

SmartWay Transport Partnership

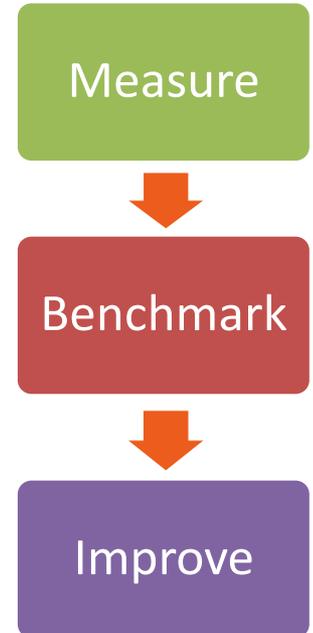
Talking Freight Webinar

US Environmental Protection Agency
September 19, 2012

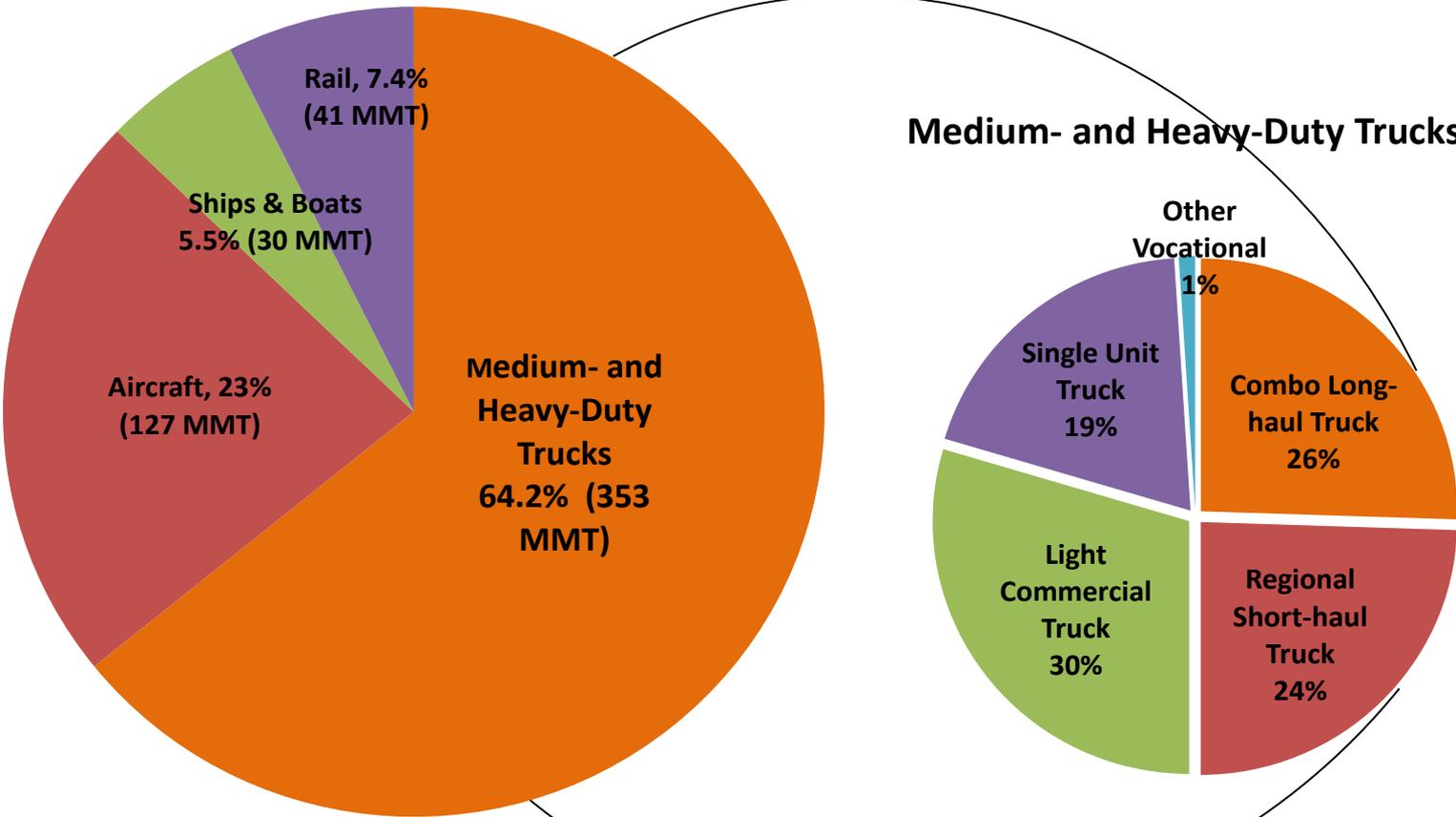


SmartWay

- **Goals**
 - Reduce CO₂, NO_x and PM emissions
 - Save millions of gallons of fuel
 - Improve supply chain efficiencies
 - Assist companies to become more cost effective
- **SmartWay can accomplish these goals by:**
 - Providing the freight transportation with **information** so companies can make informed emission optimization choices:
 - Providing **standardized** system of data collection and calculation
 - Creating a **market based system** to incentivize good performers
 - Providing calculation **tools**, a **data management** system, and informational materials



