

EPA Funding Opportunities



National Clean Diesel Campaign



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National Clean Diesel Campaign

- Goal: *reduce emissions from the legacy fleet of over 11 million diesel engines by 2014*
- Focus on five sectors:
 - School Buses
 - Ports
 - Construction
 - Agriculture
 - Freight
- Program activities:
 - Technology verification
 - Providing technical and policy analysis
 - Coalition-building and outreach
 - Establishing projects through grant competitions

Diesel Emissions Reduction Program

Energy Policy Act of 2005:

- Authorizes more than \$1B over 5 years for grants and loans that support clean diesel activities

President's FY08 Budget Request:

- Proposes \$35M for clean diesel activities
- Limits funds to grants in nonattainment (NA) areas

Funding Distribution:

70% of funds for national grant and loan programs
30% for state grant and loan programs

Diesel Emissions Reduction Program

Use of Funds

- Retrofit Technology, Engine Replacement, Engine Repower, Rebuild
- Reduction of long-duration idling

Eligible entities (federal program)

- Regional, state, local, tribal governments
- Nonprofit entities

Use of funds (federal program)

- $\geq 50\%$ of funds for public entities
- $\geq 90\%$ for verified/certified technologies
- $\leq 10\%$ for emerging technologies

Program funding, allocations, criteria, eligibility, etc. will be subject to final Congressional appropriation language

Priority Projects

- Maximize public health benefits
- Are the most cost effective
- Areas with high population, air quality issues, and air toxic concerns
- Areas that receive a disproportion quantity of air pollution (i.e. truck stops, ports)
- Maximize the useful life of the engine
- Conserve diesel fuel and utilize ULSD

Tools and Technical Assistance

National Clean Diesel Campaign's Technology Verification program

- EPA has a rigorous testing program for evaluating technologies
- Memorandum of Agreement between EPA and CARB

SIP/Conformity Guidance for diesel retrofits and idle reduction

- Outlines how to use retrofits in SIPs, transportation conformity, and general conformity
- EPA recommends use of National Mobile Inventory Model (NMIM)
- Cost effectiveness guidance for diesel retrofits

Diesel Emissions Quantifier

- An easy-to-use calculation tool for estimating emission reductions
- Can not be used for SIP/Conformity credit

Idle Reduction Technology Information

- SmartWay Transport program: <http://www.epa.gov/smartway/idling.htm>
- Clean School Bus USA: <http://www.epa.gov/cleanschoolbus/antiidling.htm>

What is the SmartWay Transport Partnership?

- Public-Private partnership between EPA and transportation industry to conserve fuel and reduce emissions
- Free to Join; Open to Companies of any Size
- Simple & Easy
 - Trucking companies agree to improve fuel efficiency (reduce fuel consumption) and reduce emissions over a 3 year period.
 - Shipping companies agree to ship 50% or more of their product on SmartWay trucking partners, as well as improving their operations over a 3 year period.

SmartWay Grow and Go

- New component of SmartWay program
 - Work with prospective and current SmartWay partners to promote the environmental benefits of renewable fuels
- Benefits of Renewable Fuels
 - Ethanol reduces emissions of pollutants such as carbon monoxide and benzene, a known human carcinogen
 - Biodiesel provides significant reductions in carbon monoxide, particulate matter (PM) and sulfates. Both fuels also reduce greenhouse gas emissions.
- Goal
 - 25 percent of SmartWay partners using renewable fuels by 2012, and 50 percent by 2020



www.epa.gov/smartway/growandgo

Deploy Innovative Financial Strategies

- Grant programs and other government funding programs will not achieve our clean air goals
- We need creative, sustainable **financing** strategies for emission control technologies:
 - For all sectors: Trucks, locomotives, freight, construction, ports, etc.
 - For fuel saving devices and for after-treatment technology
- **Phase I Financing: Traditional Market Rates and Terms**
 - EPA and SBA National Environmental Loan Program is now available
 - Will finance fuel saving strategies (APUs, aerodynamics, tires)
 - Tough to finance after-treatment
- **Phase II Financing: Low interest, more flexible loans**
 - More environmental controls = Better financing rates and/or terms
 - Trucks with after-treatment are less expensive than those without
 - Community Investment Banks, Public/Private investment blends
 - Change the way in which trucks/ equipment are sold to 2nd and 3rd owners

Phase I: SmartWay Upgrade Kit Example

Fuel Savings Drive the Business Case

Example of a SmartWay Upgrade Kit for Long Haul Trucks:

Device	Cost/Unit	PM Reduction	NOx Reduction	FE/CO ₂ Change
PM Filter	\$5,000	90%	--	--
Super Single Tires w/ alum. wheels	\$5,600	--	4%	4%
Trailer Aero Kit	\$2,400	--	5%	5%
Direct Fired Heater	\$1,500	--	5%	5%
Totals:	\$14,500	90%	14%	14%

