

*Designing and Implementing
a Freight Sustainability Program:
Tools, Best Practices, and Lessons Learned*

Workshop Course Book

SmartWay Workshop

June 3, 2010



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Introduction

Background of Freight Transportation in the United States

Freight transportation is invaluable to businesses, consumers, and the US economy, but is not without costs. Of all the energy consumed in the transportation sector, moving freight accounts for 20 percent of all energy consumed.

35 Billion Gallons a Year...

Together, rail and truck transport consume over 35 billion gallons of diesel fuel per year. Translated into emissions, this represents over 350 million metric tons of carbon dioxide annually.

...and Growing

As the economy grows and technology improves, the numbers become more staggering. Just-in-time manufacturing, faster delivery services, and increasing internet shopping have increased mileage—and emissions—from ground freight transportation.

Based on current trends:

- By 2012 ground freight transportation will consume over 45 billion gallons of diesel fuel.
- Freight transport is expected to produce over 450 million metric tons of carbon dioxide—a 25 percent increase over today's levels.

Making Sense of Emissions

While burning fuel is necessary to move goods efficiently by truck and rail, some of that fuel is wasted due to inefficient practices. And wasted fuel translates to wasted money as well as increased emissions of air pollutants, such as:

- Carbon dioxide (CO₂), the most prevalent greenhouse gas. Ground transportation contributes 30 million metric tons of carbon dioxide.
- Nitrogen oxides (NO_x), which contribute to ozone formation, commonly known as smog. Domestic ground freight accounts for 50 percent of NO_x emissions.
- Particulate matter (PM) also has serious health and environmental effects. Ground freight transportation contributes 30 percent of all PM emissions.

Summary of SmartWay Transport Partnership

To address these trends, EPA developed SmartWay Transport—an innovative collaboration between the freight industry and government to reduce air pollution and greenhouse gas emissions, improve fuel efficiency and energy security, and strengthen the freight sector.

SmartWay Transport's goals are to reduce the impact of freight transport on the environment, and to help our partners see the rewards to their business. Working together, we aim to reduce:

- Fuel consumption from trucks and rail delivering freight.
- Operating costs associated with freight delivery.
- Emissions of CO₂.
- Emissions of NO_x, PM, and air toxics.

Companies that participate in the SmartWay Transport Partnership save money, reduce fuel consumption, and are recognized for their social responsibility and environmental leadership.

EPA projects savings of between 3.3 and 6.6 billion gallons of diesel fuel per year, representing a savings of as much as 150 million barrels of oil per year. This is the equivalent of taking 12 million cars off the road, leading our partners to save nearly \$10 billion in operating costs.

Detailed Timeline of Significant Events

- 2001**
 - Initial discussions with stakeholders for design/development of a Ground Freight Transportation Initiative.
 - “Industry Options for Improving Ground Freight Fuel Efficiency”—Dec, 2001—Report on Freight Trucking/Rail Sectors, Efficiency Strategies, and Fleet/Industry Characteristics.
 - Consider common voluntary program elements and freight industry trends to design the program.
- 2002**
 - Industry responds to initial Report.
 - Charter Partners join.
 - Design and Development of Program including FLEET Model; Partnership commitments and goals; Logo development, guidance, and usage; Begin planning outreach and marketing.
- 2003**
 - FLEET Model –develop as a Partner tool/resource.
 - Discussions with Charter Partners to plan program specifics and performance metrics.
 - Program Launch Planning.
 - Development of Partnership Tools and Outreach Materials – Overview, Fact Sheets, Strategies, etc.
 - Development of Partnership Agreements for Carriers and Shippers.
- 2004**
 - SmartWay Program Launch with 50 partners – February 2004.
 - Public Service Campaign. Outreach and Recruiting Focus.
 - 100 SmartWay Partners by year end.
- 2005**
 - Recruiting Focus - 300 Partners by year end.
 - New Partnership Categories created – Affiliates and Logistics.
 - Marketing and Outreach to trade and industry media.
 - Technology Verification Program; Grants to support real-world tests.
 - Innovative Financing Opportunities Sought.
 - Development of SmartWay Upgrade Kit and SmartWay Truck.


- 2006**
 - Partner Management Focus.
 - Approaching 500 Partners.
 - Tool Refinement, Program Expansion and Process Refinement.
 - Innovative Capitalization Efforts.
 - First Annual SmartWay Awards.
 - SmartWay Light-Duty Designation Launched.
 - SmartWay Grow and Go launched.

- 2007**
 - Supply Chain Concepts Introduced.
 - Launched SmartWay Tractors and Trailers.
 - Launched SmartWay Certified Vehicles.
 - SmartWay Finance Center Opens.
 - Second Annual Awards Held.
 - Accelerating Partner Growth.


- 2008**
 - Over 1,000 Partners.
 - Begin Development of Heavy-Duty Fuel Economy Test Program.
 - Supply Chain/SmartWay Transport 2.0 development begins.
 - Package Labeling Pilots Begin.
 - Consumer Awareness Marketing Begins.
 - New Web Portal.
 - US/Canada Partner Networking Forum.
 - Launch Partner Webinar Series.

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Module I. Exploratory Stage



EPA Transportation and Air Quality Portfolio



I-1

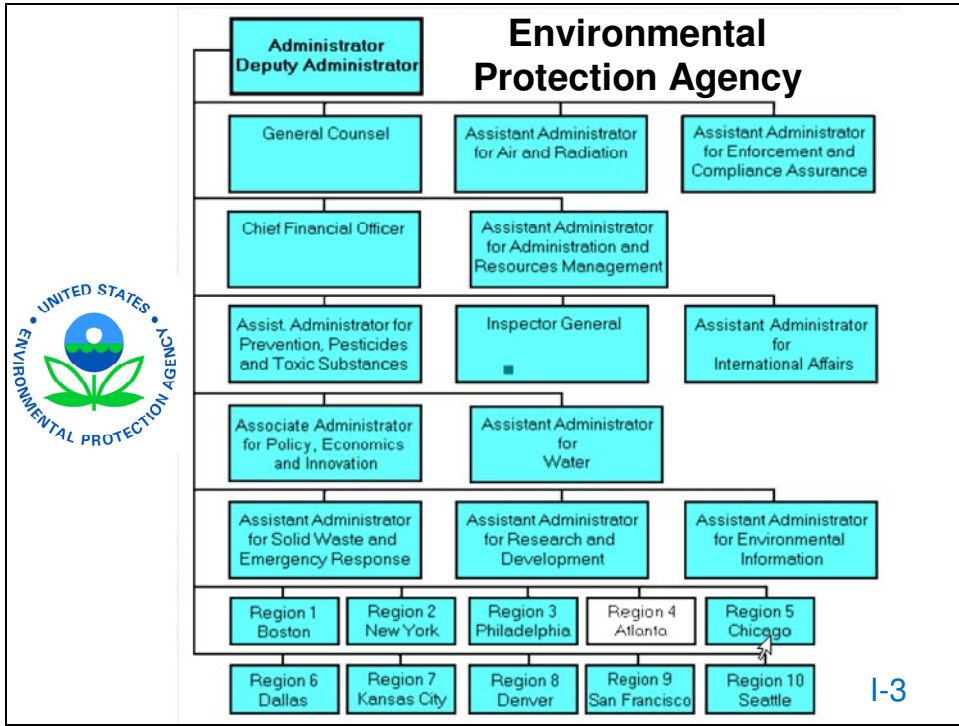


Transportation and Air Quality Strategy

- SmartWay is part of broad EPA strategy to address transportation sector emissions and energy use
 - Regulatory framework
 - Vehicles (on road and off-road)
 - Engines
 - Fuels and fuel additives
 - Modeling, testing and research
 - Grant programs
 - Public-private partnerships
 - Market mechanisms
 - Public education and awareness



I-2



I-3

Why do we care about vehicle emissions?

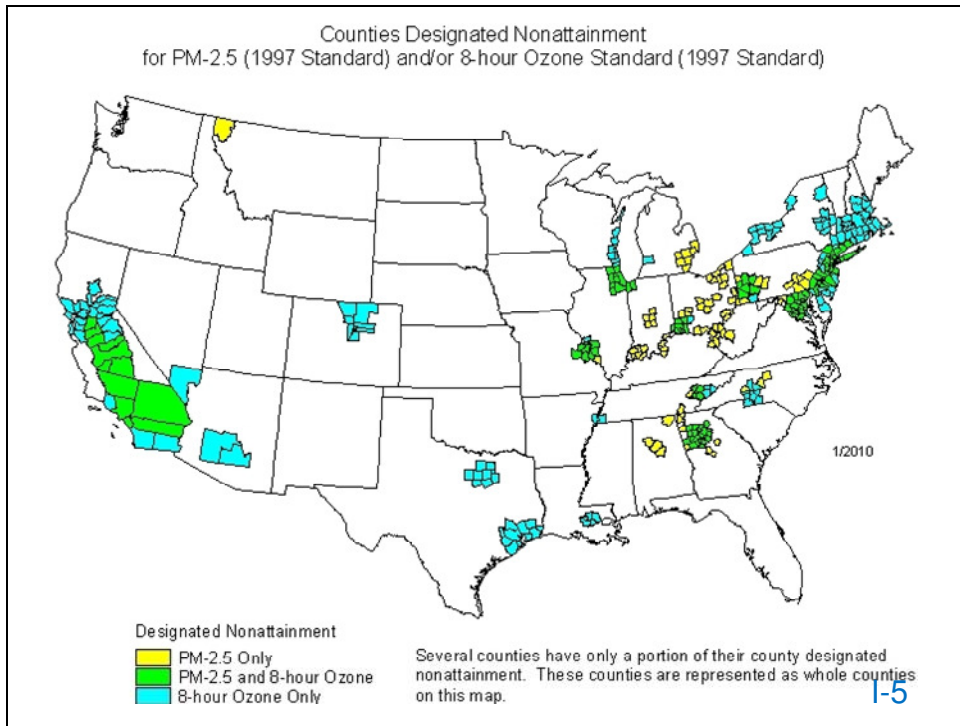
Ozone and PM2.5 contribute to serious public health problems:

- Premature mortality,
- Aggravation of respiratory and cardiovascular disease
 - increased hospital admissions and emergency room visits, school absences, loss work days, and restricted activity days
- Changes in lung function and increased respiratory symptoms,
 - altered respiratory defense mechanisms, and chronic bronchitis
- Diesel exhaust is of special public health concern,
 - Since 2002 EPA has classified exposure to diesel exhaust as likely to be carcinogenic to humans by inhalation from environmental exposures*

- Transportation sector is a major source of greenhouse gas emissions

* Source: U.S. EPA (2002) Health Assessment Document for Diesel Engine Exhaust. EPA/600/890/057F. ORD, Washington DC. <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060>.

I-4



The Clean Air Act requires EPA to set National Ambient Air Quality Standards for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are found all over the United States. They are particle pollution (often referred to as particulate matter), ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. These pollutants can harm your health and the environment, and cause property damage. Of the six pollutants, particle pollution and ground-level ozone are the most widespread health threats. EPA calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels.

U.S. Comprehensive Regulatory Approach on Clean Fuels and Vehicles

○ Clean Cars and Passenger Trucks (1999 rulemaking)

- Tier 2 Standards
- Gasoline sulfur control (30 ppm avg / 80 ppm max, 2006 for most refiners)
- 77-95% lower light-duty vehicle standards (beginning in 2004)
- Same standards for light trucks and cars; gasoline and diesel



○ Clean Heavy-Duty Trucks and Buses (2000 rulemaking)

- Heavy-Duty 2007 Standards
- Diesel sulfur control (15 ppm maximum, beginning in 2006)
- 90% lower heavy-duty gasoline & diesel vehicle standards
- PM filter forcing standards, NOx catalyst based standards



○ Clean Nonroad Diesel Engines and Equipment (2004 rulemaking)

- Nonroad Tier 4 Standards
- Diesel sulfur control (2 steps - 500 ppm in 2007, 15 ppm in 2010)
- 90-95% lower emission standards - based on highway technology



○ Locomotive and Marine Diesel Standards (2008)

- Marine diesel sulfur control (15 ppm maximum) in 2012
- 90% cut in PM emissions; 80% cut in NOx emissions



We know that technologies exist to decrease the sulfur content of diesel, that this technology works and is widely deployed, and that the costs of reducing sulfur in diesel are far outweighed by the public health benefits. The benefits of ultra-low sulfur (15 parts per million - ppm) diesel fuel (ULSD) are multiplied many times over when combined with advanced emission control devices on trucks and buses. These devices, which make use of ULSD, are now used in the United States and the costs of reducing the sulfur content of diesel did not lead to major price increases for U.S. consumers.

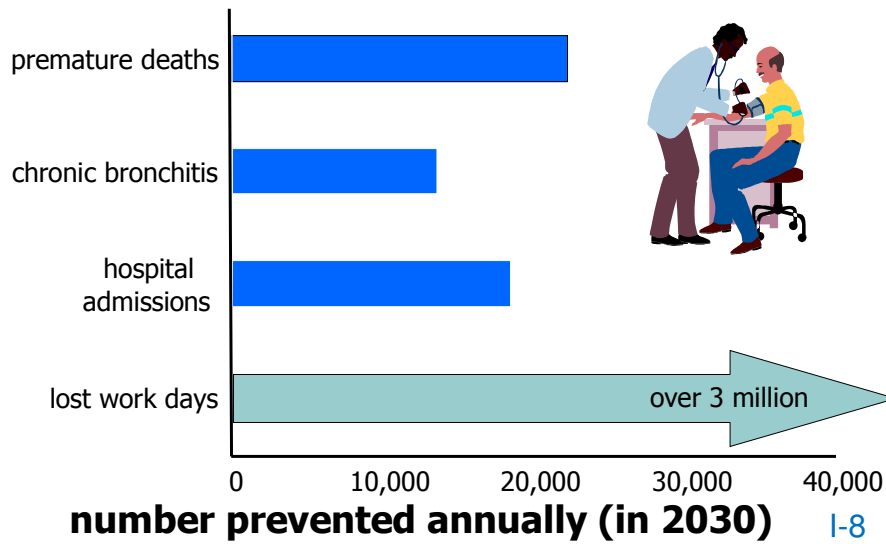
In the U.S., current regulations call for 15ppm ULSD content, because we strongly believe that the ultra-low sulfur content, along with clean engines and appropriate advanced emission control devices, significantly reduces particulates and enables the control technology to work optimally.

Reducing Sulfur Levels in Fuel is Critical

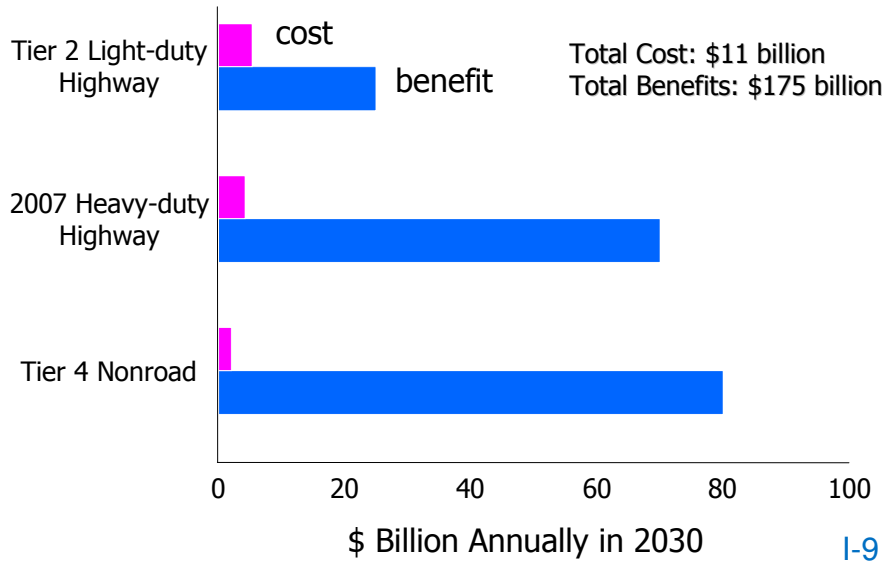
- **Sulfur is a catalyst poison**
- Removing sulfur, like removing lead from gasoline, allows for maximum catalyst efficiency
- Reductions in fuel sulfur provide immediate PM reductions and is very cost-effective
- U.S. Low Sulfur Gasoline
 - New Tier 2 vehicles have near zero running emissions
 - Existing vehicles see significant improvement from the new fuel
- U.S. Ultra-Low Sulfur Diesel Fuel (Highway and Nonroad)
 - Enables PM filters that can eliminate 99% of carbonaceous PM
 - Enables advanced NOx catalysts giving 90+% reductions
 - Allows for retrofit of existing vehicles with highly efficient control devices

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Tremendous Health Benefits



EPA Programs Are Cost-Effective



Summary Benefits and Costs of EPA's Diesel Regulatory Programs

2030 Annual	Tier 2 Standards	Heavy Duty 2007	Non-Road Tier 4	Total
Cost	\$5 billion	\$4 billion	\$2 billion	\$11 billion
Net Benefits	\$25 billion	\$70 billion	\$80 billion	\$175 billion
Premature Mortality	4,300	8,300	12,000	24,600
Hospital Admission	3,000	7,100	8,900	19,000
Lost Work Days	0.7 million	1.5 million	1.0 million	3.2 million

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Additional Information: EPA's 2007 Heavy-Duty Highway Diesel Regulations

EPA's Clean Air Highway Diesel final rule required a 97 percent reduction in the sulfur content of highway diesel fuel, from 500 ppm, to 15 ppm.

The U.S. and many other countries approached the regulation of sulfur in diesel fuel and in clean diesel engines simultaneously.

The regulations require:

15 ppm sulfur in diesel fuel

Cleaner engines and particulate filters

Once this action is fully implemented, environmental benefits include annual reductions of 2.6 million tons of smog-causing oxides of nitrogen (NO_x) emissions and 110,000 tons of PM.



Designing and Implementing a Freight Sustainability Program

Tools, Best Practices and Lessons Learned



I-11



Development of U.S. EPA's SmartWay Transport Partnership

- Brief Overview of SmartWay
- Four Parts of Planning and Implementation
 - Module 1: *Exploratory Stage, 2001-2002*
 - Module 2: *Design and Development Stage, 2003*
 - Module 3: *Implementation Stage, 2004-2005*
 - *Part 1: Marketing*
 - *Part 2: Recruiting & Partner Management*
 - Module 4: *Expansion and Lessons Learned, 2006 and beyond*



I-12

The initial idea of SmartWay started in 2001, and it officially launched in February 2004. As the Partnership approached 500 partners towards the end of 2006, EPA considered how to sustain the growth, improve the Partnership, and ensure that Partners are successfully meeting goals.



Overview

SmartWay Transport Partnership

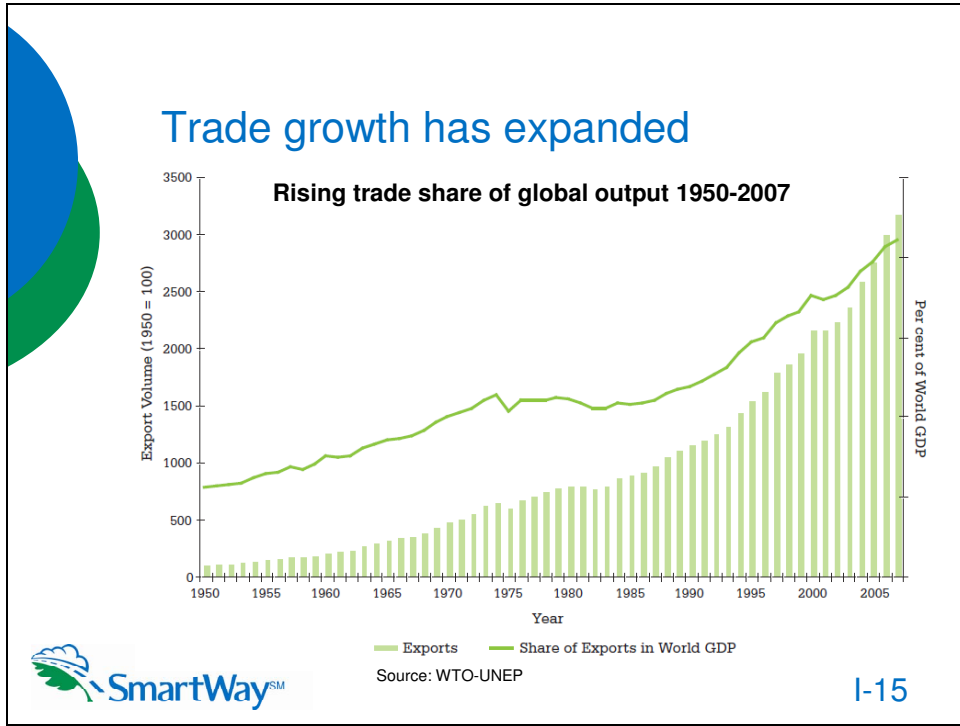


I-13

US Domestic freight

- Currently, truck and rail:
 - Travel over 220 billion miles
 - Consume over 40 billion gallons of fuel
 - Account for over 20% of transportation related energy use
 - Produce approximately 380 million metric tons of CO₂
 - Will increase usage dramatically over next decade





In 2007, developing countries accounted for 34% of world merchandise trade – double the rates of the 1960s.