Supply Chain Goods Movement – CO₂

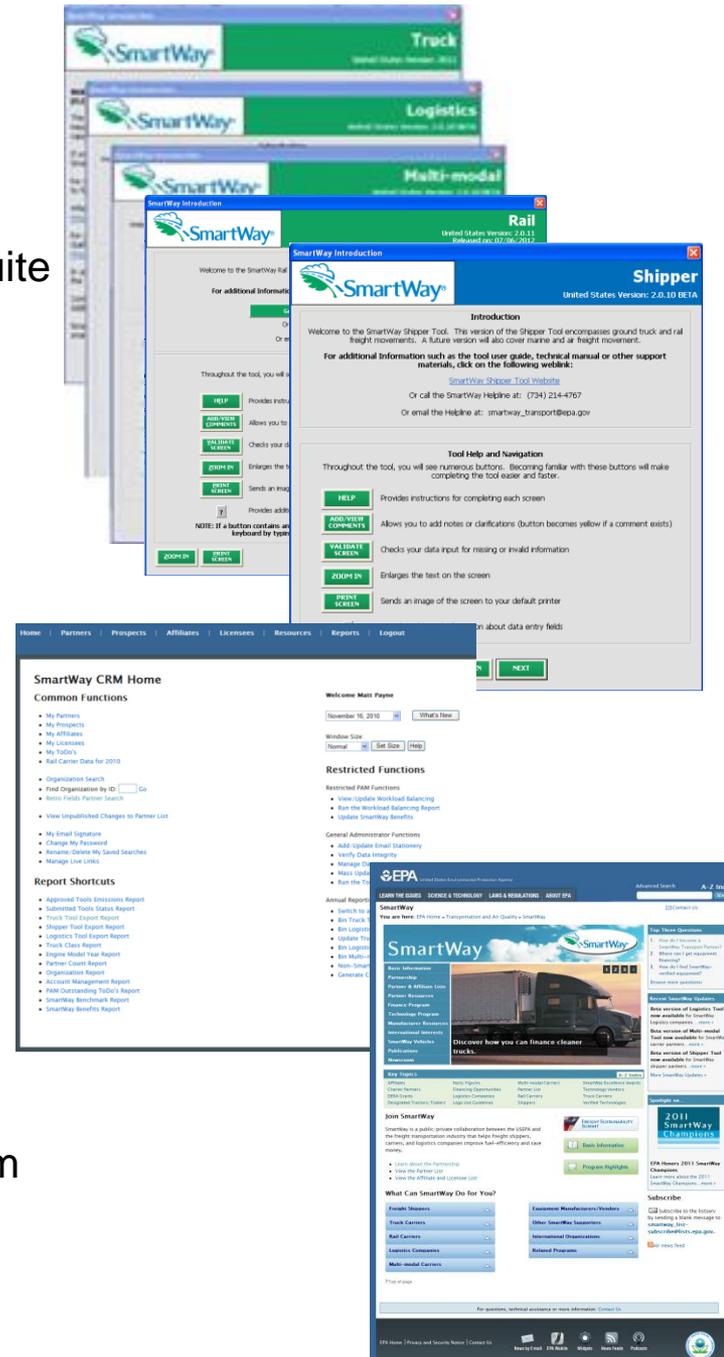


MMT = Million Metric Ton = Teragram (Tg)

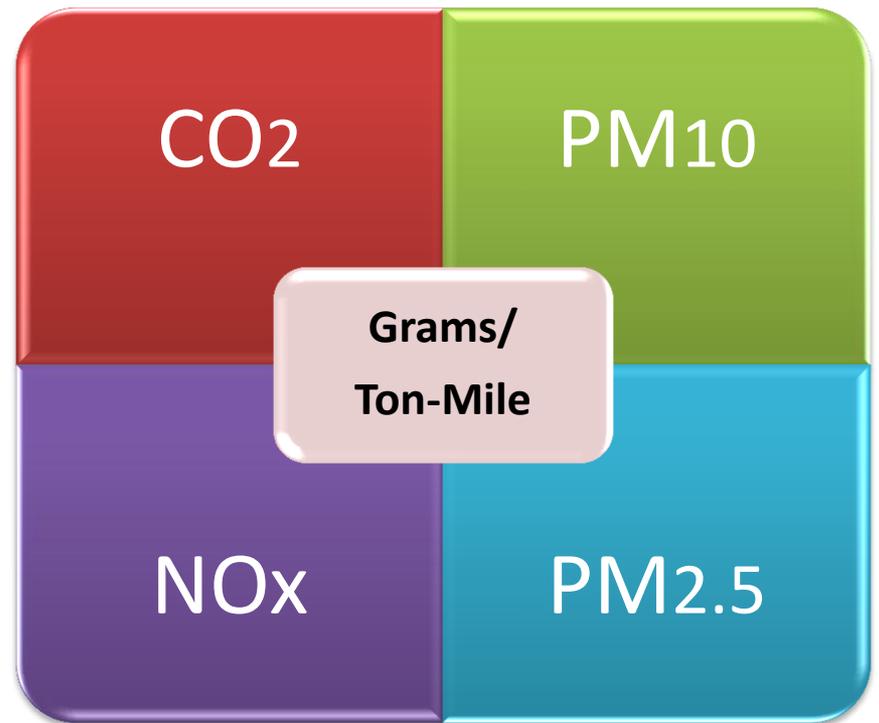
* 2009 Data - Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2009 (EPA 2011)

SmartWay Components

- Carrier Data Collection tools
 - Truck Tool, Logistics Tool, Rail Tool, Multimodal Suite
 - All industry and academically peer reviewed
 - Data collected: gallons, miles, payload, volume, vehicle class and model year, and operational characteristics
- Shipper Tool
 - Industry and academically peer reviewed
 - Calculates emission inventories and efficiencies based on carrier mix
- SmartWay Database
 - Stores and manages all SmartWay data
- SmartWay Website
 - Contains downloadable versions of all tools, user guides, technical documentation, webinars, program descriptions

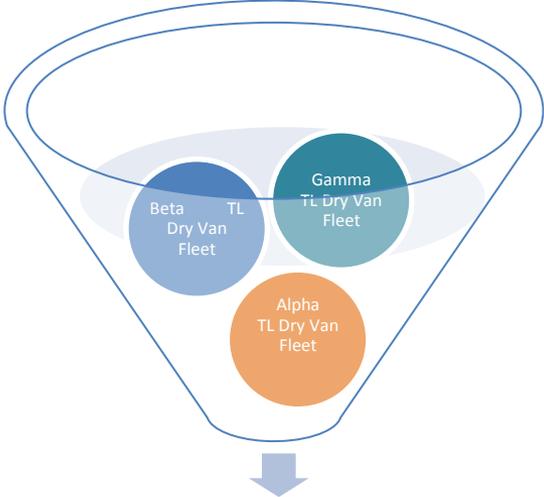


8 Emission Metrics



SmartWay Separates All Fleets into their Carrier Categories

- 15 Categories based on operational characteristics
 - 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”



