

SmartWay Transport

Helping the Freight Industry Save Fuel,
Money, and the Environment







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Introduction

Background

Economic prosperity in the United States is inextricably tied to the commercial movement of goods by truck and rail. Trucks and locomotives move more than 80 percent of the nation's freight—some 9 billion tons each year—valued at nearly \$7 trillion.

While essential to business and consumers, the ground freight transport system also consumes energy and produces pollution. Trucks and locomotives burn 35 billion gallons of diesel fuel each year, representing 20 percent of the fuel used in the transportation sector. Carriers hauling the nation's goods produce more than 350 million metric tons of carbon dioxide (CO₂), a greenhouse gas,

annually. They also emit nitrogen oxides (NO_x) and particulate matter (PM), air pollutants that have serious health and environmental impacts.

With factors such as just-in-time manufacturing, faster delivery services, and demand for imported products increasing both the volume and value of freight shipments in the United States, freight-related energy consumption and pollution are also increasing. Based on current trends, ground freight transportation will consume more than 45 billion gallons of diesel fuel and produce over 450 million metric tons of CO₂ by 2012—an increase of more than 25 percent compared to today's levels.

What Is SmartWay Transport?

To address economic and environmental challenges surrounding growth in the freight industry, the U.S. Environmental Protection Agency (EPA) has developed the SmartWay Transport program to reduce greenhouse gas emissions and air pollution from the ground freight transport industry. This innovative, voluntary program promotes efficiency in the freight sector. Through public-private partnerships, SmartWay Transport is helping freight companies save money while also reducing fuel consumption and harmful environmental impacts. This new approach to government/industry cooperation demonstrates that environmental protection and economic progress can go hand in hand.

The objective of SmartWay Transport is to increase the fuel efficiency and environmental performance of the ground freight industry through four core components:

The SmartWay Transport Partnership

- A strong government/industry partnership among freight shippers, carriers, and logistics companies.

The National Transportation Idle-Free Corridors Project

- A partnership with federal, state, and local government; industry; and other organizations committed to eliminating all unnecessary long-duration truck and locomotive idling at strategic points along major transportation corridors.

SmartWay Innovative Financing Program

- An innovative financial strategy that helps companies acquire fuel-efficient, low-pollution technologies through creative financial mechanisms such as low-interest loans.

SmartWay Technologies Program

- A testing and verification program designed to quantify emissions reductions and fuel savings and allow companies to assess environmental performance of products.





Summary of Key Accomplishments, 2004–2005

Since the program's inception, SmartWay projects that its program activities will eliminate more than 3.2 million tons of CO₂, reduce diesel fuel consumption by nearly 300 million gallons, and save participating partners \$850 million in fuel costs annually. In 2004 and 2005, the SmartWay Transport Partnership has also achieved the following:

SmartWay Transport Partnership

- Established corporate partnerships with 261 freight shippers, shipper-carriers (private fleets), carriers (truck and rail), and logistics companies in the United States and Canada (plus relationships with 22 associations and nonprofit organizations) to promote awareness and adoption of SmartWay strategies.
- Signed a Memorandum of Understanding with Canada to expand SmartWay Transport Partnership resources and reach.

National Transportation Idle-Free Corridor Project

- Initiated pilot projects in 52 sites and distributed \$6 million worth of grants to 14 states and nonprofit organizations.

SmartWay Innovative Financing Program

- Started coordination with Arkansas and Minnesota to allow use of technology loans for SmartWay Upgrade Kits.

SmartWay Technologies Program

- Conducted preliminary testing, which demonstrated measurable improvements in fuel efficiency and reductions in NO_x emissions due to single-wide tires and trailer aerodynamics.

Environmental Measures of Achievement

	Projected CO ₂ (tons/year)	Projected NO _x (tons/year)	Projected PM (tons/year)	Diesel Fuel Savings Anticipated (gallons/year)	Fuel Savings (\$/year)
Smartway Corporate Partnerships	3,120,000	22,000	777	283,000,000	\$807,000,000
National Transportation Idle-Free Corridors Project	160,000	3,000	64	15,000,000	\$43,000,000
TOTALS	3,280,000	25,000	841	298,000,000	\$850,000,000

Note: Fuel savings are based on a November 10, 2005, price of \$2.85/gallon and do not include capital or labor costs.



Program Activities

In just over a year, SmartWay Transport has made a major impact on the ground freight transport industry. Hundreds of companies, state and local agencies, and other organizations are recognizing the progressive creativity of this program. SmartWay Transport is setting an outstanding example of the power and potential of government and industry working together to achieve mutual goals—environmental protection and economic prosperity.

The structure, goals, and achievements of the four core components of SmartWay Transport are described in more detail in the following sections.

The SmartWay Transport Partnership: Business and Government Working Together

On February 9, 2004, EPA unveiled the SmartWay Transport Partnership with the full support of the trucking industry, including 15 charter partners and the American Trucking Associations. The partnership element of the broader SmartWay Transport program emphasizes voluntary participation by progressive companies and organizations that recognize that they can improve their business and the environment at the same time. Companies that provide and/or hire freight delivery and

logistics services become SmartWay Transport Partners by committing to improve the environmental performance of their freight delivery operations. Environmental performance is calculated using specially designed models that compute reductions in fuel consumption, and CO₂, NO_x, and/or PM emissions.