How did SmartWay Transport Partnership begin?

○ Freight carrier goals

- Reduced fuel consumption
- Public recognition
- Better public image
- Benefits for carriers
- Better relationship with government



○ EPA goals

- Reduced CO2 emissions
- Improve energy security
- Better relationship with the trucking industry

○ Freight shipper goals

- Better understanding and control of transportation foot print
- New ways to promote corporate citizenship and sustainable business practices



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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
- Launched February 2004
- Developed with input from American Trucking Association and the freight industry
 - Charter Partners



I-17

EPA approached ATA about jointly developing a program that would benefit both the freight industry and the environment

SmartWay Transport Partnership: Best Practices for Sustainable Goods Movement

1. Partnership

- Assess, benchmark and track emissions of carriers, shippers, and logistics companies
- National idle reduction program
- New carbon assessment tools
- Partner support (PAM, helpline)
- GHG and fuel savings

2. Technology Program

- Test program
- SmartWay Tractor/Trailer
- SmartWay-verified technologies
- Test methods

3. Finance Program

- Innovative finance programs (grant programs, banks, retailers)
- SmartWay Finance web site

4. Outreach and Education

- Partner recognition - SmartWay web site, logo, and awards
- Partner education – webinars, fact sheets, e-update, web site, workshops, events
- Innovative pilot programs
- Brand marketing – PSAs, media campaigns, events

5. International Activities

- Conferences
- Role model
- Projects
- Global supply chain

6. Light Duty Vehicles

- SmartWay certified vehicles
- Preferential leasing, purchasing
- Consumer education



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How Does SmartWay Work?

○ Shippers:

- Top of the supply chain, drive marketplace demand
- Give preferred status to SmartWay Carrier Partners
- Get better data to improve their own shipping operations
- Modify logistics operations to improve efficiency and reduce emissions, for example:
 - Inter-modal Shipping
 - Full Truck Loads
 - Warehouse Improvements
 - Idle-Reduction at Docks
- Get recognition and PR value with SmartWay brand

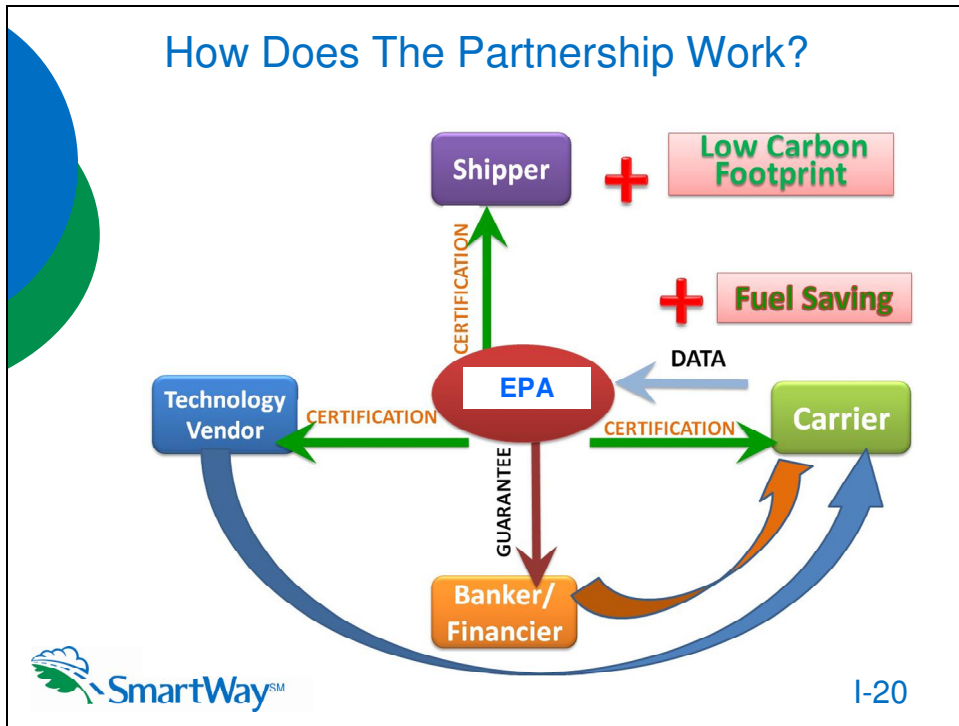
● Carriers:

- Gain competitive advantage:
 - Preferred status, plus
 - Fuel efficiency, savings
- Reduce emissions
- Integrate fuel saving technologies and strategies into fleets, such as:
 - Idle Reduction
 - Improved Aerodynamics
 - Efficient Tire Systems
 - Driver Training
 - Renewable Fuels
 - Advanced Lubricants
- Get recognition and PR value with SmartWay brand



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How Does The Partnership Work?



I-20

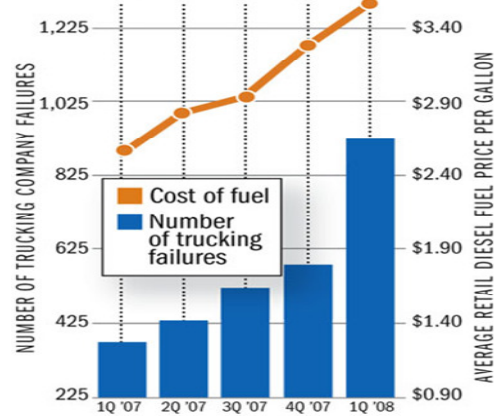
Why Do Companies Join SmartWay Transport Partnership?

- SAVE FUEL
- SAVE MONEY
- REDUCE EMISSIONS




Trucking company failures

Number of trucking company failures compared against the rising cost of fuel




SOURCE: Avondale Partners estimates and Energy Information Administration



SmartWay Partner Results

- Over 2,800 Partners
 - Drive approximately 650,000 trucks (10% of industry)
 - Travel over 60 billion miles per year (30% of industry)
 - Consume over 12 billion gallons of fuel (32% of industry)
 - In addition, encompasses - rail operators, freight shippers, logistics companies, technology manufacturers, trucks stops, ports, banks, vehicle and equipment dealer and service centers
- Since 2004, SmartWay Partners saved
 - 14.7 million metric tons of CO2
 - 1.5 billion gallons of diesel fuel
 - 3.6 billion dollars in fuel costs
 - Equivalent to taking over 2.8 million cars off the road for 1 year

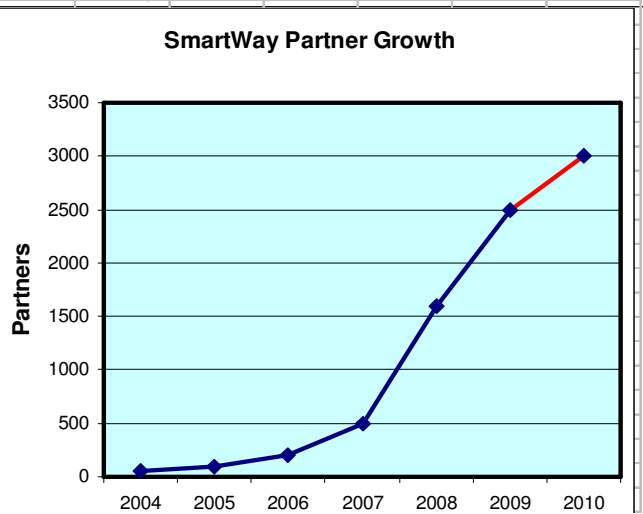


I-22

	Industry	Partners	% Industry
# of Companies	500,000	1,228	.22%
# of Trucks	4,200,000	600,000	7%
Gallons Consumed	29 billion	12 billion	24%
Miles Traveled	122 billion	51 billion	24%

Have saved the freight industry over \$2 billion in annual fuel and maintenance costs.

SmartWay Partner Growth



I-23

Some of the over 1,000 SmartWay Partners





How Can Carriers Achieve Savings and Meet Goals?

Strategies used by partners include...

Idle Reduction
Single Wide Tires
Improved Aerodynamics
Driver Training
Improved Freight Logistics
Automatic Tire Inflation Systems
Reducing Highway Speed
Low Viscosity Lubricants
Intermodal Shipping



I-25

Important to note that EPA does not promote any particular company or brand, nor do they promote one technology type over another. It's all about flexibility, and what works for each Partner

Idle reduction includes Shore power, APUs, TSE

Single Wides, still controversial, there are significant pros: Weight reduction, rolling reduction, stability. Some SmartWay Partners have helped disseminate real-world data showing these benefits.

Driver Training includes many different things, but EPA signed an MOU with NRCAN (discussed later) to allow SmartWay Partners to use NRCAN's driver training materials.



Public Recognition

- The SmartWay Transport logo
 - The EPA SmartWay logo is a mark of cleaner transportation
 - The SmartWay Transport Partner logo identifies the Partner as a responsible corporate citizen and environmental steward



I-26

The SmartWay Transport Partnership Brand

- SmartWay Partner Logo
 - No-idle signs at distribution centers
 - Letterhead
 - Websites
 - Other business-to-business publicity
- Lets the public and potential customers know that the Partner is a high environmental performer
- FLEET model score determines eligibility to use the logo



I-27

Logo Use Criteria:

Carriers – FLEET score of 1 or better (combination of CO₂, NO_x and PM fleet emissions)


Shippers/Logistics – Ship 50% or more of freight with Partner Carriers (calculated by metric that company chooses – ton-miles, annual transportation spend, # of trips)

Affiliates – Upon joining the Partnership

The SmartWay Transport Partnership Brand




SmartWay Web Portal




SmartWay Home
Basic Information
SmartWay Vehicles
SmartWay Transport
Newsroom

SmartWay
Recent Additions | Contact Us
Search: All EPA This Area
You are here: [EPA Home](#) » [Transportation and Air Quality](#) » [SmartWay](#)

 The Smart Way to Save Fuel,
Money, and the Environment


SmartWay Certified Vehicles



Shopping for SmartWay Certified Vehicles? Look for the leaf on the EPA Green Vehicle Guide!

- Smart Buying and Driving Tips
- Learn More about SmartWay Certified Vehicles
- Financing discounts for SmartWay Certified Vehicles


SmartWay Financing Options



Get technology and truck financing through our **Innovative Financing!**

- SmartWay Finance Program
- SmartWay Finance Center [\[XXX Disclaimer\]](#)


New Leaf Campaign



Learn how choosing green cars and trucks can save and money, and help the environment!

- Watch the TV commercial
- Listen to the radio commercial
- View the print PSAs


SmartWay Transport



Ready to join a partnership that will save money and reduce fuel use?

- Join SmartWay
- Download the FLEET Models
- View the Partner List
- SmartWay Publications
- Verified Technologies
- Shipper Employee Resource Kit

SmartWay Tractors & Trailers




Learn about the benefits of Certified SmartWay tractors and trailers!


- Partner FAQs
- OEM Specifications
- License Agreement
- Idling Reduction Strategies
- Federal Excise Tax Exemption
- Guide to Tractor Certification

News & Features

- EPA Celebrates the 40th Anniversary of Earth Day--April 22, 2010
- New SmartWay E-update for April, 2010



I-29



SmartWaySM
Transport Partnership
U.S. ENVIRONMENTAL PROTECTION AGENCY

I-29


New PSA Campaign Multi-media: TV, Radio, Print



Reflects Well On You.

Driving a vehicle that is fuel-efficient, produces fewer greenhouse gases, and can save you money reflects well on its owner—especially these days, with growing concerns about climate change. The U.S. Environmental Protection Agency makes it easy to identify environmentally friendlier cars and trucks. Just look for the SmartWay® leaf. SmartWay will help change the way Americans drive.

For more on SmartWay certified cars and trucks, leaf through our website at www.epa.gov/smartway.

EPA 



Reflects well.
(And helps keep the air clean, too.)

Let's face it, any time your fleet can boost fuel efficiency by 10 to 20%, it reflects well on you and your bottom line. U.S. EPA certified SmartWay Tractors and Trailers allow you to do just that. You can also display the SmartWay certification mark, a symbol of environmental distinction, which also reflects well on you. The SmartWay leaf indicates to both industry and the public that you operate the cleanest and most efficient trucks and equipment available today.

To learn more, visit epa.gov/smartway





I-30

SmartWay Certified Vehicles

The screenshot shows the EPA Green Vehicle Guide website. At the top left is the EPA logo. The main header is "Green Vehicle Guide" with a search bar and navigation links. Below the header is a banner that says "You Have Green Options" with a green car. A central text block reads: "Use this guide to choose the cleanest and most fuel-efficient vehicle that meets your needs. Low emissions and good fuel economy are both important for the environment." Below this are three search boxes: "Look Up a Vehicle", "Look Up a Vehicle by Type", and "Look Up Greenest Vehicles". Each box contains dropdown menus for Year, State, Make, and Model, along with a Submit button. The "Look Up Greenest Vehicles" box also includes checkboxes for SmartWay and SmartWay Elite. A sidebar on the left lists various site navigation options. At the bottom, there are footnotes and a note about EPA's fuel economy estimates for 2008 models.

Green Vehicle Guide

Recent Additions | Contact Us Search: All EPA This Area Go

You are here: [EPA Home](#) » [Transportation & Air Quality](#) » [Green Vehicle Guide](#)

[Home / Basic Search](#) [Advanced Search](#) [Compare](#) [Complete Guide](#)

You Have Green Options

Use this guide to choose the cleanest and most fuel-efficient vehicle that meets your needs. Low emissions and good fuel economy are both important for the environment.

Look Up a Vehicle
Year:*
State:*[†]
Make:*
Model:

Look Up a Vehicle by Type
Year:*
State:*[†]
Type:*

Look Up Greenest Vehicles
SmartWay vehicles are good environmental performers.
 SmartWay SmartWay Elite
Year:*
State:*[†]

* Required.
[†] Choose the state where you plan to buy your vehicle, or choose ALL STATES. Choosing ALL STATES might result in multiple listings due to differences between federal and California emission requirements.

NOTE: EPA's fuel economy estimates for 2008 models are *calculated differently* than for 2007 and earlier years. The fuel economy estimates on this website for model years prior to 2008 have been recalculated using the model year 2008 methodology. As a result, fuel economy estimates for 2007 and earlier years for most models will be lower than the estimates listed originally in the Fuel Economy Guide and posted on the fuel economy website at [epa.gov](#).



SmartWay Certified Tractors & Trailers

Turn Over A New Leaf To Save Big



Introducing SmartWay Certified Tractors & Trailers
From These Manufacturers

Tractor makers:

- Freightliner
- International
- Kenworth
- Mack
- Peterbilt
- Volvo

Trailer makers:


- Great Dane
- Trailmobile
- Utility
- Wabash

To learn more visit epa.gov/smartway




SmartWaySM

I-32




SmartWay Timeline 2001 - 2005

2001	<ul style="list-style-type: none"> ➤ Initial discussions for design/development of a Ground Freight Transportation Initiative ➤ "Industry Options for Improving Ground Freight Fuel Efficiency" – Dec, 2001 - Report on Freight Trucking/Rail Sectors and Efficiency Strategies
2002	<ul style="list-style-type: none"> ➤ Industry Responds to initial Report ➤ Charter Partners join ➤ Design and Development of Program including FLEET Model; Partnership commitments and goals; Logo development, guidance, and usage; Begin planning outreach plan
2003	<ul style="list-style-type: none"> ➤ FLEET Model –develop as a Partner tool/resource; Partnership Agreements for Carriers and Shippers, Marketing and Outreach materials – Overview, Fact Sheets, Strategies, etc. ➤ Program Launch Planning
2004	<ul style="list-style-type: none"> ➤ SmartWay Program Launch – February 2004 ➤ PSA Campaign. Outreach and Recruiting Focus. ➤ 100 SmartWay Partners by year end
2005	<ul style="list-style-type: none"> ➤ Recruiting Focus - 300 Partners by year end ➤ New Partnership Categories created – Affiliates and Logistics




I-33

This timeline includes a few key events from each year. The module-specific timelines include additional points for each year.




SmartWay Timeline 2006 - 2008

2006	<ul style="list-style-type: none"> ➤ Partner Management Focus ➤ Approaching 500 Partners ➤ Tool Development, Program Expansion and Refinement
2007	<ul style="list-style-type: none"> ➤ Supply Chain Concepts Introduced ➤ Launched SmartWay Tractors and Trailers & Certified Vehicles ➤ SmartWay Finance Center Opens ➤ Second Annual Awards Held ➤ Accelerating Partner Growth
2008	<ul style="list-style-type: none"> ➤ Over 1,000 Partners ➤ Supply Chain/SWT 2.0 development begins ➤ Package Labeling Pilots Begin ➤ Consumer Awareness Marketing Begins ➤ SmartWay International Summit ➤ US/Canada Partner Networking Forum ➤ Launch Partner Webinar Series



I-34

This timeline includes a few key events from each year. The module-specific timelines include additional points for each year.




SmartWay Timeline 2009 - 2010

2009	<ul style="list-style-type: none">➤ Over 2,000 Partners➤ DERA and SmartWay Grants➤ Enhanced technology verification program➤ Begin Development of Heavy-Duty Fuel Economy Test Program
2010	<ul style="list-style-type: none">➤ Almost 3,000 Partners➤ Supply Chain carbon accounting tools fully developed, beta testing and peer review➤ International stakeholder support➤ Refined marketing program



I-35

This timeline includes a few key events from each year. The module-specific timelines include additional points for each year.



Module 1 Exploratory Stage (2001-2002)

2001	Initial discussions for design/development of Ground Freight Transportation Initiative <ul style="list-style-type: none">➤ "Industry Options for Improving Ground Freight Fuel Efficiency" – Dec, 2001 - Report on Freight Trucking/Rail Sectors, Efficiency Strategies, and Fleet/Industry Characteristics➤ Consider common voluntary program elements and freight industry trends to design the program
2002	<ul style="list-style-type: none">➤ Identifying Stakeholders and Champions➤ Charter Partners join➤ Design and Development of Program including FLEET Model; Partnership commitments and goals; Logo development, guidance, and usage; Begin planning outreach plan





State of Freight Transportation in the US

- Before designing SmartWay, EPA conducted research on the current state of freight transportation
 - Freight industry energy use
 - Environmental impacts
 - Trends and forecasts
- Contractor performed substantive report on state of industry and potential for energy savings



I-37

An initial report was written about the freight industry, and included ways to improve its efficiency.

EPA then developed the Partnership with input from industry and began to design program elements.



State of Freight Transportation in the US

- At the time of the report (2001), ground freight:
 - Accounted for 19.4% of total transportation energy use
 - Contributed 50% of mobile source emissions of ozone precursor NO_x
 - Contributed 30% of mobile source particulate matter (PM) emissions.
 - Contributed 20% of the mobile source carbon dioxide (CO₂)
 - Was expected to grow more rapidly than all transportation sectors except air travel



I-38

This is a significant portion of total transportation emissions, and creates a large opportunity for improvement.

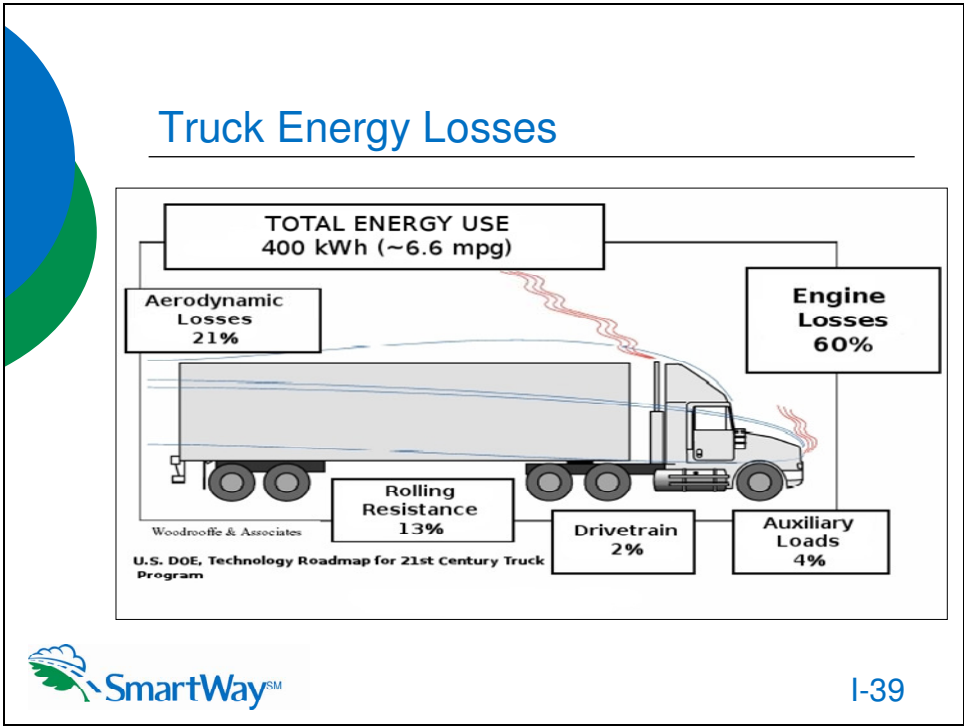
Freight trucks make up a significant portion of mobile source emissions, and the sector is expected to grow significantly. With fuel remaining one of the biggest operational expenses to most fleets, a program that reduces fuel use while reducing emissions should be embraced by the industry and the regulators.

