X				
Diesel	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Passenger Cars and Light Trucks	X		X	X		X	X	X	X		X	X	X
Medium Duty	X			X		X			X		OTW		
Heavy Trucks	X			X	X			X	X		OTW		
Limit Idling of Vehicles and Equipment													
Onroad	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Onroad	X	X	X	X	X	X	X	X	X	X	X	X	X
Sleeper Berths	X				X			X	X	X	X		
Nonroad	X			X				X			X		
Marine				X									
Rail				X							X		
Ports/Goods Movement													
Ships/Harborcraft/Ferries	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Ships/Harborcraft/Ferries								X	X		X		X
Rail								X	X				
Cargo Handling					X			X	X				X
Trucks			X		X	X		X	X				X
Airports			X						X				
Construction Strategies													
Clean Contracting	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Clean Contracting								X			X		
Reducing VMT													
Transportation Demand Management	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Transportation Demand Management					X					X	X		X
Transit Ridership/Rideshare	X			X	X	X	X	X	X	X	X	X	X
Bike Paths	X				X	X	X	X	X	X	X	X	X
Commuter Option Programs				X	X		X				X	X	X
Onroad Vehicle Reductions													
Alternative Fuels	CT	DC	DE	MA	MD	ME	NH	NJ	NY	PA	RI	VT	VA
Alternative Fuels	X				X		X		X		X	X	X
Advanced Technology Vehicles	X				X	X	X	X	X		X	X	
Diesel Retrofit/Repower	X			X	X	X	X	X	X	X	X	X	X

## ***Appendix***

### **Connecticut**

*Updated October, 2014*

#### **Vehicle Emissions Standards**

Section 22a-174g of the Connecticut General Statutes, passed in 2004, requires Connecticut to adopt the California Low Emission Vehicle (LEV) Program. The LEV program applies to all passenger cars, light trucks and medium duty vehicles with a Gross Vehicle Weight Rating (GVWR) of 8,501-14,000 lbs. The LEV program also includes the Pavley vehicle GHG standards which are important towards meeting the goals of the Connecticut Global Warming Solutions Act which establishes GHG target levels for 2030 and 2050.

For heavy-duty trucks over 14,000 lbs. GVWR, federal standards apply.

#### **Fuels**

In 2004, Connecticut opted in to the federal Reformulated gasoline requirements for the entire state. Connecticut does not have a state specific standard for diesel fuel.

#### **Inspection and Maintenance**

Connecticut has a statewide Inspection and Maintenance program. The Connecticut program requires OBD II testing every two years for all passenger vehicles, light duty trucks and medium duty vehicles, up to 10,000 pounds GVWR. Vehicles that are less than four years, or older than 25 years, are exempt from testing. Connecticut has roadside snap-idle opacity testing for heavy duty diesel vehicles.

#### **Limit Idling of Vehicles and Equipment**

Connecticut has a three minute idling limit for all vehicles with some exceptions (e.g. delivery vehicles and emergency response vehicles).

#### **Construction Strategies**

The Department of Energy and Environmental Protection provided DERA/ARRA funding to retrofit all of the Connecticut Department of Transportation (DOT) highway maintenance vehicles, and 19 pieces of construction equipment with diesel oxidization catalysts and diesel particulate filters respectively.

Connecticut is a part of the I-95 Clean Air Construction Initiative and the CT DOT has included contract requirements for the use of retrofit or clean equipment for the Quinnipiac Bridge project in New Haven and the Fastrak rapid transit project between New Britain and Hartford.

#### **Reducing VMT**

Connecticut has implemented the CT Rides program which has an estimated reduction of nearly 2.5 million miles to date.

#### **Onroad Vehicle Reductions**

##### ***Advanced Technology Vehicles***

Connecticut is one of eight states that signed the Multi-State ZEV MOU, pledging to work with manufacturers and dealerships to deliver 3.3 million zero emission vehicles by 2025 to the signatory

states. Additionally, ZEVs were identified in the Governor's Comprehensive Energy Strategy as a key to meeting energy diversification and reliability goals.

In 2014, Connecticut started the EV Connecticut program which provides grants to public and private entities across the state for the installation of electric vehicle charging stations.

### ***Diesel Strategies***

In 2005 the Department published the Clean Diesel Plan which identified four areas of focus to reduce diesel emissions. Those areas include: transit, school buses, construction equipment, and on-road fleets. The Department has taken steps in each area to improve emissions from these sectors.

### ***Diesel Retrofit/Repower/ Replacement***

Connecticut has implemented a number of diesel retrofit programs through DERA and/or ARRA funding including: repower of the Cross Sound Ferry MV Susan Anne from tier 0 to tier 2 engines, repower of two marine engines from tier 0 to tier 2, retrofit of 353 school buses statewide, retrofit of all eligible Department trucks with DOCs, retrofit of municipal recycling trucks and replacement of municipal maintenance trucks.

## **Delaware**

*Updated October, 2014*

### **Vehicle Emissions Standards**

Delaware adopted the California Low Emission Vehicle (LEV) Program. The LEV program, starting with model year 2014, applies to all passenger cars, light trucks and medium duty vehicles with a Gross Vehicle Weight Rating (GVWR) up to 14,000 lbs. Delaware did not adopt the Zero Emission Vehicle program. For vehicles over 14,000 lbs. GVWR, federal standards apply.

### **Fuels**

Reformulated gasoline is required state-wide in Delaware, as is federally compliant diesel fuel.

### **Inspection and Maintenance**

Delaware's I/M program is a centralized program that requiring vehicles to pass an OBD or tailpipe emission inspection once every other year. Motor vehicle emissions tests are performed on all gasoline and diesel powered light-duty vehicles weighing up to 8,500 pounds gross vehicle weight. Any vehicle identified with excess emissions is required to be repaired before vehicle registration or renewal is obtained. Vehicles that are less than five years or older than model year 1968 are exempt from the I/M program.

### **Limit Idling of Vehicles**

Vehicles that weigh over 8,500 pounds gross vehicle weight are restricted to engine idling time of no more than three minutes in Delaware.

### **Onroad Vehicle Reductions**

#### ***Diesel Retrofit/ Replacement***

Since 2008, Delaware has participated in the National Clean Diesel Campaign through its funding to install clean diesel technology. These technologies include emissions and idle control devices, aerodynamic equipment, engine and vehicle replacements, and alternative fuel options. Projects have included:

- Port of Wilmington (Diesel Oxidation Catalysts and Engine replacements)

- School Bus Retrofits (Diesel particulate Filters and Closed Crankcase Ventilation)
- Municipal Public Work Trucks (Diesel Particulate Filters)
- Smyrna Rest Area (24 Electrified Parking Spaces)
- Fort Delaware (Piston Generator Replacement with Microturbine Generator)
- Wilmington Tug (Propulsion Engine Replacement)
- DelDOT Dump Trucks (Diesel Particulate Filters)

## **Reducing VMT**

### ***Bike Paths***

Delaware has committed \$6 million dollars a year for trail and bike paths and ranks fourth in the nation as a bike friendly state. Delaware encourages bicycling as a transportation alternative and supports projects that maximize bicycle access and increase connectivity within the state's bicycle system, including bicycle-friendly trails and roads and connections to work, school, shopping, and transit.

