



SmartWay: Fundamentals

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US Environmental Protection Agency

Regions 1 & 2 SmartWay Workshop

Sept 13, 2013



Today's Discussion

- Transportation and Freight Sectors
 - Environmental & Economic Impact
 - Marketplace changes and challenges

- Corporate Citizenship and Carbon
 - Environmental & Economic Drivers
 - Public awareness
 - Business case for freight sustainability

- What is SmartWay?
 - Carbon accounting system
 - 2nd Generation program enhancements

SmartWay Drivers:

Freight Sector Environmental Impacts

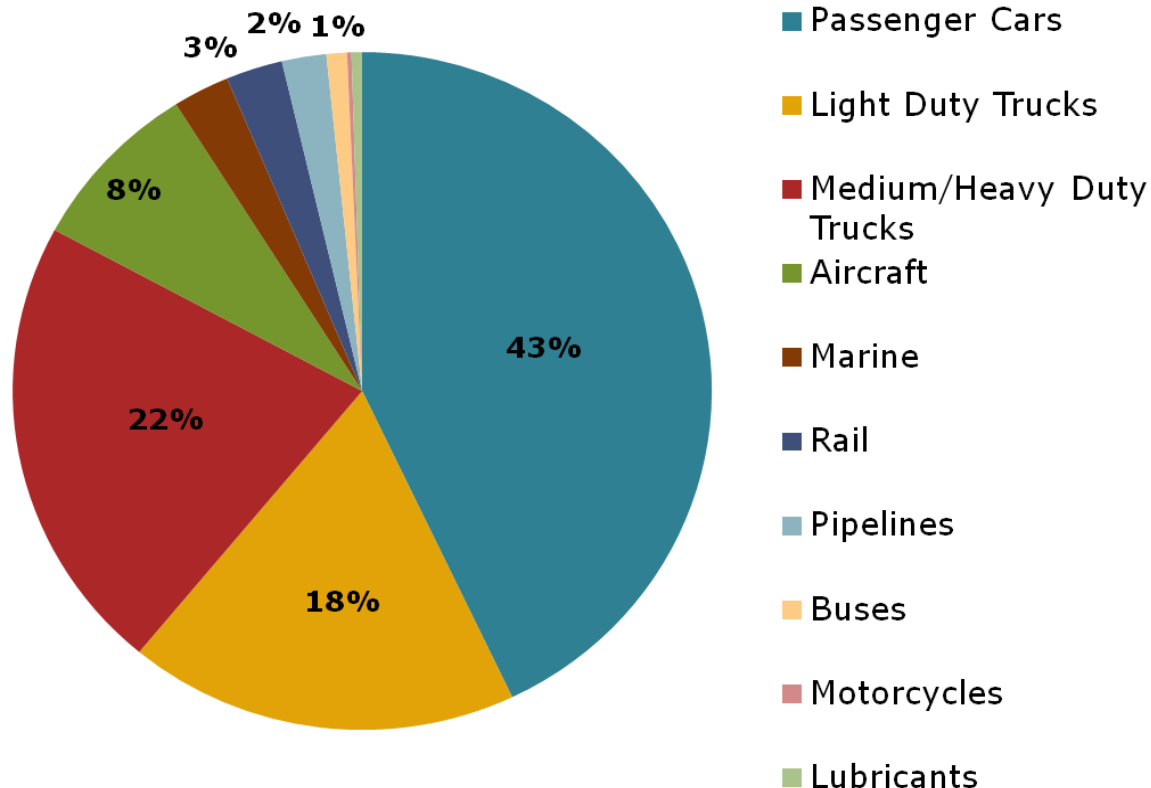
Transportation in U.S.:

- Over 1/4 total GHG emissions;
- About 2/3 petroleum-based fuel use.

In Transport Sector:

- Freight accounts for over 25% of all fuel consumed and GHGs emitted.
- Freight is fastest growing source of transport GHGs.