SmartWay Transport Partnership Charter Partners

These companies helped design and develop the SmartWay Transport Partnership:

- Canon USA
- CSX Transportation
- Coca-Cola Enterprises
- FedEx Express
- H-E-B
- The Home Depot
- IKEA North America
- Interface
- Nike
- Norm Thompson Outfitters
- Roadway Express
- Schneider National
- Swift Transportation
- UPS
- Yellow Transportation

How the Partnership Works

There are currently four categories of SmartWay Transport Partners:

- **Shipper Partners** are companies that manufacture or sell merchandise and ship those goods to distribution centers or retail facilities.
- **Carrier Partners** are companies that own and operate freight trucks or locomotives that are hired to transport materials or merchandise; these include truck and rail companies as well as “shipper-carriers”—companies that ship their merchandise using their own private fleets.
- **Logistics Partners** are companies that are hired to facilitate the packaging and shipping of goods.

How Companies Join the SmartWay Transport Partnership

When companies, such as freight shippers, carriers, or logistics handlers, join the SmartWay Transport Partnership, they commit to:

- Assessing the environmental performance of their current operations using EPA’s Freight Logistics Environmental and Energy Tracking (FLEET) Performance Models.
 - Identifying a goal to improve their environmental performance.
 - Developing a plan detailing how the goal will be achieved.
 - Reporting their progress annually to EPA.
- **Affiliate Partners** are organizations and associations that help spread the word about SmartWay and encourage participation.

SmartWay Transport Carriers commit to integrate innovative cost-saving strategies into their fleet operations. These strategies include a variety of technologies that, when added to trucks or locomotives in the carrier’s current fleet, provide significant fuel economy gains, especially when combinations of these technologies are installed. In addition, carriers can adopt non-technology strategies such as driver training and improved logistics to save even more fuel. These strategies result in savings on fuel costs and maintenance, can improve driver retention, and can result in more business from shippers that are concerned about environmental stewardship and corporate social responsibility.

SmartWay Transport Shippers commit to ship at least 50 percent of their goods with SmartWay Transport carriers. Shippers also can further improve their environmental performance by adopting strategies such as no-idling policies at their docks, evaluating and modifying business practices at their distribution centers and warehouses, and using a combination of truck and

locomotive transport to ship their goods. Companies that meet SmartWay Transport Partnership requirements will benefit from a reduced environmental footprint and reduced operating costs.

Like shippers, SmartWay Transport Logistics Partners do not generally own or directly operate freight trucks. Instead, they act as intermediaries for shippers and carriers, managing the shippers' inbound freight, customs, warehousing, order fulfillment, distribution, and outbound freight to the shippers' customers. Logistics Partners' role in the SmartWay Transport Partnership is

to inspire the fleets that they manage to join the partnership and adopt the fuel-saving strategies and technologies SmartWay Transport promotes. Logistics companies determine the percentage of freight shipped by SmartWay carriers and commit to increase that percentage by at least 5 percent per year or increase the number of SmartWay carriers contracted by 20 companies per year.

All partners commit to improving their environmental performance, and partners that demonstrate superior performance are recognized through press announcements, events, and award ceremonies. They also earn

Recommended Technologies to Improve Fuel Efficiency

TECHNOLOGY	DESCRIPTION	TYPICAL COSTS	APPROXIMATE PAYBACK PERIOD ¹
Idle Reduction Device – Bunk Heater	Small, lightweight, diesel fuel-fired device mounted in the cab that provides heat for cab comfort. Does not include any air conditioning capabilities.	Approximately \$1,000	5 months
Idle Reduction Device – Auxiliary Power Unit	Small diesel-powered generator mounted outside the cab that provides heat, air conditioning, and electrical power to run appliances.	Approximately \$6,000 - \$8,000	21 to 28 months
Idle Reduction Strategy – Truck Stop Electrification	The process of shutting down the tractor and trailer (for transport refrigerated units) and using an external source for power and other amenities.	\$20 for the adapter kit plus \$1.25 for each hour of use	8 months
Single-Wide Tires	Traditional dual tires are replaced with one single-wide tire and aluminum wheel. Can be applied to all tractor and trailer tire positions except for the steer tires.	Approximately \$3,000	29 months
Auto Tire Inflation	Underinflated tires can cause significant losses in fuel efficiency, plus dangerous blow-outs. Auto tire inflation systems can ensure the safety of drivers and lower fuel costs.	Up to \$900	45 months
Trailer Aerodynamics	Fairings added to the front, underside, and rear of the trailer to reduce drag.	Approximately \$2,400	15 months

¹ The payback period is defined as the number of months it would take for the reduced fuel costs to compensate for the cost of the equipment. Fuel costs are calculated based on the November 10, 2005, diesel price of \$2.85 per gallon.

Beyond Technology

SmartWay Transport promotes many practical policy and operations strategies to reduce fuel consumption:

- **Improved Freight Logistics** can optimize trucking operation efficiency, saving fuel and increasing profits for trucking companies.
- **Warehouse Improvements** can be made in and around warehouses and will facilitate improved efficiency and emission reductions.
- **Driver Training** can improve fuel economy considerably by encouraging such simple techniques as cruise control, coasting whenever possible, limiting use of cab accessories, smooth and gradual acceleration, progressive shifting, reducing maximum freeway speeds, and limiting truck idling and stops.
- **Intermodal Shipping** combines the fuel efficiency of rail with the logistical strengths of trucking. Standardized containers are easily transferred from rail to truck, and vice versa.
- **Preferential Docking** privileges for SmartWay Transport Partners: deliveries by partner carriers may be given prime docking times and locales.
- **Driver Comfort Stations** at docking facilities prevent the need for drivers to idle their trucks to stay warm or cool, as necessary.
- **Anti-Idling Policies** at loading docks, combined with driver comfort stations, ensure emission reductions and meet driver needs.
- **Improved Pickup/Delivery Scheduling** can reduce excess idling and increase the on-time efficiency of freight operations.
- **Operating Full Truckloads** instead of partial loads not only improves efficiency but also helps reduce congestion at docking facilities.

the right to display the SmartWay Transport logo on a variety of promotional materials.