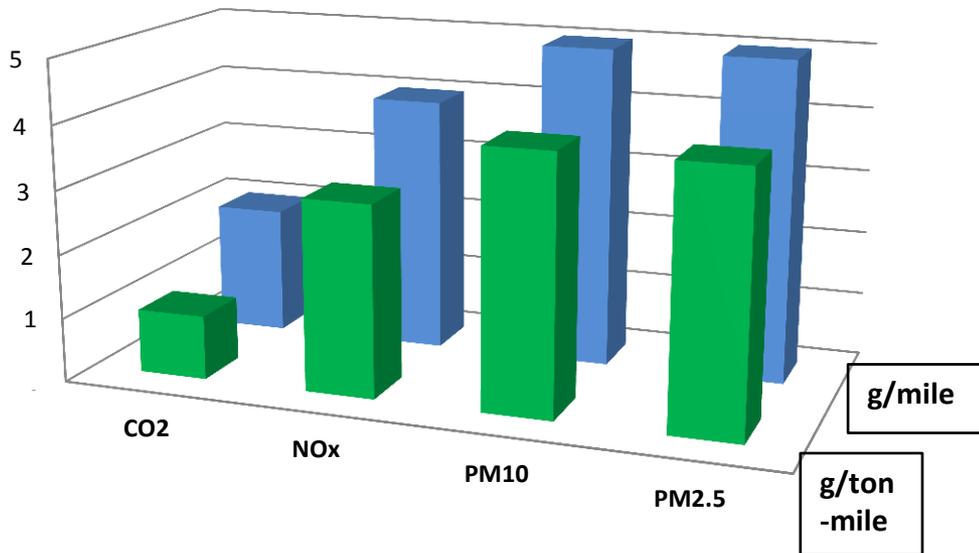
All Truckload Dry Van Fleets Submitted to SmartWay

SmartWay Truck Categories 2011 Data Year									
	Dry Van/Chassis	Reefer	Flatbed	Tanker	Heavy/ Bulk	Auto Carrier	Moving	Specialized /Utility	Mixed
TL	Red	Blue	Light Purple	Black	Pink	Purple	Light Green	Light Green	Grey
LTL	Yellow	Blue	Light Purple	Black	Pink	Purple	Light Green	Light Green	
PD	Brown	Blue	Light Purple	Black	Pink	Purple	Light Green	Light Green	
Expedited	Dark Grey	Blue	Light Purple	Black	Pink	Purple	Light Green	Light Green	
Dray	Yellow								Grey
Mixed	Grey								
Logistics	Blue								
Multimodal	Green								

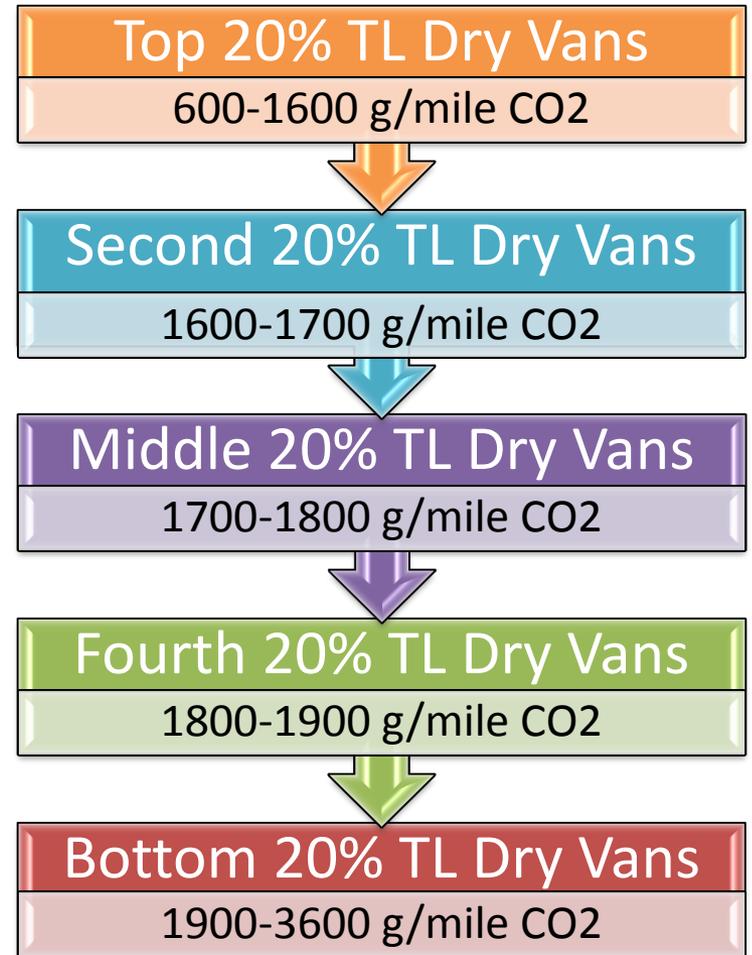
Partner Ranking

- All Fleets in a category are ranked based on emissions results and placed into one of five ranges for each of the 8 emission metrics
- Performance ranges are set from lowest emissions (best performance) to highest emissions (worst performance)

