

**BEFORE THE SUBCOMMITTEE ON CLEAN AIR,
CLIMATE CHANGE, AND NUCLEAR SAFETY**

**ENVIRONMENT AND PUBLIC WORKS COMMITTEE,
UNITED STATES SENATE**

HEARINGS ON THE DIESEL EMISSIONS REDUCTION ACT OF 2005

**TESTIMONY OF
CONRAD G. SCHNEIDER
ADVOCACY DIRECTOR, CLEAN AIR TASK FORCE**

CLEAN AIR TASK FORCE



JULY 12, 2005

1. Introduction

Mr. Chairman. Members of the subcommittee. Good afternoon. My name is Conrad Schneider, Advocacy Director of the Clean Air Task Force. CATF is a national environmental advocacy organization dedicated to restoring clean air and healthy environments through scientific research, public education, and legal advocacy. We appreciate the opportunity to testify in support of the Diesel Emissions Reductions Act of 2005. In particular, I want to commend you Mr. Chairman, for the leadership you have shown in bringing the bill to this point.

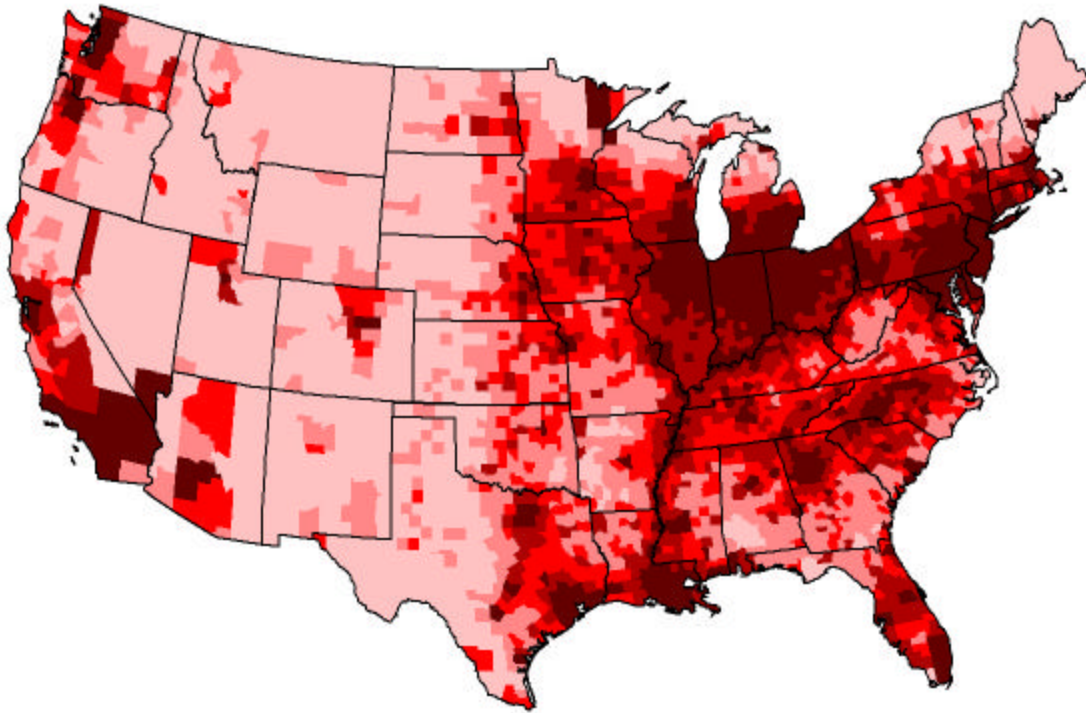
You convened a group of key stakeholders (including industry; fleet owners; local, state, and federal government officials; and environmental organizations) to hammer out the details of this legislation. You worked to assemble a nearly unprecedented group of co-sponsors including Senators Inhofe, Jeffords, Clinton, and Isakson on this committee. And, less than a week after the bill's introduction, you offered it as an amendment to the Senate Energy Bill where it passed by a vote of 92-1. Now, you are continuing the full-court press to see if the bill can be added to the Transportation Bill presently in Conference Committee.

Let's keep the momentum going on this important bill because enactment and full funding of this bill will do so much good for air quality and public health in this country.

