

Missouri Department of Transportation Clean Diesel Project

In 2008, the department received a grant from the U.S. Environmental Protection Agency to fund a clean diesel project under the National Clean Diesel Funding Assistance Program. The project included partnering with the Missouri Department of Transportation and implementing clean diesel projects on their existing on-road and off-road fleets in the three districts facing the worst air quality challenges at the time. The three districts included in the project included MoDOT District 4 in the Kansas City area, District 6 in the St. Louis area and District 8 in the Springfield area. The projects included idle reduction equipment retrofits, emission control retrofits (exhaust controls) and early vehicle replacements.

Approximately 130 MoDOT vehicles were either replaced with brand new, cleaner and more efficient vehicles or received retrofits for emission control and/or idle reduction. Below is a chart summarizing the annual and lifetime emission reductions projected as a result of the implementation of this project. The emission reductions were calculated using [EPA's Diesel Emission Quantifier](#).

2008 MoDOT Clean Diesel Project Annual Emissions Reduced						
	NOx (tons/yr)	PM (tons/yr)	HC (tons/yr)	CO (tons/yr)	CO ₂ (tons/yr)	Diesel Fuel (Gallons/yr)
District 6 (St. Louis)	0.68	0.07	0.23	0.72	20.70	1,865
District 4 (Kansas City)	0.34	0.05	0.24	0.66	18.63	1,678
District 8 (Springfield)	3.07	0.06	0.15	0.85	23.60	2,126
Annual Monetary Health Benefits Based Solely on PM_{2.5} Reductions:						\$100,580

2008 MoDOT Clean Diesel Project Lifetime Emissions Reduced						
	NOx (tons)	PM (tons)	HC (tons)	CO (tons)	CO ₂ (tons)	Diesel Fuel (Gallons)
Entire State	50.92	2.28	8.14	28.30	938.63	84,562

The Air Program is committed to reducing diesel emissions in Missouri. Diesel emissions contain Oxides of Nitrogen as well as Volatile Organic Compounds, which in the presence of sunlight react to form ground-level ozone, the pollutant of most concern statewide in Missouri. Ozone is known to cause and aggravate respiratory diseases such as asthma.

Diesel emissions also contain fine particulate matter, which can penetrate deep into people's lungs. This can lead to a variety of different lung and respiratory disease including lung cancer. Reducing diesel emissions, particularly in areas with disproportionately high concentrations of air pollutants is vital to the Air Program's mission of protecting public health.

This project highlights MoDOT's commitment to being a leader in air quality improvements. Through this project Missouri sets the example as a model state where State Transportation and Natural Resource Departments partner together to conserve fuel, reduce operating costs and improve air quality. This project was completed Dec. 31, 2010.