By defining clear and achievable goals and committing to ambitious strategies, participants in the SmartWay Transport Partnership are actively addressing concerns about greenhouse gas reductions and air quality while saving money.

Successes and Accomplishments

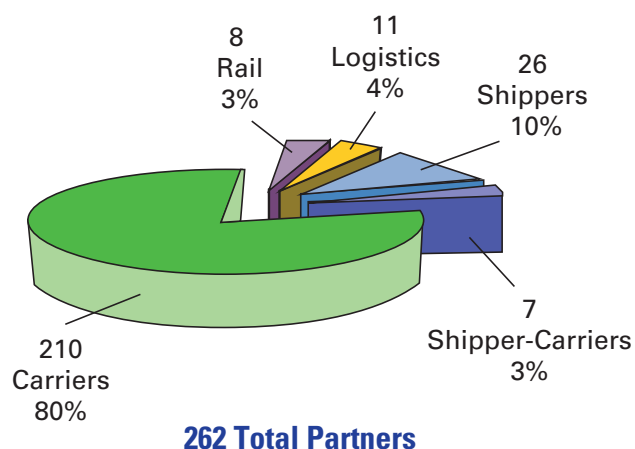
Since the partnership's inception in February 2004, some of the largest national and international freight-transport companies, product manufacturers, and corporations in the United States and Canada have joined the SmartWay Transport Partnership, along with many small and medium-sized truck fleets, rail companies, and logistics providers.

To date, 262 companies have joined the partnership. From partner commitments during the first two years, the SmartWay Transport Partnership projects annual reductions of 3.1 million tons of CO₂, 777 tons of PM, and 22,096 tons of NO_x. These figures add up to an annual fuel savings of 283 million gallons of diesel fuel—worth \$807 million per year to the industry.²

To date, SmartWay has enrolled 22 Affiliates, which are spreading the message of improving fuel efficiency in freight transport to hundreds of additional companies.

² Based on the November 10, 2005, diesel price of \$2.85 per gallon.

SmartWay Transport Partners, Percentage by Type



At the current rate of company progress in the SmartWay Transport Partnership, EPA's partners are well on their way to achieving Smartway's goals of saving 6.6 billion gallons of diesel fuel per year and eliminating 66 million metric tons of CO₂ and as much as 200,000 tons of NO_x each year.

In addition to these notable environmental achievements, the SmartWay Transport Partnership has recently developed relationships with the rail industry and with Canada to further strengthen its efforts to transform the way the freight industry does business.

In May 2005, all seven major freight railroads joined the SmartWay Transport Partnership. These Class 1 freight railroads transport more than 90 percent of all domestic rail freight. Each railroad has committed to evaluate the environmental impacts of its operations and work jointly with SmartWay to develop and implement a plan to improve fuel efficiency and reduce emissions over the next several years. Strategies include reducing idling, improving aerodynamics, applying new fuel-saving technologies, and installing emissions control devices.

The efforts of these seven railroads—BNSF Railway Company, Canadian National Railway Company, Canadian Pacific Railway, CSX Transportation, Kansas City Southern, Norfolk Southern Corporation, and Union Pacific Railroad—will further help SmartWay Transport

increase energy efficiency while reducing greenhouse gas emissions and air pollution. More recently, after learning of the benefits of the partnership, Pacific Harbor Line, a Class 3 railroad, also joined.

Why Are Companies Joining the SmartWay Transport Partnership?

Direct economic benefits:

- Reduced cost of fuel use. A one-to-three year payback period on most technologies.
- Up to \$3,000 in savings per truck per year after payback period.
- Reduced maintenance costs.
- Driver retention through driver incentive and training programs, and comfort features such as truck stop electrification and auxiliary power units.

Additional benefits:

- An enhanced reputation with the public and stockholders for environmental stewardship.
- An additional way to meet corporate environmental sustainability goals.
- A way to demonstrate corporate values that matter to employees.
- Business-to-business advantage.





How the National Transportation Idle-Free Corridors Project Works

The National Transportation Idle-Free Corridors Project addresses unnecessary idling, through studying, evaluating, and deploying technologies and infrastructure modifications at truck stops, travel centers, ports, loading docks, terminals, and even along the side of the road. The program has installed truck stop electrification (TSE) at truck parking facilities across the country along major interstate corridors, such as I-95, I-40, I-5, I-35, I-10, and I-85. TSE provides for the heating, cooling, and power needs of truck drivers on layovers between transport trips. While most truck drivers idle their engines to supply the power for these purposes, TSE lets drivers turn off their engines and plug into a grid—reducing fuel waste and associated emissions. The program also promotes mobile idle reduction technologies, such as direct-fired heaters and auxiliary power units (APUs), which are installed directly on trucks to provide power and allow engine shutdown.

Successes and Accomplishments

The National Transportation Idle-Free Corridors Project currently has 31 active anti-idling projects and 27 new sites under construction to evaluate the potential benefits of idle reduction technologies that provide power, heating, and cooling without using the engine.

To help states assess the environmental benefits of idle-reduction strategies in state air quality planning, the National Transportation Idle-Free Corridors Project published formal air quality guidance in January 2004 for including idle reduction projects in state implementation plans and conformity determinations. And during the summer of 2005, the program began working with state governments and industry representatives to develop a model state or local idling law for heavy-duty trucks and buses.