2. Why We Need to Clean Up Existing Diesel Engines

A. Health Effects of Diesel Exhaust

U.S. EPA, as part of its regulatory impact analyses (RIAs) for the new highway and non-road diesel engine rules found that together the rules would avoid approximately 20,000 premature deaths in the year 2030. Using EPA's Science Advisory Board-approved methodology, that also has been reviewed and affirmed by the National Academy of Sciences (NAS), CATF contracted with EPA's own air quality consulting firm, Abt Associates, to determine the toll, in terms of adverse health effects, from diesel particles today. Abt Associates found that fine particle (PM_{2.5}) pollution from diesels shortens the lives of 21,000 people each year. This includes 3,000 early deaths from lung cancer. Tens of thousands of Americans suffer each year from asthma attacks (over 400,000), heart attacks (27,000), and respiratory problems associated with fine particles from diesel vehicles, equipment and vessels. These illnesses result in thousands of emergency room visits, hospitalizations, and lost work days. Together with the toll of premature deaths, the health damages from diesel fine particles will total \$139 billion in 2010—three years after EPA's new engine rules begin to phase-in. The map below displays the health risk across America due to diesel fine particle pollution nationally in 1999.



Health Risk from Diesel (darker = most polluted)
(Directly-emitted Diesel PM_{2.5} concentrations (1999))

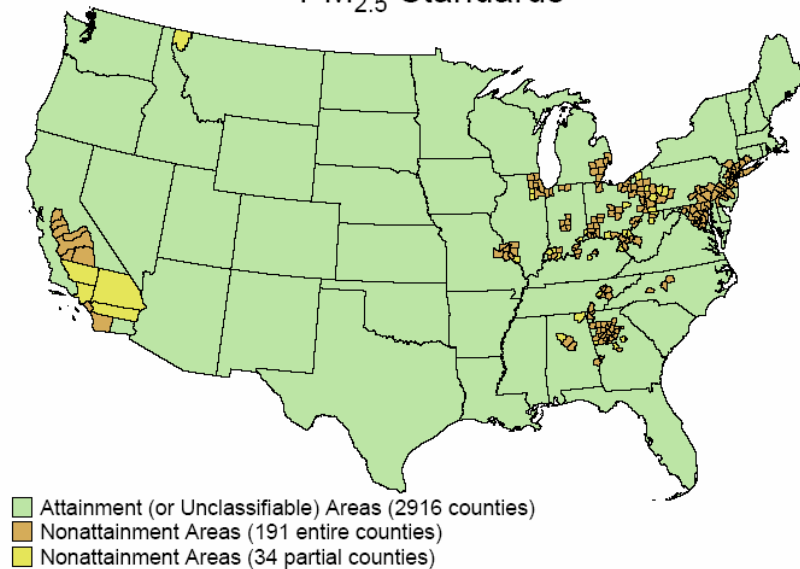
Based on CATF's analysis, nationally, diesel exhaust poses a cancer risk that is 7.5 times higher than the total cancer risk from all other air toxics combined. In the U.S. the average lifetime nationwide cancer risk due to diesel exhaust is over 350 times greater than the level U.S. EPA considers to be "acceptable" (i.e., one cancer per million persons over 70 years of exposure.)

CATF estimates that reducing diesel fine particle emissions by 75 percent by 2020 could save a cumulative total of tens of thousands of lives beyond the projected benefits of EPA's new engine regulations. For details of CATF's diesel health report, please see: www.catf.us/goto/dieselhealth.

B. Diesel Emission Reductions will be Critical to Attainment of the PM_{2.5} Standard in Many Areas.

EPA, earlier this year, finalized nonattainment designations for the PM_{2.5} National Ambient Air Quality Standard (NAAQS). In all, EPA designated 225 counties where nearly one hundred million people live as failing to meet federal air quality standards for fine particles. See EPA map below:

