Advanced Fleet Technology Forum

SmartWay Overview & Benchmarking,
Colorado SmartWay Overview, and
Westco Express Case Study
U.S. EPA SmartWay Transport Partnership

Part 1: SmartWay 101

Kyle Olson, USEPA
Nov. 14th, 2012
Why SmartWay?

• Transportation Sector:
  – major contributor to GHG Emissions
  – major user of petroleum-based fuels
  – cornerstone of the U.S. economy
  – expensive!
    • fuel prices rising
Transportation accounts for roughly 1/3 of total U.S. GHG emissions . . .

and

about 2/3 of U.S. petroleum-based fuel use.

2010 GHG Inventory Totals

- Transportation (1838.6 Tg) 27.0%
- Other U.S. Sources (4778.9 Tg) 70.1%
- Non-Transportation Mobile (204.3 Tg) 3.0%
Transportation/Heavy-Duty GHG Emissions

- **Passenger Cars**: 38.6%
- **Light-Duty Trucks**: 17.0%
- **Medium & Heavy-Duty Trucks**: 19.7%
- **Nonroad**: 10.0%
- **Marine Rail**: 2.1%
- **Rail**: 2.3%
- **Aviation**: 7.0%
- **Other**: 3.4%

**2010 Data - Inventory of U.S. Greenhouse Gas Emissions and Sinks (EPA)**
Economic Importance of Freight

- Cornerstone of our economy
- $11T in value in freight shipments
- Trucking industry moves ~$504B in freight
- Trucking generates $660B in revenues, employs about 9M people
Why SmartWay?
What is SmartWay?

Public/private collaboration between EPA & the freight transportation industry that helps companies improve fuel efficiency & save money.
SmartWay Partners

Carriers  Shippers  Multi-Modal  Rail  Logistics
For-Hire Truck Carriers: Freight shippers hire you to haul their goods.

Private Truck Carrier: You are a shipper that operates your own private trucking fleet.
Shippers

- A company that ships OR receives items delivered by truck or rail transport.
Multi-Modal

- Freight shippers hire you to haul their goods.
- More than 5% of your mileage is via trucks you own
- At least 95% of your mileage is contracted with a mix of truck, rail, air, and marine carriers.
Rail

- New Rail Tool is now available.
- All Class 1 Railroads are SmartWay Partners.
Logistics Companies

• Freight shippers hire you to haul their goods.
  • Less than 5% of your mileage is via trucks you own/control
  • Less than 5% of your mileage is via other modes (rail, air or marine)
Some of SmartWay’s Partners

PEPSICO

UPS

TRANSPLACE

Dow

PENSKE Logistics

U.S. General Services Administration
Freight Transportation Management

J.B. HUNT

kraft foods

YRC Worldwide
Who are SmartWay Partners?

- Nearly 3,000 SmartWay partners
- Top 100 U.S. truck carriers
- All Class 1 rail lines
- Fortune 500 shippers from every major business sector
Who are SmartWay Partners?

- 60% of SmartWay Carriers are small and medium fleets with 100 trucks or less.
- 25% are fleets with 20 trucks or less.
What are the Benefits to Becoming a Partner?

Save money
Stay competitive
Demonstrate environmental stewardship
Public Relations

Forbes

World Trade

Business Week

IBM

You’re a click away from a smarter supply chain

www.epa.gov/smartway

Logistics managers are constantly looking for ways to reduce costs for their customers through customized solutions. SmartWay® Transport Partnership is one smart money-saving program grounded in innovative business strategies and new technologies. SmartWay Transport is about streamlined logistics operations that reduce fuel costs while reducing greenhouse gases and other emissions.

To find out more about this collaborative program, please call 1-734-214-4767 or visit www.epa.gov/smartway.
Shipping executives survey: SmartWay is the leading industry sustainability program

Environmental Sustainability Benchmarking Study:
- Leaders Prepare for the “Greening” Supply Chain, Feb, 2011
DowJones Sustainability Index

- First global sustainability benchmark
- Tracks stock performance of companies in terms of economic, social and environmental criteria.
Partner Recognition

SmartWay Excellence Award 2006

API Logistics
Baias, Inc.
Catalyst Savings Solutions
Center Freight Lines
Ecolab Logistics Services, Inc.
Erie, PA
KSA Distribution Services, North America
Interstate
Land Regional Air Pollution Agency
Longfords, Inc.
Sage
Clearinghouse, Inc.
Fleet Savings & Banking
Fleet Freight, Inc.
Knights Freight Line
LTC Transport Co.
Mid-Atlantic Freight Services
Minnesotan Trucking Association
National Freight
New Jersey Motor Freight
New York Truck Association Co.
& Trucking, Inc.
Owens Corning
Pacesetter, Inc.
Rendel, Inc.
Schneider National, Inc.
Shipshape Corporation
Swift Freight
Truck Trailer
VRC Worldwide