Ground freight accounts for:


About 50 percent of transportation NO_x

About 27 percent of transportation PM

About 18 percent of transportation CO₂




A significant portion of the energy a truck loses while in motion can be recouped with advanced technologies. This saves fuel and reduces emissions (a win-win for EPA and the industry).



Opportunities to Improve Efficiency

Fuel Savings per truck (<3%)	2010 Emission Reduction (MMTCE*)
Automatic Tire Inflation	0.70
Tare Weight Reduction (3000 lbs.)	0.80
Low-Friction Drive Train Lubricants	0.50
Low-Friction Engine Lubricants	1.50
Reduced Rolling Resist. (Wide based tires)	2.30
Fuel Savings per truck (3%<x<6%)	
Improved Trailer Aerodynamics	1.90
Driver Training and Monitoring	1.80
Improved Tractor Aerodynamics	1.20
Fuel Savings per truck (>6%)	
Speed Reduction (70 to 65 mph)	0.90
Speed Reduction (65 to 60 mph)	3.90
Idling Reduction (APU)	2.90
Total Maximum Benefit (current technologies)	18.4

 *million metric tons of carbon equivalent

I-40

These MMTCE savings estimates consider:

All trucks across entire fleet

All trucks are 'perfect,' using all technologies as a package

Retrofitting existing trucks with these technologies

Idle Reduction Technologies

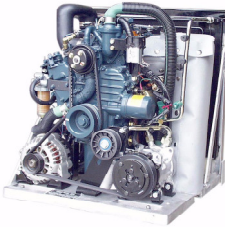
Average fuel savings

Trucks: 1 gal/hr
Rail: 4 - 12 gal/hr

Emissions Controlled

CO₂, NO_x, and PM

- Automatic Shut-Down/Start Up System
- Battery Powered Systems
- Diesel Driven Heating System
- Auxiliary Power Unit/Generator Set
- Truck Stop Electrification



Trailer Aerodynamics

Average fuel savings	Emissions Controlled
Trucks: 5%	CO ₂ , NOx

- Trailer Fairings, Side-skirts
- Nose Cone and Trailer Tail



Low Rolling Resistance Tires

Single Wide Base and Improved Duals

Average fuel savings Emissions Controlled

Trucks: 4 - 5% CO₂, NOx

- Single-wide tires
 - Reduced rolling resistance
 - Reduced weight
- Low rolling resistance dual tires



Wheel and Tire Inflation Improvements

Aluminum Wheels, Tire Pressure Monitoring and Inflation

Average fuel savings

Trucks: 3 - 5%

Emissions Controlled

CO₂, NO_x

- Tire pressure monitoring and inflation
 - Ensure appropriate pressure for efficiency
 - Reduced maintenance and extended tire life
- Aluminum wheels save weight and inertia energy



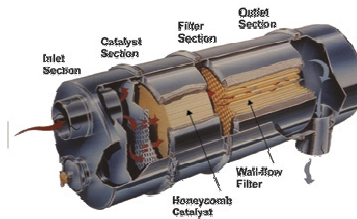
Exhaust After-Treatment Devices

Average fuel savings

Emissions Controlled

PM

- Diesel Oxidation Catalysts
 - Estimated cost: \$1,000
 - Reduce PM by 25% – 40%
- Particulate Matter Filters
 - Estimated cost \$6,000
 - Costs expected to drop sharply after 2007
 - Reduce PM by 80% – 90%



I-45

Intermodal Shipping



Response to Industry Report

- In December, 2001, EPA distributed the report to industry experts during a day-long workshop
- In January, 2002, a larger roundtable event was held to unveil the idea to industry stakeholders
- Began process of stakeholder outreach and input from industry leaders



Ground Freight Transportation Initiative Roundtable 1850 K Street NW, Suite 1000 Washington, DC 20006 (202) 862-1200	
Agenda	
9:30 a.m.	Continental Breakfast
10:00 a.m.	Introductions
10:10 a.m.	Overview of the Ground Freight Transportation Initiative -- US EPA <ul style="list-style-type: none">- OIAQ's vision for its voluntary programs- The transportation brand label- How the Ground Freight Transportation Initiative fits into the larger picture
10:20 a.m.	Questions about the Industry Options Paper -- ICF Consulting
10:45 a.m.	Guided Discussion -- All participants <ul style="list-style-type: none">- Industry suggestions for program design improvement- What are the barriers to improved freight emissions?- Where can industry stakeholders coordinate to reduce inefficiencies in the freight sector?- Examples of active, replicable efficiency models- What is the value of the label to stakeholders?
12:30 p.m.	Working Lunch - Break out sessions <ul style="list-style-type: none">• Discuss specific performance goals for each segment<ul style="list-style-type: none">• Shippers• Carriers• Manufacturers
2:00 p.m.	Guided Discussion

I-47

Industry Experts were from Academic, Government and non-profit organizations: Massachusetts Institute of Technology, Argonne National Laboratory, Burlington Northern Santa Fe, California Trucking Association

The January 2002 workshop included groups that eventually became Charter Partners: Home Depot, FedEx, UPS, Roadway Express



What is a Voluntary Program?

- Sometimes called Public-Private Partnership (PPP) or Market Transformation programs
- Structured relationship between a government agency and multiple private sector entities to address a public-policy problem
- Program participants (“Partners”) commit to
 - specific verifiable action beyond “business as usual”
 - monitoring and sharing information
- Government commits to
 - barrier removal
 - technical support
 - public recognition
 - other incentives
- Typically memorialized in a Memorandum Of Understanding or Partnership Agreement



I-48

All voluntary partnerships fit within these design elements. This presentation will discuss how SmartWay was designed within these elements.

PPPs are a popular policy tool in the U.S.
EPA is a leader in Voluntary Programs



Energy Star, the most established EPA partnership, paved the way for EPA to explore more voluntary efforts. ENERGY STAR has over 60% brand awareness with consumers today. ENERGY STAR has over 40 different product categories they label – appliances, windows, electronics, buildings (homes and commercial), etc.

All of these logos are EPA voluntary programs, except:

VPP (Voluntary Protection Programs), which is OSHA

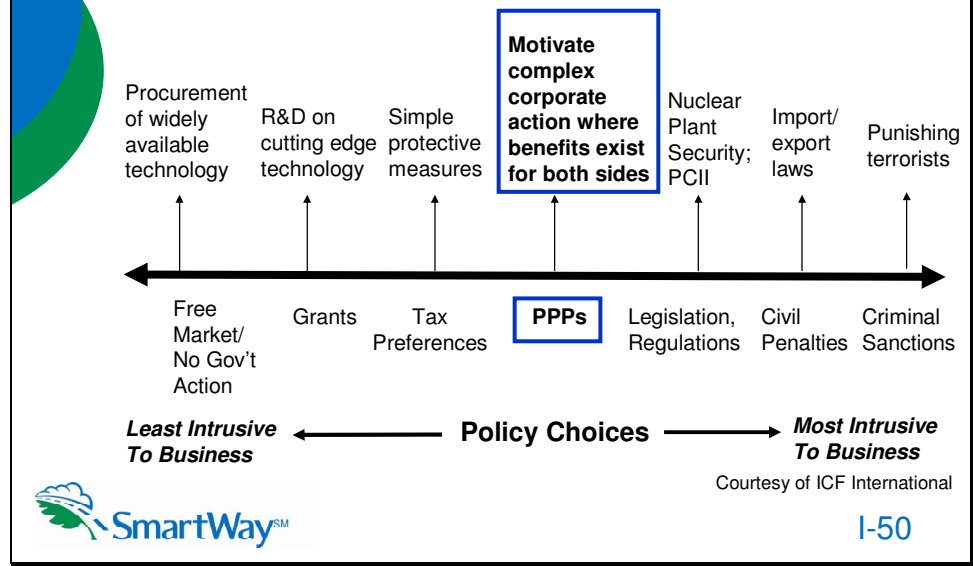
Methane to Markets, which is an international partnership with 14 countries. EPA chairs the steering committee.

CHP = Combined Heat and Power Partnership

AgStar = Agricultural-based Partnership

C2P2 = Coal Combustion Products Partnership

PPPs Fit Within a Range of Policy Tools






PPPs Fit Within a Range of Policy Tools

- Establishing a program that provides value to participants
 - The “value proposition” is a key drivers of success... is it compelling enough?
- Setting goals and measuring performance
 - How do you balance the need for evaluation with limiting burden on partners?
- Recruiting partners
 - How do you get Partners to commit? Are your communications materials effective?
- Getting partners to implement program
 - How do you keep Partners interested?
- Staffing the program and maintaining over time
 - What are the initial staffing needs? Range of services and expertise required?
- Moving the Market
 - Does the program have the cache to continue to attract partners?



I-51



Voluntary Programs – Lessons Learned

- Challenge 1: Establishing a Program that Provides Value
 - Identify any barriers (e.g., regulatory, informational, etc.) and develop program support to overcome barriers
 - Create a “value proposition” (e.g., how will it benefit participants?)
 - Identify motivators and design program to capitalize on them (e.g., Recognition, Business Opportunities):
 - Involve potential partners in the design of the program
 - Use feedback loops to regularly measure and evaluate the current costs and benefits of participation; and adjust program as needed




I-52



Voluntary Programs – Lessons Learned

- Challenge 2: Setting Goals and Measuring Performance
 - Set measurable goals up front, evaluate and modify program
 - Set up ways to estimate (and possibly inhibit) “free riders”
 - Simplify the data collection – the more onerous the data collection, the less likely Partners will want to participate



Voluntary Programs – Lessons Learned

○ Challenge 3: Recruiting Partners

- Identify and understand target audience and create effective communication materials
- Use experienced business marketers rather than analytical staff for recruiting and use professional sales techniques
- Reach out to the appropriate person (e.g., Decision-making authority, “Champion” within organization)
- Your partners are businesses - “Don’t waste their time”
- Identify and recruit low-hanging fruit at first, but beware of free-riders
- Use third party recruiters effectively



I-54



Voluntary Programs – Lessons Learned

- Challenge 4: Getting Partners to Implement the Program
 - Link rewards to successful completion of project
 - Take advantage of momentum when the partners first join
 - Set long- and short-term goals and milestones
 - Constantly resell the program to partners and communicate often
 - Provide training and other needed support



I-55



Voluntary Programs – Lessons Learned

- Challenge 5: Staffing the Program and Maintaining Over Time
 - Use consistent core staff throughout program, adding expertise as needed
 - Be ready to invest in training for core staff to shore up skills they do not have
 - Use IT (e.g., sales tracking systems, computer-based training, etc.) to maximize your results



Voluntary Programs – Lessons Learned

○ Challenge 6: Moving the Market

- Focus on long-run behavioral change for real, sustained market transformation
- Recognize the value of market leaders as early adopters of the program in moving the market
- Use a sector-based approach to identifying triggers and motivators
- Develop program messages and value statements that can endure market and economic fluctuations.
- Constantly use feedback loops to evaluate and adjust your approach



I-57



Benefits for the Environment and Economy

Fuel Consumption, CO₂, NO_x, and PM

- Lessen health impacts from diesel emissions:
 - Exacerbates asthma, respiratory and cardiac illness
 - Possible human carcinogen
- Improve air quality:
 - 474 counties are out of compliance with the 8-hour ozone standard
 - 225 counties are out of compliance with the particulate matter standard
- Lessen the impacts on our most vulnerable populations:
 - Children, the elderly and people with existing health conditions
- Reduce CO₂ emissions that contribute to climate change:
 - Every gallon of diesel consumed creates 22.2 pounds of CO₂
- Improve energy security:
 - Fuel prices, availability



I-58



Benefits for Carriers and Shippers

- Reduced fuel consumption and fuel costs
- Improved business relationships
- Create incentives for drivers
- Access to EPA technical and financial support:
 - Testing and verification programs for the latest technologies
 - Financial assistance programs around the country
- Create Recognition for your company and industry
- Marketing opportunities
 - EPA markets SmartWay Partners
- Attract socially responsible investors
 - Huge increase in number of corporations publishing sustainability reports
- Measure and improve your environmental footprint



I-59

Staffing Needs (Program Initiation) 2001 - 2002

- 2 – 3 FTEs (full-time equivalents)
- Staff should have:
 - Experience in freight industry, able to develop a profile of the national trucking industry
 - Staff with experience in voluntary program design and implementation



I-60

These are the primary staffing needs for program initiation and exploration.

Discussion: Examining the Exploratory Stage for Your Country

Discussion about Potential Partners/Leaders

1. Who are the industry leaders and nonprofit associations that can serve as leaders?
2. What are the opportunities to leverage existing programs and initiatives?
3. Are there groups in the financial services sector that can provide innovative financing to trucking companies and owner-operators?

Discussion about Freight Industry Structure

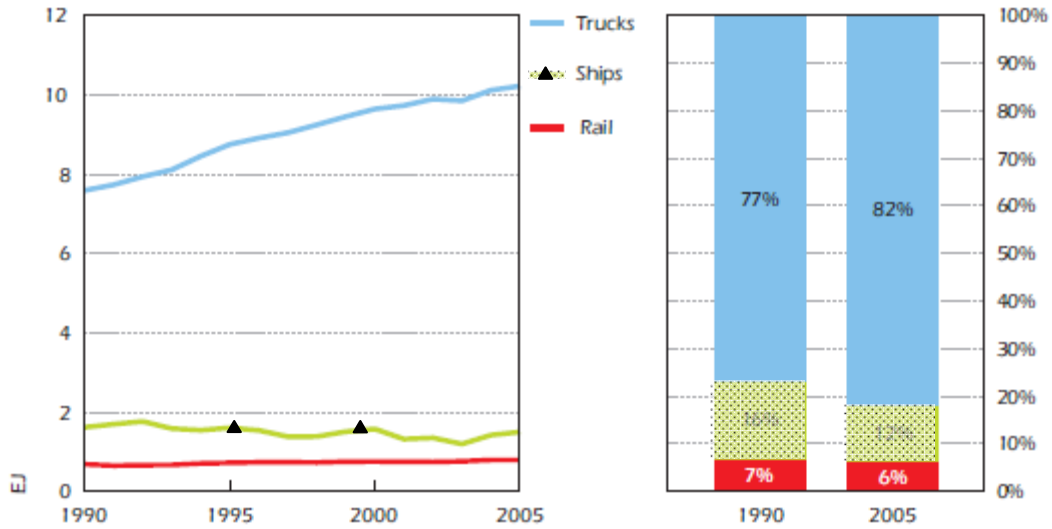
1. Review supplemental information on freight transport and energy use (see page I-47).
2. How significant is trucking and other modes in freight GHG emissions in your country? What are the trends in freight activity, emissions, and efficiency?

Discussion about Technology Opportunities

1. Review supplemental information on U.S. truck and rail technologies to improve energy efficiency (see page I-50).
2. Which efficiency strategies are most common in your country? Which are not?
3. Where are the greatest opportunities to increase market penetration of existing technologies?
4. Which emerging technologies hold the most promise?

Supplemental Information on Freight Energy Intensity

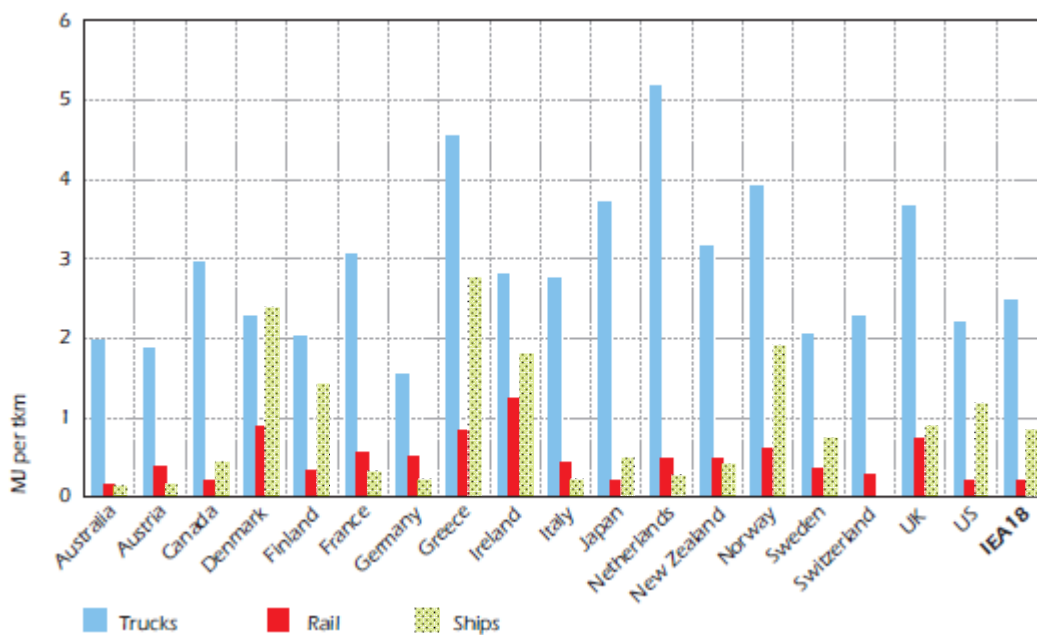
Truck Share of Freight Energy Has Grown Steadily since 1990



Source: *Worldwide Trends in Energy Use and Efficiency*, International Energy Agency, 2008

- Between 1990 and 2005, total energy used by trucks grew 32%.
- Rail and ship energy use remained unchanged.
- The truck share of freight energy grew from 77% in 1990 to 82% in 2005.

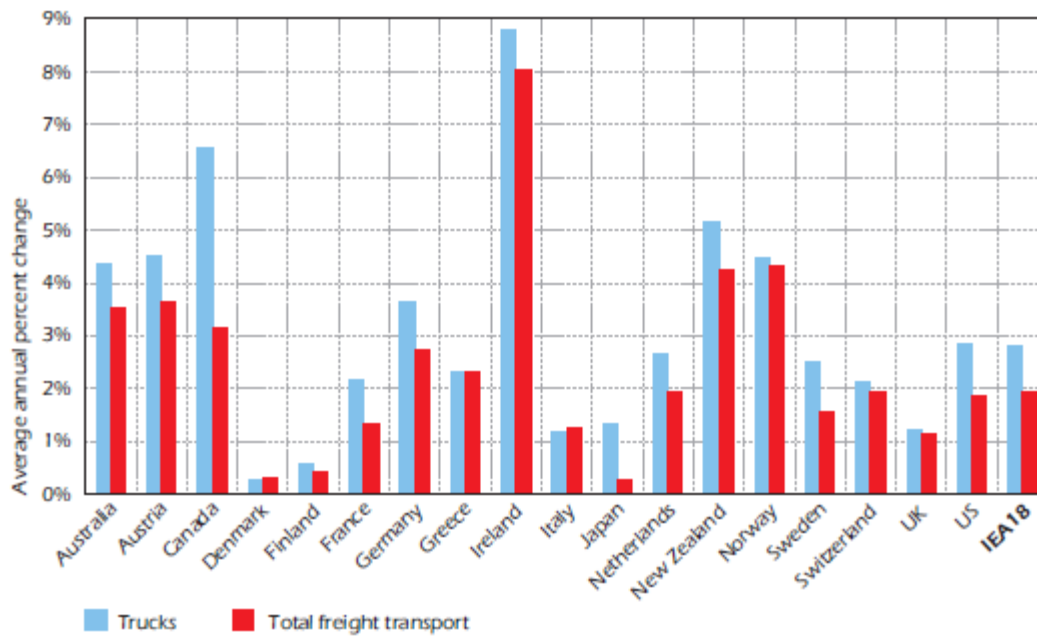
The Energy Intensity of Each Mode Varies Greatly by Country



Source: *Worldwide Trends in Energy Use and Efficiency*, International Energy Agency, 2008

- On average, truck energy intensity (MJ / ton-km) is triple that of ships and 15 times larger than rail.
- There is great variation across countries in the energy intensity of freight.
- In most countries, trucks require much more energy than rail or ships.

The Increase in Freight Volume Varies by Country



Source: *Worldwide Trends in Energy Use and Efficiency*, International Energy Agency, 2008

- Overall, truck volume increased 3% annually while total freight volume increased 2% annually.
- There is great variation across countries in the increase of freight volume
- In many countries, truck volume has increased at a much faster pace than overall freight volume.

Supplemental Information on Truck Technologies to Boost Fuel Efficiency

Reduced Aerodynamic Drag Technologies

Because aerodynamic drag dominates energy losses at highway speeds, improving a truck’s aerodynamics offers great potential gains in fuel efficiency. Excessive drag usually occurs at the front of the tractor, in the gap between the tractor and trailer, under the tractor and trailer, and behind the trailer.