Attainment and Nonattainment Areas in the U.S. PM_{2.5} Standards



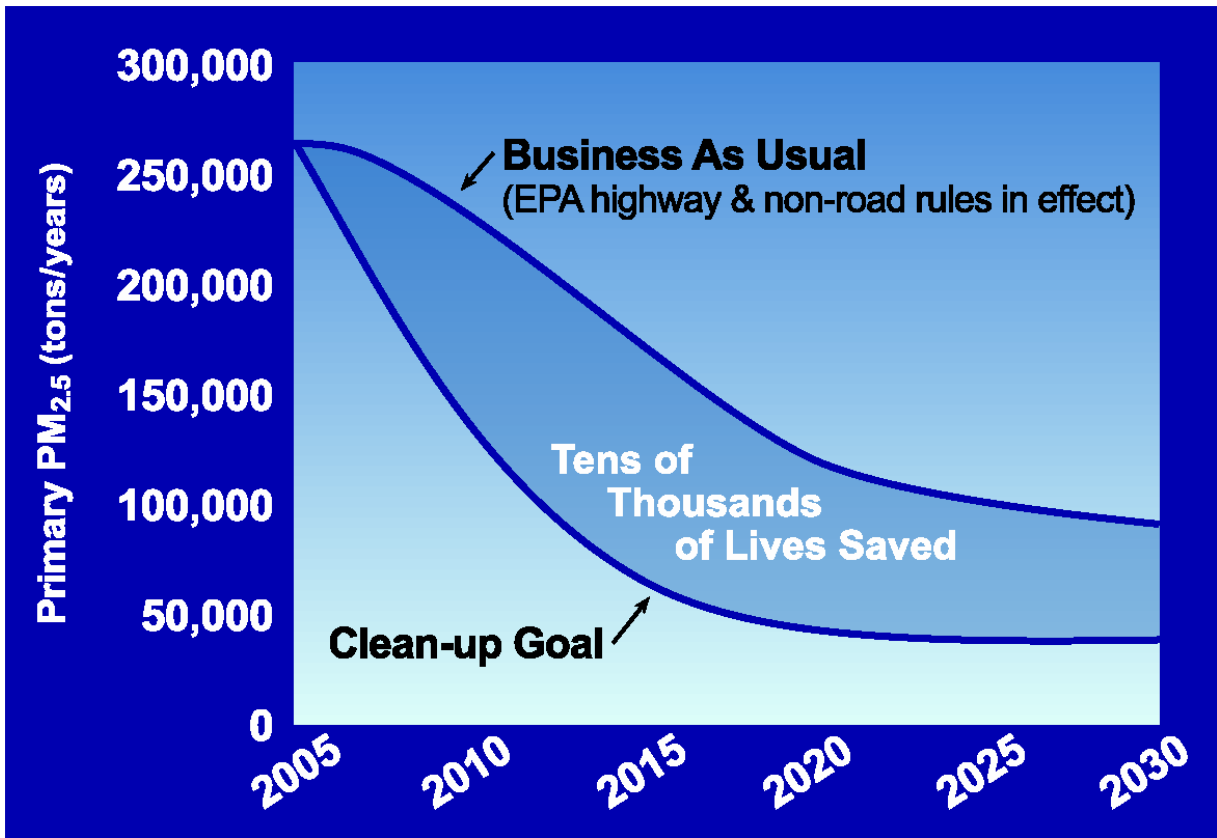
By 2010, these areas will have had to implement mandatory measures to reduce PM_{2.5} as part of their State Implementation Plans (SIPs) and have measured three years of air that meets these standards. EPA's new engine rules will have just begun to result in their first emission reductions by that time – too late to provide much assistance to states and municipalities needing to find faster reductions for their plans due in 2007. Reductions from existing diesel engines through retrofits, rebuilds, and repowerings can provide cost-effective tons of PM_{2.5} removed and help these areas achieve timely attainment.

C. Climate Impacts

Soot from diesels also has an impact on the climate. Black carbon absorbs heat in the atmosphere and is a major contributor—and potential solution—to Global Warming. Reducing diesel black carbon could provide an immediate climate benefit.

3. State Diesel Initiatives – The Need for Funding

CATF knows that EPA's rules governing emissions from new diesel engines slated to go into effect starting in 2007 will mean significant reductions in diesel emissions over time. However, other than providing for cleaner fuel, these rules do nothing to reduce emissions from diesel engines in service today. Because of the durability of the diesel fleet, today's engines will be running for years and even decades to come. CATF's policy goal is to accelerate the benefits of EPA's new engine rules by finding ways to cut emissions from the existing diesel fleet.



CATF estimates that if we effectively steepen the curve of diesel emission reductions through retrofits, rebuilds and replacements of existing engines, and achieve a 75% reduction in emissions by 2020, tens of thousands of preventable deaths can be avoided. See graph above.