Congratulations to our first SmartWay Excellence Award Winners

SmartWay Transport Partnership is an innovative collaboration between U.S. Environmental Protection Agency and the freight industry designed to increase energy efficiency and significantly reduce greenhouse gases and air pollutants.

www.epa.gov/smartway
Package Labeling Pilot Program

HP consumer electronics carried exclusively by SmartWay Carrier Partners
Program Achievements

• Since 2004, SmartWay Partners have saved:
  – 16.5 M metric tons of CO2
  – 9,000 tons of PM
  – 235,000 tons of NOx

• 50 M barrels of oil

• $6.1 B in fuel costs

Equivalent to taking over 3 M cars off the road for 1 year.
How do I Become a Partner?

- Which Partner Type are you?
- Sign the Agreement
- Provide Data
- Update Annually
What Tools are Available?

• User Guides for each Partner Type
• Data Tools to Collect and Track Data
• Other Resources
SmartWay Transport Partnership

The SmartWay Transport Partnership helps freight companies improve fuel efficiency, increase environmental performance, and increase supply chain sustainability.

Joining SmartWay is *FREE*

and open to all freight shippers, truck carriers (including drayage fleets), logistics companies, multimodal carriers, and rail carriers.

How To Become a SmartWay Partner

1. Determine your Partnership Type.

Identify which partnership category applies to your company structure and operating model. Currently there are four types of freight transport companies that are eligible to join SmartWay:

2. Complete your SmartWay Partnership Agreement and FLEET Tool.

- Freight shippers
- Logistics companies (including 3PLs/4PLs)
- Rail carriers
- Aircraft operators
- Marine carriers
- Drayage carriers
- Pipelines
- Energy companies
- Trade associations
- Transportation service providers
Sign the Agreement

• Sign the SmartWay Agreement
  – General commitment to reduce emissions and fuel use through more sustainable business practices and supply chain efficiencies.
U.S. EPA SmartWay Transport Partnership

Part 3: SmartWay Data

Kyle Olson, USEPA
Nov. 14th, 2012
SmartWay Tools Calculate Freight Emissions

- Measure
- Benchmark
- Improve
Categories of Partners

Trucks
- truck categories:
  - Dray
  - Flatbed
  - LTL Dry Van
  - Mixed
  - Package
  - Refrigerated
  - Specialized
  - Tanker
  - Truckload dry van
  - Specialized Utility
  - Auto Carrier
  - Moving

Logistics

Multimodal Carriers

Shippers
SmartWay Tools

- **Carrier Data Collection tools**
  - Truck Tool, Logistics Tool, Rail Tool, Multimodal Suite

- **Shipper Tool**
  - Calculates emission inventories and efficiencies based on carrier mix

- **SmartWay Website**
  - Contains downloadable versions of all tools, user guides, technical documentation, webinars.
SmartWay Data Collection

- Partners submit data annually

Data Collected

- Gallons by fuel type, total miles, revenue miles, empty miles
- Average payload, ton-miles, average volume, trailer usage and capacities, short vs. long haul
- Numbers of trucks by class and model year, duty cycle: urban/highway, average speeds, idle time, PM reduction strategies
- Fleet type, operational and equipment type, executive contact information, commodities hauled
SmartWay collects industry data, quality checks it, and calculates 8 basic metrics that shippers and carriers need to optimize their performance.
8 Emission Metrics

- CO₂
- PM₁₀
- NOₓ
- PM₂.₅

- Grams/Mile
- Grams/Ton-Mile

- CO₂
- PM₁₀
- NOₓ
- PM₂.₅
SmartWay Aggregates All Fleets in a Carrier Category

• E.g., all truckload (TL) dry-van fleets are evaluated together – “apples to apples”

• TL dry-van fleets are NOT evaluated with flatbed truck fleets – “apples to oranges”
All Fleets in a Category are Ranked Based on Emissions Results

- Best Performance
  - Lowest emissions of CO\textsubscript{2} in grams/mile

- Second Best Performance
  - Second lowest emissions of CO\textsubscript{2} in grams/mile

- Third Best Performance
  - Third lowest emissions of CO\textsubscript{2} in grams/mile

...etc.