SmartWay Rating System
Metric and Pollutant Specific Performance Levels

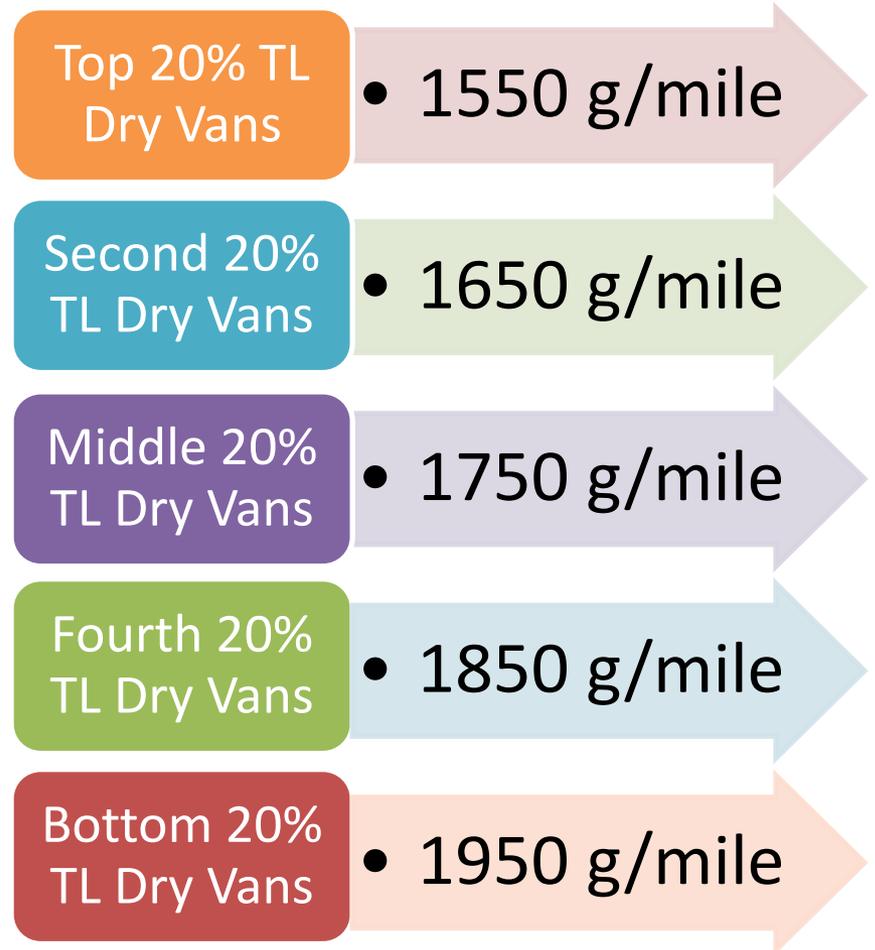


TL Dry Van Example



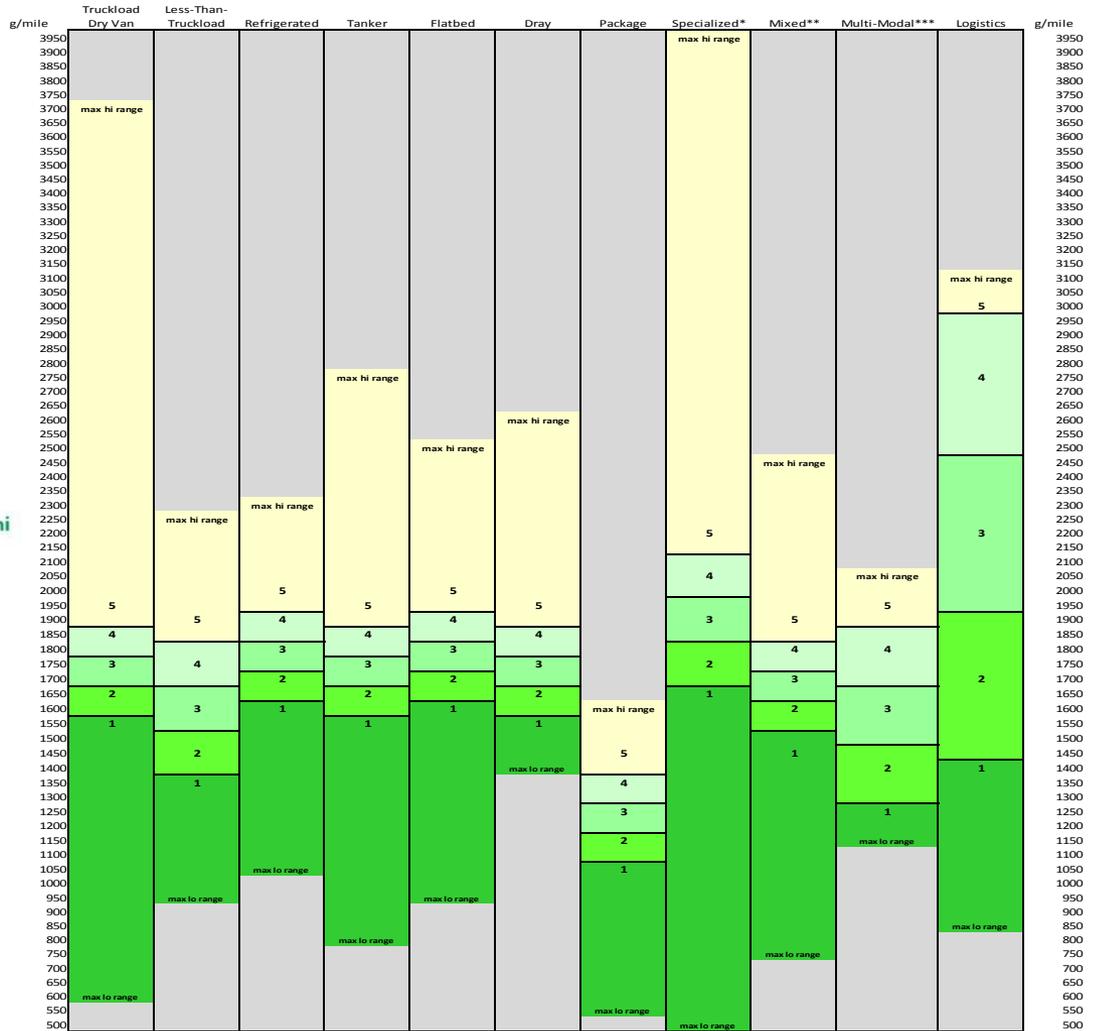
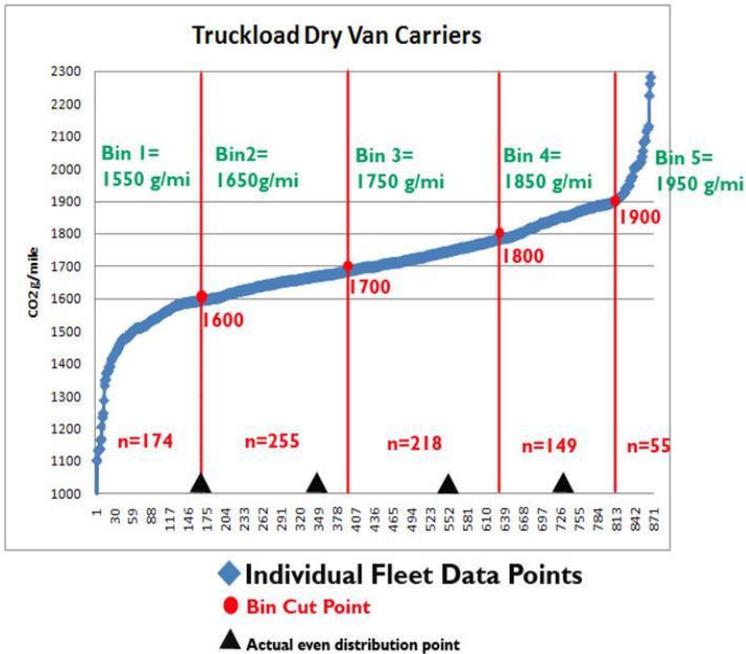
All Fleets in a Range are Assigned a Performance Level