To reach this goal, CATF is working with campaigns in over a dozen states seeking state and local solutions to reduce diesel emissions. The state lead organizations and their coalition partners are pursuing reductions from the whole suite of diesel engines depending on the greatest contributors to their local air quality problems: trucks, buses, ports, trains, etc.

To cite one example, CATF is working with the Ohio Environmental Council in a stakeholder process in Columbus, Ohio sponsored by the Mid-Ohio Regional Planning Council (MORPC) to develop a set of recommendations on how to include diesel reductions in the area's PM_{2.5} State Implementation Plan. What is, perhaps, the most critical common issue that has arisen in this process (and all the other states in which we work) is the lack of *funding* for retrofits. This is especially true for fleets owned by cash-strapped municipalities and states such as transit buses, school buses, and waste haulers. Currently, U.S. EPA has a paltry amount of money each year to award to fleet owners willing voluntarily to seek emissions reductions. Other small amounts of money have been available as a result of the settlement of lawsuits with the government. A handful of

states have passed measures providing limited funding for diesel clean up. In California, the Carl Moyer program and in Texas the Texas Emissions Reduction Program (TERP) provide money to clean up construction equipment used in public works projects. New Jersey just this summer passed legislation funding the retrofit of a few specific public fleets. But, the money available today is just a drop in the bucket of what is needed to improve public health and help areas facing nonattainment achieve healthy air standards.

4. How DERA Works

The Diesel Emission Reductions Act of 2005 (DERA) establishes the funding for a federal grant and loan program that will be administered through a partnership between the federal government and state governments. The amount of funding we seek is \$200 million per year for 5 years, for a total of \$1 billion.

All categories of diesel engines and fleets are eligible to apply for the funds including: construction, transit, school bus, ports, agricultural, and stationary engines.

All effective solutions to diesel emission reduction are eligible to compete for funds including the suite of verified retrofits, engine rebuilds and repowerings, engine replacement, and idle reduction programs, etc.

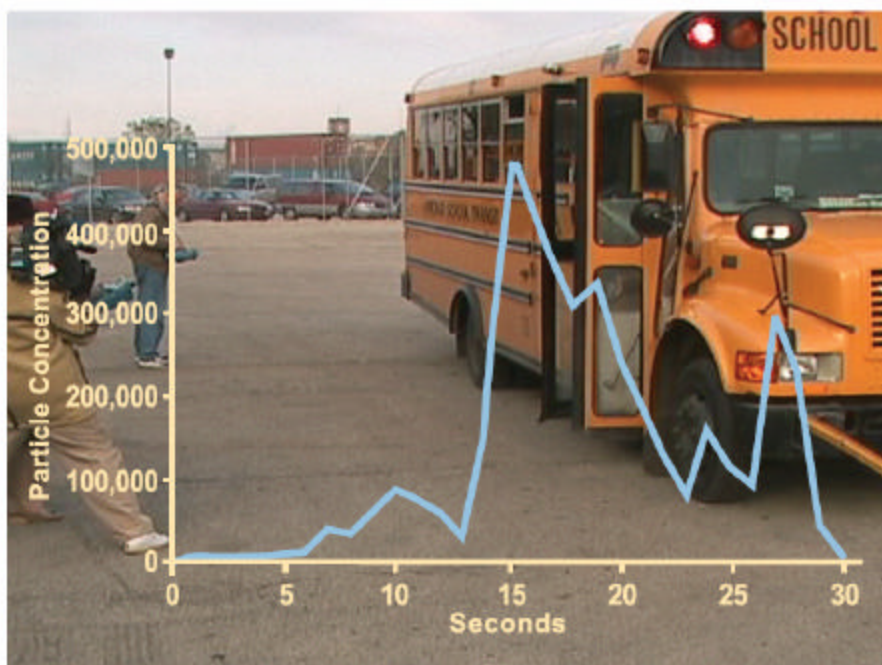
The program will have two parts: a state program that will administer 30 percent of the funds; and a national program that will be administered by U.S. EPA that will allocate 70 percent of the funds. Under the state program, states will have broad flexibility to design their own programs. DERA allocates 20 percent of funds to states to develop retrofit programs with an additional 10 percent available as an incentive for state's to match the federal dollars being provided. Each state's share will be determined by combination of number of states that apply and the state's population.