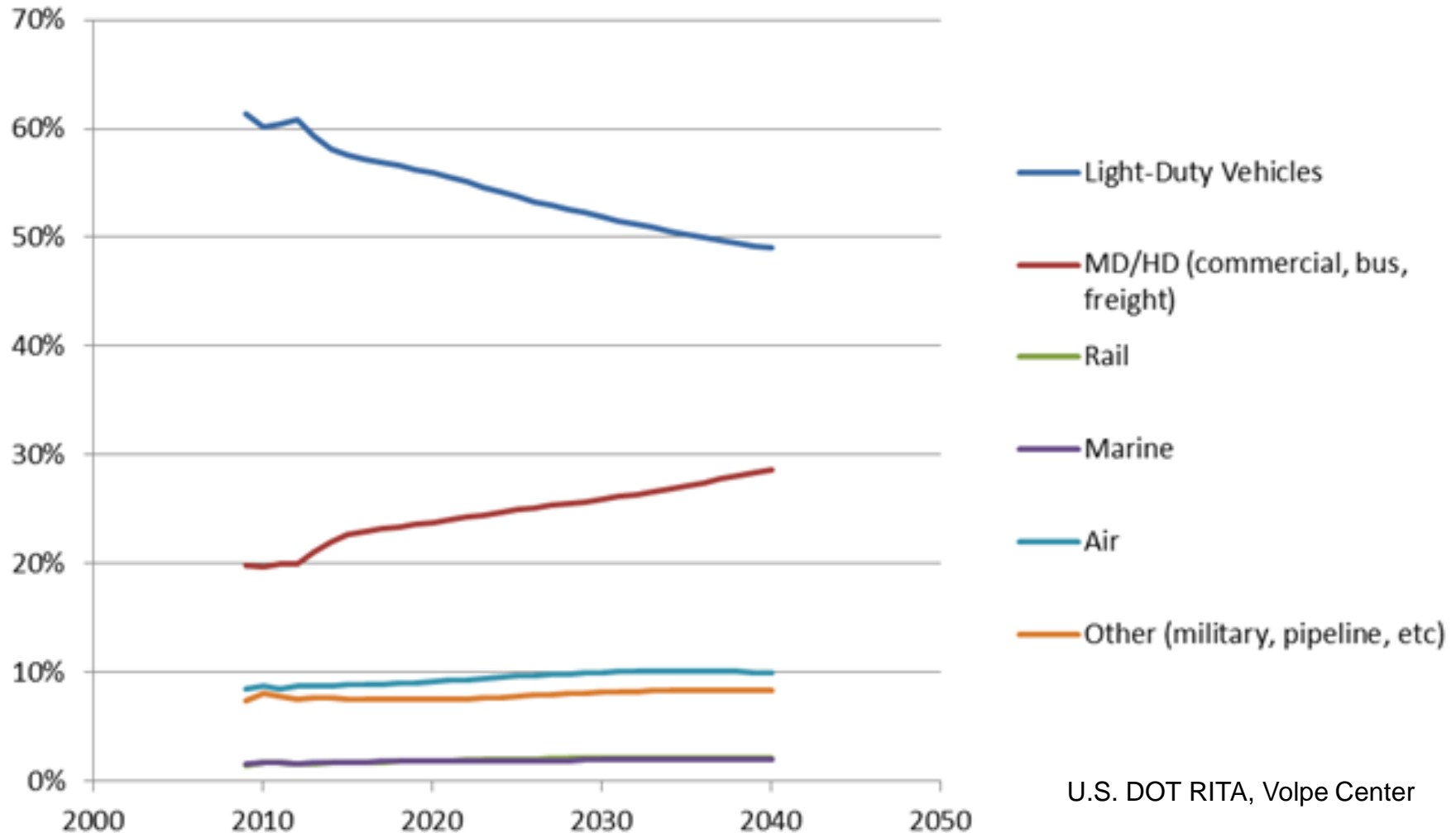
Transportation Greenhouse Gases



2011 Data - Inventory of U.S. Greenhouse Gas Emissions and Sinks (EPA 2013)

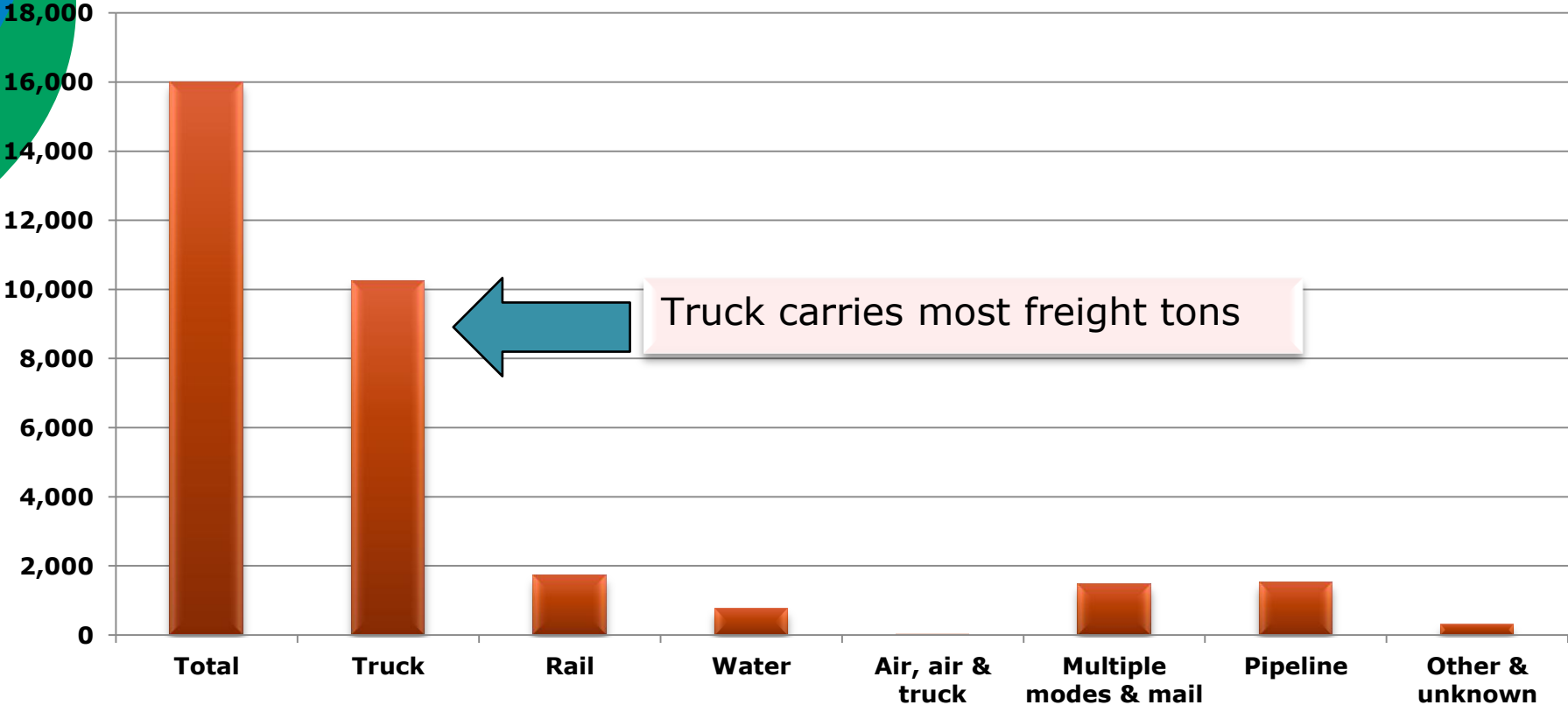
SmartWay Drivers: Energy use by Heavy Duty Trucks

Percent of Energy Used by Mode -- Transportation Sector (million barrels per day oil equivalent)