Options to reduce aerodynamic drag include:

- Add-on or integrated cab-roof fairings (standard on many trucks).
- Cab extenders (sometimes called gap seals).
- Truck tractor side fairings.
- Front bumper air dam.
- Trailer side-skirts and front fairings.



	Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
Tractor aero package	3–5%	80-90% of van trailer trucks 50-60% of non-van trailer trucks	100% of truck tractors
Trailer aero package	3–5%	< 5% of trailers	100% of van trailers (accounts for 65% of VMT)

Reduced Rolling Resistance: Single-Wide Tires

A variety of tire options can reduce rolling resistance and improve truck fuel economy. A single wide-base tire can replace dual tires on the truck’s drive and trailer axles. Similar efficiency gains can be achieved using dual tires with low rolling resistance. Fuel economy can be further increased using lightweight cast aluminum alloy wheels and aluminum axle hubs.



	Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
	3–5%	<5% of trucks	100% of truck tractors

Reduced Rolling Resistance: Automatic Tire Inflation

Underinflated tires cause higher rolling resistance and fuel consumption. Proper tire inflation can be maintained at all times using automatic tire inflation systems that sense pressure and supply pressurized air to tires on a continuous basis. In addition to fuel savings, maintaining proper tire pressure will decrease tire wear, the frequency of road emergencies, and the time spent on periodic tire pressure inspection.



Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
1–2%	5–10% of trucks	100% of truck tractors

Reduced Frictional Losses: Fuel Efficiency Lubricants

Friction losses in the drive train (transmission and differential) and engine can be reduced by using low viscosity lubricants. Most manufacturers of lubricants produce “fuel economy” brands that have lower viscosity than standard lubricants. Low viscosity lubricants are usually synthetics, since they are better able to meet volatility requirements, but some mineral oils can also improve fuel economy.

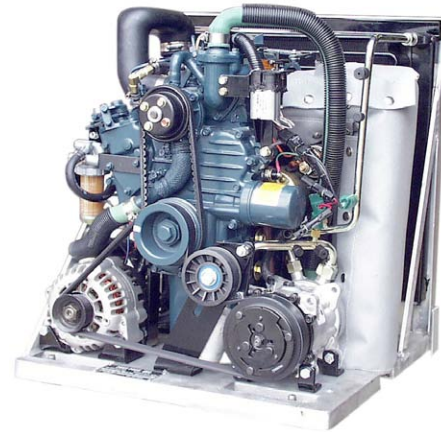


	Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
Transmission lubricants	1–2%	5–10% of trucks	100% of truck tractors
Engine lubricants	1–2%	10% of trucks	100% of trucks

Idle Reduction Technologies

A variety of technologies can provide truck cab heating, cooling and/or electrical supply as an alternative to engine idling.

- *Automatic engine idle systems* start and stop the truck engine automatically to maintain a specified cab temperature, or to maintain minimum battery.
- A *bunk heater* is a small, lightweight, diesel fuel-fired device mounted in the cab that provides heat for cab comfort.
- An *auxiliary power unit (APU)* is mounted externally on the truck cab. Electricity from the APU can be used to power air conditioning, heating and electrical accessories for the cab and sleeper.
- *Advanced Truck Stop Electrification* can provide heating and cooling from an external source. Under this system, truck parking bays are installed with systems that provide the cab with heating, cooling and other amenities through an external console.



	Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
Bunk heater	5%	50% adoption in Europe, uptake in U.S.	100% of sleeper cab trucks
Auxiliary power unit	8%	50,000 units sold in 2007	100% of sleeper cab trucks
Truck stop electrification	8%	136 Stations in U.S.	Over 1,600 existing stations

Supplemental Information on Rail Technologies to Boost Fuel Efficiency

Locomotive Idle Reduction Technologies

Like trucks, locomotive idling can be reduced using several technologies. EPA estimates that switch locomotives run at idle 60% of the time, which would account for over 20% of their total fuel use. Locomotive Auxiliary Power Units (APUs) automatically shut down the main locomotive engine, while maintaining all vital main engine systems at greatly reduced fuel consumption.



Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
2-13%	Up to 50% of locomotive fleet, depending on railroad.	100% of locomotives.

Hybrid Locomotives

Hybrid locomotives, such as the “Green Goat,” combine a diesel locomotive engine with a diesel-alternator set and a bank of batteries. Switching locomotives are an attractive application for a hybrid locomotive, given that full power is only needed intermittently and for relatively short periods.

A true hybrid line-haul locomotive, developed by GE in 2007, adds a battery pack to the basic locomotive and redirects dynamic braking power to the battery instead of resistor banks. The control system optimizes power management on the locomotive to minimize overall fuel consumption.



Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
15-50%	60 units in service (2007)	100% of yard switchers.

Gen-Set Locomotives


A Gen-set locomotive is equipped with two or three independent diesel-alternator sets. One set is kept running on a rotating basis to provide basic locomotive functions, and the second and third sets are started as necessary when higher power is needed. The initial development was sponsored by Union Pacific in partnership with National Railway Equipment, with the first locomotive being delivered in 2005. While fuel efficiency gains are not quite as substantial as with the hybrid locomotive, Gen-sets have proved successful in service and about 250 had been ordered or delivered by early 2007, with every prospect of further growth.



Fuel Savings	Current Market Penetration	Maximum Potential Market Penetration
10-40%	250 units in service	100% of yard switchers.


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Module II. Design and Development Stage



Module 2: Design and Development Stage (2003)

2003	<ul style="list-style-type: none">➤ Discussions with Charter Partners to plan program specifics and official launch➤ Program Launch Planning➤ Development of Partnership Tools and Outreach Materials➤ Development of Partnership Agreements
-------------	---



II-1



Initial Stakeholder Outreach

- SmartWay was designed as a collaborative effort; Industry helped EPA create the program
 - Carriers
 - Shippers
 - Industry Associations
 - Environmental Groups
 - And, Champions from these companies and organizations
- This created buy-in from industry, further strengthening SmartWay as a true public-private partnership.
- Some Partners were first in a freight workgroup organized by Business for Social Responsibility (BSR)
 - BSR is an organization that helps companies achieve social, environmental and ethical success.



II-2

After the initial idea was developed, and some industry groups became interested, EPA sought a group of initial stakeholders, to further develop and refine the Partnership.

Including industry in the initial planning stages enfranchised them to actively participate in the design process.

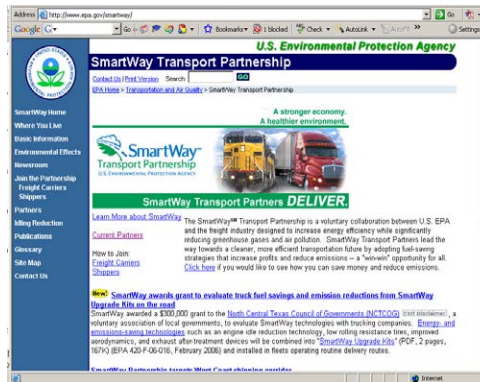
Charter Partnership Group

- 15 Companies joined as Charter Partners, both shippers and carriers
 - Canon, Coca-Cola, CSX Transportation, FedEx Express, HEB, The Home Depot, IKEA, Interface, Nike, Norm Thompson Outfitters, Roadway Express, Schneider National, Swift Transportation, UPS, Yellow Transportation
- Provided EPA with institutional knowledge of the industry, ensuring SmartWay would be viable



Website Development

- Began development of Web site in preparation for program launch
- Includes information on current Partners, news, funding opportunities, official program materials, technical reports, general SmartWay information
- Continual updates based on Partner requests and news items





EPA's FLEET Model

Creating a Level Playing Field

- Freight Logistics Environmental and Energy Tracking Performance Model:
 - Carriers:
 - Estimates tons of CO₂, NO_x, and PM (Baseline and Future)
 - Determines effectiveness of strategies used in the fleet (e.g., aerodynamics, idling reduction, speed control)
 - Allows fleet to conduct “what if” scenarios to determine best strategies for them
 - Projects and estimates cost savings and paybacks
 - Shippers:
 - Tracks percentage of freight shipped with SmartWay Carriers
 - Measures their environmental footprint



II-5

The FLEET model is integral part of Partnership process; used to collect baseline partner data, annual updates and project emissions savings

FLEET model was developed with Charter Partner input and peer reviewed

EPA tried to balance need for detailed data collection with need for user friendly tool

Microsoft Excel - fleet_model_version1d

File Edit View Insert Format Tools Data Window Help Adobe PDF

M7

1	Carrier Information	Current Fleet Evaluation	Current Fleet Summary	Action Plan Evaluation	Action Plan Summary	Annual Update Evaluation	Annual Update Summary	Print	Zip File for Mailing	
2	Fleet Efficiency Evaluation									0 gallons
3										
4	STEP 1: General Information About Your Existing Fleet:									
5	1. For which year are you estimating the environmental performance of your fleet? <input type="text"/>									
6										
7	Show Video Tutorial	Straight Trucks							Print This Table	
8		Total # of trucks	Average Miles per truck per year	Total Miles	Total Fuel Consumption Gallons	Average payload (tons) per trip	Average Idling Hours per truck per year	Total Idling Hours		
9										
10										
11	Short Haul	Diesel		0				0		
12		Gasoline		0				0		
13		Alternative Fuel	0	0	0	0	0	0	0	
14	Long Haul	Diesel								
15		Gasoline								
16		Alternative Fuel	0	0	0	0	0	0	0	
17		Combination Trucks								
18		Total # of trucks	Average Miles per Truck per Year	Total Miles	Total Fuel Consumption Gallons	Average payload (tons) per trip	Average Idling Hours per truck per year	Total Idling Hours		
19										
20										
21	Short Haul	Diesel		0				0		
22		Gasoline		0				0		
23		Alternative Fuel	0	0	0	0	0	0	0	
24	Long Haul	Diesel								
25		Gasoline								
26		Alternative Fuel	0	0	0	0	0	0	0	
27	Totals	Diesel	0	0	0	0	0.00	0		
28		Gasoline	0	0	0	0	0.00	0		
29		Alternative Fuel	0	0	0	0	0.00	0		
30		All vehicles	0	0	0	0	0.00	0		

Ready

Start | tasks A-D | 10-11EPA Conf | Conquer Club :: Ga... | 4 Microsoft Office... | fleet_model

Microsoft Excel - fleet_model_version1.d

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

Arial 9 B I U

D23 fx

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Carrier Information	Current Fleet Evaluation	Current Fleet Summary	Action Plan Evaluation	Action Plan Summary	Annual Update Evaluation	Annual Update Summary	Print	Zip File for Mailing				
2	2005 Fleet Efficiency Summary												
3	1. Fleet Efficiency Summary												
4	Show Video Tutorial												
5		Fuel Economy	CO ₂	PM	NO _x	CO ₂	PM	NO _x	CO ₂	PM	NO _x	CO ₂	
6													
7													
8													
9													
10	2005 Fleet Performance												
11	Diesel	6.0	27,750	4,545	108.4	277.5	0.0454	1.084	1,678.3	0.2748	6.55	167.83	
12	Gasoline	0.0	0	0.000	0.0	0.0	0.0000	0.000	0.0	0.0000	0.00	0.00	
13	Alternative Fuel	0.0	0	0.000	0.0	0.0	0.0000	0.000	0.0	0.0000	0.00	0.00	
14	Total:		27,750	4,545	108.4	277.5	0.0454	1.084	1,678.3	0.2748	6.55	167.83	
15	2005 Projected Fleet Performance Without Existing SmartWay Improvements												
16	Diesel	4.2	40,073	4,545	108.4	400.7	0.0454	1.084	2,423.6	0.2748	6.55	242.36	
17	Gasoline	0.0	0	0.000	0.0	0.0	0.0000	0.000	0.0	0.0000	0.00	0.00	
18	Total:		40,073	4,545	108.4	400.7	0.0454	1.084	2,423.6	0.2748	6.55	242.36	
19	Total Savings Resulting From Existing SmartWay Improvements												
20	Emissions Saved		12,323	0.000	0.0	123.2	0.0000	0.000	745.3	0.0000	0.00	74.53	
21	% Savings		30.8%	0.0%	0.0%	30.8%	0.0%	0.0%	30.8%	0.0%	0.0%	30.8%	
22													
23	2. Specific Savings From Each SmartWay Strategy Used on Existing Fleet												
24		Average cost of fuel per gallon in 2005?											
25		Diesel per gallon	Gasoline per gallon										

Ready NLM

This is the summary page that is generated after a fleet enters the relevant information (trucks, current technologies, miles traveled, hours idling, etc).

The model lists fuel consumption and emissions by pollutant (in “1. Fleet Efficiency Summary”), it also allows companies to figure out savings from specific technologies (“Specific Savings from Each SmartWay Strategy...”).



Database Development

- EPA decided to develop a Customer Relationship Management (CRM) database to organize Partnership contact and communication information
 - Partner contact information and history, submission deadlines
 - Tool for tracking recruiting and partner management efforts
 - Emissions reductions and calculations



II-8

The Customer Relationship Management (CRM) database is essential to track recruits, partners, and other related groups.

It is ESSENTIAL to have a database system to maintain a voluntary partnership like SmartWay.

FileMaker Pro - [CarrierPartners]

File Edit View Insert Format Records Scripts Window Help

Main Int... 6

Records: 446
Unsorted

YRC Worldwide Inc.

Partner Code: SWT-C-7
Company Code: 291

1. General Partner Info:

Partner Account Manager: Matt Payne (Make as Partner) Active Inactive

Company Name: YRC Worldwide Inc. (Charter Partner)

Type of Company: Truck Carrier Shipper Logistics Rail Carrier Affiliate

Initial Partnership Date: 2/9/2004

Goal and Action Plan Due: 8/7/2004

File Name	Reviewer	Date Reviewed	Manager	Date Approved
YellowRoadway_Version1.xls	Matt Payne	10/19/2004		
YellowRoadwayActionPlan.do	Matt Payne	10/19/2004		

Annual Updates Due: _____

Shipper Connection: The Home Depot, Nike, Volvo, BND, Sharp

Smartway Logo Use?: Yes

Shipper Index Factor: 1.25

Carrier SCAC Code: YRCP,

Strategies Used:

<input checked="" type="checkbox"/> Idling Control	<input checked="" type="checkbox"/> Advanced Lubricants	<input type="checkbox"/> NOx Reflash
<input checked="" type="checkbox"/> Aerodynamic	<input checked="" type="checkbox"/> Intermodal	<input type="checkbox"/> Engine upgrades
<input checked="" type="checkbox"/> Auto Tire Inflation	<input checked="" type="checkbox"/> Trailer Strategies	<input type="checkbox"/> Retrofit technologies
<input type="checkbox"/> Wide based tires	<input checked="" type="checkbox"/> Speed Management	<input type="checkbox"/> Other...
<input checked="" type="checkbox"/> Weight reduction	<input type="checkbox"/> Hybrid Technology	

Interest in SmartWay Truck: Yes No Maybe Potential # SmartWay Trucks: _____

3. Company Contact Info:

Website URL: <http://www.yellowroadway.com>

EPA Region: 7 Conference Speaker: Yes No

Recruiter: Matt Payne

Company Organizations: ATA

Quote: "Roadway Corporation is committed to being known for safety practices and achievements, both in the work highways. The practices in place across the Roadway emphasize preventing pollution and minimizing was

First Name	Last Name	Title	Phone	Fax	Email
1	Steve	Shinnes			
2	Mike	Director of Government Affairs			mike@yellowcorp.com
3	Ted	Exec. Director for Govt Relations			ted@roadway.com

2. Environmental Performance Data:

	Baseline	Commitment
Year	2003	2006
Number of Trucks		
Total Miles		
Total Gallons		
Average Payload		

4. History of Comments:

Date / Staff	Comment
3/29/2005	Talked to Ted Scott, who indicated Action Plan include only Yellow subsidiaries are included, because largely to operate on their own, separate like Driver Comm
Mike Lutz	

100% Browse For Help, press F1

Typical CRM screen for a Partner. Includes contact info, communication history, strategies being used, and performance data. Standardized format is important for queries and other data analysis.



Partnership Agreements

- Partnership Agreements formalize commitments
- Common Method for Voluntary Programs (often called a Memorandum of Understanding)
 - Successfully gain commitment from corporate executives, set objectives, and develop timelines
- SmartWay Carrier Partners agree to:
 - Measure the environmental performance of their fleet with EPA's FLEET Model
 - Identify a goal to achieve within 3 years
 - Submit the goals and action plan to EPA within 6 months
 - Report progress annually
- EPA agrees to:
 - Increase public awareness of the Partnership and Partners participation
 - Assist Partners in achieving goals by providing technical assistance, marketing support, and create incentives (subject to appropriation)



II-10



How Do Companies Join and Participate?

- Any size or type of carrier or fleet can join the Partnership
 - **Sign** the Partnership Agreement
 - **Measure** current environmental performance with the FLEET Performance Model
 - **Establish goals** by developing a 3 year environmental improvement plan
 - **Annually update** the FLEET Performance Model



II-12

EPA is re-evaluating these requirements as part of the SmartWay 2.0 and Supply Chain modeling development. The goal is to streamline partner process.

Funding (2003)

Fiscal Year 2003 Budget: \$1,000,000



○ Marketing and Recruiting: \$200,000

- EPA Contractor Support
- EPA Travel
- Software, Display Booth, Graphic Development
- Marketing Material for Recruiting

○ Technology Grants and Testing: \$500,000

- Idling Grants and other Technologies

○ Outreach and Other Initiatives: \$300,000

- BSR (Business for Social Responsibility) Grant
- Market Research
- General Operating Costs



II-13

Staffing Needs (Design and Development) 2003

- 4-6 FTEs
- Staff should have:
 - Relationships with Stakeholder Groups
 - Trusted Industry Experts and Advisors
 - Staff involved in the initial planning stages
 - Staff w/ technical ability to write and interpret technical reports / convey technical knowledge
 - Public Speaking and Sales/Marketing experience



II-14

These are the primary staffing needs for program design and development.

Technical ability to test products, write technical reports, and convey technical information (engineers) Technical knowledge of trucks and engines (engineers) Public speaking (outreach) Sales (outreach) Marketing (outreach)

Discussion: Examining Design and Development for Your Country

A panel of stakeholders from other countries discusses some of the questions that should be considered before a SmartWay-like program is launched.


Potential Discussion Points for Panel Members

1. Would a program like SmartWay succeed in your country? What elements would need to be modified?
2. What are some of the start-up challenges or obstacles that a program like SmartWay would face in your country?
3. Is there experience with other voluntary environmental or energy efficiency programs in your country/region? How can that experience support a program focused on freight transport?
4. What is the relationship between your country's environmental agency and the freight industry? What barriers exist to improving this relationship, and how can they be overcome?
5. Would the government need to play a primary role in the establishment of a program or can a trade group or NGO establish the program?

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Module III. Implementation Stage

Part 1



Module 3: Implementation Stage (2004-2005) Part 1: Marketing

2004	<ul style="list-style-type: none">> SmartWay Launch in February 2004; 100 SmartWay Partners by year end> Development of new Partner Categories; Affiliates and Logistics Providers
2005	<ul style="list-style-type: none">> Recruiting Focus - 300 Partners> Marketing Tools and Outreach> Technology Verification Program; Grants to support real-world tests> Innovative Financing Opportunities Sought> Development of SmartWay Upgrade Kit and SmartWay Truck



III-1

As the Partnership grew, there became demand for new Partner categories, Affiliates and Logistics

As the Partnership grew to 300+ Partners, EPA began focusing on some long-term projects, the Upgrade Kits and SWT Truck. EPA also conducted a technology verification program to ensure that the technologies actually work.

Program Launch

- Kickoff event held on February 9, 2004 at ATA Leadership Meeting
- Charter Partners, EPA and other stakeholders were all in attendance
- Kickoff Event included:

- Recognition of Charter Partners
- Demonstration of the FLEET Model
- Press Releases / Press Conference



III-2

EPA sought to launch SmartWay at high visibility event for best impact and press

Executive level event in Washington DC with EPA Administrator

EPA recruited new Partners, in addition to 15 Charter Partners, to join in advance of launch




SmartWay Brand Marketing

○ Goals:

- To make the SmartWay brand a household name – synonymous with “smarter, cleaner and fuel efficient transportation choices”
- Current exposure is within freight industry
- Expand to everyday consumers with consumer campaign and through Partner’s marketing efforts




III-3



SmartWay Transport Campaign

- Purpose
 - Raise freight industry awareness
 - Create industry interest
 - Invite industry participation
- Core Messages:
 - Partners save money
 - Partners save fuel
 - Partners help protect the environment



III-4

PSAs will get noticed in magazines, posters, airports, etc.

Quirkiness of the campaign softens EPA image with trucking industry

Yellow color is distinctive, upbeat and compliments SmartWay blue & green

Marketing and Recognition EPA Creating Awareness

**CALCULATE YOUR SAVINGS
TO THE ENVIRONMENT. TO YOUR BOTTOM LINE.**



For logistics managers, SmartWay
can add up to 7% in fuel savings.