Over the last two years, the SmartWay team has awarded 14 grants to states and nonprofit organizations totaling approximately \$6 million for the deployment of idle reduction technologies around the country. Once fully

In September 2005, SmartWay developed a new partnership with Canada to share information and technical tools focusing on idle reduction, deployment of clean technologies, and driver training and awareness. The collaboration brings together the complementary strengths of EPA's SmartWay Transport Partnership and Natural Resources Canada's FleetSmart Program, with SmartWay emphasizing the deployment of innovative technologies and FleetSmart specializing in driver education and training. With more than 13 million truck border crossings between Canada and the United States each year, this partnership could save up to 440 million gallons of fuel and prevent emissions of an estimated 5 million tons of CO₂ per year.

National Transportation Idle-Free Corridors Project: Working to Dramatically Reduce Long-Duration Idling

Long-duration truck and locomotive engine idling has a significant impact on the environment and economy. Each year, more than 1 billion gallons of diesel fuel are consumed, and 11 million tons of CO₂, 200,000 tons of NO_x, and 5,000 tons of PM are emitted due to long-duration truck and locomotive idling. In addition, long-duration idling leads to increased engine maintenance costs and shortened engine life, impaired driver rest and health, and elevated noise levels, particularly in urban areas.

On June 10, 2003, in Atlanta, Georgia, EPA launched the National Transportation Idle-Free Corridors Project. The objective of this project is to eliminate all unnecessary long-duration truck and locomotive idling at strategic points along major transportation corridors.

implemented, these technologies are expected to yield yearly reductions of 52,233 tons of CO₂, 877 tons of NO_x, and 22 tons of PM, saving 5.1 million gallons of diesel fuel each year. These reductions will help states and counties achieve their air quality goals.

SmartWay Innovative Financing Program: Making Technology Accessible

Most freight fleets are small. In fact, 96 percent of all trucking companies operate 20 or fewer trucks, and 87 percent operate six trucks or fewer. These small businesses are the most affected by rising fuel prices and the least able to absorb the added cost and high competition in the freight industry. For these companies, the SmartWay Transport Partnership represents a tremendous opportunity to take advantage of technologies, corporate policies, and driver training programs, which save fuel and money and help protect environmental quality.

For many of these companies, however, the major barrier to adopting these fuel and cost-saving strategies is a lack of investment capital.

To help make these technologies more accessible to these trucking companies, SmartWay Transport is establishing the SmartWay Innovative Financing Program and Upgrade Kit program.

How SmartWay Innovative Financing and Upgrade Kits Work

To assist these companies, SmartWay has developed an innovative program, bundling highly fuel-efficient technologies with emission control devices, such as an oxidation catalyst or PM filter, into

“SmartWay Upgrade Kits.” These kits, which can include idle reduction devices, single-wide tires, and trailer aerodynamics, along with the PM control device, will be offered to trucking companies through flexible low-interest loans managed through state and national loan programs.

SmartWay Upgrade Kits create a monetary incentive for trucking companies to retrofit their trucks because the monthly fuel savings achieved from the technology upgrade exceed the monthly cost of the loan. In effect, these innovative financial packages actually put money in a truck owner’s pocket.



SmartWay Upgrade Kits

How Do SmartWay Upgrade Kits Work?

To receive a loan for a SmartWay Upgrade Kit, companies must choose one or more of the following technologies:

- Idling-Control Technologies (APU or bunk heater): 6 – 10% fuel savings
- Wide-Base Tires with Aluminum Wheels: 4 – 10% fuel savings
- Improved Aerodynamics: 5 – 7% fuel savings
- Emission Reduction Device: 20 – 90% PM reductions

Fuel and emissions savings begin as soon as the technologies are installed. Most companies will begin to see financial benefits right away. The following example demonstrates the profitability of this type of loan program.*

Example Kit

Device	Cost/Unit (Retrofit)*	PM Reduction	NOx Reduction	Fuel Economy Change
Direct-Fired Heater	\$1,000	—	7%	7%
Super Single Tires w/Aluminum Wheels	\$3,500	—	5%	5%
Trailer Aero Kit	\$2,400	—	5%	5%
PM Filter	\$7,000	90%	—	—
Totals:	\$13,900	90%	17%	17%

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

- Fuel savings: 2,833 gallons @ \$2.75/gallon → **\$7,790/year**
- Payback period: \$13,900/\$7,790 → **~1.8 years**
- or a 3-year loan @ 4.8% APR:

Monthly fuel savings: \$649
 Monthly loan payment: (\$415)

Monthly cash for driver: \$234

Successes and Accomplishments

The SmartWay Innovative Financing Program is coordinating with small business loan programs in Arkansas and Minnesota to offer SmartWay Upgrade Kits at below-market interest rates. These two programs are just the beginning—SmartWay Innovative Financing is actively working with six to 10 additional states to expand these programs.

The SmartWay Innovative Financing Program is also partnering with private lending institutions and other private investors to expand these innovative financing strategies into the private sector.

SmartWay Technologies Program: Evaluating Fuel Efficiency and Environmental Performance

Numerous technologies designed to improve fuel efficiency are available today. However, beyond manufacturer specifications, little is known about the actual effects these technologies have or how a combination of these technologies applied to a single truck will cumulatively impact fuel consumption.

To better understand the fuel economy impacts of these technologies and evaluate the relationship between fuel economy improvements and NOx reductions, SmartWay Transport initiated an ambitious testing program called the SmartWay Technologies Program.

How the SmartWay Technologies Program Works

The goals of the SmartWay Technologies Program are to:

- Develop a testing methodology and drive cycles needed to evaluate and verify fuel-saving products for heavy-duty trucks used in highway application;
- Better quantify the fuel-saving impacts of innovative, emerging technology options; and
- Evaluate the potential to reduce per-mile NOx emissions by retrofitting heavy trucks with the new technology options to reduce engine load.