## **Other**

### ***Air Quality Subcommittee and Technical Advisory Committee***

Delaware encourages the reduction of vehicle miles travelled, and the use of alternative fuel and high efficiency vehicles by working in consultation with the Delaware Department of Transportation (DelDOT) and the Wilmington Area Planning Council (WILMAPCO) in the state planning process. Delaware considers the region's long-range land use and transportation initiatives in an effort to minimize the effects of vehicle emissions on air quality which conform to the State Implementation Plan (SIP).

### ***Clean Cities Coalition***

Clean Cities is a deployment program within the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy's (EERE) Vehicle Technologies (VT) program. Delaware has supported Clean Cities by developing a strategic program plan and creating statewide partnerships. Delaware links vehicle technologies to users across the state, and works to advance economic, environmental, and energy security by reducing the use of petroleum in the transportation sector.

## **District of Columbia**

*Updated November 2014*

## **Reducing VMT**

### ***Transit Ridership/Rideshare***

Law Under Congressional Review (Sustainable DC Omnibus Amendment Act of 2014 – Title III: Subtitle A) – To reduce the cost of transit for employees across the city by requiring District employers of 20 workers or more to provide access to transit benefit programs, such as a pre-tax payroll deduction, for all employees who qualify for the minimum wage. Projected Effective Date: December 6, 2014 (Subject to revision)

## **Onroad Vehicle Reductions**

### ***Alternative Fuels***

Enacted Law (Fiscal Year 2015 Budget Support Act of 2014 – Title VI: Subtitle H) – To provide new, partial tax rebates to vehicle owners who convert a gasoline or diesel-powered vehicle to run on alternative fuels such as compressed or liquefied natural gas, biodiesel, propane, fuel cells or electric power and to provide new, partial tax rebates to promote installation of cleaner fuel fueling stations for

compressed or liquefied natural gas, propane, or electric recharging when the site is accessible to the public

## **Other**

### ***Planning Efforts and Analysis***

Through the District Department of the Environment:  
GreenDC Agenda; Greenhouse Gas Inventories; Climate Action Plan  
“Sustainable DC Plan” for the transportation sector:

By 2032, increase use of public transit to 50% of all commuter trips

By 2032, increase biking and walking to 25% of all commuter trips

By 2032, reduce commuter trips made by car or taxi to 25%

By 2032, eliminate all “unhealthy” air quality index days, including “unhealthy for sensitive groups

Through the District Department of Transportation:

2010 Sustainability Plan; Greenhouse Gas Inventory; Climate Adaptation Plan

Proposed “moveDC” – A Multimodal Long-Range Transportation Plan

Among goals: 75% of all commute trips in the District will be by non-auto modes

Through the Metropolitan Washington Council of Governments:

2010 – “Region Forward” – A comprehensive vision for the region

2010 – Transportation Planning Board’s “What Would It Take” Scenario Study – To meet aggressive climate change goals

2010 – Transportation Planning Board’s “CLRP Aspirations” Scenario Study – To examine the effects of the region’s long-range land use and transportation vision to horizon year 2030

2014 – “Regional Transportation Priorities Plan” – To identify strategies with the greatest potential to respond to the region’s most significant transportation challenges

Climate, Energy and Environment Policy Committee (CEEPC) Action Plans (for example, for 2013 to 2016)

– Transportation and land use goal:

To minimize the greenhouse gas impact of our transportation system, which contributes one third of regional emissions, by reducing vehicle miles travelled and increasing the use of alternative fuel and high efficiency vehicles

Air Quality Committee’s Technical Advisory Committee (MWAQC TAC) Work Plan “Special Project” – To evaluate and communicate the importance of emissions from the transportation sector when planning to mitigate ozone and climate challenges

### ***Program Highlights***

DC Fleet Share – The motor pool system for government employees has reduced the number of vehicles in the District fleet. The total fleet size is not anticipated to grow beyond the 2008 fleet vehicle inventory as result of the program.

Capital Bikeshare – The program provides more than 33,000 members access to more than 2,500 bikes at 300 stations. According to a survey of Bikeshare members, approximately 16% of the trips taken replaced single occupancy vehicle trips.

Police Cruiser Right Sizing and Anti-Idling – Through the Sustainable DC Budget Challenge, 100 police cruisers were equipped with anti-idling devices to cut idling time by 60%.

## **Maine**

*Updated August 2014*

## **Vehicle Emissions Standards**

Chapter 127 of Maine's Department of Environmental Protection's Rules requires all 2001 and subsequent model year passenger cars and light duty trucks and 2003 and subsequent model year medium-duty motor vehicles comply with California emissions standards. This chapter also requires all 2008 and subsequent model year heavy duty diesel engines and vehicles be certified by California. Since 2009, Maine has had the California zero emission vehicle requirement.

## **Fuels**

Maine presently requires gasoline with a RVP of 7.8 or less in the seven southern counties and gasoline with a RVP of 9.0 or less in the remainder of the state from May 1st through September 15th of each year. As of June 1, 2015 Maine will require RFG year-round in the seven southern counties in place of the 7.8 RVP requirement. Maine does not have a state specific standard for diesel fuel.

## **Inspection and Maintenance**

Maine requires OBD inspections only in Cumberland County. On June 1, 2015 Maine will require aftermarket converters and other aftermarket parts to meet CARB standards, but is a requirement for sales and not a part of an inspection program.

## **Limit Idling of Vehicles and Equipment**

Maine's anti-idling statute applies to commercial on-road applications.

## **Onroad Vehicle Reductions**

### ***Diesel Retrofit/Repower***

The Maine Clean Diesel Program's goals and priorities are to maximize public health benefits by employing the most cost effective strategies to reduce diesel emissions. The school bus fleet is the largest public fleet in the State of Maine and continues to be a priority for the Maine Clean Diesel Program. The Maine Clean Diesel Program focuses on reducing emissions in areas that receive a disproportionate quantity of air pollution from diesel fleets primarily in ports, rail yards and school bus depots/yards. Since 2003 Maine has used federal grants to fund a significant number of emissions reductions projects.

## **Advanced Technology Vehicle Program**

Maine DEP has awarded grants for the incremental cost of alternative fueled vehicles with DERA funds. Specifically, the Maine Clean Diesel Program has funded the incremental cost of 19 propane school buses and 11 compressed natural gas school buses (CNG).