SmartWay Drivers: Heavy Duty Truck Freight Tonnage

Million Metric Tons of Freight - 2011



Total: 17.6 billion tons

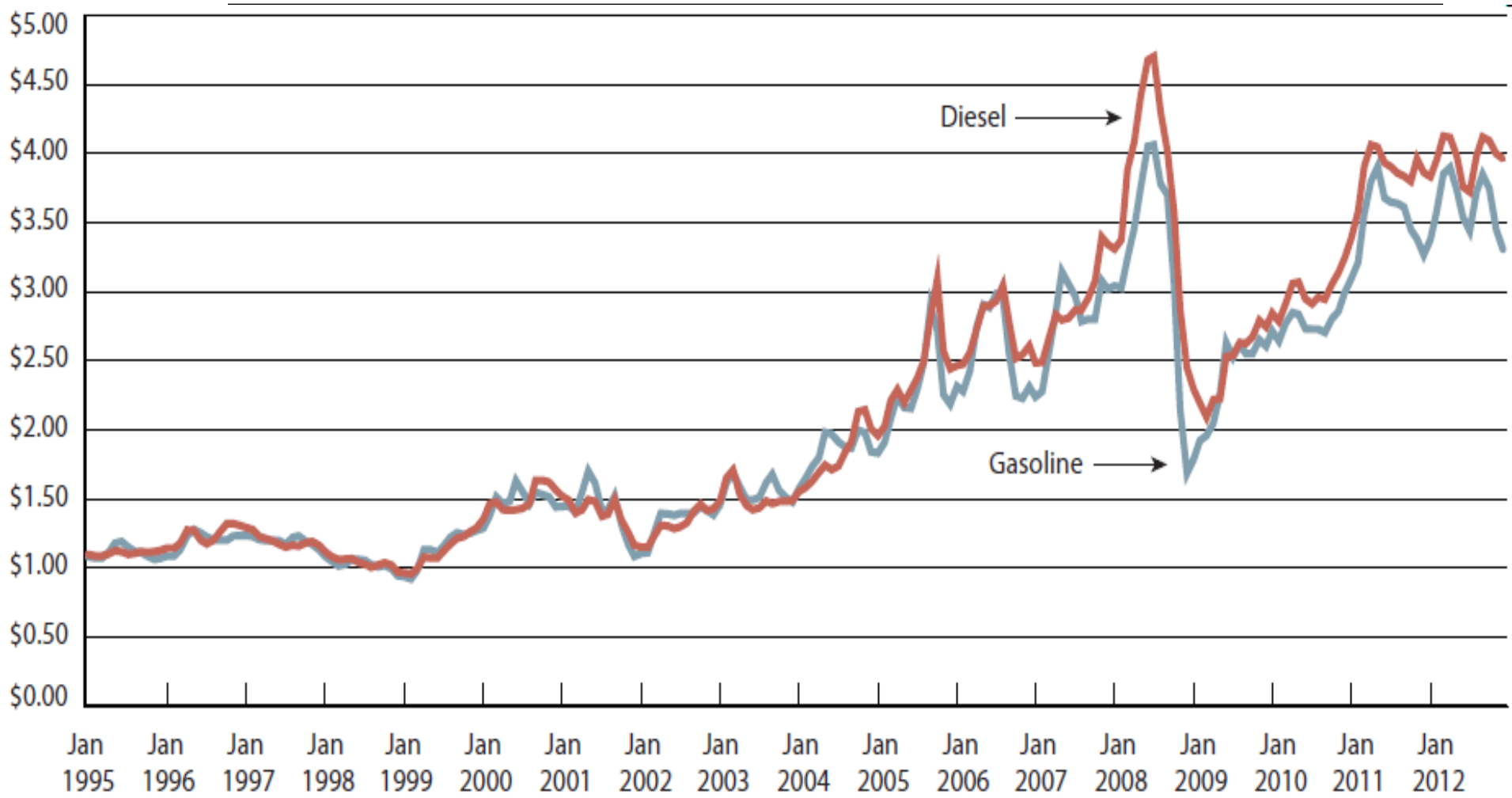


SmartWay Drivers: Economic Impacts of Freight

- **Freight transportation is cornerstone of U.S. economy**
 - Trucking & rail deliver goods and materials that drive economic growth and development
 - Domestic commodity and consumer goods shipments
 - Exports and Imports
 - Freight system moves:
 - 17.6 billion tons of freight per year
 - 48.3 million tons of freight daily
 - 57 tons of freight per person each year
 - \$16.8 trillion worth of freight yearly
 - \$46 billion worth of freight daily

- **Transportation logistics costs \$836 billion (5.4% of GDP)**

SmartWay Drivers: Energy Challenges



Source: U.S. Energy Information Administration



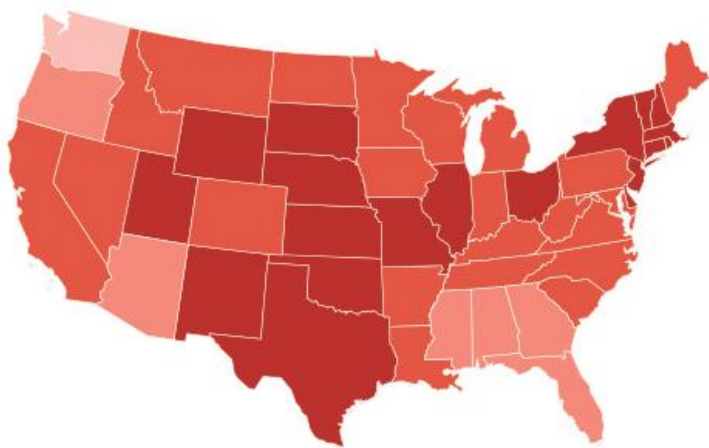
SmartWay Drivers: Climate Awareness

2012 WAS THE SECOND MOST EXTREME YEAR ON RECORD FOR THE NATION

SOURCE: NOAA, U.S. CLIMATE EXTREMES INDEX

RECORD HEAT ACROSS THE U.S.

STATE-BY-STATE TEMPERATURES IN 2012



SOURCE: NATIONAL CLIMATIC DATA CENTER/NCSDI/NOAAV

Doesn't include Alaska, Hawaii or U.S. territories.

ALSO IN 2012:



WARMEST YEAR ON RECORD FOR THE U.S.

Doesn't include Alaska, Hawaii, or U.S. territories.

SOURCE: NOAA

356

RECORD HIGH TEMPERATURES TIED OR BROKEN

IN THE UNITED STATES.

SOURCE: NOAA, STATE OF THE CLIMATE REPORT



APPROXIMATELY

ONE-THIRD OF THE U.S. POPULATION EXPERIENCED 100° TEMPERATURES

FOR TEN OR MORE DAYS.

SOURCE: NOAA

DROUGHTS, WILDFIRES, AND FLOODS ARE ALL MORE FREQUENT AND INTENSE



PRECIPITATION WAS 2.57 INCHES BELOW THE 20TH CENTURY AVERAGE.