- Fleets are assigned a performance level that allows relative performance comparison to other fleets in that category
- Provides enough information to differentiate, but doesn't reveal sensitive business information
 - The performance level for ranges 2-4 are based on the MIDPOINT of the performance range
 - The performance levels for Range 1 is based on the standard deltas between the midpoints of ranges 2-4, subtracted from the midpoint of range 2. (1650 -100)
 - The performance levels for Range 5 is based on the standard deltas between the midpoints of ranges 2-4, added to the midpoint of range 4. (1850+100)



CO2 g/mile Category Ranges

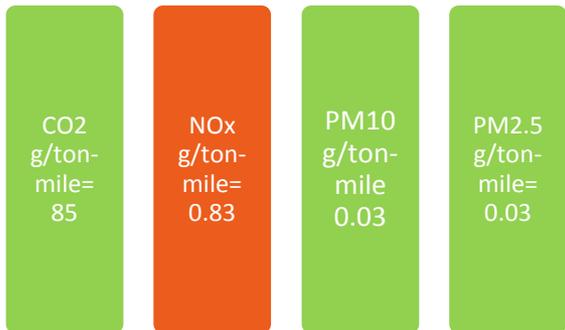
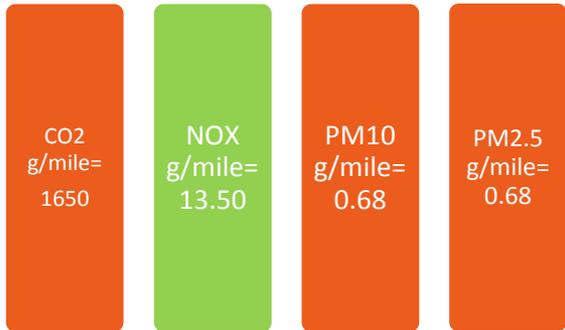
Developing SmartWay Emission Factors



	g/mile					g/ton-mile					g/mile					g/ton-mile																																																	
CO2	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5															
NOx	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5										
PM10	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
PM2.5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
	Truckload Dry Van					Less-than-Truckload					Refrigerated					Flatbed					Tanker					Drayage					Package Delivery					Mixed					Specialized					Logistics					Multi-modal														

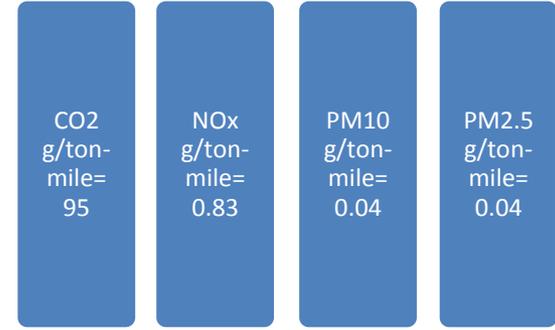
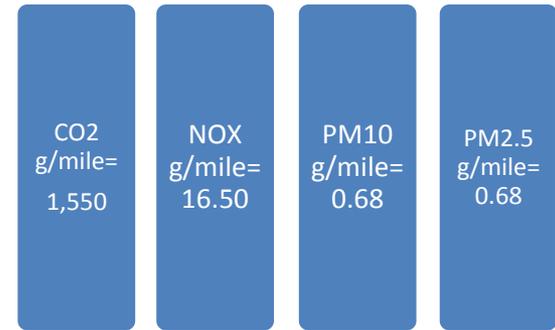
Shippers use Performance Levels to Assess Relative Carrier Performance

Alpha
TL Dry Van Fleet



VS

Beta
TL Dry Van
Fleet



Alpha performs better than Beta for NOx g/mile and CO2, PM10 and PM2.5 g/ton-mile