## **Other**

### ***Maine Center for Disease Control's Active Community Environment Workgroup***

The workgroup is comprised of over a dozen public, private and nonprofit agencies which have established an initiative promoting the creation of municipal level Active Community Environment Teams. Active Community Environment Teams have formed in more than fifteen communities so far. Identifying opportunities for active transport and promoting policy and environmental changes to enable walking and biking is among a wide range of strategies these teams will promote.

### ***Education***

The Maine Department of Transportation's Bicycle and Pedestrian Safety Education and Safe Routes to School Programs (in coordination with the Bicycle Coalition of Maine and communities statewide),



provided education and encouragement presentations and resources to more than 20,000 Maine residents and their kids on how to safely ride bikes and walk on the state's roadways, helping Maine residents make the choice to use non-motorized transportation.

### ***Complete Streets***

The cities of Portland, Lewiston and Auburn passed Complete Streets policies to help ensure all transportation and land use development projects include sidewalks, safe crossings and bike lanes in all projects undertaken in the cities.

## **Maryland**

*Updated August 2014*

### **Vehicle Emissions Standards**

The Maryland Clean Cars Act of 2007 required the state to adopt the California low emission standards (Cal LEV) for passenger cars and light duty trucks. The Cal LEV standards took effect beginning in model year 2011. Maryland also adopted the California Zero Emission Vehicle requirement.

### **Fuels**

Federal reformulated gasoline (RFG) is required in all of Maryland's ozone nonattainment areas. The RFG areas include the Baltimore and Washington DC Metropolitan areas as well as Cecil County and Queen Anne's County on the eastern shore. Federal conventional gasoline is used in all other areas of the state.

### **Inspection & Maintenance**

Maryland requires OBD, or tailpipe emission inspections every two years in 13 counties and Baltimore City for gasoline powered vehicles up to 26,000 lbs. The biennial Vehicle Emissions Inspection Program (VEIP) tests 1977 and newer model year vehicles with the two newest model years exempted from testing. In general, idle or tailpipe testing is conducted on the older and heavier vehicles with all other vehicles receiving the OBD test.

### **Limit Idling of Vehicles and Equipment**

Maryland's anti-idling law applies to all on-road vehicles and limits idling time to five minutes. There are exemptions for traffic conditions, heating and cooling the vehicle, and for use of auxiliary equipment. Sleeper berths are covered under the anti-idling law.

### **Ports/Goods Movement**

Maryland was awarded a grant through MARAMA to retrofit two cargo-handling cranes at the Baltimore port with diesel oxidation catalysts (DOCs). The success of this project led to additional funding under ARRA for additional crane equipment retrofits.

Using ARRA funds, MDE, Maryland Environmental Service and Maryland Port Authority installed 18 retrofits (14 diesel particulate filters, 4 DOCs), replaced 4 vehicles, and repowered 1 truck with 2007 engine.

The Maryland Port Administration operates a Dray Truck Replacement Program that provides up to \$30,000 for the purchase of a newer, cleaner truck that meets or exceeds 2010 EPA emission standards. The current truck must serve the Port of Baltimore and be of model year 1990 through 2003 to qualify

for replacement. To date, the Dray Truck Replacement Program has replaced 82 dray trucks with cleanser models.

## **Reducing VMT**

### ***Transportation Demand Management***

Maryland's Intercounty connector has variable toll rates based on peak travel times. New I-95 Express Lanes open in fall of 2014 north of Baltimore. These lanes will help control peak period congestion near Baltimore.

### ***Transit Ridership/Rideshare***

The Charm City Circulator is a free bus service with three routes through Baltimore City. Two new light rail lines, the Red Line and Purple Line, have been proposed to improve transit connections around Baltimore City and the Washington DC Metro area.

Maryland Rideshare is a program designed to match commuters with carpools, vanpools, and help coordinated commuting options with employers.

### ***Bike Paths***

The Maryland Bikeways Program encourages bicycling as a transportation alternative. It supports projects that maximize bicycle access and increase connectivity within the state's bicycle system, including bicycle-friendly trails and roads and last-mile connections to work, school, shopping, and transit. Both on-road bicycle projects, such as bike lane striping, and wayfinding signage, and off-road shared-use path and trail projects are eligible for funding.

Sidewalk Construction projects are focused on adding sidewalks along state roads to improve mobility, reduce public safety risks such as of pedestrian crashes, and remove barriers to easy movement. Projects that increase access to transit are prioritized.

Sidewalk Reconstruction projects focus on upgrading pedestrian facilities along state roads to come into compliance with Americans with Disabilities Act (ADA) guidelines and the Maryland State Highway Administration's (SHA's) Accessibility Policy. Priority is given to projects within ½ mile of transit stops, schools, hospitals, libraries, government facilities, and senior centers, and in areas with a high incidence of pedestrian crashes.

Bicycle Retrofit projects focus on small-scale improvement to improve bicycling conditions on state roads. Funds are targeted toward projects that can be completed quickly and without the need for permits or right-of-way acquisition. Examples include providing marked bicycle lanes and shared lane signage.

### ***Commuter Option Programs***

Commuter Choice Maryland is an incentive program that encourages employees to choose transit or vanpools instead of driving to work. The program offers monthly fare passes at reduced prices for employers to give to employees and gives tax deductions and other credits to the company.

Guaranteed Ride Home is a free commuter program for commuters who use public or alternative form of transportation within the Baltimore and Washington D.C. Metropolitan Areas. Eligible commuters are able to receive 4 free rides home per year for occasions and times when their usual transportation options are limited.

## **Onroad Vehicle Reductions**

### ***Alternative Fuels***

Maryland's Energy Administration (MEA) oversees many of the state's alternative fuel programs. The Maryland Natural Gas Vehicle and Electric Truck Voucher Programs were designed to provide assistance for the purchase of natural gas vehicles and electric trucks. Vouchers of \$3,000 to \$20,000 were available for natural gas vehicles and \$20,000 for electric trucks.

MEA has a new Maryland Freedom Fleet Voucher Program that offers similar assistance for the purchase of alternative fuel vehicles. Eligible vehicles such as natural gas, propane, electric, hybrid electric, and hydraulic hybrid are eligible for vouchers based on GVW.

Maryland offers a rebate for the installation of Electric Vehicle Supply Equipment of up to 50% of the cost for equipment and installation. The rebate is capped at \$900 for residential installations, \$5,000 for commercial, and \$7,500 for retail service stations.

A Maryland excise titling tax credit of \$125/kW of battery capacity up to \$3,000 is available to buyers and lessors of qualifying new plug-in electric vehicles. The credit is effective July 1, 2014 through June 30, 2017.

