



# National Clean Diesel Campaign

## Reducing Diesel Emissions through Collaboration and Innovative Strategies

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# 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 <sub>2</sub> Change
PM Filter	<b>\$5,000</b>	<b>90%</b>	--	--
Super Single Tires w/ alum. wheels	<b>\$5,600</b>	--	<b>4%</b>	<b>4%</b>
Trailer Aero Kit	<b>\$2,400</b>	--	<b>5%</b>	<b>5%</b>
Direct Fired Heater	<b>\$1,500</b>	--	<b>5%</b>	<b>5%</b>
<b>Totals:</b>	<b>\$14,500</b>	<b>90%</b>	<b>14%</b>	<b>14%</b>

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)
<b>Monthly Cash for Driver:</b>	<b>\$207</b>

# Phase II Financing: Buy Down Interest Rates

Lower APR Drives the Business Case: No Fuel Savings Needed

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

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