The SmartWay Technologies Program began preliminary testing of Class 8 tractor-trailers in late November 2004, at a test track operated by the Department of Defense in Aberdeen, Maryland. The purpose of the Technologies Program was to determine whether or not it was possible to simultaneously measure fuel use, engine performance, and NOx emissions in a simulation of real-world operating conditions. Two identical 2004 model year Mack Vision CX-13 Class 8 trucks, with identical Wabash-Fruehauf 53-foot box trailers, were loaded to a typical 65

percent payload. The test truck was modified to include single-wide tires (lower rolling resistance and reduced weight) and trailer aerodynamic devices to reduce wind resistance and drag. SmartWay used a Portable Emissions Measurement System (PEMS) to quantify NOx emissions, and used the industry-standard SAE 1321 fuel economy test. A total of 72 tests under varying speeds and in-use conditions were conducted.

This testing ran through January 2005, and was an important first step to developing a technology verification program for SmartWay Transport. The results have been evaluated, and will be presented at the SAE Commercial Vehicle Engineering Congress in November, 2006, and published in a peer-reviewed technical paper. EPA plans to conduct additional tests to gather more data and further refine a test methodology that could be used by the freight industry to assess the environmental benefits of innovative technologies.

Successes and Accomplishments

The testing done to date shows that components designed to reduce power load and improve fuel economy may also reduce NOx emissions. These test results should be of particular interest to the freight industry because most fleets and operators will be using existing heavy-duty trucks for many years or even decades to come, and could benefit significantly from upgrade technologies. These simple, cost-effective components not only have the potential to reduce fuel costs; they may also provide a method of NOx control “retrofit” that pays for itself. Through this testing program, the SmartWay Technologies program has demonstrated a correlation between fuel efficiency improvements and NOx reductions. This study is truly groundbreaking—although the relationship between fuel efficiency and NOx emissions has been assumed, it has never been tested or quantified.





Looking Ahead

Based on the first year's achievements and the growing interest in and support for this initiative, SmartWay Transport is expected to continue to grow and expand its reach. Along with continued work in the four core areas of the program, SmartWay Transport is expanding into several new areas.

The foundation of the program has been, and will continue to be, the SmartWay Transport Partnership. The actions of SmartWay Transport Partners, affecting more than 300,000 vehicles, have reduced emissions at levels exceeding the first year's goals. However, the fact that most of the industry is made up of small to medium-size fleets, and these fleets tend to comprise older trucks,

leaves considerable room for fuel efficiency improvements through technology upgrades. To continue to make progress towards the 33 million to 66 million metric ton CO₂ reduction per year goal, the SmartWay Transport Partnership will further emphasize enrollment of small and medium-size fleets to help them benefit from the technology and non-technology fuel efficiency strategies the partnership endorses.

Because of their smaller size and tighter profit margins, these companies often find it difficult to get information and capital for the best available transport efficiency technologies and strategies. To support these companies and to increase the penetration of fuel-efficient technolo-

SmartWay Transport Indicators at a Glance	2004-2005
Projected CO ₂ reductions (tons/year)	3.28 million
Projected NO _x reductions (tons/year)	25,000
Projected PM reductions (tons/year)	841
Projected fuel savings (gallons/year)	298 million
Projected dollar savings through reduced fuel use	\$850 million
Partner companies	217
Trucks/rail/vehicles affected by SmartWay Transport	300,000

gies into the market, SmartWay Transport will expand the SmartWay Innovative Financing Program and is actively working with six to 10 additional states to increase the reach of these technology bundles and funding strategies.

SmartWay Transport is exploring ways of distinguishing low-emission, high-efficiency “SmartWay Trucks” that represent the highest level of environmental performance in freight truck technology. Plans are in the works to define criteria for outstanding truck performance and to label these trucks with special identifiers.

Another way that SmartWay Transport is expanding its reach is through the development of a new SmartWay partnership category—SmartWay Transport Truck Stops. By introducing truck stops as partners, the partnership will be recognizing truck stops for going above the law by creating non-idle zones and deploying electrified parking spaces. In fall of 2005, SmartWay Transport launched a pilot study in New York.

The SmartWay Technologies program will continue to test technologies to verify fuel savings and emissions reductions and to develop procedures with the ultimate goal of being able to designate specific fuel-efficiency technologies as “SmartWay Technologies.”

To share the concept of SmartWay Transport with more segments of the freight transport industry, the program will continue to work with Smart Transport Affiliates to promote the benefits of the SmartWay Transport and encourage more companies to join the partnership. Also planned are recognition and award ceremonies to honor high levels of partner achievement, and other promotional activities such as press events and public relations campaigns.

With all trends pointing to future increases in freight transport, fuel prices, and an increased need for communities to find ways to reduce pollution, it is clear that SmartWay Transport’s voluntary, innovative, and economical strategies and technologies will become essential assets for the freight industry—and the environment.



Appendix 1

Partnership Requirements for Freight Shippers, Carriers, and Logistics Companies

To meet their goals, all partners must:

- Sign the SmartWay Transport Partnership Agreement.
- Create and submit an Action Plan describing how shippers or carriers will achieve their goal.
- Report progress toward achieving the goal to EPA annually.

Carriers must:

- Measure current environmental performance with the SmartWay Transport FLEET (Fleet Logistics Energy and Environmental Tracking) Performance Model for carriers.
- Commit to improve performance within three years.