The Maryland Attorney General's Office has authorized the use of \$1 Million dollars from an environmental enforcement action to install a network of Electric Vehicle DC Fast Charging Stations across Maryland. The program will award grants to companies to cover up to 50% of the cost of installing the Fast Charging Network.

### ***Advanced Technology Vehicles***

Maryland is one of the states that signed the Multi-State ZEV MOU, pledging to work with manufacturers and dealerships to get Maryland and the other signatory states ready for zero emission vehicles like electric and fuel cell vehicles. Maryland has set a goal of having 60,000 ZEVs on the road by 2020 and has begun to build the infrastructure necessary to accommodate these new vehicles.

Maryland established the Electric Vehicle Infrastructure Council (EVIC) to look into and make recommendations to the needs of the state to support new electric vehicles. EVIC has set a goal for state fleet purchases to be 25% ZEVs by 2025. EVIC has also developed recommendations for incentives and legislation aimed at reducing the barriers to EV adoption, such as exempting charging equipment from regulation as a power provider.

### ***Diesel Retrofit/Repower***

Maryland has initiated many grant projects aimed at reducing the pollutants from diesel vehicles. School busses have been a large focus for the state with many grants going to installing diesel oxidation catalysts, closed crankcase ventilation systems, and diesel particulate filters on older school busses. These retrofits greatly reduce the emission of CO, PM, NOx, and hydrocarbons, and it is especially important to reduce the emissions around children.

Maryland has used many grants from the EPA to help local governments replace, or retrofit their fleets of trash trucks, and busses to reduce diesel emissions.

Maryland's Idle Reduction Technology Grant Program provides financial assistance for the purchase and installation of idle reduction technology on trucks. Eligible technologies include auxiliary power units,

fuel-operated heaters, electric truck refrigeration units, battery-operated air conditioning systems, and thermal storage systems. Awards are up to 50% of the installed cost, up to \$3,000.

## **Massachusetts**

*Updated August 2014*

### **Vehicle Emissions Standards**

Massachusetts has adopted the California Low Emission Vehicle Program for all passenger cars and light trucks sold in Massachusetts. Massachusetts is also a signatory state for the multi-state ZEV Action Plan. Massachusetts has adopted the California Low Emission Vehicle Program for heavy-duty trucks with a Gross Vehicle Weight Rating (GVWR) of 8,501-14,000 lbs., which California categorizes as medium-duty vehicles. For heavy-duty trucks over 14,000 lbs. GVWR, federal standards apply.

### **Fuels**

Reformulated gasoline is sold in Massachusetts, as is federally compliant diesel fuel.

### **Inspection and Maintenance**

The Inspection and Maintenance (IM) program in Massachusetts is statewide. All light-duty vehicles 14 model years old and newer receive an OBD test, regardless of fuel type, as do model year 2007 and newer medium-duty diesel vehicles and model year 2008 and newer nondiesel vehicles. Any model year 1984 or newer diesel vehicle over 10,000 lbs. GVWR that is not subject to an OBD test receives a snap-idle opacity test.

### **Limit Idling of Vehicles and Equipment**

The Massachusetts anti-idling statutes apply to all vehicles, regardless of fuel type. Massachusetts also has anti-idling strategies for nonroad, marine, and rail operations.

### **Construction Strategies**

Contractors working on certain Commonwealth construction projects are required to use clean technology nonroad vehicles, or nonroad vehicles that have had retrofits or have been repowered with cleaner technology engines.

### **Reducing VMT**

Large employers are required to implement employee trip reduction incentive programs. Also, the Massachusetts Bay Transit Authority (MBTA) is required to implement certain transit system improvements in connection with the Central Artery Tunnel project.

### **Onroad Vehicle Reductions**

#### ***Diesel Retrofit/Repower***

Massachusetts has benefitted from several diesel retrofit programs, including school buses, waste collection vehicles, and Commonwealth-owned heavy duty trucks and nonroad equipment. Also, some head-end power (HEP) generator sets in the commuter locomotive fleet have been repowered, electrification of vessels at the fish pier has displaced diesel generator emissions from onboard the fishing vessels while docked, replacement of diesel transportation refrigeration unit (TRU) with electric units at markets, distribution facilities, and warehousing centers is displacing diesel emissions from TRUs, and a hybrid vehicle incentive program for medium- and heavy-duty trucks for commercial fleets

and utility fleets as replacements for the conventional diesel-powered trucks has reduced diesel emissions from these vehicles.

## **New Hampshire**

*Updated October 2014*

### **Vehicle Emission Standards**

#### ***Passenger Cars and Light Trucks***

*Federal* - New Hampshire follows Federal emissions standards. New Hampshire Rules Env-A 1102 prohibit any visible emissions from a motor vehicle other than water vapor or steam except during initial startup.

### **Fuels**

#### ***Gasoline***

*RFG* – New Hampshire fuel formulations follow Federal RFG standards in the southern Ozone maintenance counties (Strafford, Hillsborough, Rockingham and Merrimack).

### **Inspection & Maintenance**

#### ***Gasoline***

*Passenger Cars and Light Trucks* – The statewide New Hampshire I/M program consists of a mandatory OBD II test on all light duty ( $\leq 8,500$  lbs) MY 1996 and newer vehicles and an anti-tampering inspection for all vehicles less than 20 years old. In addition, New Hampshire requires a safety inspection for all registered motor vehicles regardless of age.

#### ***Diesel***

*Passenger Cars and Light Trucks* – Diesel passenger cars and light trucks ( $\leq 8,500$  lbs) MY 1997 and newer are subject to New Hampshire's OBD II test requirements. All vehicles less than 20 years old are subject to anti-tampering inspection and all registered vehicles are subject to safety inspections. All diesel vehicles greater than 10,000 lbs. and buses with a 25-person or greater capacity are subject to roadside opacity testing in accordance with SAE J1667 procedures.

### **Limit Idling of Vehicles and Equipment**

#### ***Onroad***

New Hampshire Rules Env-A 1100 prohibit motor vehicle idling longer than 5 consecutive minutes in any 60-minute period or for 10 minutes at temperatures between -10 degrees F. and 32 degrees F. Exemptions are allowed for reasons such as emergency vehicle use, operating at temperatures below -10 F., traffic jams, to keep refrigeration operating, etc.

### **Reducing VMTs**

#### ***Transit Ridership/Rideshare***

Commute Green New Hampshire (CGNH) is a consortium of regional planning agencies, transportation providers and state agencies collaborating on a project that will enhance and promote local and state-wide ride sharing options. CGNH has the goal of encouraging and assisting people to choose sustainable transportation options in place of in place of travelling in single occupancy vehicles, NHDOT is currently in the process of distributing funds via the Transportation Alternatives Program (TAP) for projects that

help fill gaps for multimodal transportation connections and increase safety to promote active transportation, among other projects.