SmartWay Transport helps shippers and for-hire carriers lower greenhouse gases and other emissions, while at the same time giving the average truck a fuel savings of \$2,000 per year.

To find out more about this new partnership, call for your info kit at 1-734-214-4767 or log onto www.epa.gov/smartway.

 SmartWay
Transport Partnership
Getting There With Cleaner Air

A new voluntary program from the
U.S. Environmental Protection Agency



III-5

When SmartWay was first developed, marketing was crucial because it did not yet have name recognition in the industry.

EPA used a variety of strategies and tools to market SmartWay (and continues to use many of the strategies)

Marketing and Recognition EPA Public Service Announcement (PSA) Campaign

ATTENTION SHIPPING CUSTOMERS



Shopping for the smartest way to transport your products? Ship SmartWay and save 7% on fuel.

SmartWay Transport helps shippers and for-hire carriers lower greenhouse gases and other emissions, while at the same time giving the average truck a fuel savings of \$2,000 per year.

To find out more about this new partnership, call for your info kit at 1-734-214-4767 or log onto www.epa.gov/smartway.



A new voluntary program from the U.S. Environmental Protection Agency



BOXED IN?



With margins so fragile you need smarter solutions, like SmartWay.

SmartWay Transport helps shippers and for hire carriers lower greenhouse gases and other emissions, while at the same time giving the average truck a fuel savings of \$2,000 per year.

To find out more about this new partnership, call for your info kit at 1-734-214-4767 or log onto www.epa.gov/smartway.



A new voluntary program from the U.S. Environmental Protection Agency

III-6

PSAs were developed to increase the industry and public's awareness of SmartWay.

American magazines have a quota of PSA advertisements, so there is available space for these ads. EPA just had to develop the concept, design ads, and pitch to trade and business publications.

EPA received several million dollars worth of advertising, pro-bono, in a variety of leading business magazines.

Marketing Tools

- Official SmartWay Partnership Documents
- Case Studies



Overview documents include Partnership Overview, Shipper and Carrier efficiency strategies and Partnership Agreements. These will be available to the audience at the meeting.

Case Studies highlight efficiency strategies currently being used by Partners. These also provide publicity for the Partners undertaking the projects. These case studies provide publicity to Partners and help other convince other fleets to try some advanced technologies (like single-wide tires)

Marketing Tools

○ E-Updates

- Quarterly Partner Newsletter, includes news, events and highlights recent Partner achievements
- Sent to Prospective Partners for Recruiting purposes



III-8

The E-Update is the official partner newsletter. It highlights emerging technologies, specific partner achievements, details on events and grants, highlights future developments.

Marketing Tools

- Press Releases
- Press Conferences



III-9

EPA holds press events to announce major Partnership news (big partners joining, new program components). A press conference was held in Arkansas when Tyson and Wal-Mart joined (in 2005).

Generally viewed as very good publicity for Partners.

Press events can be used as leverage to recruit partners (if you join, we'll hold an event). This can also be done with affiliates (if you sign 5 partners, we'll hold an event).

Marketing Tools

- Displays at Industry Shows



III-10

EPA attempts to secure speaking roles or educational sessions at industry events. These speaking roles range from 5-10 minutes, to hour-long panels with Partner testimonials.

The goal is to get current successful Partners in front of other companies, encouraging them to join. But, a quick speech can help companies understand the basic design of SmartWay.

Marketing Tools

- Speaking Opportunities



III-11

EPA attempts to secure speaking roles or educational sessions at industry events. These speaking roles range from 5-10 minutes, to hour-long panels with Partner testimonials.

The goal is to get current successful Partners in front of other companies, encouraging them to join. But, a quick speech can help companies understand the basic design of SmartWay.

Leveraging the Freight Sector

- SmartWay Transport helps to reach the consumer through SmartWay Tractors/Trailers
 - We are using the tractors and trailers like billboards to showcase the SmartWay brand
- Several SmartWay Partners qualified to place the Certification Logo on the exteriors of their tractors/trailers, representing over 8500 tractors and 2300 trailers



III-12



Partner-Initiated Marketing and Outreach

- Reduces EPA resource burden
- More compelling than EPA-authored marketing
 - Peer recommendations and testimonials
- Examples:
 - Industry Advisory Group
 - Advertisements
 - Presentations to Industry Groups
 - Articles, Interviews and Press Releases
 - Internally within their organization (i.e. corporate newsletter)
 - Externally with business partners (i.e. no idling signs)



III-13

Partner-initiated marketing is important because it doesn't require much (if any) EPA effort, and can be more effective and convincing than EPA marketing.

Partner Testimonials – Credibility of Peer Group

EPA helps (and gets the ball rolling) on some of these examples, but Partners are free to pursue their own marketing, too

Marketing and Recognition
Partner Initiated No Idling Policies at Loading Facilities

ATTENTION DRIVERS:

SHARP ELECTRONICS
IS A MEMBER OF THE
EPA'S SMARTWAY TRANSPORT PARTNERSHIP.

**SHARP HAS A
NO IDLE POLICY.**

PLEASE TURN OFF YOUR ENGINES
WHILE ON SITE WAITING
TO BE LOADED/UNLOADED.



THANK YOU FOR
HELPING US WORK TOWARDS A
CLEANER ENVIRONMENT.



III-14

Marketing and Recognition Partner Initiated Companies Marketing Their Corporate Activity



Owens Corning Carrier Portal

My Profile | Carrier Home | Sign Out

Search > Carrier Homepage Site Help

Inbox

Welcome Back
Ron Encher Trucking

Account Activity Summary

Late Deliveries - 0 Open	Open Tenders - 50 New	Confirm Delivery - 6 Open
Late For Pickup - 120	Load Board - 0 Requests	Assignments - 600 Unscheduled
Balance Due - 1 Pending Carrier	Claims - 5 Open	POD - 2 Open

Carrier Info

Performance Metrics

A/T Delivery Performance			2006 Compliance Goals	
	14 Day	QTD	YTD	
COOR	100.0%	99.5%	99.5%	Insurance Compliance 100% met
DART	97.6%	99.0%	98.0%	No Show/No Call None
DRM	100.0%	100.0%	100.0%	Rejected Tenders == 2% of Total Shipments
HBOI	99.0%	99.0%	98.0%	Tennessee == 1110% of Total Shipments
HUBT	99.2%	99.5%	98.5%	On-time Delivery 99%
HUGO	99.5%	99.6%	98.6%	214 Delivery Confirmation SmartWay Partner Membership
OPMT	100.0%	99.2%	99.2%	

Navigation: Accounting, Administrative, Location - Operations, Contacts, Training and Education, Inmate Information, Contact Us, Contact Us 2, Contact Us 3, 214 Compliance, Site 2, POD - Proof of Delivery

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Print this Release

Office Depot

May 08, 2006 10:27 AM US Eastern Timezone

Office Depot Joins U.S. EPA SmartWay(SM) Transport Partnership; Becomes First Office Products Reseller to Support Nationwide Effort Focused on Energy Efficiency and Lowering Greenhouse Gases from Shipping Operations

DELRAY BEACH, Fla. (BUSINESS WIRE) - May 8, 2006 - Office Depot (NYSE: ODP), a leading global provider of office products and services, today announced that it joined the SmartWay Transport Partnership, a voluntary collaboration between the U.S. Environmental Protection Agency (EPA) and commercial, industrial and public sector organizations.

As an environmental leader in the office products industry, Office Depot will contribute to the Partnership's goal to reduce 20 to 98 million metric tons of carbon dioxide and up to 200,000 tons of nitrogen oxide per year by 2017. Carbon dioxide is the most common greenhouse gas, and nitrogen

Top Left – Stylone – SmartWay Partner advertises the Partnership at their facilities

Top Right – Sharp emphasizes their no idling policy at their facilities

Bottom Left – Owens Corning has a Carrier Portal (for their 400+ carrier partners). They advertise and encourage participation in SmartWay through their portal.

Bottom Right – Office Depot Press Release announcing its initial Partnership in SmartWay (On Business Wire)

Marketing and Recognition Partner Initiated Companies Marketing Their Corporate Activity



Top Left – Styline – SmartWay Partner advertises the Partnership at their facilities

Top Right – Sharp emphasizes their no idling policy at their facilities

Bottom Left – Owens Corning has a Carrier Portal (for their 400+ carrier partners). They advertise and encourage participation in SmartWay through their portal.

Bottom Right – Office Depot Press Release announcing its initial Partnership in SmartWay (On Business Wire)

Marketing and Recognition – Partner Initiated Companies Marketing Their Corporate Activity

A smarter way

The Environmental Protection Agency's "SmartWay" initiative helps reduce energy costs and emissions by promoting efficiency among freight carriers.

Every year, 9 billion tons of goods are carried across America's highways and railroads by nearly 7 million trucks and 20,000 trains. This vast ground transportation network helps keep shelves stocked and prices competitive nationwide.

It also accounts for a big part of U.S. energy costs. Together, truck and rail transport consume over 35 billion gallons of diesel fuel and other petroleum products each year.

Emissions result, too. Ground freight contributes 20 percent of transportation-related carbon dioxide emissions, 30 percent of particulate emissions, and 40 percent of nitrogen oxide emissions in the United States.

How can we deliver lower energy costs and lower emissions while still delivering the goods we need? Greater efficiency is one way. By being smart about energy use, freight carriers can reach their destination in a more cost-effective and environmentally sound way.

That's the idea behind the U.S. Environmental Protection Agency's "SmartWay" initiative. Launched two years ago, the partnership program brings together major freight shippers, trucking companies, railroads and logistics companies to pursue efficiencies that reduce costs and emissions to the benefit of all.

The SmartWay Transport Partnership aims for savings of over 6 billion gallons of fuel per year through the spread of more efficient practices such as reduced engine idling, lower highway speeds, automatic tire inflation systems, increased driver training, and greater use of low-stickability synthetic lubricants.

Currently, SmartWay has over 400 partners. ExxonMobil is proud to be the first petroleum company to join, and is committed to continuing our plans to make our fleet of 150 company-owned tanker trucks more efficient as we deliver fuel to service stations throughout the United States.

Reducing costs and emissions through smarter, more efficient energy use. That's a goal all Americans can partner in.

ExxonMobil
Taking on the world's toughest energy challenge.
www.exxonmobil.com

On Left – Owens Corning published an add in Transport Topics thanking its carriers, and highlighting its participation in SmartWay.

On Right – ExxonMobil published an editorial describing its commitment under SmartWay; it was published in the New York Times, Washington Post, and a few other newspapers. PlowShare (EPA's marketing contractor) determined that the estimated value for a ¼ page ad in the NYTimes OP-ED section is **\$50,385 (gross), circulation is: 1,124,622.**



Partner Recognition – Annual Partner Awards

Purpose

- Recognize SmartWay industry leaders with awards
 - Highlight accomplishments of outstanding SmartWay Transport Partners
- Publicize SmartWay program results
- Opportunity to increase visibility of SmartWay
 - EPA acknowledges award winners
 - Partners market that they are awardees
 - Affiliates recognize members that are winners



III-18


SmartWay Excellence Awards

Great Press and Program Recognition

- First Annual Award Ceremonies at NAEM and ATA Conferences
- Low-cost (piggyback on other events)
- All Award Winners publicize – press releases / announcements



III-19



Module 3: Implementation Stage (2004-2005) Part 2: Recruiting & Partner Mgmt

2004	<ul style="list-style-type: none">> SmartWay Launch in February 2004; 100 SmartWay Partners by year end> Development of new Partner Categories; Affiliates and Logistics Providers
2005	<ul style="list-style-type: none">> Recruiting Focus - 300 Partners> Marketing Tools and Outreach> Technology Verification Program; Grants to support real-world tests> Innovative Financing Opportunities Sought> Development of SmartWay Upgrade Kit and SmartWay Truck



III-21

As the Partnership grew, there became demand for new Partner categories, Affiliates and Logistics

As the Partnership grew to 300+ Partners, EPA began focusing on some long-term projects, the Upgrade Kits and SWT Truck. EPA also conducted a technology verification program to ensure that the technologies actually work.



Recruiting Strategies

- Leveraging current relationships
 - State and National Trucking and Shipping Associations
 - Shipper Partners (later Logistics Partners)
 - Charter Partners
- Using industry resources
- Conferences and Events
 - Shipper and Carrier Conferences
- Developing new strategic relationships
 - Regional Approach
 - Networking through current Partners
- Cold and Warm calls
 - Leads from conferences/events
- Direct mailings
 - Endorsed by associations



III-22

Solid recruiting strategies are important; it's important to grow the Partnership, but it is also important to ensure that good, active companies are joining.

Current relationships: charter partners, industry experts involved in the planning, companies participating in other programs

Industry resources: Transport Topics Top 100, Most Sustainable Companies

New Relationships: State and National Associations, Proactive Shippers

Cold calls and direct mailings can be conducted after groups supply contact information for their members. Strategic relationships are necessary for direct mailings, and make cold calls easier.

Marketing events – wide range of events to lift the visibility of the Partnership



Leveraging Current Relationships to Recruit

- Charter Partners
 - Typically high-profile industry members
- Industry Experts
 - Trusted advisors to many companies
- Participation in similar programs
 - EPA has other voluntary partnerships, these Partners may see value in related initiatives

Successful (with strong industry relationships)



III-23

Charter Partners were generally recognized as leaders in the industry, and could convince other companies to join.

Industry Experts, who may have helped shape the Partnership (or quickly realize its value) can spread the word within their networks (George Edwards)

ANECDOTE: ICF manages Energy Star Partners and occasionally asks them if they are also interested in a transportation efficiency voluntary partnership.

Energy Star or Performance Track Partners value voluntary partnerships to improve the environment, and see value in the publicity from EPA. Joining SmartWay is a logical step to improve that publicity and save more money.



Using Industry Resources

- Industry resources can identify large companies, or companies that value environmental initiatives
- Transport Topics: Publishes an annual list of Top 100 For-Hire and Private Carriers
 - Top Companies in Shipper Sectors
 - Fortune Magazine: Publishes annual list of Most Sustainable Companies

Moderately Successful (better to identify key recruits than to directly recruit them)



III-24

These resources are useful to identify the companies to focus recruiting efforts on (recruit the big companies and let word-of-mouth trickle down the industry). But, they don't always provide the contact information necessary for follow up calls.

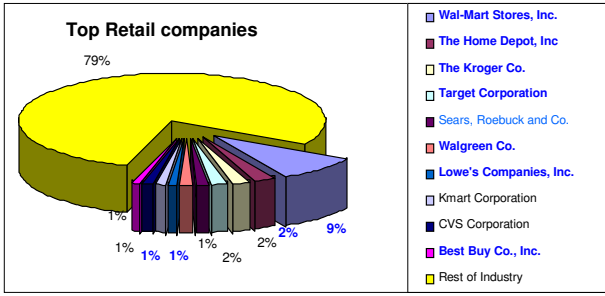
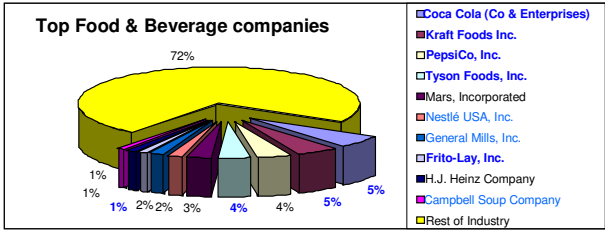
ANECDOTE: (1) Every year we check the annual Transport Topics list and identify large companies that have not yet joined. (2) The next slide includes a breakdown of the largest companies in the retail and food/beverage industries. We used this to identify the largest companies, and set recruiting priorities accordingly. (Transport Topics is a key freight industry publication.)

Industry Participation



SmartWay Partners in **blue**.

Based on total sales.





Conferences and Events

Shipper and Carrier Conferences

Industry trade shows provide good early opportunity to exhibit the program and build visibility

- Look for top transport industry, logistics, or shipper environmental events
- Be sure to understand audience and attendees
- Have good basic program overview materials and display to distinguish the program
- Good opportunities to network with other attendees and exhibitors

Moderately Successful (hinges on getting appropriate venues, some can be unproductive, requires staff travel and expenditures)



III-26



Developing New Relationships

- National and State Trucking Associations
- Federal Agency Regional Offices
- Environmentally oriented Associations

Very Successful (These groups are among the most influential in the industry)



III-27

National and State Trucking Associations are designed to serve their members and help them be better businesses. SmartWay achieves these goals, so it is in the interest of the STAs to highlight SmartWay. In addition, many activities to promote SmartWay won't cost the STA any money.

ANECDOTE: Maryland Motor Truck Association asked SmartWay to attend its 2005 Annual Conference because its members kept asking about strategies to save fuel (in light of the high prices), a SmartWay representative discussed the various strategies that SmartWay endorses and provided basic information about how to join.

EPA Regional Offices typically have better relationships with citizens and companies, and can easily mention SmartWay as a potential option for these leads

There are numerous 'GreenBiz'-type groups in America, all trying to increase efficiency and reduce GHGs. Many large companies participate, making it a great forum to discuss SmartWay



Cold Calls and Direct Mail Campaigns

- Secure contact information from industry associations, send a standard package of information to all members
- Direct mail campaigns are much more successful when:
 - Endorsed by a Membership Organization (signed letter)
 - Follow-up phone calls are made to members (sustain contact)

Marginally Successful (requires a high level of effort)



III-28

This strategy entails compiling a package of information (typically a joint letter from the association head and Partnership program manager), and sending or emailing it to all members of an association.

It is vital to have an endorsement from the membership organization and the ability to make follow-up calls.

This strategy is typically only marginally successful, and takes quite a bit of effort.

ANECDOTE: One face to face meeting with a prospect that shows serious interest can be more fruitful than 50 cold phone calls to the same prospect. Casual face to face meetings at industry shows can help prospects become seriously interested, and subsequent calls can formally bring them on board.



Marketing Activities

- Speaking Opportunities
- Articles and Press Releases
- Case Studies and other official Program publications
- All marketing material should provide audience with an easy way to request more information about the program

Successful (as more companies learn of SmartWay, more want to join)



III-29

All marketing activities should be seen as direct or indirect recruiting opportunities. Even a press release, which highlights a specific Partner's achievements, should include contact information for another company that wants to participate.

Including a simple, 'for more information about SmartWay, contact xxx at 999-9999' on all materials/publications is helpful.



Face-to-Face vs. Phone Recruiting

- Face-to-Face is more successful, but is more costly
 - Travel to site, lodging, meals
 - Face-to-face meetings can be grouped with a trip to an industry conference
 - Numerous phone discussions should be conducted before scheduling a meeting



III-30

To maximize face to face recruiting, only companies with serious interest should be met. Unless, it is a large company that has significant influence in the industry.

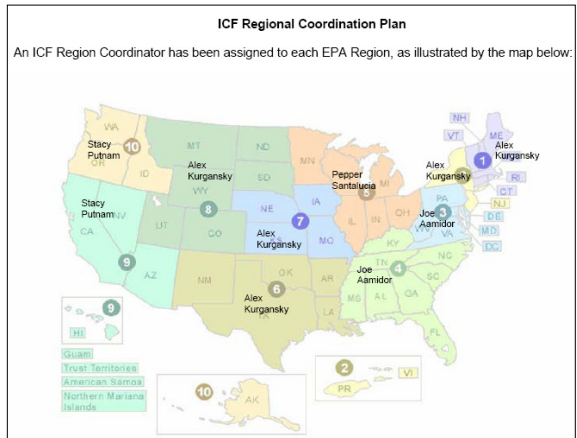
Phone recruiting is useful for general inquiries and helping companies understand the basics of the program. If successful, propose a face to face meeting.

These meetings can be piggy-backed with scheduled marketing events. If you are attending and speaking at an industry show, it is a good idea to set up other meetings with warm leads in the area.



Regional Coordination Plan

- A specific coordinator was assigned to each EPA region to coordinate all SmartWay activities between EPA regional offices, State associations, current Partners and other stakeholders.



III-31

New Partnership Categories

- Partner Affiliates – state and national associations
- Logistics Providers – freight brokers



Partnership Agreement: Logistics

EPA's SmartWay Transport Partnership is a voluntary program that recognizes Partners for setting and achieving greenhouse gas (GHG) and emissions reduction goals in freight transport.

With this agreement, you join EPA's SmartWay Transport Partnership and commit to:

- Determine the percentage of freight shipped by SmartWay carriers.
- Increase the percentage of freight shipped by SmartWay carriers to at least 5% per year, or increase the number of SmartWay carriers by 20 companies per year, and report this information in the EPA's FLEET Performance Model.
- Develop a three year action plan detailing how this goal will be achieved.
- Submit the goal and action plan to EPA within 6 months of signing and submitting this agreement.
- Report progress toward achieving the goal to EPA annually.
- Remain a member of the SmartWay Transport Partnership website on the company website.
- Inform contracted carriers about the Partnership and the benefits of participating in the Partnership through various means, such as including SmartWay membership in contract orders, making brochures and manuals, and giving presentations at meetings.