Shippers must:

- Assess the current proportion of goods dispatched with SmartWay Transport partner carriers using the FLEET Performance Model for shippers.
- Commit to ship at least 50 percent or more of goods with SmartWay Transport partner carriers.
- Assess and commit to improve facility transportation emissions within three years.

Logistics companies must:

- Determine the percentage of freight shipped by SmartWay carriers.
- Increase the percentage of freight shipped by SmartWay carriers by at least 5 percent per year, or increase the number of SmartWay carriers contracted by 20 companies per year, and report this information in EPA's FLEET Performance Model.
- Provide a link to the SmartWay Transport Partnership Web site on the company Web site.
- Inform contracted carriers about the partnership and the benefits of participating in the partnership through various means, such as including SmartWay membership in contracting criteria, mailing brochures and pamphlets, and giving presentations at meetings.



Appendix 2

SmartWay Transport Partnership Partner List

Freight Carriers (Trucking)

AAA Cooper Transportation (AL)
A&A Express, Inc. (SD)
Ace-Way Freight Systems 2003 Inc. (Canada)
Accelerated Freight Group (AL)
ADM Trucking, Inc. (IL)
AJ Saragusa Trucking Company Inc. (TX)
Alabama Motor Express, Inc. (AL)
Alert Motor Freight, Inc. (NJ)
Alvan Motor Freight (MI)
American Cartage, Inc. (Canada)
AMI Transport Service (MA)
Arfsten Transfer Inc. (MN)
Arndt Trucking (SD)
Arnold Transportation Services (FL)
Arrow Trucking Company (OK)
A & S Trucking Service, Inc. (MD)
ASL Transportation (NJ)
Atkinson Freight Lines (PA)
Averitt Express (TN)
B.R. Williams Trucking, Inc. (AL)
Bartels Truck Line, Inc. (MN)
Baxter Healthcare (IL)
Bear Cartage & Intermodal, Inc. (IL)
Behnke Dedicated (MI)
Bell City Transport Systems (Canada)
Bison Transport, Inc. (Canada)
Braun's Express, Inc. (MA)
Brakebush Transportation (WI)
Bright Transportation, L.P. (TX)
Burns Motor Freight, Inc. (WV)
California Cartage Express (CA)
Camionnage C.P., Inc. (Canada)
Can-Am West Carriers Inc. (Canada)
Cardinal Freight Carriers, Inc. (NC)
Celadon Trucking Services, Inc. (IN)
Central Freight Lines (TX)
Circle City Transport, Inc. (AL)
Commercial Transportation, Inc. (PA)
ContainerFreight EIT, LLC (CA)
Contract Freighters, Inc. (MO)
Coomes Inc. (KS)
C. R. England, Inc. (UT)
Currier Trucking Corp. (NH)
Cynthia Wilson (MO)
Damian Trucking, Inc. (IL)
Dart Transit Co. (MN)
Davis Cartage Co. (MI)
Davis Express, Inc. (FL)
Deeco Transportation (MI)
Deep South Freight (AL)
Denmark Express, Inc. (WI)
DHL Express (FL)
Dick Lavy Trucking, Inc. (OH)
Diversified Transfer and Storage (MT)
Dizco, Inc. (SD)
Double NN Transport Ltd. (Canada)
Douglass Distributing Carriers (TX)
Eagle Motor Freight, Inc. (AL)
ECM Transport, LLC (PA)
Estes Express Lines (VA)
Excargo Services (TX)
Fastrax Transportation (Canada)
Farruggio's Express (PA)
FedEx Express Corp. (Charter Partner) (TN)
FedEx Freight System, Inc. (TN)
Floyd & Beasley Transfer Company, Inc. (AL)
Floyd Wild Trucking, Inc. (MN)
FMI, West (CA)
Food Lion, LLC (NC)
Frerichs Freight Lines, Inc. (IL)
Frito-Lay, Inc. (TX)
Frock Bros. Trucking, Inc. (PA)
Gangloff Industries, Inc. (IN)
Garufi Logistics, LLC (OH)
Genmar Transportation, Inc. (MN)
George's Foods, LLC (VA)
G.I. Trucking Company (CA)
Gordon Trucking, Inc. (WA)
Grand Island Express (NE)
Great Plains Trucking, Inc. (KS)
Green Mountain Coffee Roasters (VT)
Greenbush Logistics, Inc. (AL)
GTL Transportation (IA)
Gwaltney Transportation Co., Inc. (VA)
Hall's Fast Motor Freight, Inc. (NJ)
Hannaford Trucking Company (ME)
H.F. Campbell & Son, Inc. (PA)
Hilltop Transportation, Inc. (OH)
Hirschbach Motor Lines, Inc. (NE)
Hodges Trucking Co. (GA)
Hub Group, Inc. (IL)
Hudson's Bay Company (Canada)