The national program will allocate 70 percent of the total funds. The national program will be administered by EPA. For the national program, not less than 50% of the funds will be awarded to publicly-owned fleets to demonstrate public-sector leadership on the issue and help cash-strapped states and municipalities reduce their fleet's emissions. Awards will be made to maximize public health benefits per dollar on the basis of competitive bids. Ranking criteria include: fleets in nonattainment areas, and Class I areas; fleets in areas with high population density; fleets in areas with disproportionate impact from the diesel fleet; and the expected life of the retrofit technology.

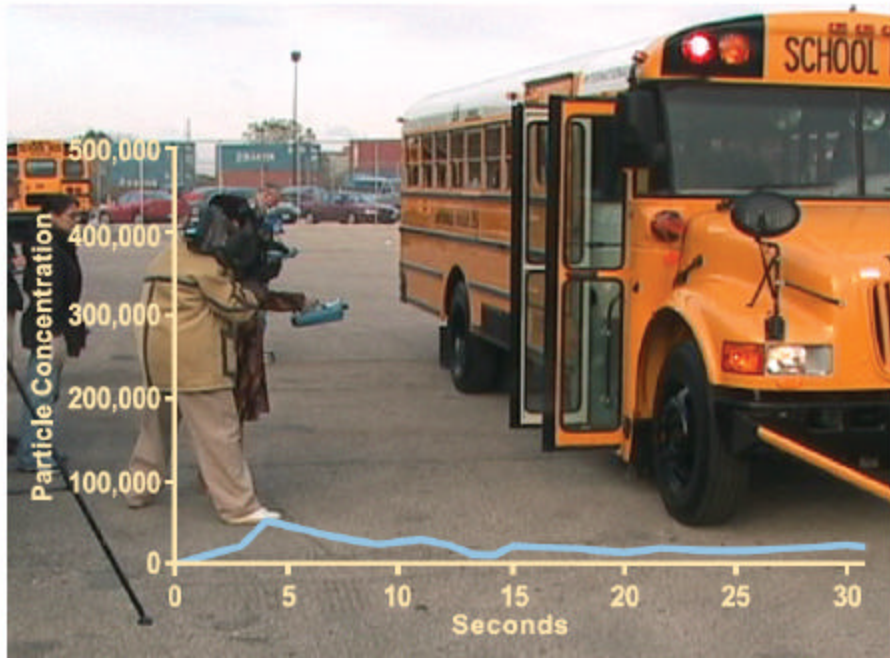
U.S. EPA estimates that this billion dollar program would leverage an additional \$500 million, resulting in a net benefit of almost \$20 billion with a cumulative reduction of about 70,000 tons of particulate matter. This yields a 13 to 1 benefit-cost ratio [i.e., \$20B:\$1.5B = 13:1].

5. DERA Funds will Buy Technology Proven to Virtually Eliminate Fine Particles Emissions from Diesel Engines

The funds awarded under DERA will go to a variety of diesel clean up projects determined through a competitive process. Any solution that proves its worth can qualify for funding. Let me describe some school bus emissions monitoring that CATF performed in conjunction with researchers at Purdue University. In Chicago, Atlanta, and Ann Arbor, Michigan, CATF measured levels of $PM_{2.5}$ inside and outside school buses following actual bus routes. In the photograph below, researchers equipped with monitors are measuring $PM_{2.5}$ levels at the curbside as a school bus pulls away after children are dropped off.



As you can see from the image above, the monitoring instrument recorded high particle levels as the conventional bus running on conventional fuel departed.



In the next image, above, when the bus was retrofitted with a diesel particulate filter and run on the Ultra Low Sulfur Diesel fuel that will be available nationwide next year, the same particle emissions were *virtually eliminated*. This type of filter costs about \$5,000 per bus. This provides one real-world example of what the money in the DERA bill will do. It can fund retrofits that can reduce diesel $PM_{2.5}$ from vehicles such as this by up to 90 percent.

6. Conclusion

In summary, CATF enthusiastically supports full funding and enactment of the Diesel Emission Reductions Act of 2005. We believe it will make a significant contribution towards improving the nation's air quality. Thank you for your commitment to this important matter. I would be happy to answer any questions you may have.