In return, EPA commits to:


- Increase the awareness of Partner participation in the SmartWay Transport Partnership by listing Partners on the EPA SmartWay Transport Partnership website and in related educational, promotional and media materials.
- Obtain express written consent from a Partner before publishing the Partner's name in any context or for any purpose other than their obligations above.
- Provide Logistics companies with the needed information to quantify emissions from their freight facility operations, and to determine the percentage of freight shipped with SmartWay Transport Partnership carriers.
- Publicize the actual performance data of Partners only with a Partner's express permission, except as otherwise required by law.
- Assist Partners in achieving goals, by working to address challenges, create incentives, and provide technical assistance and support related to operations.

General terms:

- If the Partner or EPA defaults upon this agreement at any point, the agreement shall be considered null and void.
- Either party can terminate the agreement at any time without any notification or penalties or any further obligation. EPA and the Partner agree to its continued liability regarding the withdrawal of Partners.
- EPA reserves the right to suspend or revoke Partner status for any Partner that fails to accomplish the specific actions to which it committed in the SmartWay Transport Partnership Agreement.
- The Partner agrees that it will not claim or imply that its participation in the SmartWay Transport Partnership constitutes EPA approval or endorsement of anything other than the Partner's commitment to the program. The Partner will not make statements or imply that EPA endorses the purchase or sale of the Partner's products and services or the name of the organization.
- The Partner understands that it bears its own costs for participation in this program, and agrees not to submit a claim for reimbursement to EPA or any other federal agency on the basis of this agreement.
- The terms "Partner" and "Partnership," as used in this agreement, do not denote any specific legal entity meaning. The parties to this agreement are independent legal entities and no partnership, limited partnership, joint venture or any other legal relationship is created between the parties by this agreement.

This agreement, when signed by the authorized representative of the Partner, shall constitute the entire agreement and agrees with the terms of the EPA SmartWay Transport Partnership.

Signature: _____ Date: _____



Becoming a SmartWay Transport Affiliate

WHAT DOES IT MEAN TO BECOME A SMARTWAY TRANSPORT PARTNERSHIP AFFILIATE?
The Affiliate level of the SmartWay Transport Partnership is for trade and professional associations, nonprofit organizations, energy, and commodity organizations, schools and university groups, and other organizations that are committed to something greater: energy efficiency and air quality within the freight transport sector. As an Affiliate, you are assisting your members in making better choices for their businesses and the environment. By encouraging them to participate in the SmartWay Transport Partnership, you help them get the information and tools they need to reduce fuel consumption, save money, and make a positive impact on the environment.

WHAT BENEFITS DOES MY ORGANIZATION RECEIVE FOR JOINING AS AN AFFILIATE?
When you become a SmartWay Transport Partnership Affiliate, you are providing your members with a simple, highly-beneficial way to improve their business operations and make a difference for the public good. You are able to give your members access to leading tools that will help them achieve their business goals. EPA will support your efforts by providing outreach materials, programs and technical training, and networking opportunities.

And, when you promote the Partnership to your members, your good works will be recognized by EPA.

WHO IS ELIGIBLE TO BECOME AN AFFILIATE WITH THE SMARTWAY TRANSPORT PARTNERSHIP?
The following types of organizations are eligible to affiliate with SmartWay Transport Partnership:

- membership organizations
- governmental agencies
- nonprofit organizations
- professional associations
- nongovernmental organizations
- trade associations
- academic institutions
- asset management organizations

HOW CAN MY ORGANIZATION JOIN?
Becoming an Affiliate is Easy. Simply:

- Sign Affiliate Agreement
- Identify the promotional and/or educational activities you will pursue.
- Create a link to the SmartWay Transport Partnership website on your organization's website

A representative from SmartWay Transport Partnership will contact you and help provide you with information about the Partnership and assist you with your promotional activities.

HOW TO SUBMIT MY COMPLETED AGREEMENT
Simply mail it to the completed Affiliate Agreement to:

SmartWay Transport Partnership Affiliate Agreement
LEGISA, Office of Transportation and Air Quality
3002 15th Avenue, NW
Washington, DC 20007

III-32

Affiliates: national and state groups that support the goals of the Partnership (mainly state trucking associations and groups like ATA, NIT League). A way that these associations can receive more publicity for their efforts.

Affiliates commit to some or all of the following:

Press and promotional events

Educational workshops – learn about SmartWay and the technologies

Partner Support – help Partners with FLEET, marketing, etc

Recruiting – bring members and contacts on board

Discounts – e.g. – cheaper conference registration fees

Other – the affiliate can do and suggest more activities to spread the Partnership

Logistics: Companies that provide freight services to shippers through for-hire carriers.




Partner Management

- Importance of Partner Management
- Initial Partner Management Steps
- Adding Value to your Partners
- Managing Partnership Growth
- Tool Development
- The SmartWay Transport Partnership Brand




III-33



The Importance of Partner Management

- General assistance with paperwork and reporting
 - FLEET Model
 - Authorization to use logo
- Develop relationships
- Marketing assistance
 - Press Release
 - Case Study
 - Logo Use
 - Authoring articles or internal memos
- Make the Partnership more valuable
 - Using Partner feedback to improve the process for them (and other Partners)



III-34

Partner Management is necessary, especially to complete the FLEET model, add a personal touch to the process and help Partners with queries and initiatives related to SmartWay. A Partner Manager can help a company navigate the Partnership and connect it with the right people to get its goals accomplished.

Logo Use Criteria:

Carriers – FLEET score of 1 or better (combination of CO₂, NO_x and PM fleet emissions)

Shippers/Logistics – Ship 50% or more of freight with Partner Carriers (calculated by metric that company chooses – ton-miles, annual transportation spend, # of trips)

Affiliates – Upon joining the Partnership

Think of Partner Management as being a personal consultant to the Partner.



Initial Partner Management Steps

- Welcome call to new Partner
 - Generally explain Partnership, goals and objectives
 - Set deadline for data submissions
 - Offer marketing materials for Partner to publicize its participation
 - Ask what else the Partner expects out of the Partnership, discuss ways to achieve these goals



III-35

The official joining SmartWay is not always the same person doing the day-to-day work, so it is important to first explain SmartWay and make sure the company contact understands.

Adding Value for Partners

PARTNER CASE STUDY

FUEL SAVINGS THROUGH WIDE-BASE TIRES

Company Profile

Headquarters Location: Joplin, Missouri
Point of Contact: Bruce Stockton, Vice President of Maintenance
 Ph: 417-659-5085, email: bstockton@cfi-us.com

Number of Employees: 3,000 **Strategy Category:** Tire Tech
Number of Trailers: 7,400 **Number of Power Units:** 2,000

Project Description

In late 2002, CFI began looking for ways to improve their fleet's fuel economy. Recognizing tires improve fuel economy because they weigh less than conventional tires and have a low rolling resistance, CFI decided to purchase 750 tractors outfitted with wide-base tires from their original equipment manufacturer (OEM). Each tractor cost only \$40 more than it would have otherwise cost if it did not have wide-base tires. With a fuel economy improvement of 2-10 to 3-10 of a mile per gallon, CFI estimated that the savings paid for within the first 2,250 miles of driving.

In addition to purchasing tractors with wide-base tires, CFI outfitted 100 trailers with wide-base tires. CFI estimated savings of approximately 805,000 gallons of fuel due to their wide-base tires.

Search Results for Google

[Print this Release](#)

Office Depot
 May 08, 2006 10:27 AM US Eastern Timezone

Office Depot Joins U.S. EPA SmartWay(SM) Transport Partnership: Becomes First Office Products Reseller to Support Nationwide Effort Focused on Energy Efficiency and Lowering Greenhouse Gases from Shipping Operations

DELRAY BEACH, Fla. (BUSINESS WIRE) - May 8, 2006 - Office Depot (NYSE:ODP), a leading global provider of office products and services, today announced that it joined the SmartWay Transport Partnership, a voluntary collaboration between the U.S. Environmental Protection Agency (EPA) and commercial, industrial and public sector organizations.

As an environmental leader in the office products industry, Office Depot will contribute to the Partnership's goal to reduce 33 to 66 million metric tons of carbon dioxide and up to 200,000 tons of nitrogen oxide per year by 2012. Carbon dioxide is the most common greenhouse gas, and nitrogen oxide is an air pollutant that contributes to smog.

"I am pleased to welcome Office Depot to the SmartWay Transport Partnership," said Margo T. Oge, Director of EPA's Office of Transportation and Air Quality. "They are the first office supply retailer to join the Partnership in a commitment to freight-related environmental performance and fuel efficiency."

"Joining the SmartWay Transport Partnership was the natural next step in our long-standing commitment to increasing fuel efficiency in all of our operations," said Mark Hollfield, Office Depot's Executive Vice President, Supply Chain. "In 2004 and 2005 alone, we saved well over 4.5 million gallons of fuel by increasing the efficiency of our local distribution trucks, shifting from truck to inter-

CFI case study on single wides (an EPA SmartWay staff member wrote this with CFI) on the left, and an Office Depot Press Release on the right. EPA/ICF helped write both of these. In fact, there is a template press release that Partners can use when they join. The template saves everyone time, and it encourages Partners to release a press release, even if they don't have much time.



Adding Value for Partners: Driver Training

- Goal: To adapt Natural Resource Canada's (NRCan) "SmartDriver for Highway Trucking" training program for a U.S. audience and to adapt the training modules for the Web.
- The SmartDriver Training program modules to be hosted online and will use log-in feature and database.
- Students' training/completion information will be housed on database.
- The training will be available in French
- EPA and NRCan discussing option of extending to Mexico (in Spanish) for N. Green American Driver Training certification



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Driver Training E-learning Portal

Introduction

▶ Introduction

SMARTDRIVER FOR HIGHWAY TRUCKING

Help

Introduction

Welcome

Welcome to SmartDriver for Highway Trucking.

Fuel costs are one of the largest expenditures for fleets (and for owner-operators). In fact, fuel costs are the biggest expense after labor costs. As a driver, you have a significant role to play in reducing these costs through energy-efficient driving practices.

This program is designed to give you tools and tips for saving fuel on the road.



Click the arrow above to play the video.

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Adding Value for Partners

- As the Partnership grows, resources to support growth were focused on tools rather than staff support
- Prioritizing Partners
 - Size of company
 - Influence on other Partners
 - Prominence in market/industry
- With a rapidly expanding program, EPA was forced to innovate to deal with the growth



III-39



Partnership Growth

- Growth - Partner Management
 - Initially Partner Account Manager (PAM) handled 50 partners
 - As Partners submit FLEET (baseline/action plans), PAMs can handle more accounts
 - Partner Attrition is a part of all voluntary programs – also enables PAMs to handle more accounts
- Tools can be developed to alleviate this resource crunch
 - Automate activities or tasks
 - Develop guidance documents
 - Train and enable affiliates/regional offices to support Partners



III-40

Initially, EPA allowed partners to join without completing the FLEET model, as long as they committed to finishing it soon after joining. But, this caused some partners to join, and never complete the required materials. EPA eventually removed these partners (after giving them numerous chances to submit the data), and began to require a completed FLEET model before a partner joined.

Partnership Tools

- FLEET Model User's Guide
 - Many Partners have similar questions about the FLEET
 - The User's Guide answers these basic questions, reducing EPA staff burden



SmartWay Transport Partnership Carrier FLEET Model User Guide

Welcome to the SmartWay Transport Partnership! The User Guide will introduce you to the SmartWay Carrier FLEET Model. FLEET is an acronym for: Freight Logistics Environmental and Energy Tracking Performance Model.

What is the FLEET Model and why am I filling it out?

The FLEET model is the measurement tool that EPA uses to demonstrate the beneficial actions that truck companies are taking to save fuel and reduce emissions. Working together, the SmartWay Transport Partnership, the American Trucking Associations, the Truckload Carriers Association, the National Industrial Transportation League, and many state trucking associations are helping companies improve their efficiency and enhance the image of the trucking industry.

The FLEET model:

- Is a *required* part of Partner participation in the SmartWay Transport Partnership.
- Is a multifunctional tool that many SmartWay Partners find very useful to help them optimize their fleet performance.
- Helps you track your fleet's fuel economy and also provides you with estimates of how much carbon dioxide, harmful oxides of nitrogen, and particulate matter emissions your company can prevent from entering the atmosphere through your actions.
- Tracks your baseline performance and also helps you plan what you want your fleet to look like in the future.
- Can also be used as a simple cost benefit evaluation tool for choosing what new technologies you may want to add to your truck specifications.

This user guide will walk you through the FLEET model and answer many of your questions. If you have a question that is not answered here, please feel free to contact your Partner Account Manager (PAM).

FLEET Model Components

The main parts of the FLEET model are identified on the tabs at the top of the opened worksheet.

9/26/2006

Page 1 of 19

Saves the Partner Managers time by not answering the same questions numerous times. Plus, the Partners have a document in writing instead of just knowledge from conference calls with EPA.

Short Version FLEET Model (option for Owner Operators)

CARRIER FLEET MODEL

Short Version: For Small Truck Fleets



www.epa.gov/smartway

INSTRUCTIONS:

Please fill out the information about your company. For each strategy, fill out the number of trucks that use that strategy. Provide the data requested for speed and weight reduction.



MPH Speed Limiter Setting _____

Company Name: _____	Company Contract: _____	Weight Reduction:
Address: _____	Title: _____	Item and pounds reduced: _____ lbs
City: _____	Phone: _____	_____ lbs
State and Zip: _____	E-mail Address: _____	_____ lbs
Trucks/Trailers in your fleet: _____	TL/LL: _____	_____ lbs
Operation Type: Long Haul/ Short/ Mixed: _____	Own/Lease: _____	_____ lbs
Miles travelled per year (fleet total): _____	Gallons Consumed (Fleet Total): _____	_____ lbs

Integrated Cab Roof Fairing _____	Cab Trailer Gap Reducer _____	Flatbeds: Trailer Tarps _____	Trailer Tails _____
Cab Roof Fairing _____	Satellite Tracking/Dispatch _____	Trailer Gap Reducer _____	Boat Tails _____
Cab Roof Deflector _____	Aero Profile Cab _____	Aerodynamic Mirrors _____	
	Traditional Long Nose Cab _____		
	Cab over Engine Tractor _____		
	Cab Front Air Dam _____		
	Bumper _____		
	Direct Fired Heaters _____		
	Auxiliary Power Units _____		
	Driver Tag Teams _____		
	Double Drivers _____		
	Engine Shutdown _____		
	Truck Stop Electrification _____		
	Synthetic engine Lubricants _____		
	Synthetic Drivetrain Lubricants _____		

Single Trailers: 48 foot _____ 53 foot _____
 Double: 28+28 _____ 40+28 _____ 40+40 _____
 Triple: 28+28+28 _____

Trailer Side Skirts _____

Single Wide Tires _____

Auto Tire Inflation _____

Particulate Trap _____
 Oxidation Catalyst _____
 Refrashing _____

Average hours you idle: per truck per year _____

Average Payload per Trip (tons) _____

RETURN TO: Mail: SmartWay Transport Partnership
 2000 Traverwood
 Ann Arbor, MI 48108 Fax: (734) 214-4906
 E-mail: SmartWay.Transport@epa.gov



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This was created as an option for small truck fleets and owner-operators. In some cases, these small partners do not have sophisticated data collection tools. EPA found that some didn't have access to a computer, which is needed to fill out the full FLEET model.



Partnership Tools

- Web-based savings calculator
 - Easier to use than the FLEET model
 - Fewer data inputs than FLEET
 - Allows companies to instantly calculate money saved by using strategies/technologies
 - Includes financing calculations, if user plans to purchase equipment with a loan



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More Tools and Resources: SmartWay Loan Calculator

Calculator for single-owner (one truck):

RESULTS:

Equipment	Cost	% Fuel Savings	Annual Fuel Savings	Monthly Fuel Savings	Monthly Loan Payment	Net Monthly Savings
APU, Tires, Aero, ATI, DOC	\$14300	16.6%	\$6723	\$560	(\$329)	\$231

STEP 1: ENTER YOUR TRUCK AND LOAN INFORMATION.

Enter your basic vehicle and loan numbers here **OR** Click the "Load Typical Values" button below for help with typical long haul truck numbers.

Annual Fuel Use (Gallons)
 Cost of Fuel
 Annual Idling (Hours)
 Loan Period (Months)
 Loan Interest Rate %
 Yearly Fuel Cost \$ 40500
 Monthly Fuel Cost \$ 3375

STEP 2: SELECT TECHNOLOGIES OF YOUR TRUCK.

Check the technology box below to test various combinations of technologies for your truck. You can check as many items as you want.

Technology	Cost
<input type="checkbox"/> Bunk Heater (Heater)	\$ 1500
<input checked="" type="checkbox"/> Auxiliary Power Unit (APU)	\$ 7000
<input checked="" type="checkbox"/> Aluminum Wheel Sets for Single Wide Tires (Tires)	\$ 3000
<input checked="" type="checkbox"/> Trailer Aerodynamics (Aero)	\$ 2400
<input checked="" type="checkbox"/> Automatic Tire Inflation (ATI)	\$ 900
<input checked="" type="checkbox"/> Oxidation Catalyst (DOC)	\$ 1000


"Savings Without Loan" button sets the loan period and interest rate to zero, to show you the results of buying this technology outright.



SmartWaySM

www.epa.gov/smartway/calculator/loancalc.htm ||-44

The SmartWay loan calculator is available at www.epa.gov/smartway/calculator/loancalc.htm



Module 3:
Implementation Stage (2004-2005)
Part 3: Technology Program



III-45

As the Partnership grew, there became demand for new Partner categories, Affiliates and Logistics

As the Partnership grew to 300+ Partners, EPA began focusing on some long-term projects, the Upgrade Kits and SWT Truck. EPA also conducted a technology verification program to ensure that the technologies actually work.

Technology Testing and Analysis

- **Technology Verification Program**
 - EPA tested benefits of Single-wide tires and trailer aerodynamics, publishing the findings
- **Grants**
 - EPA also distributes grant money for fleets to conduct real-world tests of the fuel saving technologies



Paper Number 05CV-45

Effect of Single Wide Tires and Trailer Aerodynamics on Fuel Economy and NOx Emissions of Class 8 Line-Haul Tractor-Trailers

L. Joseph Bachman, Anthony Erb, and Cheryl L. Symon
U.S. Environmental Protection Agency

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ABSTRACT

Vehicle fuel components designed to improve fuel economy by reducing power requirements should also result in a decrease in emissions of motor oil and particulates. Fuel economy and NOx emissions of a fleet of class 8 tractor-trailers were measured on a test track to evaluate the effects of single wide tires and trailer aerodynamic devices. Fuel economy was measured using a modified version of SAE test procedure J1321. NOx emissions were measured using a portable emissions measuring system (PEMS). Fuel consumption was estimated by a carbon balance on CO₂ output and correlated to fuel meter measurements. Tests were conducted using three trailer aerodynamic configurations at 55, 60, and 65 mph and reduction in fuel use. The tests showed a negative correlation (coefficient at p < 0.05) between fuel economy and NOx emissions. Single wide tires and trailer aerodynamic devices resulted in increased fuel economy and decreased NOx emissions relative to the control tests. Decreases in NOx emissions were disproportionately larger than increases in fuel economy; however, the effect may be an artifact of the particular engine test bed. These results demonstrate that emissions reductions can be achieved using strategies that decrease fuel use and save truck operators money.

INTRODUCTION

Fuel consumption of heavy-duty vehicles can be reduced by the installation of components that reduce the vehicle's power requirements. A single test reduction measure proposed by Clark [1] shows that two disparate sources of energy loss in vehicles are the rolling resistance and aerodynamic drag:

$$P = 1/2 \rho V^3 C_d A + \mu MgV + MgV \sin \theta \quad (1)$$

where P is the power needed to maintain a steady speed, ρ is the density of air, C_d is the drag coefficient of the vehicle, A is the frontal area of the vehicle, μ is the rolling friction coefficient, M is the mass of the vehicle, g is the acceleration due to gravity, and θ is the angle of inclination of the road grade. At a steady speed of 65 miles per hour on a flat road, aerodynamic drag and rolling resistance account for 21 percent and 13 percent, respectively, of the total energy used by a class 8 five-axle tractor-trailer [2]. At lower speeds, rolling resistance receives a greater fraction of the vehicle's power requirements.

Further, because total vehicle emissions are a function of the power output of the engine, [2] reductions in power requirements should be expected to also result in a corresponding reduction in vehicle emissions. This is more likely the case for emissions of oxides of nitrogen (NOx) because NOx is primarily a function of power output whereas CO₂ is controlled by a much complex set of factors in addition to power output, including air composition, and transient engine properties, such as air/fuel ratio, oil leakage through piston rings, and exhaust gas temperature.