Demonstration: SmartWay Performance Report for Carriers

Performance Rankings					TRUCKLOAD/DRY VAN							
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												
Company Division Name	Category	FleetType	SCAC	MCN	Performance Ranking							
					CO2 g/m metric	NOx g/m metric	PM10 g/m metric	PM2.5 g/m metric	CO2 g/ton-m metric	NOx g/ton-m metric	PM10 g/ton-m metric	PM2.5 g/ton-m metric
1625443 Ontario Inc. dba TVM	TL/Dry Van	For-Hire	OSTG	MC564999	1,101	16.50	0.68	0.68	95	0.83	0.04	0.043
1st Express Inc.	TL/Dry Van	For-Hire	FSEP	MC181440	1,101	10.50	0.53	0.53	61	0.53	0.02	0.023
2010 KKW Trucking Inc.	TL/Dry Van	For-Hire	KKWQ	MC151877	1,101	3.00	0.08	0.08	61	0.15	0.00	0.004
24:7 Expedite, Inc.	TL/Dry Van	For-Hire	TWFJ	MC690675	1,101	16.50	0.68	0.68	115	0.83	0.04	0.043
A & S Services Group, LLC	TL/Dry Van	For-Hire	ANSW	MC164166	1,101	3.00	0.23	0.23	115	0.53	0.01	0.013
A.C.S. LOGISTICS TRANSPORTATION INC.	TL/Dry Van	For-Hire	OFNS	MC548067	1,101	10.50	0.38	0.38	115	0.83	0.04	0.043
A.R.K.B. Xpress,LLC	TL/Dry Van	For-Hire	AKBP	MC659939	1,101	7.50	0.38	0.38	85	0.38	0.01	0.013
All Truck Transportation Company	TL/Dry Van	Private	ALLC	MC163455	1,101	13.50	0.53	0.53	115	0.83	0.04	0.043
Apollo Express, Inc	TL/Dry Van	For-Hire	AOXE	MC366984	1,101	10.50	0.53	0.53	85	0.68	0.03	0.033
ARI Mail	TL/Dry Van	For-Hire	RAIL	MC0023010	1,101	10.50	0.53	0.53	61	0.53	0.03	0.033
Army and Air Force Exchange Service	TL/Dry Van	Private	AYAF		1,101	7.50	0.38	0.38	115	0.68	0.03	0.023
Arnold Transportation Services, Inc	TL/Dry Van	For-Hire	ANTT	MC148974	1,101	10.50	0.68	0.53	85	0.53	0.03	0.033
ASL Transportation Group, Inc.	TL/Dry Van	For-Hire	AXGN	MC644828	1,101	7.50	0.38	0.38	105	0.53	0.02	0.023
Astral Carrier, Inc.	TL/Dry Van	For-Hire	AQCI	MC195809	1,101	16.50	0.68	0.68	61	0.83	0.04	0.043
Autobahn Freight Lines Ltd.	TL/Dry Van	For-Hire	AUBA	MC361296	1,101	10.50	0.53	0.53	85	0.68	0.03	0.033
B & D MOTORS, INC.	TL/Dry Van	For-Hire	BDMW	MC185907	1,101	16.50	0.68	0.68	95	0.83	0.04	0.043
Baylor Trucking, Inc.	TL/Dry Van	For-Hire	BYLR	MC109154	1,101	3.00	0.23	0.23	61	0.15	0.00	0.004
Bear Trucking, Inc	TL/Dry Van	For-Hire	BERO	MC367467	1,101	13.50	0.53	0.53	61	0.53	0.02	0.023
Bilbo Transports Inc. - BoxTruck	TL/Dry Van	Private	BIBT	MC134547	1,101	16.50	0.68	0.68	61	0.83	0.04	0.043
Bridgestone Americas Tire Operations, LLC (Team	TL/Dry Van	Private	BGFI	MC309557	1,101	3.00	0.08	0.08	61	0.15	0.00	0.004
Cardinal Health, Inc.	TL/Dry Van	Private	CHWK	MC654731	1,101	7.50	0.38	0.38	115	0.83	0.04	0.043
Cargo Transporters	TL/Dry Van	For-Hire	CGOR	MC257768	1,101	7.50	0.23	0.23	115	0.68	0.02	0.023
CDN LOGISTICS, INC.	TL/Dry Van	For-Hire	CQDN	MC332177	1,101	13.50	0.53	0.53	95	0.68	0.03	0.033

Shipper Applications

- The shipper tool pulls in the emission factor data from the SmartWay website.
- Shippers are then able to input their miles and ton-miles to calculate their inventory, as well as estimate savings from shipper strategies

Company/Division Name	Mode	SubMode	Fleet Type	g/mile			g/ton-mile		
				CO2	NOx	PM	CO2	NOx	PM
A & S Services Group, LLC	Truck	TL/Dry Van	For-Hire	1550	4.5	0.225	115	0.525	0.013
A&I Transport Inc.	Truck	Refrigerated	For-Hire	1700	11.5	0.425	82.5	0.5	0.023
A&I Transport Inc. Express Division	Truck	Refrigerated	For-Hire	1700	5.5	0.025	82.5	0.3	0.0015
A&M Transport / Dry Van	Truck	TL/Dry Van	For-Hire	1750	10.5	0.525	85	0.525	0.023
A&M Transport / Flatbed	Truck	Flatbed	For-Hire	1700	16	0.725	87.5	0.825	0.069
A&M Transport / Tauntliner	Truck	Specialized	For-Hire	1775	6.5	0.15	90	0.275	0.008
A&R Transport	Truck	Tanker	For-Hire	1650	7	0.375	82.5	0.55	0.0225

SmartWay Introduction

Shipper
United States Version: 2.0.10 BETA

Introduction

Welcome to the SmartWay Shipper Tool. This version of the Shipper Tool encompasses ground truck and rail freight movements. A future version will also cover marine and air freight movement.

For additional information such as the tool user guide, technical manual or other support materials, click on the following weblink:
[SmartWay Shipper Tool Website](#)

Or call the SmartWay Helpline at: (734) 214-4767
 Or email the Helpline at: smartway_transport@epa.gov

Tool Help and Navigation

Throughout the tool, you will see numerous buttons. Becoming familiar with these buttons will make completing the tool easier and faster.

- HELP**: Provides instructions for completing each screen
- ADD/VIEW COMMENTS**: Allows you to add notes or clarifications (button becomes yellow if a comment exists)
- VALIDATE SCREEN**: Checks your data input for missing or invalid information
- ZOOM IN**: Enlarges the text on the screen
- PRINT SCREEN**: Sends an image of the screen to your default printer
- ?**: Provides additional information about data entry fields

ZOOM IN **NEXT**



Shipper Tool Output Screens

- Shippers can calculate their freight carbon inventory for their entire company, divisions, product lines, etc.
- Shippers can compare modal, and carrier efficiencies in many different ways.

SmartWay Shipper Tool: Example Corporation

Select Carrier(s) | Emissions or % SmartWay | Activity Data | % SmartWay | Emissions Summary | **Carrier Performance** | Shipper Strategies | Modal Shift

This display allows you to look at your company's emissions-related performance by mode and internal segmentation. Use the drop-down boxes provided to filter your results. You can display carrier-specific emission factors or associated carrier rankings by choosing the appropriate option from Display Type drop-down. In addition, if you selected Emissions Footprint and completed the Activity Data screen, you can also display mass emissions in tons per year. (If you selected % SmartWay Only, this mass emissions option is not available.) In viewing your results, use the +/- icon to the left of each mode name to hide/reveal details for that particular mode.