### ***Bike Paths***

New Hampshire Dept. of Transportation Bicycle & Pedestrian Program (BPTAC) helps fund the construction of bike/pedestrian trails, provides education and outreach supporting bicycling and walking and maintains a statewide map of trails. BPTAC advises DOT on policies and programs that support walking and bicycling as a safe, convenient and sustainable form of transportation.

## **Onroad Vehicle Reductions**

### ***Alternative Fuels & Advanced Technology Vehicles***

The Granite State Clean Cities Coalition (GSCCC) a government-industry promoting the reduction of petroleum consumption in the transportation sector by advancing the use of alternative fuels and vehicles, idle reduction technologies, hybrid electric vehicles, fuel blends, and fuel economy measures. Current efforts focus on expansion of the state's electric vehicle charging and compressed natural gas refueling infrastructure.

### ***Diesel Retrofit/Repower***

The New Hampshire Department of Environmental Services offers Federal Diesel Emissions Reduction Act (DERA) money as grants to fund a variety of activities that will help reduce diesel emissions in New Hampshire. Past projects include replacement of old engines, auxiliary heater installation and ambulance anti-idling kiosk installation.

## **New Jersey**

*Updated September 2014*

### **Vehicle Emissions Standards**

New Jersey adopted California emission standards for all 2009 and later model year passenger cars and light duty trucks, as well as the zero emission vehicle requirement portion of California's rule. New Jersey also requires all 2005 and subsequent model year heavy duty diesel engines and vehicles be certified by California.

### **Fuels**

Reformulated gasoline is sold in New Jersey, as is federally compliant diesel fuel.

### **Inspection and Maintenance**

The Inspection and Maintenance (IM) program in New Jersey is statewide. All gas vehicles more than 5 years old receive an emission test (Tailpipe or OBD). Light duty diesel vehicles receive an OBD test, heavy duty diesel vehicles receive an opacity test, and medium duty diesel vehicles are not emission tested.

### **Limit Idling of Vehicles and Equipment**

New Jersey adopted three minute idling rules for both gasoline and diesel vehicles in 1985 and 1986 respectively. In 2010, the sleeper berth exemption was phased out which means trucks with sleeper berths are also prohibited from idling more than three minutes unless they are model year 2007 or newer or are retrofitted with a diesel particulate filter. The three minute idling rules also apply to nonroad equipment. Voluntary strategies have been implemented to reduce idling from rail.

## **Ports/Goods Movement**

New Jersey DEP and other stakeholders partnered with the Port Authority of NY/NJ to develop a comprehensive plan, released in 2009, to reduce emissions from all sources at the port over a ten year period. NJDEP is also a member of USEPA's Mobile Source Technical Review Subcommittee's Port Workgroup whose goal is to identify ways to improve port environmental achievement and air quality for port communities. The workgroup will also help with developing streamlined methodologies for emission inventories at ports and promoting community engagement in setting priorities and identifying solutions at ports. New Jersey has also worked on individual projects with the South Jersey Port Corporation.

## **Construction Strategies**

Using several sources of funding, NJDEP is retrofitting diesel vehicles used on state construction projects in urban, high population areas. To date, 253 diesel particulate filters have been installed on 192 pieces of construction equipment. Emissions benefits each year are estimated to include over 7 tons of PM<sub>2.5</sub> per year, with additional retrofits ongoing.

## **Reducing VMT**

### ***Transit Ridership/Rideshare***

New Jersey has eight Transportation Management Associations (TMA's), which are non-profit, public/private partnerships, that have been established to work with businesses and local governments to provide commuter information and services. The TMA's provide carpool, vanpool and public transit services.

### ***Bike Paths***

The New Jersey Department of Transportation has implemented a Complete Streets policy. Complete Streets policies provide for well designed, constructed and maintained streets to accommodate all users including bicyclists. For example, a "complete street" might include bike lanes, crosswalks, wider sidewalks, more and clearer signs, and street lights timed for pedestrians.

## **Onroad Vehicle Reductions**

Pursuant to a law passed in 2005, retrofits have been installed on 10,000 school buses, garbage trucks, transit buses and "public works" type vehicles, with an additional 6,000 expected before the program ends in 2016. When completed, these retrofits will result in about 130 tons per year of PM benefits.

## **New York**

*Updated July 2014*

## **Reducing VMT**

### ***Commuter Option Programs***

The New York State Departments of Transportation, Motor Vehicles and Environmental Conservation jointly administer the Clean Pass program which allows vehicles meeting strict emissions and fuel efficiency criteria to operate with a single occupant in the HOV lanes of the Long Island Expressway. The same criteria are used for the Thruway Authority's Green Pass program which provides discounted tolls on the NYS Thruway and on bridges operated by the Metropolitan Transportation Authority and the Port Authority of New York and New Jersey.

## **Onroad Vehicle Reductions**

### ***Alternative Fuels***

New York's alternative fuels programs are generally run through the New York State Energy Research and Development Authority (NYSERDA). Current programs include:

The NY Truck Voucher Incentive Program. "The NYT-VIP voucher is intended to reduce about half the incremental costs of purchasing advanced technology heavy-duty trucks and buses. These vehicle technologies will include hybrids, natural gas vehicles, zero-emission vehicles, and diesel particulate emission reduction traps"

The BioFuel Station Initiative. "The objective of The Bio-Fuel Station Initiative: Driving Energy Independence for the Empire State, is to increase the number of retail E85 and B20 Biodiesel service stations selling these fuels to the general public in New York State through a comprehensive approach. This PON solicits applications for funds to purchase and install equipment to store and dispense E85 Ethanol and B20 Biodiesel (Biofuels). It is estimated approximately 300 new retail E85 Ethanol and/or B20 Biodiesel fueling stations will be opened as a result of this initiative."

Compressed Natural Gas Infrastructure Program. "The objective of The New York State Compressed Natural Gas (CNG) Infrastructure Program (the "Program") is to increase the number of publicly accessible CNG refueling stations in New York State. PON 2818 solicits proposals for funds to purchase and install equipment for the retail sale of compressed natural gas in New York. It is estimated that approximately twelve (12) new CNG refueling stations will become operational as a result of this PON."

### ***Advanced Technology Vehicles***

In addition to NYSERDA's NYT-VIP described above, New York is a signatory of the Multi-State ZEV MOU. Governor Cuomo also announced the CHARGE-NY Initiative in 2013. Headed by NYSERDA and the New York Power Authority, the initiative "aims to make New York State ready to accommodate 30,000 plug in electric vehicles (EVs) by 2018. The initiative will create a statewide network of public and workplace charging stations, educate consumers about EVs, break down regulatory barriers, and demonstrate new EV technologies."