Measurements of whole-vehicle emissions from class 8 tractor-trailers are not readily available because historically such measurements have been made using the laboratory and dynamometer setups for class 8 tractor-trailers are rare. Also, because each model of heavy-duty diesel engine is used on a large number of vehicle types, it is the engine, not the whole vehicle that is certified by regulatory agencies. In recent years, however, advances in the technology of portable emissions measurement systems (PEMS) have allowed for the portable measurement of emissions being produced in conjunction with on-road fuel economy measurements, that permits the estimation of the relation between fuel economy and emissions under real-world driving conditions.

III-46

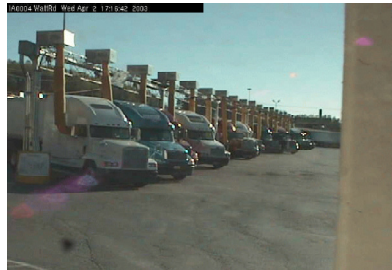
Technology Verification is EPA's effort to verify that some new technologies actually work. By publicizing the results, more companies and Partners used the new technologies.

Grants were also released to help companies test these technologies on their own.

Idle Reduction Technology Testing

Grants

- Awarded several grants to states, nonprofit groups, and universities to evaluate:
 - Truck Stop Electrification
 - Auxiliary Power Units
- Goal: build “idle-free” transportation corridors along major interstate highway roads so a truck driver always has a place to rest and not idle their engines.





SmartWay Upgrade Kit

- What is the SmartWay Upgrade Kit?
 - A bundle of highly fuel-efficient technologies with emission control devices. The “SmartWay Upgrade Kit” offers a way to describe these technologies as a package.
 - Create a unique incentive for trucking companies to retrofit their trucks because the monthly fuel savings generally exceed the monthly loan payments.

- EPA began to market these Kits with various entities (financial, non-profits, truck dealerships, etc.)
 - Partners can still pick technologies that work for them, but EPA is encouraging a “package” approach.
 - Kits have been tested and EPA and industry partners are confident in the savings potential.



III-48

This “kit” allows one-stop shopping for fleets. Instead of picking multiple items, they can pick one and know that it will save them money and reduce emissions. EPA intends for the “kit” to be added to a new truck as simply as any other accessory.

SmartWay Upgrade Kits

Creating a Business Case for Diesel Emission Reductions

Example of a SmartWay Upgrade Kit for Long Haul Trucks:

Device	Cost/Unit (Retrofit)*	PM Reduction	NOx Reduction	FE/CO ₂ Change
Oxidation Catalyst	\$1,200	25%	--	--
Super Single Tires w/ alum. wheels	\$5,600	--	5%	5%
Trailer Aero Kit	\$2,400	--	5%	5%
Direct Fired Heater	\$1,500	5%	7%	7%
Totals:	\$10,700	30%	17%	17%

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

- Fuel savings: 2,376 gallons @ \$4.00/gallon → **\$9,504/year**
- Payback period: \$10,700 / \$9,504 → **~13 months**
- or a 4 year loan @ 9% APR:

Monthly Fuel Savings: \$792

Monthly loan payment: (\$266)

Monthly cash for owner: \$526 per truck



III-49

Currently, Partners can pick different technologies and bundle them in a kit. In the future, EPA will begin to market kits that it has already tested and believes will save fleets money and reduce emissions.

The upgrade kit is simply a way to describe the numerous technologies that a truck can be equipped with, and for marketing purposes.

The Web-based calculator allows companies to calculate savings by purchasing upgrade kits



Expansion: SmartWay Truck

- Truck Stops
 - Goal: recruit truck stops to create “idle-free” zones whereby trucks are not allowed to idle.
- Truck Dealerships
 - Goal: recruit truck dealerships to sell the SmartWay Upgrade Kits so truck owners only need to go to one location to have all four items installed.
- SmartWay Truck
 - Designation identifying specific trucks as clean and efficient.
 - Labeling provides publicity for carriers, and encourages them to buy SmartWay Trucks



III-50

Truck Stops: Along the designated ‘idle-free’ corridors. Encourage trucks to reduce idle and provide facilities to make it happen.

Expansion: SmartWay Truck

U.S. ENVIRONMENTAL PROTECTION AGENCY

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SmartWay Transport Partnership
U.S. ENVIRONMENTAL PROTECTION AGENCY

The Smart Way to Save Fuel, Money, and the Environment

SmartWaySM Transport is an innovative collaboration between EPA and the freight sector designed to improve energy efficiency, reduce greenhouse gas and air pollutant emissions, and improve energy security. [Learn more about what SmartWay can do for you.](#)



Companies that participate in SmartWay Transport programs save money, reduce fuel consumption and are recognized for their social responsibility and leadership. [Join the SmartWay Transport Partnership now.](#)

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Latest News:
October 7, 2008

- Idling Reduction:**
 - [Idling Reduction Options](#)
- About the Partnership:**
 - [Join the Partnership](#)



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Expansion: SmartWay Truck



SmartWay Tractors and Trailers



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· Beginning in 2007 and through December 21, 2009, 51 Partners have reported owning/operating 6,327 SmartWay certified tractors and 1,484 SmartWay certified trailers.

Funding (2004-2005)

Fiscal Year 2004 Budget: \$1,300,000

Fiscal Year 2005 Budget: \$1,600,000



- Recruiting and Partner Management: \$400,000 - \$600,000
 - EPA Contractor Support
 - EPA and Contractor Travel
 - IT Support
 - Marketing Material for Recruiting/Partner Management
- Marketing and Communication: \$275,000 - \$350,000
 - EPA Contractor Support
 - Communication Campaign (i.e. PSAs)
 - Outreach Material Development (documents, displays, banners, award trophies, etc.)
- National Idling Program: \$250,000 (2004)
 - Truck Stop Infrastructure development
- Technology Verification and Testing: \$250,000 - \$500,000
 - Tire Evaluation program, Aberdeen Testing, SAE, Develop/Implement Verification
- General Operating Costs / Other: \$75,000



III-54

Staffing Needs (Program Implementation) 2004-2005

- General Implementation Staff:
 - 8-10 FTEs
- Recruiting:
 - 1 staff or contractor per 100 - 150 active recruits
 - Staff should have:
 - Experience with freight industry.
 - Experience identifying and pitching ideas to decision makers.
 - Strong interpersonal communication skills
 - Strong selling and marketing skills
 - Strong presentation and networking skills.



*Note: FTEs vary based on
size of recruits and travel
required by recruiters*



III-55

These are the primary skills and LOE necessary for implementation during the first years after launch. Details on recruiting are on this slide, and partner management details are on the next slide.

Staffing Needs (Program Implementation) 2004-2005

Partner Management:

- 1 FTE per 60 Partners
- Staff should have:
 - Experience as an account manager preferred
 - Knowledge of various fuel saving technologies advocated by EPA
 - Strong quantitative, Excel modeling and organizational skills
 - Strong interpersonal, communication, and relationship building skills



Note: Shipper and Carrier Partners Managers require different skill sets; staff working with shippers do not need to be as familiar with the trucking industry. It is helpful for these staff to have knowledge of specific shipper sectors.



III-56

Other useful skills for effective partner management: Managing partners, customer assistance.

Other skills for various parts of the Partnership: Entrepreneurial (outreach/marketing), Financial (loan and grant), Computer skills (Website creation)

Part 2

Supplemental Information on Recruiting for Voluntary Partnerships

Intro to Direct Marketing/Recruiting

Direct marketing is important for new and growing voluntary partnerships. Recruiting drives program growth, and educates participants, stakeholders, and other interested parties about the program.

Recruiting Strategies

Industry Relationships and other Key Stakeholders

- State and National Trucking and Shipping Associations
- Charter Partners
- Industry Leaders
- Size, Significance, Visibility
- Governments (especially state and local)
- Industry Journals
- Conference Organizers
- Consumers
- Shareholders.

Conferences and Events

- Attendance at conferences with key shippers and/or carriers. (Sponsorship at the conference could raise visibility.)
- Attendance or sponsorship of a regional event.
- Development of a new event (e.g., SmartWay Awards) all about the program. This event could be held at a larger event, instead of being free-standing.

Developing New Strategic Relationships

- Local and Regional Organizations that can influence others.
- Networking through current partners—encouraging others to participate.

Recruiting Calls

- Leads met at conferences/events that SmartWay staff attend. (Warm leads)
- Leads from industry organizations that want to publicize the partnership to their members. (Cold leads)
- Companies mentioned in news articles, displaying a commitment to the environment. (Cold leads)

Direct mailings

- Endorsed by industry associations (mentioned above)

Note: you should have support of a particular industry association before sending materials to its members.

Supplemental Information on Partner Management

Introduction to Partner Management

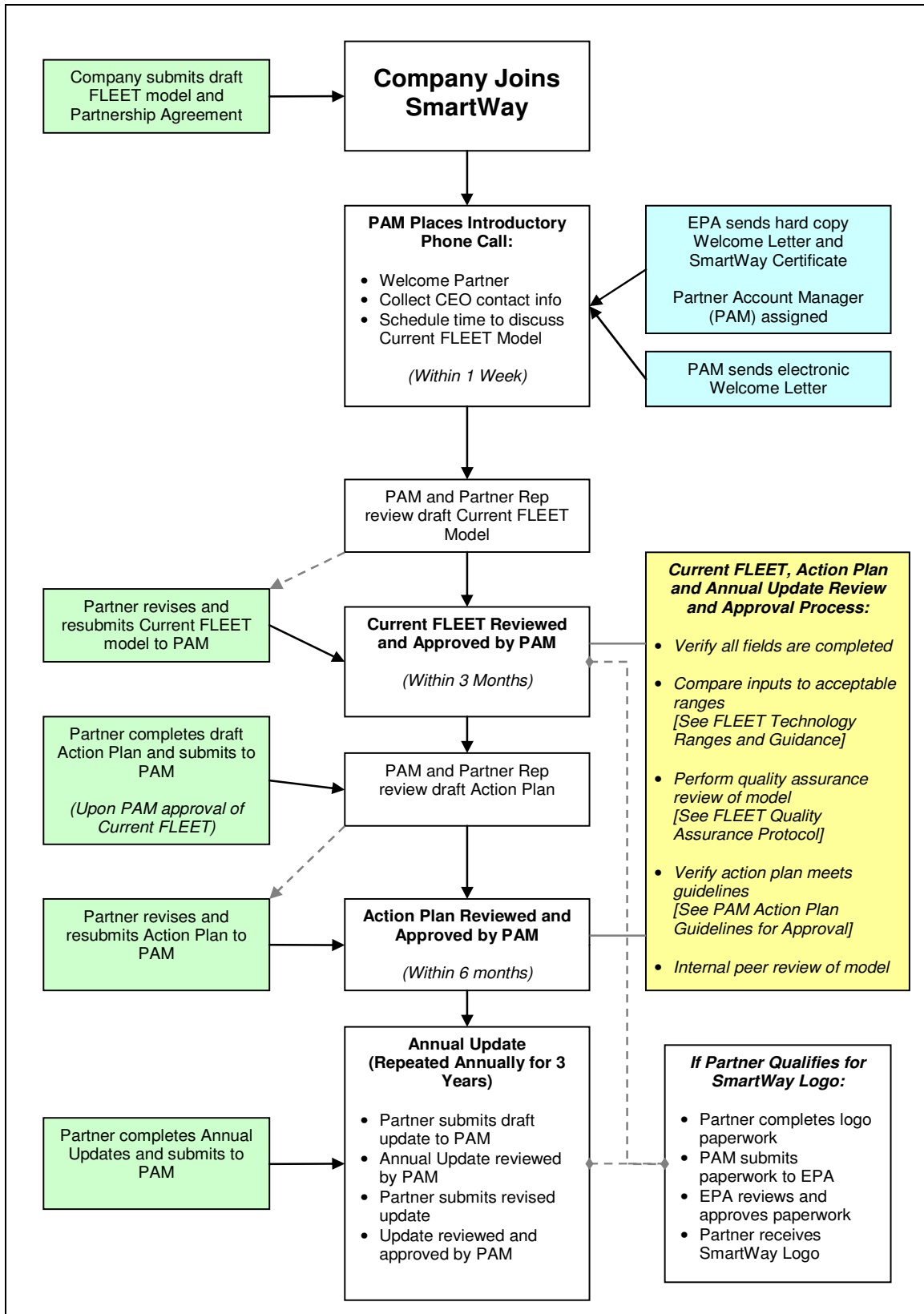
Partner management is one of the most important aspects of managing a successful voluntary partnership. The partner account manager (PAM) is the direct link from the program to the partner, and quality and responsive management of partners is a key to satisfying the partners and growing the program.

Initial Partner Management Activities

The following are initial activities that a PAM should undertake with each partner:

- Quality assurance of the FLEET model.
- Assistance with FLEET Action Plan.
- Marketing support, especially help with a press release announcing participation.
- Responding to other requests from partners.

The following table summarizes PAM activities.



Ongoing Partner Management Activities

The PAM's ongoing responsibilities include:

- Assistance with the FLEET annual updates.
- Providing technical support, as requested by partner.
- Providing marketing support, as requested by partner.
- Information dissemination.
- Responding to other requests from partners.

The attached table displays marketing oriented activities that a Partner may choose to initiate.


Internal Communications (Employees)	Step Time	External Communications (Customers, Shareholders, Citizens/Neighbors)
Announcement of Joining SmartWay A notice should be sent notifying employees of: <ul style="list-style-type: none"> • Company becoming a Partner. • What is SmartWay. • Why company joined. 	Step One <i>Upon Becoming a Partner</i>	Announcement of Joining SmartWay <ul style="list-style-type: none"> • Press Release. • Website Posting. • Submission of Corporate Profile.
Internal Education <ul style="list-style-type: none"> • What will the company do as a SmartWay Partner. • What does it mean to me as an employee? 	Step Two <i>Within 3 Months</i>	Outreach to: <ul style="list-style-type: none"> • State and National Associations. • Large Customers. • Shareholders (if applicable).
Training As determined by Partner Action Plan, employees should be trained when necessary to ensure the Partner meets its efficiency commitments.	Step Three <i>Within 8 Months</i>	Media Engagement <ul style="list-style-type: none"> • Regular and ongoing communication to local media outlets. • Other standard company media outreach.
Continued Communication and Education Updates on progress in newsletters and employee bulletins.	Step Four <i>Ongoing/Continuing</i>	Development of Marketing Materials <ul style="list-style-type: none"> • Partner Case Study. • Co-development of marketing and communication materials, as requested by Partner. • Logo usage (if applicable).

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Module IV. Expansion of the SmartWay Concept

Module 4: Expansion and Refinement Stage 2006-2007

2006	<i>Expansion and Refinement Stage</i> <ul style="list-style-type: none">➤ Partner Management Focus; Approaching 500 Partners➤ Innovative Capitalization Efforts➤ First Annual SmartWay Awards➤ SmartWay Light-Duty Designation Launched➤ SmartWay Grow and Go launched
2007	<ul style="list-style-type: none">➤ Supply Chain Concepts Introduced➤ Launched SmartWay Tractors and Trailers & Certified Vehicles➤ SmartWay Finance Center Opens➤ Second Annual Awards Held➤ Accelerating Partner Growth

IV-1

In 2006, the first SmartWay Awards were held and new programs were launched under the SmartWay Brand. Partner Management was a challenged that needed to be addressed as the Partnership reach close to 500 partners. In addition, EPA focused on developing innovative financing programs to help companies purchase fuel efficiency technologies.




Module 4: Expansion and Refinement Stage 2008-2009

- | | |
|-------------|--|
| 2008 | <ul style="list-style-type: none">➤ Over 1,000 Partners➤ Supply Chain/SWT 2.0 development begins➤ Package Labeling Pilots Begin➤ Consumer Awareness Marketing Begins➤ SmartWay International Summit➤ US/Canada Partner Networking Forum➤ Launch Partner Webinar Series |
| 2009 | <ul style="list-style-type: none">➤ Over 2,000 Partners➤ DERA and SmartWay Grants➤ Enhanced technology verification program➤ Begin Development of Heavy-Duty Fuel Economy Test Program |



IV-2



Module 4: Expansion and Refinement Stage 2010...

2010 *Moving toward second-generation program*

- Almost 3,000 Partners
- Supply Chain carbon accounting tools developed, beta testing and peer review
- International stakeholder support
- Refined marketing program



IV-3



Managing SmartWay Partner Management Challenge

- Adapting to significant growth
 - Increasing Partner Management Efficiency
 - Tool Development
 - Prioritizing tasks
- More Partners = More EPA Support
 - Without additional support, each Partner will receive less attention



IV-4

SmartWay has grown very fast and as w/ other PPPs, this growth has to be managed carefully. A program's growth/success can potentially crush it if is not managed and refined.

As w/ other PPPs, it is **very important to shift and adjust resources while applying processes, guidelines, tools, etc. to help manage growth.**

ANECDOTE: For instance, as more partners required active partner management, the program needed to rely on third party recruiters to take on more of the recruiting tasks rather than EPA and contractor staff. Further, EPA needed to link rewards to successful completion of objections/projects so only those partners that completed action plans/FLEET models were eligible to submit an award application.



Managing SmartWay Partner Management Challenge

- Adding value to Partners
 - With reduced attention, it is more difficult to give each partner attention to undertake marketing and publicity events
 - To give staff more time to pursue value-added activities, EPA developed quantitative FLEET approval guidelines.
 - Partner Account Managers approve the FLEET automatically, rather than waiting for a SmartWay Program Manager. Allows companies to “get it right the first time.”
- Partner compliance to ensure program integrity
 - As program grows, so does challenge of ensuring partner commitments are kept
 - EPA implemented an enforcement process to put non-compliant Partners on notice and remove those that did not comply



IV-5



Recruiting Challenges in a Growing Program

- No longer a primary focus, but still an important (but smaller) task
 - Focus on large, prominent companies
 - More reactive, rather than proactive
 - Indirect recruiting, through current Partners (specifically Shippers, Logistics, and Affiliates)
- Ensuring new Recruits actively participate
 - FLEET model due when new Partners join
 - Reduces EPA Partner Management burden
 - Previously, Partners had a grace period to complete the FLEET



IV-6

At this point, recruiting was no longer the primary focus of SmartWay. Established critical mass with ~500 partners.

It is important to consider Quality vs. Quantity now that there is this critical mass. EPA wants active participation not just large recruiting numbers.



Feedback Loop Industry Advisory Group

- An informal group of current Partners
- Provides feedback to EPA, used to constantly improve Partnership
 - Recruiting/Partner Management Strategies
 - What's working and what's not
 - New ways to publicize the Partnership



IV-7

Just like the industry groups that participated in the development of SmartWay, EPA has used an Industry Advisory Group to obtain regular feedback and advice on Partnership progress and necessary changes/improvements.

EPA facilitated monthly calls with about 10 of the most proactive and prominent Partners (also important to have all groups represented – shippers, carriers, affiliates, etc). This activity needs to happen informally and formally.



International Collaboration

EPA/NRCan Memorandum of Understanding

- EPA and Natural Resources Canada signed an MOU to coordinate efforts between SmartWay and FleetSmart
 - SmartWay – performance-based
 - FleetSmart – training/awareness-based
- MOU allows EPA and NRCan to share information from research and projects
- Planned projects include:
 - Truck idling reduction projects at border crossings
 - Technology deployment programs
 - On-line driver training on fuel efficient driving techniques



IV-8

Because large amounts of freight travel across our northern border, and many companies in both countries have similar operations and interests in saving fuel, an MOU was crafted to coordinate and share resources and information.

FleetSmart is Canada's equivalent program to SmartWay, but it is focused on driver training (not evaluation and quantification).

Driver training materials are available to American companies, and Canadian companies can join SmartWay.



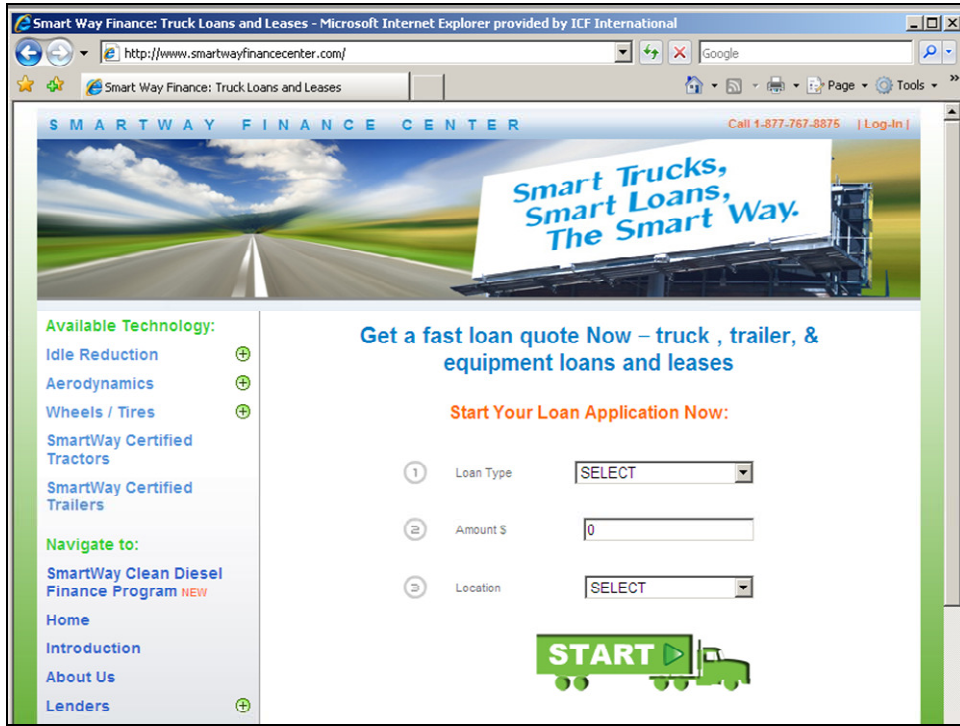
Innovative Financing Opportunities

- Many companies lack the capital to invest in innovative technologies
- To assist them, SmartWay is working with states, local energy offices, private financial institutions to create innovative financing strategies:
 - Low interest loans
 - Tax credits for innovative fuel saving and emission control products
 - Federal and state grant programs
 - Energy saving performance contracts (pay back capital from % of savings)
 - DOT innovative financing programs: State Infrastructure Banks
 - National Loan Program (SBA and EPA SmartWay)



IV-9

The SmartWay Finance Center, available at www.SmartwayFinanceCenter.com, offers information on lending institutions that offer Cleaner Truck, Trailer, and Technology Loans. Companies can enter basic information on the loan they are trying to secure, such as amount of money and location, and the website will provide loan offerings. The site also accepts loan applications.