SOURCE: NOAA



15TH DRIEST YEAR ON RECORD

SOURCE: NOAA



WILDFIRES BURNED MORE THAN 9.3 MILLION U.S. ACRES

SOURCE: NATIONAL INTERAGENCY COORDINATION CENTER

SmartWay Drivers: Changing Needs of Industry

- **Customer and Consumer awareness**
 - Demanding corporate citizenship and accountability
- **Investor, Lender and Insurer requirements**
 - Assessing climate risk and business opportunities
- **Rising and volatile energy prices**
 - Fuel and driver wages continue to be largest cost centers for truck carriers: 62% of operating costs in 2011
- **Globalization of supply chains**
 - Increasing global opportunities and global competition
 - Other countries' carbon reporting requirements

ATRI: An Analysis of the Operational Costs of Trucking: A 2012 Update

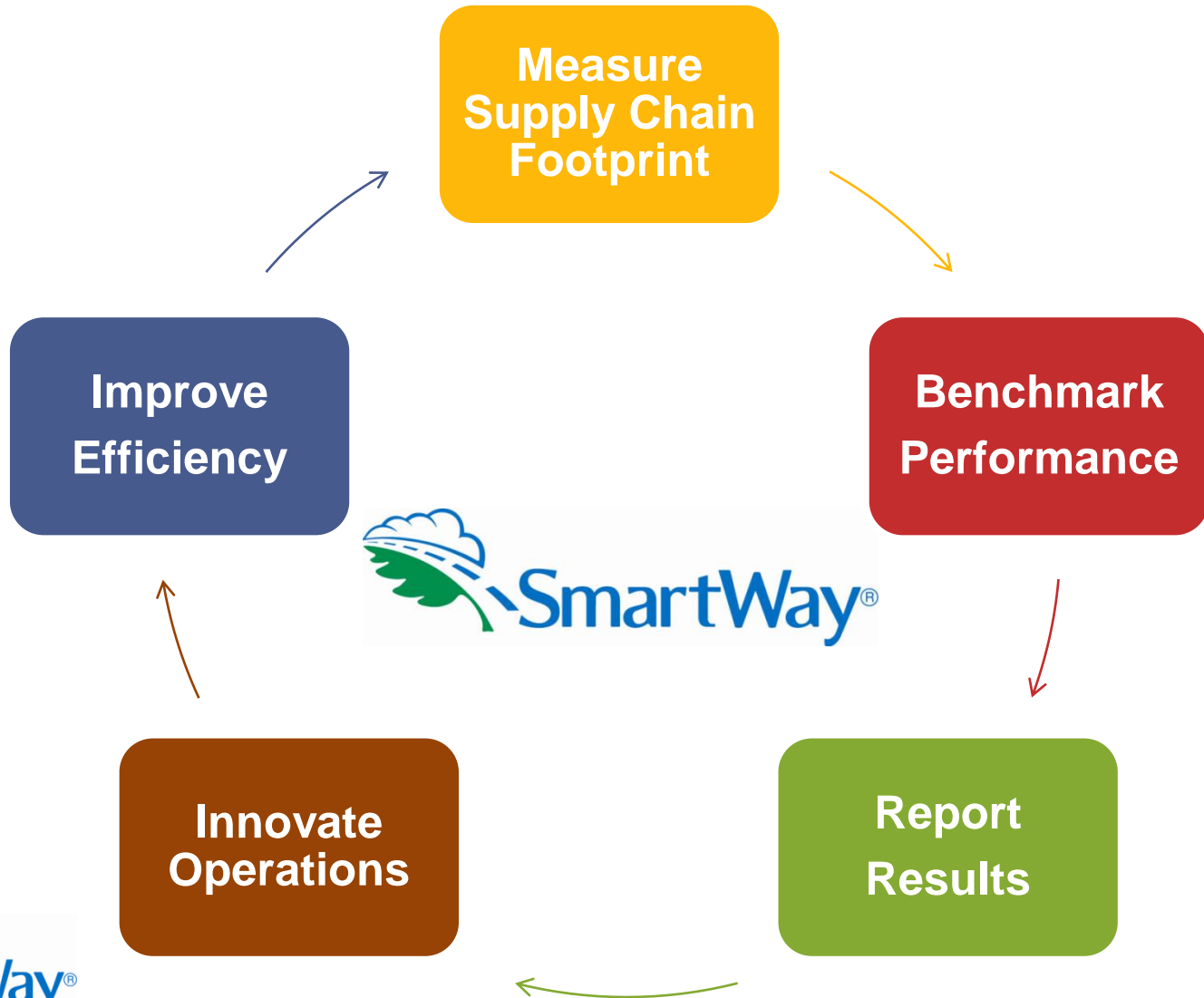
What is SmartWay?

- Public-private partnership with freight sector
 - Market based, voluntary and no cost
- Provides information to help industry improve performance, save fuel and reduce costs
 - Standardized tools, data and information to help freight sector measure, benchmark, report and improve supply chain environmental performance
- Market incentives and recognition for top performers

Primary goal: Move more ton-miles of freight with less emissions, and less energy, at lower cost

How: Accelerate adoption of advanced technologies and operational practices in the freight supply chain

How Does SmartWay work?



SmartWay Carrier Benchmarking

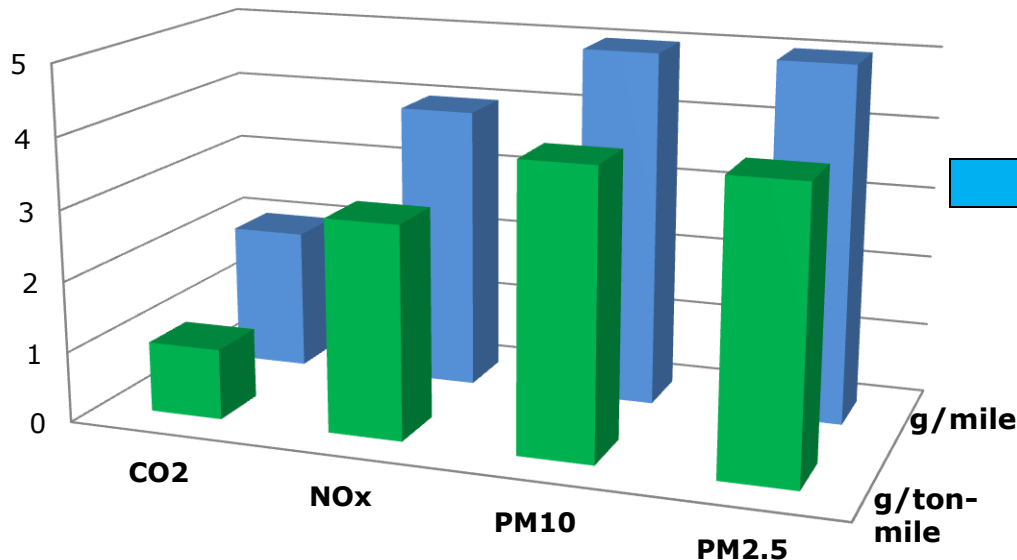
15 Carrier Categories

- (TL, LTL, Refrigerated, Tanker, etc.)