Display Results For: Display Type: Emissions Factors | Inbound / Outbound: All | US / International: All | Business Unit: All | ID Code: All | Internal Shipper Segment 1: All | Internal Shipper Segment 2: All

Mode / Selected Carriers	Bin Category	CO2		NOx		PM10		PM2.5	
		g/mile	g/ton-mile	g/mile	g/ton-mile	g/mile	g/ton-mile	g/mile	g/ton-mile
<input type="checkbox"/> Rail Carriers		1,118	1	22.57	0.012	18.600	0.5030	0.427	0.0120
> BNSF Railway Company		1,163	1	20.20	0.012	18.600	0.5030	0.427	0.0120
> Norfolk Southern Corporation		1,087	1	24.24	0.012	18.600	0.5030	0.427	0.0120
<input type="checkbox"/> Truck Carriers		1,776	193	11.52	1.441	0.552	0.0995	0.549	0.0960
> Schneider National Carriers	TL/Dry Van	1,550	95	7.50	0.525	0.375	0.0230	0.375	0.0230
> J.B. Hunt Transport, Inc. Truck Divi...	TL/Dry Van	1,650	85	7.50	0.525	0.375	0.0230	0.375	0.0130
> YRCW - YRC Inc.	LTL/Dry Van	1,625	75	13.50	0.850	0.550	0.0250	0.550	0.0250
> Drayage Express LLC	Dray	1,650	70	28.00	1.050	1.125	0.0550	1.125	0.0550
> C.R. England, Inc.	Refrigerated	1,600	68	2.50	0.200	0.125	0.0070	0.125	0.0015
> non-SmartWay Truck Carrier		3,191	887	38.00	7.250	2.000	0.5900	1.975	0.5900
Composite Weighted Average		1,746	145	12.03	1.084	1.373	0.2003	0.543	0.0750

Shipper Tool Output Screens

SmartWay Shipper Tool: Example Corporation



[Select Carrier\(s\)](#) |
 [Emissions or % SmartWay](#) |
 [Activity Data](#) |
 [% SmartWay](#) |
 [Emissions Summary](#) |
 [Carrier Performance](#) |
 [Shipper Strategies](#) |
 [Modal Shift](#)

This display shows a summary of your carrier's performance based on the selected pollutant -- CO2, NOx, or PM. Select a different option below to view a summary for that pollutant. A more detailed presentation of your performance is shown on the next tab: Carrier Performance.

Selected Pollutant:

CO2 [?](#)
 NOx [?](#)
 PM10 [?](#)
 PM2.5 [?](#)

Selected Carriers ?	Carrier Mode	Bin ? Category	Inv Calc Metric	Carrier Performance - CO2				CO2 Mass Emissions ? (tons/year)
				g/mile ?	Bin Ranking	g/ton-mile ?	Bin Ranking	
Composite ?	All	All	--	1,746	--	145	--	1,437.6
Schneider National Carriers	Truck	TL/Dry Van	g/mile	1,550	1	95	3	341.7
J.B. Hunt Transport, Inc. Truck Divi...	Truck	TL/Dry Van	g/ton-mile	1,650	2	85	2	187.4
YRCW - YRC Inc.	Truck	LTL/Dry Van	g/ton-mile	1,625	3	75	1	165.3
BNSF Railway Company	Rail		g/ton-mile	1,163	--	1	--	1.1
Norfolk Southern Corporation	Rail		g/ton-mile	1,087	--	1	--	1.1
Drayage Express LLC	Truck	Dray	g/mile	1,650	2	70	1	36.4
C.R. England, Inc.	Truck	Refrigerated	g/mile	1,600	1	68	1	352.7
non-SmartWay Truck Carrier	Truck		g/mile	3,191	--	887	--	351.7

BACK

NEXT

ZOOM IN

PRINT
SCREEN

HOME

VALIDATE
SCREEN

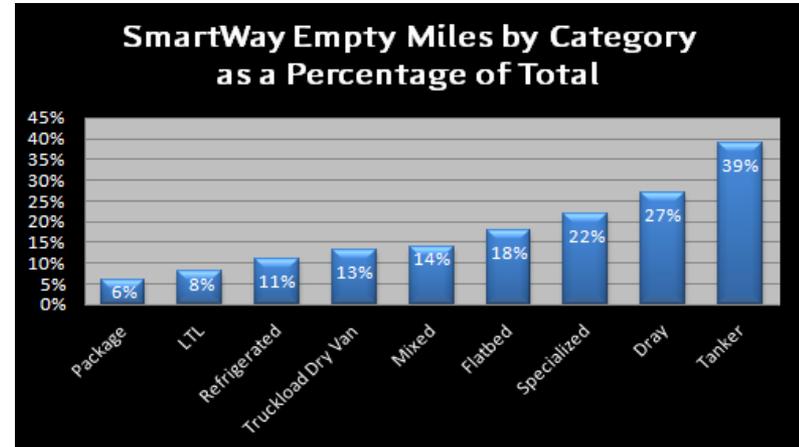
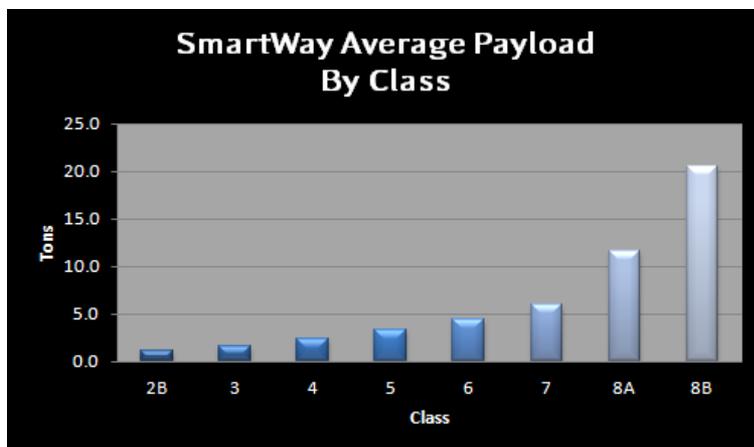
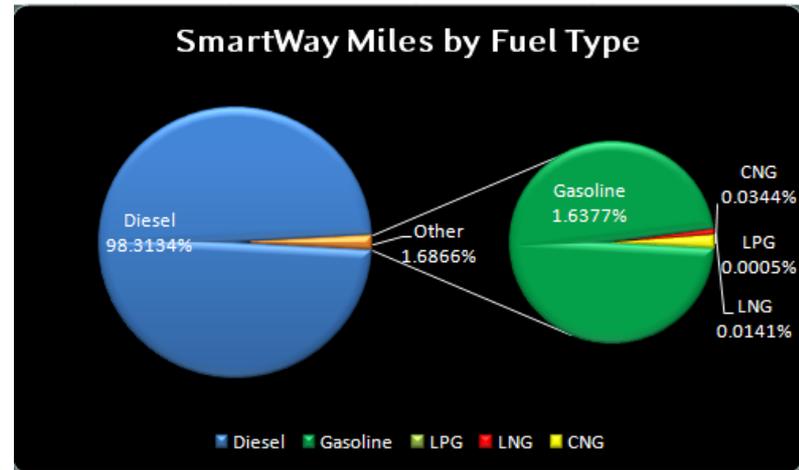
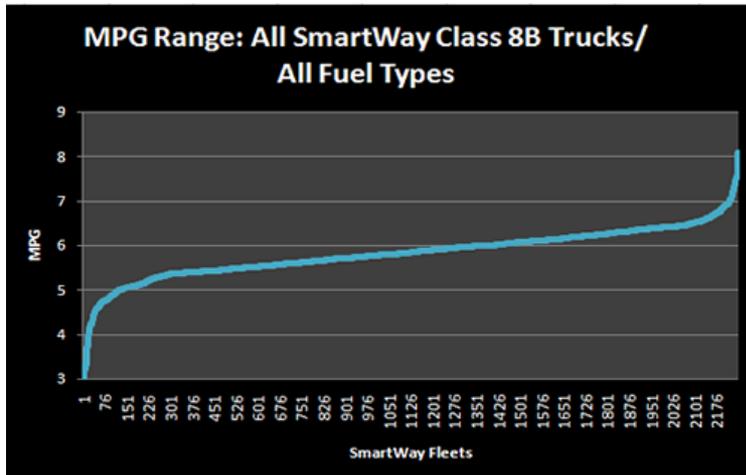
VALIDATE
COMPANY