SmartWay Finance Program

- Goal: Maximize deployment of fuel saving and emission reduction technologies in the market
- Innovative finance programs reduce emissions and improve air quality
 - Aim for highest leveraging of public dollars
 - Loan program funds can be “recycled”– increasing public benefits
 - Most funding to date under DERA = focus on diesel emissions with GHG co-benefits



IV-11

Small and medium trucking fleets can't afford upfront cost of retrofits or new cleaner trucks

Means older, dirtier trucks stay in legacy fleet



Financing for Cleaner Trucks & Equipment

- SmartWay finance program provides access to capital for smaller trucking fleets and owner operators
 - Private lenders offer financing using federal grants as seed money to provide better rates or terms

- Benefits of Cleaner Truck/Equipment Financing
 - Maximize emission reductions
 - Incentivize purchase of cleaner vehicle/equipment
 - Improve monthly cash flow

More environmental controls = Better financing rates or terms



IV-12



SmartWay Finance Helps Fleets Cut Emissions and Costs

Cleaner Used Truck	2005 MY Truck on the Used Market	
	Standard Truck	Same Truck with PM Filter <i>Extend loan by 12 months & lower rate to 6%</i>
Purchase Price:	\$40,000	\$50,000
60 Month Interest Rate:	12%	6%
Monthly Payment:	\$890	\$829 (\$61 less)
Total Cost:	\$53,400	\$59,688

Combining diesel filters with fuel saving retrofits cuts emissions and costs less!

Equipment	Cost	% Fuel Savings	Annual Fuel Savings	Monthly Fuel Savings	Monthly Loan Payment	Net Monthly Savings
APU, Tires, Aero, PM Filter	\$26,500	17%	\$8,320	\$693	(\$659)	\$34

Assumes loan at 9% for 48 months; \$3/gal diesel



IV-13

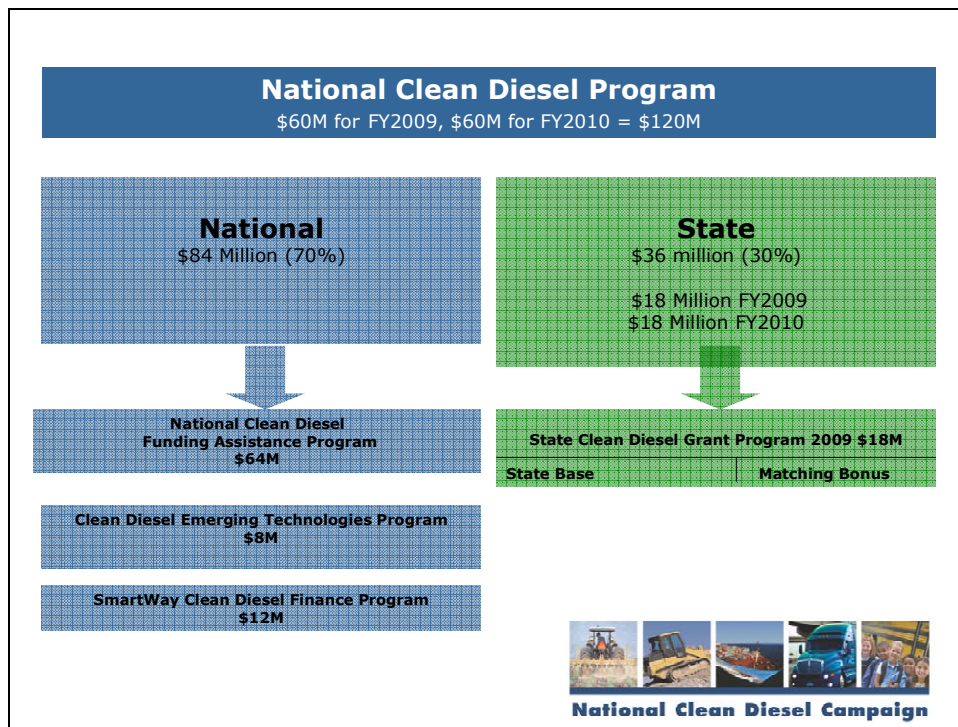


SmartWay Finance Program

- Since 2008, approximately \$30 million awarded to support the development of loan programs to reduce fuel costs and emissions
 - Additional \$12M 2009/2010 funds to be awarded
 - Complements \$284M funding for EPA's National Clean Diesel Campaign
- Grants awarded to multiple entities
 - Cascade Sierra Solutions
 - Community Development Transportation Lending Services, Inc.
 - Houston Galveston Area Council
 - Owner-Operator Independent Drivers Association Foundation
- SmartWay Finance funding supports a wide range of projects across U.S.
 - Port dray truck retrofits and repowers
 - Over-the-road and regional truck fleet upgrade, leasing and loan programs
 - APU rebates for independent owner-operators
 - CNG retrofits of school buses
 - Retrofit and repower of port, construction, and agricultural equipment



IV-14



National Clean Diesel Emissions Reduction Program which was created under Title VII, Subtitle G (Sections 791 to 797) of the Energy Policy Act of 2005, Public Law 109-58, signed August 8, 2005 (EPA Act). The National Clean Diesel Emissions Reduction Program is sometimes referred to as "DERA".

Eligible entities:

U.S. regional, state, local or tribal agencies/consortia or port authorities with jurisdiction over transportation or air quality

Nonprofit organizations or institutions that:

represent or provide pollution reduction or educational services to people or organizations that own or operate diesel fleets; or

have, as their principal purpose, the promotion of transportation or air quality

School districts, municipalities, metropolitan planning organizations (MPOs), cities and counties are all eligible entities under this assistance agreement program.



Lessons Learned

- Lesson: Simplify the FLEET Model
 - Model is intimidating at first glance, model file size is large and user's don't use all the features
 - Reduce Partner Account Management time on training Partners on the tool
- Solution:
 - User's guide to help companies use the tool
 - Short FLEET Model for smaller companies.
- Potential Improvements:
 - Web-based version
 - Graphical User Interface to make it more user friendly (i.e. TurboTax type front-end)



IV-16



Lessons Learned

- Lesson: Pick the right Industry Events / Forums
 - Smaller shows with significant SmartWay presence can result in new relationships
 - Methodology and Criteria for Events chosen including target audience, marketing opportunities, and partners support
- Solution:
 - Pick events based on opportunities for SmartWay, not just events w/ large attendance (i.e. Big Truck Shows)
 - Ensure a speaking role at the event
 - Garner Partner support for testimonials and credibility.
- Potential Improvements:
 - Dedicated SmartWay Conference (build off of Awards Ceremony)
 - SmartWay sponsorship at relevant conferences (already happening...Awards Ceremony at NAEM)



IV-17

SmartWay staff and publicity can be lost among everything else happening at the largest of events. This was especially true in 2004 and 2005, before SmartWay had industry name recognition. When SmartWay was first launched, some of the smaller events offered the best opportunity to meet prospects and get them to join.



Lessons Learned

- Lesson: Link the FLEET, Web site and CRM
 - Reduce effort spent to enter (re-enter) information in each system.
- Solution:
 - Set up systems that allow EPA, contractors, and regional offices to collaborate and communicate more efficiently.
 - CRM data will automatically populate website (i.e., new Partner joins). Faster communication to public and partners.
- Potential Improvements:
 - Single information system for all Partner data, including Web site.



IV-18



Lessons Learned

- Lesson: Foster More Partner Networking
 - Partners want more offerings and information about technologies and opportunities
- Solution:
 - SmartWay Awards is a start but build it into a SmartWay specific event with workshops and information sharing across all partnership categories.
- Potential Improvements:
 - Workshops and Partner-only events
 - Webinars (Regular sessions/seminars for partners over the Internet)
 - More tools to provide valuable services to Partners



IV-19




Lessons Learned

- Lesson: Improve Industry Feedback Channels (Sustain Feedback Loop)
 - Partners want more offerings about technologies and opportunities
- Solution:
 - Re-commit to scheduled Industry Advisory Meetings
 - Feedback opportunities at speaking engagements at conferences or at SmartWay-specific workshops/events
- Potential Improvements:
 - Encourage Industry to develop its own SmartWay Partners Association
 - Sector-specific feedback groups (Benchmarking workgroups – initiated by industry)




IV-20



SmartWay Brand Value

- SmartWay Brand symbolizes environmentally-friendly, efficient transportation
- The Partnership is just one element of this brand
- “SmartWay” is identifiable by the public in numerous instances



IV-21

SmartWay is not just a green freight transportation program/symbol; **it is a symbol of green transportation**

The SmartWay Brand - Expansion

- The SmartWay umbrella includes a variety of clean, green transportation programs and services
- SmartWay is being used to designate the most efficient light-duty vehicles

SmartWay Vehicles

U.S. ENVIRONMENTAL PROTECTION AGENCY

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You are here: EPA Home > Transportation and Air Quality > SmartWay Home > SmartWay Vehicles

SmartWay The Smart Way to Save Fuel, Money, and the Environment

EPA's SmartWaySM program helps drivers and shoppers who want to make the smart choice when it comes to buying a new car. When you buy a SmartWay vehicle with a renewable fuel like E85, you can reduce air pollution and improve the smart way to make an investment in a cleaner environment and our planet.

[Learn more about SmartWay](#)

Greenhouse Gas Score

Score	CO ₂ e Emission (g/mile)	Combined City/Hwy Label MPG	
		gasoline	diesel
10	Less than 237	38+	43+
9	238 to 283	32-37	36-42
8	284 to 329	28-31	31-35
7	330 to 375	24-27	28-30
6	376 to 421	22-23	25-27
5	422 to 467	20-21	22-24
4	468 to 513	18-19	20-21
3	514 to 559	16-17	19
2	560 to 605	15	17-18
1	606 to 651	14	16
0	652 and up	1	1

Air Pollution Score

Score	US EPA Tier 2 Emission Standard	California Air Resources Board LEV II Emission Standard
9	Bin 2	SULEV II
8	Bin 3	--
7	Bin 4	ULEV II
6	Bin 5	LEV II
5	Bin 6	LEV II option 1
4	Bin 7	--
3	Bin 8	SULEV II lg trucks
2	--	ULEV II lg trucks
1	--	LEV II lg trucks
0	--	--

Consumers are now exposed to the idea of SmartWay (green transportation) when they are shopping for cars.



The SmartWay Brand - Expansion

○ SmartWay Grow and Go

- Temporary initiative to promote the use of biofuels
- Partners were encouraged to adopt the use of biodiesel under the Partnership
- Other companies were encouraged to use biofuels, or offer products that run on biofuels



IV-25

SmartWay Truck Goal

Year	2007	2010	Retrofit
Fuel Economy	~7.5 mpg 25% better than today's standard trucks		
NO_x	1.2 g/bhp-hr	0.2 g/bhp-hr	
PM	0.01 g/bhp-hr	0.01 g/bhp-hr	80% PM Filter
Fuel	ULSD Required		
Compliance	Sign Logo use guidelines Sign SWT truck agreement		



IV-26



SmartWay Truck Features

○ Tractor requirements:

- 2007+ model year
- Integrated cab roof fairing
- Cab side fairing
- Tank fairing
- Cab front air dam bumper
- Aerodynamic mirrors
- Idle reduction equipment
- Single-wide or low rolling-resistance tires

○ Trailer requirements:

- Side skirts on trailer
- Single-wide or low rolling resistant tires
- Weight savings
- Gap reducer on front or trailer tails



SmartWaySM

IV-27

SmartWay Truck



IV-28

Funding (2006)



Fiscal Year 2006 Budget: \$1,850,000

- Recruiting and Partner Management: \$750,000
 - EPA Contractor Support
 - EPA and Contractor Travel
 - IT Support
 - Marketing Material for Recruiting/Partner Management
- Marketing and Communication: \$400,000
 - EPA Contractor Support
 - Communication Campaign (i.e. PSAs)
 - Outreach Material Development (documents, displays, banners, award trophies, etc.)
- Technology and Verification: \$300,000
- Expansion Projects: \$300,000
 - Light-Duty Vehicles, Drayage and Ports
- General Operating Costs / Other: \$100,000



IV-29

Staffing Needs (Program Management/ Expansion) 2006 - 2007



15-20 Total FTEs

- Program Management:
 - Institutional Knowledge / Generalists (experience with various program aspects and design)
 - Experience in voluntary program design and implementation
- Recruiting / Partner Management Staff:
 - Experience identifying and pitching ideas to decision makers.
 - Strong interpersonal communication, sales, and marketing skills
 - Strong presentation and networking skills
 - Experience as an account manager preferred (with freight industry experience)
 - Knowledge of SmartWay fuel saving technologies
 - Strong quantitative, Excel modeling and organizational skills
 - Strong interpersonal and relationship building skills.
- Technical Support and New Initiatives Staff:
 - Ability to write and interpret technical reports / convey technical knowledge
 - Entrepreneurial; Identify trends: Understand technology adoption life cycle
 - Industry Sectors Specific Knowledge– Financial, Ports, Borders/International



IV-30

Moving toward a 2nd generation program



IV-31



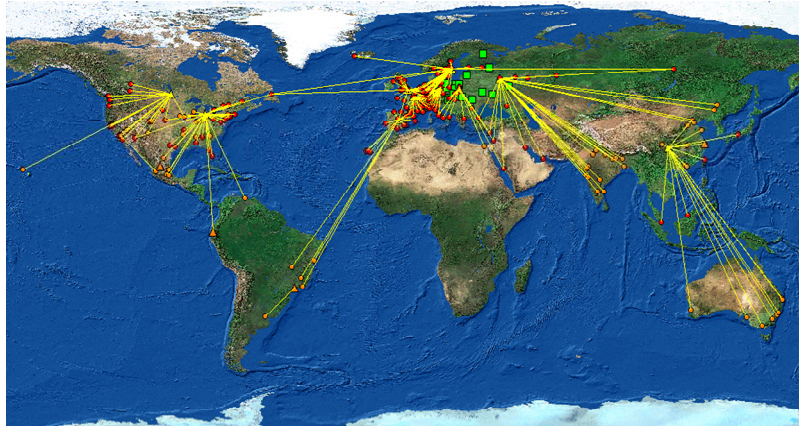
SmartWay Vision for Green Supply Chain

- Industry and government work toward decarbonizing global supply chains
- Full carbon transparency exists in freight management decision-making
- SmartWay carriers are enabled with better benchmarking tools
- Universal usage of a global database of company emission factors
- Freight sustainability Programs like SmartWay exist in industrialized countries



IV-32

Measuring and Reducing Emissions from the Supply Chain



IV-33



The Demand

- Shippers driving demand for sustainable freight operations
 - Growing demand for carbon disclosure & efficiency gains from freight providers
 - Transportation significant to overall global emissions footprint
- Globalization introduces new challenges and opportunities
 - Multinational corporations linking manufacturing and logistics operations across the world
 - Strong business case for more sustainable supply chains
- SmartWay Partners see SmartWay as a key part of their global supply chain solution
 - SmartWay developing new carbon accounting and tracking tools that will cover more freight modes; provide enhanced carbon assessment, tracking and benchmarking capability; and improve data functionality and management



IV-34



SmartWay as a Template for Global Freight Programs

- Numerous countries, NGOs and trade groups are working to develop freight sustainability initiatives globally.
 - SmartWay often seen as a model public/private, market-based partnership for other countries to emulate.
- SmartWay International Workshop December, 2008
 - Representatives from 12 countries
 - Belgium, France, Netherlands, Sweden, Switzerland, UK, Australia, New Zealand, Canada, Mexico, India, Japan
 - Other key organizations included:
 - World Resources Institute, Environmental Defense Fund, Carbon Trust, MIT, US Maritime Administration, EPA OITA
 - Goals:
 - Training countries to set up SmartWay sister programs
 - Sharing best practices from other countries' programs
 - Harmonizing supply chain GHG accounting methods
 - Developing an international SmartWay Exchange Network



IV-35

SmartWay: Americas

- SmartWay “sister” programs:
 - Canada – FleetSmart
 - Administered by NRCan
 - Focused on driver training, education, best practices
 - EPA has MOU to collaborate on joint program activities
 - Mexico – Transporte Limpio
 - Administered by SEMARNAT
 - Pilot program underway to collect fleet data, benchmark efficiency, develop action plans
- Commission for Environmental Cooperation
 - Integrating SmartWay into North American Supply Chain Sustainability study; report to Environmental Ministers
 - Exploring cooperation for CAN-US-MEX trade corridor
- Chile and Brazil (through IDB) are pursuing SmartWay design

FleetSmart



IV-36

SmartWay: Europe

- SmartWay “sister” programs launched:
 - France – Objectif CO₂
 - Administered by ADEME
 - Modeled after SmartWay
 - Focused on benchmarking, best practices
- EU developing SmartWay platform with goal of harmonizing multinational freight sustainability efforts, share data with US
 - Pilot demonstration underway with a dozen freight shippers/carriers
 - Multinational companies with US and EU operations
 - Beta testing new SmartWay carbon accounting tools
 - www.climatetransact.eu



IV-37

SmartWay: Asia

- SmartWay “sister” programs launched:

- Australia – “SmartWay”

- Administered by EPA Victoria
 - Modeled after SmartWay
 - Focused on technology, best practices



- Guangzhou China Green Truck Demonstration project

- SmartWay technology retrofits on existing trucks
 - Demonstrated 6%-17% fuel savings



- Guangdong Green Freight project

- World Bank developing multi-million funding sources from Global Environment Facility and commercial co-financing for:
 - Market based freight partnership program (like SmartWay)
 - Carbon accounting tools and methodologies
 - Financing programs



IV-38

Appendix: Relevant Websites and Contacts

- Official SmartWay Homepage: <http://www.epa.gov/smartway/>
- SmartWay Transport Partnership: <http://www.epa.gov/smartway/transport/index.htm>
- EPA Interactive Activity Map: http://epamap10.epa.gov/website/irim_us_map.asp
- EPA Green Vehicle Guide: <http://www.epa.gov/greenvehicle/>
- SmartWay Finance Center: <http://www.smartwayfinancecenter.com/>
- SmartWay Finance Program: www.epa.gov/smartway/transport/what-smartway/financing-clean-diesel-info.htm
- SmartWay verified technologies: www.epa.gov/smartway/transport/what-smartway/verified-technologies.htm
- National Clean Diesel Campaign verified emission control equipment: www.epa.gov/otaq/retrofit/verif-list.htm
- Fuel Savings Calculator: www.epa.gov/smartway/transport/calculators/
- Diesel Emissions Quantifier: <http://cfpub.epa.gov/quantifier/view/index.cfm>
- EPA Technology Package Savings Calculator: <http://www.epa.gov/smartway/calculator/loancalc.htm>
- EPA National Clean Diesel Campaign: <http://www.epa.gov/cleandiesel/index.htm>
- Greenhouse Gas Equivalencies Calculator: <http://www.epa.gov/cleanenergy/energy-resources/calculator.html>
- Department of Energy truck stop electrification (TSE) locator: http://www.eere.energy.gov/cleancities/idle/station_locator.html
- Department of Energy list of available idle reduction (IR) technology: <http://www.eere.energy.gov/cleancities/idle/models.html>
- ATA Trucks Deliver a Cleaner Tomorrow: <http://www.trucksdeliver.org/>
- Cascade Sierra Solutions: <https://secure.cascadesierrasolutions.org/>
- FleetSmart Canada: <http://fleetsmart.nrcan.gc.ca/>

For more information about SmartWay, please contact us at:

Mail:

SmartWay Transport Partnership
2000 Traverwood
Ann Arbor, MI 48105

Phone:

SmartWay Transport Partnership Call Center
(734) 214-4767

Email:

smartway_transport@epa.gov

Fax:

(734) 214-4052