8 Emission Metrics

SmartWay Carrier Rating

Pollutant Specific Performance Levels



Quintile Rankings

(ex: Truckload CO₂ g/mile)

Top 20%
TL Dry
Vans

• 1550 g/mile

Second
20% TL
Dry Vans

• 1650 g/mile

Middle
20% TL
Dry Vans

• 1750 g/mile

Fourth
20% TL
Dry Vans

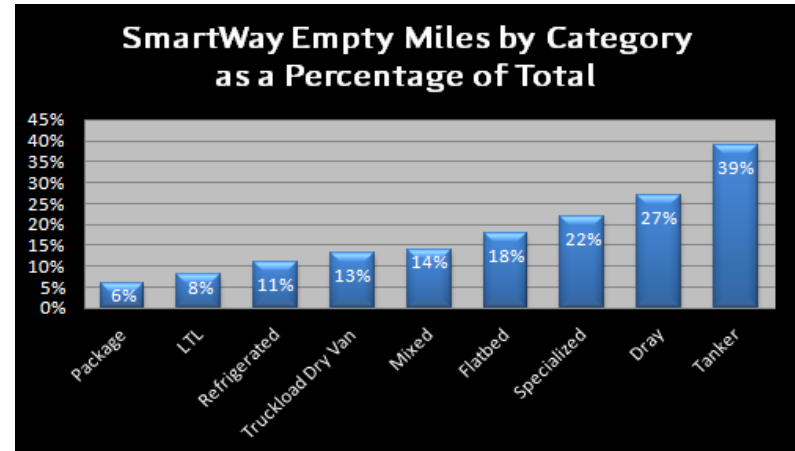
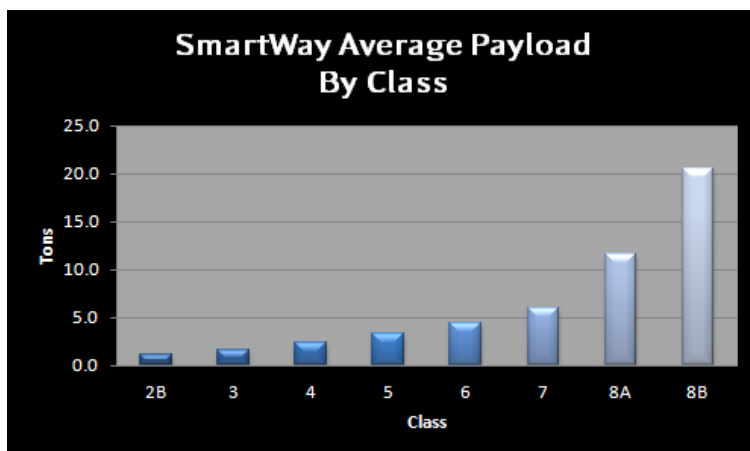
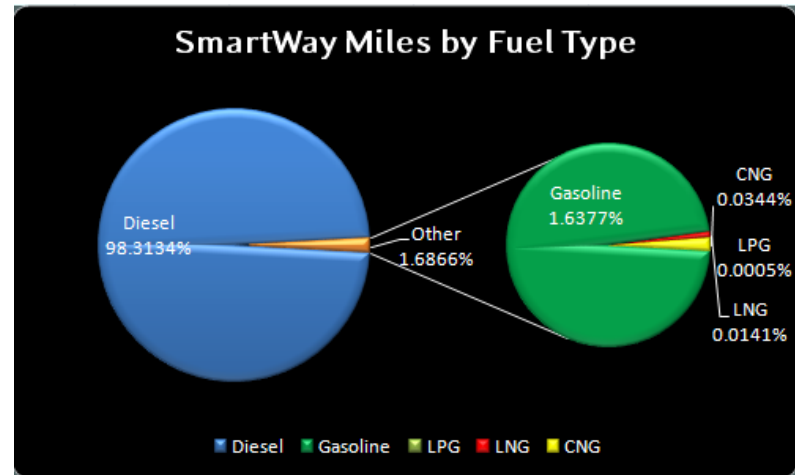
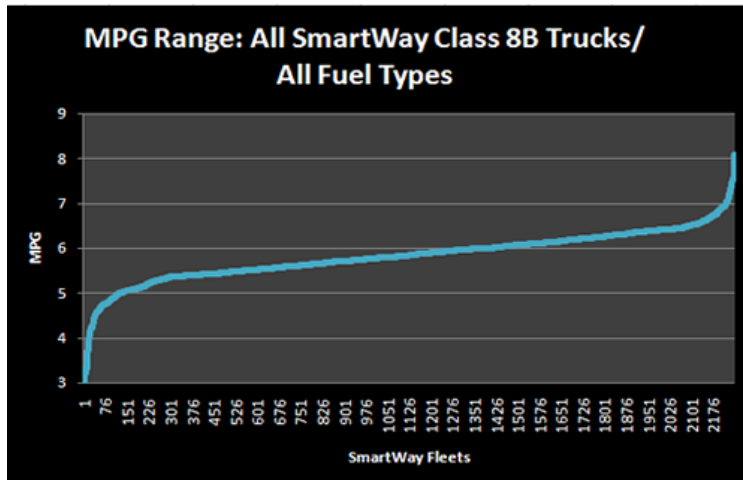
• 1850 g/mile

Bottom
20% TL
Dry Vans

• 1950 g/mile

Benchmarking Carrier Performance

- SmartWay develops analytics from data collected within SmartWay
- This is a powerful tool to help carriers to improve efficiency