All Truckload Dry Van Fleets Submitted to SmartWay
Fleets are Grouped into Five Performance Ranges

- Example for TL Dry Vans CO2 g/mile
  - Performance ranges are set from lowest emissions (best performance) to highest emissions (worst performance)
All Fleets in a Range are Assigned a Performance Level

- Each performance level is based on the MIDPOINT of the performance range
  - Fleets are assigned a performance level that allows relative performance comparison to other fleets in that category

- Top 20% TL Dry Vans: 1101 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
SmartWay is able to create a “Carrier Performance Map”

SmartWay Rating System
Metric and Pollutant Specific Performance Levels

Emission Levels by Performance Ranking

- CO2
- NOx
- PM10
- PM2.5

g/mile  g/ton-mile
Carriers benchmark their performance

- SmartWay can develop distribution curves by aggregating any data collected within SmartWay. Carriers can then see where they fall on that curve.
- This will be a powerful tool to help carriers to improve.
How Shippers Use Carrier Data

- To make informed carrier selection

Carrier Tool Data  
Eight Emissions & Performance Ranking per Fleet  
Shipper Tool

- Shippers submit data in shipper tool to assess and track emissions and carbon footprint
Sample of Publicly Available Report

Performance Rankings

Click down arrows to filter data by column categories. Select one or more items in the dropdown checklists.

To search by name, SCAC or MCN, click CTRL + F to bring up the search dialogue box, then type in the 4 letter SCAC, the 8 digit MCN, or all or part of the company name.

Performance Ranking = midpoint of the performance range for the metric

Note: gm=grams/mile and gtm= g/ton-mile

| Company Division Name                          | Mode | SubMode | FleetType | SCAC | MCN    | CO2 gm metric | NOx gm metric | PM10 gm metric | PM2.5 gm metric | CO2 gtm metric | NOx gtm metric | PM10 gtm metric | PM2.5 gtm metric |
|-----------------------------------------------|------|---------|-----------|------|--------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 101 Transport Truckload                      | Truck| TL/Dry Van | For-Hire | OZOT | MC625894 | 1750           | 13.5          | 0.525          | 0.525          | 105            | 0.825          | 0.033          | 0.033          |
| 1625443 Ontario Inc. dba TVM                  | Truck| TL/Dry Van | For-Hire | OSTD | MC564999 | 1101           | 16.5          | 0.675          | 0.675          | 95             | 0.825          | 0.043          | 0.043          |
| 1st Express Inc.                             | Truck| TL/Dry Van | For-Hire | FSEP | MC181440 | 1101           | 10.5          | 0.525          | 0.525          | 60.5           | 0.525          | 0.023          | 0.023          |
| 2010 KW Trucking Inc.                         | Truck| TL/Dry Van | For-Hire | KKWQ | MC151877 | 1101           | 3             | 0.075          | 0.075          | 60.5           | 0.15           | 0.004          | 0.004          |
| 24:7 Expedite, Inc.                           | Truck| TL/Dry Van | For-Hire | TWFJ | MC690675 | 1101           | 16.5          | 0.675          | 0.675          | 115            | 0.825          | 0.043          | 0.043          |
| 3NT, LLC                                      | Truck| TL/Dry Van | For-Hire | THLL | MC716250 | 1650           | 3             | 0.075          | 0.075          | 85             | 0.15           | 0.004          | 0.004          |
| A & C Incorporated dba Asbury Trucking       | Truck| TL/Dry Van | For-Hire | AQCD | MC264307 | 1850           | 13.5          | 0.525          | 0.525          | 85             | 0.675          | 0.023          | 0.023          |
| A & S Services Group, LLC                    | Truck| TL/Dry Van | For-Hire | ANSW | MC164166 | 1101           | 3             | 0.225          | 0.225          | 85             | 0.525          | 0.013          | 0.013          |
| A&M Transport / Dry Van                      | Truck| TL/Dry Van | For-Hire | ALKM | MC217072 | 1750           | 10.5          | 0.525          | 0.525          | 85             | 0.525          | 0.023          | 0.023          |

Performance Ranking

Information published weekly

www.epa.gov/smartway
How to Use the SmartWay Results

• SmartWay tools give businesses the power to quantify environmental performance using tools that business helped EPA to develop
• Results provide snapshot of where you are relative to others.
• Use results for internal metrics and for planning and marketing.
For More Information, Questions and/or Assistance

www.epa.gov/smartway

734-214-4767 (helpline)
Lessons Learned

Possible Directions for the Future

by Tracy Sakaguchi
Colorado Motor Carriers Assoc.
November, 2012
Positives in Past Year