Hunkes Transfer, Inc. (MN)
 Hospira Fleet Services, LLC (IL)
 H.O. Wolding, Inc. (WI)
 IFA Trucking (FL)
 International Motor Freight (NJ)
 Interstate Distributor Co. (WA)
 JK Trucking (Canada)
 J&L Wilson Transportation, Inc. (IL)
 J&M Tank Lines, Inc. (GA)
 J.B. Hunt Transport, Inc. (AR)
 John Christner Trucking, Inc. (OK)
 Jones Brothers Trucking, Inc. (MT)
 Joseph John Belovich, Jr. (TX)
 J&R Schugel Trucking, Inc. (MN)
 KBD Transportation (Canada)
 Kennesaw Transportation, Inc. (GA)
 Knight Transportation, Inc. (AZ)
 Lakeville Motor Express, Inc. (MN)
 Langford, Inc. (MN)
 Lasco Bathware Trucking Company, Inc. (MI)
 Lavigne Truck Lines, Inc. (Canada)
 LBAS Transportation (GA)
 Lester Fellows Co. (NJ)
 Linde Gas, LLC (OH)
 Li-Way Transfer and Storage (GA)
 Mark IV Transportation and Logistics (NJ)
 Maverick Transportation, Inc. (AR)
 May Trucking Company (OR)
 McFarland Truck Lines, Inc. (MN)
 McKelvey Trucking Company (AZ)
 MDE&E Trucking (TX)
 Metropolitan Trucking, Inc. (NJ)
 Michel Distribution Services, Inc. (MD)
 Midwest Specialized Transportation, Inc. (MN)
 MST Freight Services, Inc. (FL)
 Muir's Cartage Limited (Canada)
 Muir's International, Inc. (Canada)
 National Distributors, Inc. (IN)
 National Freight, Inc. (NJ)
 New Century Transportation, Inc. (NJ)
 New England Motor Freight (NJ)
 New Penn Motor Express, Inc. (PA)
 Nick Strimbu, Inc. (OH)
 Overnite Express, Inc. (MN)
 Overnite Transportation Company (VA)
 PAF Transportation, Inc. (ME)
 P.A.M. Transport, Inc. (AR)
 Panther II Transportation, Inc. (OH)
 Paramount Truck Lines Ltd. (Canada)
 Paschall Truck Lines, Inc. (KY)
 PCC Logistics (CA)
 Perdue Transportation, Inc. (MD)
 Pike Transportation, Inc. (AL)
 Pitt Ohio Express, LLC (PA)
 Plains Transportation (TX)
 Pottle's Transportation, Inc. (ME)
 Quad/Graphics, Inc. (WI)
 Quantum Logistics, LLC (AL)
 Rapid Freightways (CA)
 Refrigerated Food Express, Inc. (MA)
 R & E Enterprises of Mankato, Inc. (MN)
 Reliable Liquid Transport (CA)
 Rhett Butler Trucking, Inc. (AL)
 Rinchem Company, Inc. (NM)
 R&L Trucking, Inc. (AL)
 Roaco Logistics Services (IL)
 RoadLink USA East (PA)
 Rock Creek Transportation, Inc. (MD)
 Roehl Transport, Inc. (WI)
 Schneider National, Inc. (Charter Partner) (WI)
 Shaw Transport, Inc. (GA)
 Signature Truck Lines, Inc. (Canada)
 Smithfield Packing Transportation Co., Inc. (VA)
 Southeastern Freight Lines, Inc. (SC)
 Southern Cal Transport, Inc. (AL)
 Sprint Recycling (NY)
 Stevens Transport (TX)
 Styleline Transportation, Inc. (IN)
 Sub Zero Transportation, Inc. (NE)
 Summitt Trucking, LLC (IL)
 Swift Transportation Co., Inc. (Charter Partner) (AZ)
 Taz Trucking (Canada)
 T.D.T., Inc. (FL)
 Terra Renewal Services (AR)
 Texas Department of Transportation (TX)
 Texas Star Express (TX)
 Tig Transportation (NY)
 TP Freight Lines, Inc. (OR)
 Transport America (MN)
 Transport Industries, L.P. (TX)
 Transways Motor Express Co., Inc. (NJ)
 Transport Robert LTEE (Canada)
 Trailwood Transportation, Inc. (MN)
 Triple S Trucking (NE)
 Two Cool Trucking Corp. (NC)
 Two Flags Transportation (Canada)
 Unisource Worldwide, Inc. (GA)
 UPS (Charter Partner) (GA)
 US Xpress Enterprises, Inc./Xpress Global
 Systems, Inc (TN)
 USA Motor Express, Inc. (AL)
 USA Cartage, Inc. (MD)
 USA Truck, Inc. (AR)
 VaughanTransport, Inc. (GA)
 Vitran Logistics (Canada)
 VOA Corporation (FL)
 VTL Group (Canada)
 Walgreen Co. (IL)

Watkins Motor Lines, Inc. (FL)
Watkins & Shepard Trucking, Inc. (MT)
Wausau Carriers, Inc. (WI)
Wellborn Transportation, Inc. (AL)
Werner Enterprises, Inc. (NE)
Western Aries Co., LLC (NY)
Whitehead Bros, Inc. (AL)
Whole Foods Market, Midwest Distribution (IN)
WSE Transportation, LLC (AR)
YellowRoadway Corporation (Charter Partner) (OH)

Freight Carriers (Rail)

BNSF Railway Company (KS)
Canadian National Railway Company (Canada)
Canadian Pacific Railway (Canada)
CSX Transportation (FL)
Kansas City Railway Company (MO)
Norfolk Southern Corporation (VA)
Pacific Harbor Line, Inc. (CA)
Union Pacific Railroad (NE)

Freight Shippers

American Clean Energy Systems, Inc. (OH)
Canadian Hydrogen Energy Company Ltd. (Canada)
Canon U.S.A., Inc. (Charter Partner) (NY)
Clean Diesel Technologies, Inc. (CT)
Cozort International, LLC (MO)
Dell Products L.P. (TX)
DENSO Manufacturing Michigan, Inc. (MI)
IdleAire Technologies (TN)
IKEA North America Services, LLC
(Charter Partner) (PA)
Interface, Inc. (Charter Partner) (GA)
JC Penney (TX)
J & J Industries, Inc. (GA)
Labat-Anderson, Inc. (VA)
Lowe's (NC)
Lubri-Loy (MO)
Michelin North America, Inc. (SC)
Nike, Inc. (Charter Partner) (OR)
OFS (IN)
Owens Corning (OH)
Philips & Temro Industries (MN)
Pressure Systems International (TX)
Sharp Electronics Corporation (NJ)
Shurepower, LLC (NY)
The Home Depot, Inc. (Charter Partner) (GA)
Transportation Systems Solutions, LLC (NC)
Volvo Logistics North America (NC)