Trends, Indicators, and Partner Statistics (TIPS)

- SmartWay Home
- Basic Information
- Partnership
- Partner & Affiliate Lists
- Partner Resources
- TIPS: Trends, Indicators, and Partner Statistics
- Finance Program
- Technology Program
- Manufacturer Resources
- International Interests
- SmartWay Vehicles
- Publications
- Newsroom

You are here: EPA Home Transportation and Air Quality Smartway » SmartWay Trends, Indicators, and Partner Statistics (TIPS)

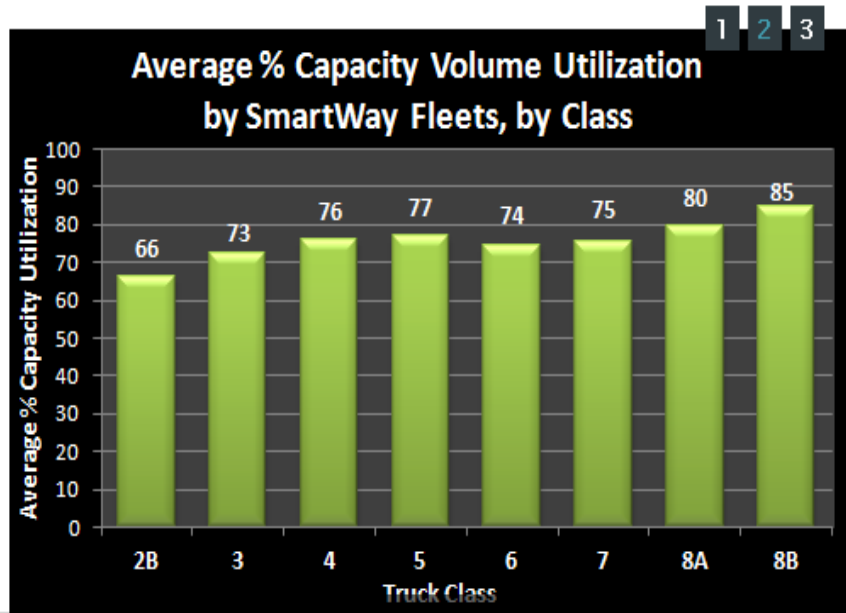
SmartWay Trends, Indicators, and Partner Statistics (TIPS)



This Week's TIPS Previous TIPS About

This Week in SmartWay TIPS

Posted June 4, 2013



About TIPS

TIPS (Trends, Indicators, and Partner Statistics) is a source of leading freight movement industry indicators and quick facts about current SmartWay Partner performance metrics. [More about TIPS.](#)

What's New in TIPS

- [Average Percent Capacity Volume Utilization for SmartWay Fleets, by Category](#)
- [Average Percent Capacity Volume Utilization for SmartWay Fleets, by Class](#)
- [Average Percent Capacity Volume Utilization across SmartWay Class 8B Fleets](#)

SmartWay Snapshot Today

- Since 2004, SmartWay has grown to about 3,000 partners with broad freight industry support
 - 236 Partners in EPA R1 & R2 (100 in NJ, 60 in NY, 35 in MA)
 - 134 carriers
 - 50 shippers
 - 48 logistics firms
 - 1 rail line and 1 multimodal
 - Key sectors: retail, food and beverage, consumer goods, manufacturing

SmartWay Carriers:

- Operate 8% of freight trucks on the road
 - 663,000 class 4 – 8 trucks
- Account for 22% of total trucking miles
 - 49 billion miles annually

Significant SmartWay Results

- Since 2004, SmartWay Partners saved:
 - 28 million metric tons of CO₂
 - 65 million barrels of oil
 - \$8.1 billion dollars in fuel costs
 - 478,000 tons NOx
 - 22,000 tons PM
- *Equivalent to taking over 5 million cars off the road for 1 year*
- *Reduced dependence on petroleum*
- *Strengthened freight sector & U.S. economy*

2013 SmartWay Excellence Award

- Recognizes top 1% of all partners
- Award based on environmental performance
- Recognizes large & small partners
- Includes additional criteria important to program
 - data quality
 - brand visibility
- CSCMP Conference
 - October 22, 2013
 - Denver, CO



SmartWay Public Service Ads

TO REDUCE THIS ...



AND SAVE THIS ...



Partner with SmartWay®

SmartWay Transport Partnership is the smarter way to ship goods. With enhanced tools and user-friendly reporting systems, the SmartWay program can help your company put its best foot forward to reduce its carbon footprint, improve its bottom line, and better manage its global freight supply chain. This innovative public-private collaboration helps your company increase operational efficiency, incorporate sustainability, and gain a competitive edge. Drive over to epa.gov/smartway to learn more.

SmartWay®
Transport Partnership
U.S. ENVIRONMENTAL PROTECTION AGENCY

Any way you ship it, move it the SmartWay.

The UnSmart Way. Keep on doing what you're doing.

SmartWay. If you ship food or beverages, join the SmartWay® Transport Partnership. It gives you

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SmartWay. If you're a retailer, join the SmartWay® Transport Partnership. It gives you user-friendly

The UnSmart Way. Keep on doing what you're doing.

SmartWay. If you're a retailer, join the SmartWay® Transport Partnership. It gives you user-friendly tools and streamlined reporting systems to help you increase operational efficiency. So for everything you ship the SmartWay, you improve your bottom line, gain a competitive edge and better manage your global freight supply chain. And by incorporating sustainability and reducing your carbon footprint, you put your best foot forward: you're seen as an even better corporate citizen. More than 3,000 companies have already joined SmartWay. It's an innovative public-private collaboration that benefits everyone. Now that's smart.

To learn more, scan this  or drive over to: epa.gov/smartway/forshippers

SmartWay®
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Any way you ship it, move it the SmartWay.