For a truck traveling 100,000 miles/year @ 6 mpg (16,667 gallons /year)

- Fuel savings: 2,333 gallons @ \$2.80/gallon → **\$6,532/year**
- Payback period: \$14,500 / \$6,532 → **~2 years**
- or a 5 year loan @ 12% APR:

Monthly Fuel Savings:	\$530
Monthly Loan Payment:	(\$323)
Monthly Cash for Driver:	\$207

Phase I Financing: SmartWay Upgrade Kits

Fuel Savings Drive the Business Case

- **State programs:**
 - Many states (Arkansas, Minnesota, Oregon, California) have or are considering truck loan programs for SmartWay Upgrades
 - Some offer low interest (4 – 6%), but limited capital
- **National Environmental Loan Program:**
 - Partnership between EPA and Small Business Administration
 - Program uses SBA qualified banks to offer loans to truck owners to purchase components of SmartWay Upgrade Kits:
 - 85% government guarantee, No collateral required
 - Quick approval process (1-5 days), \$5K-\$25K loan range
 - Interest rate: prime rate + 4.5% (~ 12%)
 - National Loan Program is available
 - We are developing marketing campaign to get the word out, drafting press release, and considering options for formal announcement
 - Interest Rate is too high to impact after-treatment purchases

Phase II Financing: Buy Down Interest Rates

Lower APR Drives the Business Case: No Fuel Savings Needed

Interest Rate Buy Down and other loan term flexibility:

- Does not require fuel or energy savings to create a financial incentive
- A truck with PM filter is **less expensive** than same truck w/out
- Can apply to all types of diesel vehicles/equipment sold:
 - We can also refinance many existing loans with the same strategy
- Requires some type of public (or other low cost) capital for:
 - Reduced APR or extended terms
 - Loan guarantees
 - Blending low cost capital with private existing capital at market rates
- Removes the “Why would I retrofit?” question from owners
 - New question is “How much money will I save if I buy this clean truck?”
- For many small to medium size companies: Cash flow is the key to staying alive in business

Phase II Financing: Buy Down Interest Rates

Lower APR Drives the Business Case: No Fuel Savings Needed

Trucks	2002 MY Truck on the Used Market	
	Standard Truck	Same Truck with PM Filter Buy down the loan
Purchase Price:	\$55,000	\$59,000
60 Month Interest Rate:	12%	8%
Monthly Payment:	\$1,223	\$1,196
Total Cost:	\$73,380	\$71,760

Construction	Bulldozer	
	Standard Bulldozer	Same Bulldozer with PM Filter Buy down the loan
Purchase Price:	\$240,000	\$250,000
60 Month Interest Rate:	10%	8%
Monthly Payment:	\$5,099	\$5,069
Total Cost:	\$305,340	\$304,140

Phase II Financing: Demonstrate the Concept The Dealership Model

At a used truck dealership EPA and retrofit manufacturers will:

- Upgrade a group of used trucks with after-treatment
 - Retrofit manufacturer will FLOAT the cost of the upgrade until the truck is sold. (Minimize dealer risk)
- EPA through our financial partners will provide 4 – 6% APR financing for the upgraded trucks
 - USDA and Treasury loans through Community Investment Banks (Only available in certain rural areas)
 - Private Companies could contribute low cost financing as well
 - Through DERA (once funded)
 - Financing is seamlessly integrated with the other financing options at the dealership
- At time of sale of the upgraded truck, the dealer pays the technology vendor

Phase II Financing: Full Implementation

New Financing and Re-financing Strategies Throughout the Marketplace

- Low cost financing is available throughout the marketplace:
 - Truck and Equipment dealers, leasing companies, etc.
 - Opportunities for high volume (lower cost) transactions
 - Identify top sales models around the country
 - Design retrofit solutions for those models (Design once, retrofit many)
 - Professional sales staff are trained to sell clean trucks that save money
- Low cost Re-financing is available throughout the marketplace:
 - Financial models provide savings from a variety of refinancing positions
- SmartWay program will market the availability of these loans strategies: PSAs, Truck Stops, Trick My Truck
- Local support and Shipper support (IKEA) will also advance these loan strategies

Summary

- Reducing emissions from diesel engines is one of the most important air quality challenges facing the country
- It's a shared responsibility – federal, state, private, local organizations all have to do their part
- Innovative financing programs will help us meet our goal of reducing emissions from the existing fleet

For More Information



National Clean Diesel Campaign

www.epa.gov/cleandiesel



www.epa.gov/smartway