Shipper-Carriers

Bridgestone-Firestone North American Tire, LLC (TN)
Coca-Cola Enterprises, Inc (Charter Partner) (GA)
Dennis K. Burke, Inc. (MA)
H-E-B (Charter Partner) (TX)
Schwan's Logistics, LLC (MN)
Tyson Foods, Inc. (AR)
Wal-Mart Stores, Inc. (AR)

Logistics Companies

AFN (Advantage Freight Network) (IL)
APL Logistics (FL)
BNSF Logistics (AR)
Bullet Freight Systems, Inc. (CA)
Celtic International (CA)
CH Robinson Worldwide, Inc. (MN)
CRST Logistics, Inc. (NJ)
NYK Logistics (Americas) (FL)
Pacer Global Logistics (OH)
The Radiant Group, LLC (KY)
Total Logistic Control, LLC (MI)

Affiliates

Alliance to Save Energy (DC)
Association of American Railroads (DC)
Businesses for the Bay (MD)
California Trucking Association (CA)
Clean Air Minnesota (MI)
Iowa Motor Truck Association (IA)
Iowa State University Center for Transportation Research and Education (IA)
Lane Regional Air Pollution Authority (OR)
Maine Motor Transport Association, Inc. (ME)
Maryland Motor Truck Association (MD)
Michigan Trucking Association (MI)
Mid-West Truckers Association, Inc. (IL)
Minnesota Trucking Association (MTA) (MN)
Nebraska Trucking Association (NE)
New Jersey Motor Truck Association (NJ)
Ohio Trucking Association (OH)
Pennsylvania Motor Truck Association (PA)
Texas Commission on Environmental Quality (TX)
Texas Motor Transportation Association (TX)
Washington Trucking Associations, Inc. (WA)
Wisconsin Motor Carriers Association (WI)
Wisconsin Partners for Clean Air (WI)



What SmartWay Partners Are Saying

“Our participation in SmartWay is an important piece of our global fleet strategy.

With our first sustainability report issued last fall, we set aggressive goals for reducing emissions and increasing fuel efficiency. SmartWay provides another way to push ourselves to meet, and exceed, those goals.”

— **Mike Herr, Vice President of Environmental Affairs**
United Parcel Service (UPS)

“I encourage everyone to join Swift in becoming a member of SmartWay.

The very worst thing that’ll happen to you is you’ll save fuel which means you’ll make more money.”

— **Dave Berry, Vice President**
Swift Transportation

“SmartWay...incorporates elements that we feel are consistent with how we approach our business and how we want our service providers to approach things as well.”

— **Sabina Strautman, Environmental Transport**
IKEA USA

“H-E-B has always believed in putting customers and community first.

Being a good neighbor means safeguarding the health and welfare of our customers and partners. SmartWay Transport offers opportunities to learn and lead the way toward a clean transportation future.”

— **Charles Butt, Chairman and CEO**
H-E-B

“By joining the SmartWay Transport Partnership, Bison Transport demonstrates its strong environmental leadership and corporate responsibility.

SmartWay Transport is a perfect fit for us as an organization, and its goals tie directly into Bison Transport’s ongoing mission of becoming more efficient and environmentally responsible.”

— **Don Streuber, President & CEO**
Bison Transport

“Averitt Express understands that the future of our world rests on the investments we make to care for the resources of today.

Whether that manifests itself as following safe driving and freight handling procedures or fulfilling our obligation to protect the environment through avenues such as EPA’s Smartway program, Averitt Express is answering the future’s call.”

— **Scott Wolf, Vice President of Corporate Services**
Averitt Express

“Part of the mission of Interface, Inc. is to honor the places where we do business by endeavoring to become the first name in industrial ecology.

We are striving for zero emissions in our operations, including the transportation of our raw materials and finished products. We believe that cooperative initiatives, such as SmartWay Transport, are an important step toward measuring and reducing our environmental ground transportation footprint.”

—Michael Bertolucci, Senior Vice President
Interface, Inc.

“I have good news for you.

New Environmental Protection Agency (EPA) programs are providing some of these requirements that are a high priority in the training business to achieve performance improvements within the transportation industry.

These improvements can mean substantial savings for transportation companies. Who would have thought that EPA might become one of our best allies?”

—Richard Ross, President
Training Alternatives, Inc.

“By designing this program, it shows me and other carriers that EPA is concerned about our business as well as clean air.”

—Rick Coomes, President
Coomes Inc.

“This program gives us the opportunity to work with our carriers and logistics centers to develop practices and technologies that significantly benefit the environment.”

—Mark Servidio, Vice President
Sharp Electronics

“This EPA SmartWay grant is another step forward in our nation’s efforts to conserve fuel, achieve energy independence, and reduce emissions that contribute to soot and smog.

By taking actions, both big and small, to reduce our facilities’ energy usage, we are responding to the President’s call to conserve and promoting the common-sense efforts we can all make as individuals to reduce our energy demand.”

—Stephen Johnson
EPA Administrator

“The freight industry’s achievements in SmartWay are consistent with President Bush’s national call to conserve our country’s energy resources and use collaborative, innovative approaches to resolve environmental problems.”

—Bill Wehrum, Assistant Administrator
EPA Office of Air and Radiation



United States
Environmental Protection Agency
Office of Transportation and Air Quality (6401A)
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