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Brand Promotion by Partners

- SmartWay Partners using brand to showcase SmartWay *commitment & participation*



- Advertising
- Apparel (hats, t-shirts, uniforms)
- Briefings and presentations
- Business cards
- Company web site
- Company e-mail signatures
- Educational materials
- Letterhead and stationery
- Posters, internal signage
- Promotional items, Brochures
- SmartWay Designated truck labeling



For more information:

www.epa.gov/smartway

smartway_transport@epa.gov

Buddy Polovick 734-214-4928

SmartWay Helpline 734-214-4767





SmartWay: What's Next

Buddy Polovick

US Environmental Protection Agency

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SmartWay Strategic Priorities

- SmartWay part of EPA Administrator's 7 themes:
 - **#2 - Addressing Climate Change and Improving Air Quality**
“...we will heed the President's call to action on climate change...work to mitigate this threat by reducing carbon pollution and other greenhouse gas emissions from the transportation and energy sectors...will build strong partnerships with...EPA programs such as SmartWay...”
- SmartWay program priorities
 - Grow emissions reductions
 - Partner recruiting
 - Enhancing value proposition
 - Create more visibility
 - Operational strategies
 - Expand carbon accounting and reporting
 - Capture all supply chain modes
 - Inform EPA heavy duty fuel economy programs



Current and Planned Program Activities and Enhancements

- SmartWay Logo policy changes
- Data Quality Program
 - Data QA/QC Best Practices guidelines
- SmartWay program global replication
 - Canada, Mexico, EU, China, South America
- Carbon accounting with SmartWay
- SmartWay Supply Chain
- Visibility and Education
 - Website enhancements, partner portal, social media
 - Webinars, news bulletins, report card, package labelling
- SmartWay 10 Year Anniversary celebration 2014

SmartWay Serving as Global Role Model

- In 2012, US and Canada announced SmartWay expansion into Canada
 - SmartDriver E-learning Driver Training portal
- Mexico implemented a green freight program, *Transporte Limpio* (“Clean Transportation”) modeled after SmartWay
- China implementing a multimillion dollar China Green Freight Initiative based on SmartWay
- UNEP Clean Air and Climate Coalition selected “Green Freight” as 1 of 3 transportation projects to reduce climate emissions in emerging regions
 - Green Freight initiative to be modeled after SmartWay
 - Other approaches are low sulfur fuel and cleaner vehicles



SmartWay Supply Chain

- EPA considering expanding SmartWay to cover full supply chain
 - Barge/Inland Marine, Ocean Going Vessels, & Air Freight Tools and Partnership components
 - Integration with EPA Ports Initiative
 - SmartWay data becoming standard in supply chain carbon accounting systems
 - Global Standardization and Integration
- Additional Emission Metrics under consideration
 - Volumetric
 - Package Delivery

Changes to Partner Logo Policy

- Partner Logo now available to All Partners
 - Extends logo access to all participating companies who are “partners in good standing”
 - All partners gain ability to better promote their commitment and participation in the program
 - All partners will have the opportunity to better promote the SmartWay brand/program
 - Logo policy is consistent with other EPA Partnership programs, which provide a logo to all participants
- Spotlights superior environmental partner performance indicated by SmartWay Excellence Award

SmartWay Used in CDP Reporting

15.1

Please provide data on sources of Scope 3 emissions that are relevant to your organization

Sources of Scope 3 emissions	metric tonnes CO2e	Methodology	If you cannot provide a figure for emissions, please describe them
Business travel	30086	Footprint for air travel provided by FCM Travel Solutions, modeled by The Carbon Neutral Company	FCM total of 24069 mT air travel adjusted upward to account for 20% of air travel booked out of network.
Business travel	1099	Footprint for car rental, provided by FCM Travel Solutions, modeled by The Carbon Neutral Company and Greenboard Technology	FCM total of 1044 adjusted upward to account for 5% of car rentals booked out of network.
Upstream transportation & distribution	727363	Footprint for inbound and outbound North America freight within the now combined XXXXXXXXXXXXXXXXXXXX distribution network of EPA SmartWay Transportation Partnership modeled with the EPA SmartWay tool.	SmartWay total of 665,613 tons converted to metric tons and adjusted upward to account for 17% of transport out of network.
Upstream transportation & distribution	10982	Footprint for inbound EMEA road transport within the now combined XXXXXXXXXXXXXXXXXXXX distribution network	Default emission factor of 1946 g CO2/mi from the most current EPA SmartWay modeling tool
Upstream transportation & distribution	30123	Footprint for inbound EMEA sea transport within the now combined XXXXXXXXXXXXXXXXXXXX distribution network of XXXXXXXXXXXXXXXXXXXX business platforms, using a default emission factor of 1623 g CO2/mi from the EPA SmartWay modeling tool.	Default emission factor of 548.7 g CO2/mi from the EPA SmartWay modeling tool.

SmartWay Used in GRI Index Reporting

EN29	Climate Change	Product Stewardship	
Initiatives to reduce greenhouse gas emissions and reductions achieved (over 2009 baseline)		Calendar 2011 North American Operations	
CO ₂ e reduced (in metric tons)		239,000	
Our activities	What we're doing	What we did and what's ahead	
Reduce energy use when shipping products	We employ a number of strategies to reduce fuel consumption and energy use in the process of transporting products we stock.	In fiscal 2013, we aim to reduce our empty miles by 1.65 million, equating to a savings of about 250,000 gallons of fuel.	

Reducing energy use when shipping products

██████████ contracts with transportation companies to move products from U.S. ports to our distribution centers and stores. Strategies we use to reduce fuel consumption when shipping products include increasing our use of intermodal transportation (a combination of trucks and train versus trucks only) and reducing "empty" miles (miles driven with no products in the truck) by back-hauling e-waste to the distribution centers where it is collected by our recycling partners (or we bring e-waste directly to the recycler).

We also require our transportation partners to follow these policies and requirements:

- Be certified through the [EPA's SmartWay program](#)
- Follow the Coalition for Responsible Transportation's standards for using certain trucks and engines
- Follow our ["No idling" policy](#)

In fiscal 2011, we increased our use of intermodal transportation to 54 percent of inbound loads in fiscal 2012 from 50 percent in fiscal 2011. These 4 percentage points reduced carbon emissions by 2,514 metric tons.

Partner Spotlights



SmartWay Helps Tyson Foods Drive Out Miles Tackle Greenhouse Gas Emissions



SmartWay Helps Lead Kimberly-Clark to Greater Efficiencies and Reduced Transportation Costs

September 2012

Company Message

"We're serious about our responsibility to the environment, we joined the SmartWay Transport Partnership. The framework enabled us to evaluate, measure and reduce the environmental transportation operations in a more comprehensive and specific. SmartWay has helped us reduce fuel usage and emissions, and improve our operational efficiency."