### ***Federal Grants***

NYSDEC has participated in USEPA's DERA grant program in all years of the program's existence except federal fiscal year 2012. In all years, the funding was used to supplement state funds in NYSERDA's Clean Air School Bus program. The 2008-11 program was responsible for the installation of diesel retrofits (diesel particulate filters, diesel oxidation catalysts, and/or closed crankcase ventilation) in 204 buses and direct fired heaters in 373 buses. The program using 2013 grant funds is still underway, but it is expected to fund another 77 direct fired heaters. For the upcoming year, the DERA grant funding will continue to be used for school bus direct fired heaters and auxiliary power units and shore connection systems in short line railroad engines. DEC also received ARRA/DERA funding that was used to retrofit transit buses operated by three upstate NY regional transit authorities (Rochester-Genesee, Central NY and Niagara Frontier).

## **Other**

### ***Studies***

Current research at NYSDEC employs the use of diesel generators as model emission sources for mobile sources. The results of this work are also relevant to understanding the increasing air quality impact of emissions from diesel generators used for distributed generation, particularly in response to weather



occurrences such as Hurricane Sandy. Research continues to focus on species that, while currently unregulated, may nonetheless constitute potential threats to human health and/or the environment. These include ultrafine particles, toxics such as polyaromatic hydrocarbons and carbonyls, and elemental carbon/organic carbon. NYSDEC is also currently exploring research collaborations to evaluate the health effects of these species in diesel exhaust, in cooperation with other state and academic entities.

## **Pennsylvania**

*Updated November, 2014*

### **Vehicle Emissions Standards**

#### **Clean Vehicle Program for Passenger Vehicles and Light-Duty Trucks**

In 1998, pursuant to Section 177 of the Clean Air Act (CAA), Pennsylvania's Environmental Quality Board (EQB) adopted the Pennsylvania Clean Vehicles Program (28 Pa.B. 5973, Dec. 5, 1998), which adopts and incorporates by reference certain California Low Emission Vehicle (CA LEV) emission standards for passenger cars and light-duty trucks. As required under Section 177 of the CAA, these provisions are identical to the low emission standards adopted by California. The regulation does not incorporate by reference the California zero emissions vehicle (ZEV) or emissions control warranty systems statement provisions.

Pennsylvania amended the New Motor Vehicle Emissions Control Program in December 2006. The Clean Vehicles Program continues to incorporate the California Low Emission Vehicle Program by reference. The amended Clean Vehicles Program affected MY 2008 and newer passenger cars and light-duty trucks vehicles (36 Pa.B. 7424, Dec. 9, 2006). EPA approved Pennsylvania's Clean Vehicle Program as a revision to the Commonwealth's State Implementation Plan on January 24, 2012 (77 FR 3386).

#### **Heavy-Duty Diesel Control Programs**

Pennsylvania also adopted California heavy-duty truck standards for diesel-powered vehicles over 14,000 pounds. In 2002, the EQB adopted the Heavy-Duty Diesel Emissions Control Program for model years starting after May 2004. The program incorporated California standards by reference and requires MY 2005 and subsequent new heavy-duty diesel highway engines to be those certified by California.

### **Fuels**

#### **Federal Reformulated Gasoline (RFG) Program**

The Clean Air Act Amendments of 1990 requires Federal reformulated gasoline (RFG) in the 5-county Philadelphia ozone nonattainment area (Bucks, Chester, Delaware, Montgomery and Philadelphia counties). This federally mandated program is administered and enforced by EPA.

#### **Gasoline Volatility Requirements**

Low Reid vapor pressure (RVP) gasoline, summertime 7.8 RVP has been required in the 7-county Pittsburgh Region since 1998. Legislation requires the DEP to request the repeal of the gasoline volatility requirements following the development of a SIP revision, the act of May 14, 2014 (P.L. 674, No. 50) (35 P.S. § 4004(18.3)).

## **Inspection and Maintenance Program**

Motorists with gasoline powered cars, vans and light-duty trucks (9,000 lbs. or less gross vehicle weight), with a model year 1975 and newer registered in Allegheny, Beaver, Berks, Blair, Bucks, Cambria, Centre, Chester, Cumberland, Dauphin, Delaware, Erie, Lackawanna, Lancaster, Lebanon, Lehigh, Luzerne, Lycoming, Mercer, Montgomery, Northampton, Philadelphia, Washington, Westmoreland and York counties are required to participate in Pennsylvania's Vehicle Emissions Inspection & Maintenance (I/M) Program.

Pennsylvania requires annual Onboard Diagnostic emissions testing for passenger cars and light-duty trucks in 25 counties that meet the population and population density thresholds. Owners of pre-1996 vehicles in the 5-county Philadelphia area (Bucks, Chester, Delaware, Montgomery and Philadelphia counties) and 4 counties (Allegheny, Beaver, Washington and Westmoreland counties) in the Pittsburgh area are required to get a tailpipe test. In addition, vehicles in the remaining 42 counties receive a visual inspection and gas cap test. The regulations can be found in 67 Pa. Code Chapter 177 and 175. The DEP submitted the expanded emissions and safety inspection program to EPA as a SIP revision on December 1, 2003. EPA approved the SIP revision on October 6, 2005 (70 FR 58313).

## **Limit Idling of Vehicles and Equipment**

### ***Pennsylvania's Diesel-Powered Motor Vehicle Idling Act***

Act 124 of 2008, which became effective on February 6, 2009, prohibits the owners and drivers of any diesel-powered motor vehicle with a gross weight of 10,001 pounds or more engaged in commerce from causing the engine of the vehicle to idle for more than five minutes in any continuous 60-minute period, except as provided in the Act. In addition to vehicle drivers and owners, owners and operators of locations where subject vehicles load, unload or park are also responsible for compliance with Act 124. An owner or operator of a location where subject vehicles load or unload, or where 15 or more parking spaces are provided for vehicles subject to the Act, must erect and maintain at least one permanent sign to inform drivers that idling is restricted in Pennsylvania. The act was approved by EPA for inclusion into Pennsylvania's SIP on August 1, 2011 (76 FR 45705).

### ***Truck Stop Electrification Support***

Pennsylvania supported private companies' efforts to supply truck stop electrification equipment at facilities with grant funding in order to reduce idling emissions produced by heavy-duty diesel trucks. Currently, five truck stop facilities that provide more than 70 parking places with electrification service are operational in Pennsylvania. Four of the facilities are located in the central part of Pennsylvania and one is located in the Pittsburgh-Beaver Valley area.