• Significant Number of Additional Fleets have joined EPA SmartWay
• Substantial reduction in emissions and energy use associated with SmartWay program
• Awareness of SmartWay has risen dramatically among fleets and interest in the program is high
• Support from RAQC and EPA has been great
• Recognition via Green Fleet and Green Shipper was well-received and stoked even greater interest
• Participation by EPA SmartWay Administrator at CMCA 2011 Convention provided additional boost as to the value of the program
Lessons Learned from Past Year

• Workshop in 2011 showed us the need for greater assistance in getting companies started in SmartWay.
• Participants in SmartWay stressed the need to keep the forms simple and time and effort to collect/report data to a minimum.
• Need to help companies in understanding better the results/benefits of SmartWay.
• Periodic follow-ups with companies needed.
• Simple procedures necessary to address staff turnover in companies.
• More one on one assistance is needed in helping companies become part of SmartWay (difficulty in pulling together baseline etc.).
Challenges in Getting Small and Medium Size Carriers in SmartWay Bus

• Limited staff and resources – staff wears many hats and have variety of responsibilities. Difficulty carving out time.
• Difficulty with terminology as well as confusion as to what is needed
• HelpLine can not easily address specific situations and data issues.
Proposed Approach to Increase Small and Mid-Size Carrier Participation

• General overview sessions of SmartWay technologies and benefits to carriers

• Offer direct on-site assistance to interested companies in developing baseline and profile for SmartWay (one on one support via contractor)

• Follow-up quarterly with small and mid-size carriers to see how it is going and answer questions
Shippers

Why More Aren’t Involved

- Limited information on the program and lack of understanding of the benefits of SmartWay
- With economic recovery still struggling some shippers are looking for best rates from transporters which may not be SmartWay participants
- Lack of information and data as to how the shipper’s efforts contribute in energy and emission reductions
- Competition with Other Priorities as well as Other Environmental Programs
Shippers
Getting More of Them Involved in SmartWay

• Develop Specific Presentation for Shippers – Outlining program and more specifically the benefits they bring to the program
• Greater Outreach through Relationships/Partnerships with Business and Economic Development Groups
• Letters/meetings from peers in the area involved with SmartWay
• Create and Continue Recognition Programs
Where Do We Go Next?

- Much of the focus has been on long haul trucking companies who are common carriers. There has been good market penetration with many major fleets having implemented at least some SmartWay strategies.
- Need Outreach to Private Fleets, Oil and Gas Field Transporters, Local Delivery and Local Construction Transporters. These fleets will require different SmartWay technologies than long haul applications.
- Obtain greater support and commitment from federal and state govt.
- Generate greater publicity and recognition for participants.
Recognition is Critical

- Carriers and Shippers Appreciate and Value Recognition
  - Improves Corporate Image
  - Makes it easier for companies to invest in SmartWay
- Present Special Awards
  - Green Fleet Awards
  - Green Shipper Awards
- Make Sure Key People Notice – Governor, EPA and/or Key Cabinet Officials
- Publicize those companies that do the right thing
- Recognize them in front of peers - source of pride and generates interest by others
If you got it, a truck brought it.
Thank You
Westco Express
Case Study

Mike Riley
Westco Express, Inc.
Westco Express MPG Q309-Q312

- Begin using low rolling resistance tractor and trailer tires
- Begin bunk heater/AC
- Begin trailer fairing installs
- Begin trailer boat tail testing
- Purchased 10 new SmartWay certified tractors
- Purchased 5 new SmartWay systems in tractors
- Ordered 10 new SmartWay certified tractors

Miles per Gallon

Quarter-Year:
- Q309
- Q409
- Q110
- Q210
- Q310
- Q410
- Q111
- Q211
- Q311
- Q411
- Q112
- Q212
- Q312
Westco Express CO2 grams/mile

10.2% decrease in CO2 grams/mile from 2008 to 2011
SmartWay Overview & Benchmarking
Kyle Olson
Community Air Toxics Coordinator
Environmental Protection Agency
olson.kyle@epa.gov

Colorado SmartWay Overview
Tracy Sakaguchi
Event Coordinator/Membership
Colorado Motor Carriers Association
(303) 433-3375 ext. 103
tracy@cmca.com

Westco Case Study
Mike Riley
President/Treasurer
Westco Express, Inc.
(303) 327-8920