- Kevin J. Igli, SVP and Chief E

Why Tyson Foods joined SmartWay

Tyson Foods has been a long time supporter of SmartWay's transportation sustainability, and joined the partnership almost immediately after EPA launched it in 2004. Upon joining the company goal was to use SmartWay's tools to accurately measure carbon

Company Profile



Tyson Foods, Inc., Springdale, Arkansas, is one of the world's largest processors and marketers of chicken, beef and pork, the second largest food production company in the Fortune 500 and a member of the S&P 500. Tyson produces a wide variety of protein-based and prepared food products, serving customers throughout the United States and in more than 100 countries. Tyson employs approximately 115,000 team members.



Partner Profile: Penske Logistics

The SmartWay to Logistics Management



Company Message

"We're constantly working to optimize our fleet as it relates to responsible sustainable practices, which include the reduction of fuel consumption and lowering our emissions. The SmartWay program has provided us with the necessary strategies to accomplish this."

- Marc Athan, President, Penske Logistics

Why Penske Logistics joined SmartWay

Penske has always partnered with companies to create supply chain management solutions, so it made perfect sense to partner with EPA SmartWay. The collaboration between industry and government offers tremendous value. In addition, SmartWay's second generation tools have allowed Penske Logistics the opportunity to assess its freight operations and to improve efficiency.

Company Profile

Penske Logistics is a wholly owned subsidiary of Penske Truck Leasing. With operations in North America, South America, Europe and Asia, Penske Logistics provides supply chain management and logistics services to major industrial and consumer companies throughout the world. Penske Logistics delivers value through design, planning and execution in transportation, warehousing, and international freight forwarding and carrier management.

Point of Contact:
Andrew Cullen
Vice President
Energy & Telecommunications

Company Profile



Kimberly-Clark

Kimberly-Clark Corporation is a global health and hygiene leader serving 1.2 billion consumers in more than 80 countries featuring such global brands as Huggies, Kleenex, Scott, Kotex

Company Message

"At Kimberly-Clark, we see SmartWay as both good environmental policy and good business. The transportation strategies that SmartWay recommends are saving us fuel, lessening our carbon footprint, and making a big difference in bringing us closer to our sustainability goals." - Stelios Chrysandreas, Transportation Manager

Why Kimberly-Clark joined SmartWay

Kimberly-Clark is committed to sustainability in all areas of its business, including the delivery of its products. Joining SmartWay presented KCC's Corporate Transportation team with a great opportunity to more actively engage and expand its role in the company's sustainability plans.



Partner Profile

Stanley Black & Decker Uses SmartWay Tools to Reduce Freight Footprint

Company Profile

Stanley Black & Decker, an S&P 500 company, is a diversified global provider of hand tools, power tools and related accessories, mechanical access solutions and electronic security solutions, healthcare fastening systems, and more. Learn more at www.stanleyblackanddecker.com.

Contact:

Deborah Patterson
Vice President
Environment, Health, and Safety
Stanley Black & Decker
1000 Stanley Drive
New Britain, CT 06053
T 860.827.3825
F 860.515.2755

Stanley Black & Decker

Why Stanley Black & Decker Joined SmartWay

"Our success in measuring, and then shaving, energy demand and resultant Scope 1 and Scope 2 emissions associated with our brick-and-mortar operations has allowed us to apply the same productivity lens to reducing Scope 3 tailpipe emissions from vehicles that transport our finished goods and our employees. Our SmartWay Transport Partnership is the most well established of our Scope 3 emissions reduction initiatives and has stimulated parallel efforts around the globe."

Deborah Patterson, Vice President of Environment, Health, and Safety, Stanley Black & Decker

Stanley Black & Decker 2010-2011 SmartWay Emissions Factor Scope 3 CO2 Emissions

2010				2011			
MODE	E-FACTOR (CO2 G/M)	CO2 (CO2 TONS/YR)		MODE	E-FACTOR (CO2 G/M)	CO2 (CO2 TONS/YR)	
Truck	1946	596,921		Truck	1730	493,038	
Multi-modal	1623	49,212		Multi-modal	1706	20,677	
Logistics	1968	19,480		Logistics	2007	16,074	
TOTAL		665,613		TOTAL		529,789	



Blogs and Articles in Trade Pubs



A Smart Move

<http://www.stores.org/STORES Magazine May 2013/smart-move>

May 2, 2013

Privately held IKEA, a global retail player with some 300 stores in dozens of countries, treats its sustainability efforts seriously. From buying and building wind farms to adding rooftop solar arrays on its stores, IKEA's goal is to use 100 percent renewable energy in its operations.



Maintaining inventory levels translates to low prices, which helped propel the retailer to its status as a home furnishings world leader. More than 1,000 suppliers in 55 countries create proprietary products for IKEA, which has been working to reduce shipping costs and emissions in its complex supply chain.

SmartWay Social Media

facebook®

U.S. Environmental Protection Agency

State of the Environment Photographer: Dan Co

U.S. Environmental Protection Agency ✓
69,619 likes · 1,882 talking about this · 1,519 were here

Government Organization
Born in the wake of elevated concern about environmental pollution, EPA was established on December 2, 1970 to ensure environmental protection.

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U.S. Environmental Protection Agency shared a link.
August 21

Our SmartWay program works with our partners to reduce carbon emissions and fuel consumption throughout the transportation supply chain. Read about how this program is helping Stanley Black & Decker, a SmartWay partner, achieve their sustainability goals and #ActOnClimate.

[SmartWay Resource Center | SmartWay | US EPA](#)
www.epa.gov

U.S. EPA ✓
@EPA

News, links, tips, and conversation from the U.S. Environmental Protection Agency.
USA · epa.gov

State of the Environment Photographer: Dan Co
January 27, 2012

6,320 TWEETS · 568 FOLLOWING · 152,140 FOLLOWERS

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U.S. EPA @EPA 21 Aug
See how our SmartWay partners like Stanley Black & Decker achieve their freight sustainability goals & #ActOnClimate
go.usa.gov/jH6W
Expand

For more information:

www.epa.gov/smartway

smartway_transport@epa.gov

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