## **Vehicle Miles Traveled Reductions**

### ***Transportation Planning***

The Pennsylvania Department of Transportation (PennDOT) uses Congestion Management and Air Quality Program funding to support nine Transportation Management Authorities across the state that promote carpooling, telecommuting, the use of public transit and other alternative methods of commuting. PennDOT also actively supports the building of bike- and pedestrian-friendly communities.

### ***Support for Commuting Options***

PennDOT supports the Amtrak Keystone Service, an electric train service between Harrisburg and New York City, with annual funding of about \$9 million. The Amtrak Keystone Service carries nearly 1.5 million travelers every year for stops between Harrisburg and Philadelphia.

### ***Free Transit Program for Senior Citizens***

PennDOT supports the Free Transit Program which enables senior citizens 65 years of age and older to ride free on any participating local public transportation system, including local bus, trolley, and subway. There is a one dollar charge on commuter rail services. Free rides are available whenever the local public transit system is operating. Nearly 35 million free bus trips were supplied by the program in the last fiscal year.

### ***The Rail Passenger Capital Program***

The Rail Passenger Capital Program administered by PennDOT provides state and federal funds for intercity passenger rail service. The program provides reimbursements for capital expenses incurred on the Amtrak owned Keystone Corridor between Harrisburg and Philadelphia. The Bureau of Public Transportation administers capital grants to maintain and improve the infrastructure of the Keystone Corridor.

## **Onroad Vehicle Reductions**

### ***Alternative Fuels***

Pennsylvania operates two programs that encourage the development of alternatively fueled vehicles, Act 13 of 2012 / Impact Fee and the Alternative Fuels Incentive Grant Program (AFIG). Since 2013, Act 13 has made available \$14 million to 44 organizations and companies making the switch to compressed natural gas (CNG), liquefied natural gas (LNG) and bi-fuel vehicles weighing 14,000 pounds or more. Overall, the Act 13 program, which incentivizes natural gas vehicles, will grant \$20 million. The AFIG Program over the years has distributed tens of millions of dollars funding projects including: development of alternative fuel technology, funding electric, CNG, LNG, and hybrid vehicle purchases, and alternative fuel infrastructure.

### ***Nonroad Vehicle and Equipment Reductions***

Pennsylvania DEP supported grant projects that reduced pollutants from diesel vehicles with funding from consent decrees, Diesel Emission Reduction Act Grants, and American Recovery and Reinvestment Act (ARRA), and Voluntary Airport Low Emissions Project funding.

### ***Philadelphia International Airport Emission Reduction Projects***

The Federal Aviation Administration awarded the City of Philadelphia under the Voluntary Airport Low Emission (VALE) Program and funds from the Airport Improvement Program over \$5.6 million to install 35 preconditioned air units on passenger terminal gates and rechargers for electric ground support equipment. These projects reduced annual emissions of nitrogen oxides (NOX), particulate matter (PM) and volatile organic compound (VOC) emissions at Philadelphia International Airport by about 40 tons, 3 tons, and 4 tons, respectively.

### ***American Recovery and Reinvestment Act***

Pennsylvania DEP granted ARRA funding for re-powering locomotives and commercial marine vessels. DEP awarded a \$1.7 million American Recovery and Reinvestment grant which was used to repower four

locomotives into lower polluting pairs of locomotives called a mother-slug configuration. The project reduced annual emissions of NOX, PM, and VOCs by 47 tons, 1.0 tons and 2.5 tons, respectively. DEP awarded \$1.53 million dollars of ARRA funding through an Emerging Technology grant which was used to repower a towboat in the Pittsburgh region. The project reduced annual emissions of NOX, PM and VOC by 78.8 tons, 1.9 tons, and 1.1 tons, respectively.

## **Other**

### ***Programs Implemented by Local Air Pollution Control Agencies***

#### *Pittsburgh-Beaver Valley Area – Diesel Emission Reductions*

The Allegheny County Health Department has emphasized reducing diesel emissions. Diesel emission reduction projects in Allegheny County have been funded by a variety of funding mechanisms including county funding, ARRA, and private foundations. Numerous projects, which include hybridizing the bus fleet and retrofitting construction equipment and refuse haulers, have been completed which garnered large emission reductions. Currently, the Southwest Planning Commission has allocated Congestion Mitigation and Air Quality (CMAQ) Improvement Program funding for reducing emissions from 30 tugboats in the Pittsburgh-Beaver Valley Area. The vessels will be outfitted with newer engines. This \$20 million project will yield 269 tons of annual NOX emission reductions. CMAQ funding has also been dedicated to repower 14 locomotives to lower polluting configurations. These upgraded locomotives will reduce annual NOX and VOC emissions by over 180 tons.

#### *City of Philadelphia*

The City of Philadelphia has made great strides in recent years towards reducing ozone precursors from regulatory actions and a comprehensive sustainability plan, Greenworks. Regulatory actions include limiting emergency generator operation during air quality action days, limiting and phasing out perchlorethylene usage in dry cleaners, and reducing sulfur in fuels. These regulatory actions will reduce NOX and VOC emissions by about 100 tons per year. Initiatives under the Greenworks plan include: lowering city energy use by 7 percent while increasing citywide use of alternative fuels (an increase to 14 percent from 2.5 percent in 2006); installing a 250 kW solar array on City property; replacing/retrofitting all eligible city diesel vehicles with diesel oxidation catalysts, reducing hydrocarbon emissions as well as particulates and carbon monoxide; working with Southeast Pennsylvania Transportation Authority implementing programs that reduce ozone precursors, such as switching to hybrid buses (as of 2013, 472 traditional buses were replaced with energy efficient hybrids).

## **Rhode Island**

*Updated September 2014*

### **Vehicle Emissions Standards**

#### ***Passenger Cars and Light Trucks***

Rhode Island has adopted the California Low Emission Vehicle Program for all passenger cars, light-duty trucks, and medium-duty passenger vehicles sold in the state. Rhode Island is also a signatory state for the multi-state ZEV Action Plan.

## **Inspection and Maintenance**

The Rhode Island I/M Program requires a biennial inspection that includes all light-duty vehicles, 25 years old and newer, up to 8,500 pounds Gross Vehicle Weight Rate (GVWR).

## **Limit Idling of Vehicles and Equipment**

Rhode Island's anti-idling law applies to all on-road vehicles and limits idling time to five consecutive minutes during any 60-minute period. Exemptions are allowed for but not limited to reasons such as emergency response, public safety, or military vehicles.

## **Ports/Goods Movement**

ARRA dedicated funds to the DERA Program were used to make necessary upgrades and installation of shore power facilities at the Galilee State Pier to reduce the impact of watercraft idling.

Rhode Island used TIGER grant funding to purchase new harbor cranes at the Port of Providence and for infrastructure upgrades at the Quonset Business Park, including road, pier, and freight improvements which will increase port capacity at the Port of Davisville.

## **Construction Strategies**

Clean Construction – State Diesel Emissions Reduction Act Program requires the use of clean equipment at construction sites of state or federal funded projects over \$5,000,000. Construction equipment owners can replace engines and/or install exhaust controls on older construction equipment.

## **Reducing VMTs**

### ***Transit Ridership/Rideshare***

Rhode Island Public Transit Authority (RIPTA) offers statewide express service buses throughout the year in response to seasonal changes and/or passenger use. A Rapid Bus Route, replaced congested local service along two of the highest ridership routes with more than 10,500 passenger trips per day.

## **Onroad Vehicle Reductions**

### ***Diesel Retrofit/Repower***

The Rhode Island Clean Diesel Program's goals and priorities are to maximize public health benefits by employing the most cost effective strategies to reduce diesel emission. Using Congestion Mitigation Air Quality (CMAQ) funding, RI was able to clean up the dirtiest school buses in the fleet. All full-size buses older than Model Year (MY) 1994 were removed from service and 385 buses older than MY 1997 were retrofitted with emission control devices.

### ***Advanced Technology Vehicles***

Rhode Island is one of the eight states that signed the Multi-State ZEV MOU, pledging to work with manufacturers and dealerships to push sales of electric vehicles, with a goal of putting 3.3 million zero emission vehicles (ZEVs) on the road by 2025.

State Fleet – Alternative Fuel Vehicle (AFV) and Hybrid Electric Vehicle (HEV) Acquisition Requirements: requires the State of Rhode Island to purchase vehicles that provide the best value on a lifecycle cost basis. State Agencies used ARRA dollars to pay for the differential costs between AFV and comparably sized gas-powered vehicles. \$789,391 was also used for the development of clean and efficient transportation infrastructure.

## **Virginia**

*Updated October 2014*

### **Vehicle Emissions Standards**

Virginia follows Federal emissions standards. Virginia regulation 9VAC5-91-201 prohibits visible emissions from gasoline motor vehicles for longer than five consecutive seconds and from diesel motor vehicles for longer than ten seconds.

### **Fuels**

Virginia opted in to the federal reformulated gasoline (RFG) program in 1991. The RFG requirement applies to 28 counties in the Northern Virginia, Richmond metropolitan, and Hampton Roads areas. Conventional gasoline is used in all other areas of the state.

### **Inspection and Maintenance**

The Inspection and Maintenance program in Virginia applies to 10 jurisdictions. The program requires OBD or tailpipe emission inspections every two years. The inspection must be performed at a permitted emission inspection station and applies to gasoline powered vehicles up to 10,000 lbs and diesel powered vehicles up to 8,500 lbs. The program was recently expanded to utilize remote sensing observations to cover up to 30% of the vehicle fleet covered by the IM program. This will allow for the clean screening of these vehicles to improve customer convenience, and will also allow for the identification of more “high emitter” vehicles to improve the effectiveness of the program.

### **Limit Idling of Vehicles and Equipment**

Virginia’s anti-idling regulation 9VAC5-40-5670 applies to on-road vehicles and limits idling to three minutes.

### **Reducing VMT**

#### ***Transportation Demand Management***

Virginia utilizes a variety of transportation demand management programs in all of its metropolitan areas in order to reduce traffic congestion, such as ridesharing, transit usage, telecommuting, and investment in park & ride facilities.

#### ***Transit Ridership/Rideshare***

Virginia supports a number of rideshare agencies throughout the state. Some examples are the Commuter Connections programs in Northern Virginia; the Ride Finders program in Richmond; the TRAFFIX program in Hampton Roads; and the Ride Share, Ride Smart, and Ride Solutions programs in other metropolitan areas within the state.

#### ***Bike Paths***

Virginia encourages bicycling as a transportation alternative. Since 2004 Virginia has had a policy for the routine consideration of the need for accommodating bicyclists and pedestrians. The “Policy for Integrating Bicycle and Pedestrian Accommodations” outlines the decision-making process and requires all state and federally funded projects to accommodate bicyclists and pedestrians with consideration for some exemptions.

## **Onroad Vehicle Reductions**

For a number of years, Virginia has managed a comprehensive diesel emissions reduction grant program for localities and private enterprises in the state. This program has included the control device retrofit of over 2,000 public school and municipal buses, purchase of CNG buses, purchase of propane buses, and other equipment. The centerpiece of this program is the ongoing partnership between DEQ and the Virginia Port Authority (VPA) to support diesel reduction project at the VPA's Hampton Roads port facilities. This has included the retrofit and repowering of port equipment, purchase of a Hybrid yard locomotive, and support for the Green Operator (GO) Program which encourages truck companies and individual owner/operators serving the Port to install verified diesel retrofit devices to reduce emissions from carriers registered with the VPA. MARAMA is also providing support funds for this program.

## **Vermont**

*Updated October, 2014*

### **Vehicle Emission Standards**

Vermont adopted California Low Emission Vehicle requirements for light and medium duty vehicles as well as California Zero Emission Vehicle requirements.

### **Inspection & Maintenance**

Vermont has a statewide vehicle emissions Inspection and Maintenance program requiring annual OBD testing of gasoline and diesel powered light duty vehicles.

### **Limit Idling of Vehicles and Equipment**

Vermont's Motor Vehicle Idling Law limits idling of all motor vehicles to five minutes in any 60 minute period, with some exceptions. Vermont's School Bus Idling Law prohibits idling of school buses on school property while picking up or discharging students.

### **Reducing VMT**

Vermont has implemented the Go! Vermont Program, which provides services including automated matching for carpools, a public/private vanpool program, links to all public transit routes, and an emergency ride home service. In addition, Go! Vermont offers program development and transportation demand management assistance to Vermont employers.

## **Onroad Vehicle Reductions**

### ***Advanced Technology Vehicles***

Vermont is one of the signatory states to the 2013 ZEV MOU, is participating in the ZEV Program Implementation Task Force to implement the Multi-State ZEV Action Plan, and has developed a Vermont ZEV Action Plan. Vermont provides low interest loans to municipalities and businesses for the installation of EV charging stations, and matching grants to municipalities for the installation of EV charging equipment in designated downtown areas. Drive Electric Vermont is a statewide coalition of stakeholders from the business, nonprofit and government sectors working to promote electric transportation in Vermont.

### ***Alternative Fuels***

The Vermont Clean Cities Coalition provides information, education, and technical support to promote the use of alternative fuels and technologies in the transportation sector.

***Diesel Retrofit/Repower***

Vermont provides technical support and funding for vehicle and equipment replacement, repowering and retrofitting; and installation of idling reduction technologies. Past and current projects include school bus retrofits and replacements, sawmill repowering, idling reduction technology for locomotives, and idling reduction technology for hospitals.