ADD/VIEW
EDITMENTS

HELP

Carriers can Benchmark their Performance

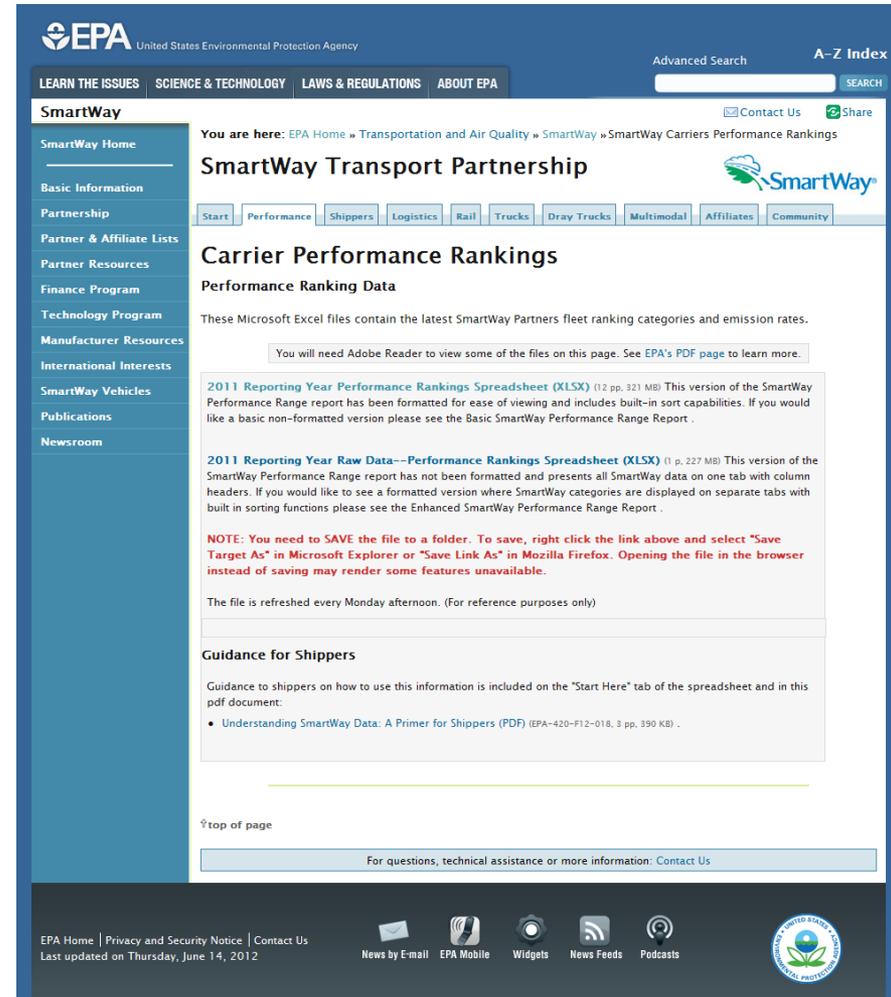
- SmartWay can develop distribution curves by aggregating any data collected within SmartWay. Carriers can then see where they fall on that curve.
- This will be a powerful tool to help carriers to improve.



Access for TMS Software Providers

- TMS providers can import this data into their systems from a simple .xlsx spreadsheet on the SmartWay website
- <http://epa.gov/smartway/partnership/performance.htm>
- Free, but please identify the source of the data in your software using the SmartWay Data Logo

SmartWay[®]
Data



The screenshot displays the EPA SmartWay website interface. At the top, the EPA logo and navigation menu are visible. The main content area is titled "SmartWay Transport Partnership" and "Carrier Performance Rankings". It provides information about performance ranking data, including links to spreadsheets for the 2011 reporting year. A note indicates that the file is refreshed every Monday afternoon. The footer contains contact information and social media links.

EPA United States Environmental Protection Agency

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SmartWay

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SmartWay Transport Partnership

Start Performance Shippers Logistics Rail Trucks Dray Trucks Multimodal Affiliates Community

SmartWay

Carrier Performance Rankings

Performance Ranking Data

These Microsoft Excel files contain the latest SmartWay Partners fleet ranking categories and emission rates.

You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more.

2011 Reporting Year Performance Rankings Spreadsheet (XLSX) (12 pp, 321 MB) This version of the SmartWay Performance Range report has been formatted for ease of viewing and includes built-in sort capabilities. If you would like a basic non-formatted version please see the Basic SmartWay Performance Range Report .

2011 Reporting Year Raw Data--Performance Rankings Spreadsheet (XLSX) (1 p, 227 MB) This version of the SmartWay Performance Range report has not been formatted and presents all SmartWay data on one tab with column headers. If you would like to see a formatted version where SmartWay categories are displayed on separate tabs with built in sorting functions please see the Enhanced SmartWay Performance Range Report .

NOTE: You need to SAVE the file to a folder. To save, right click the link above and select "Save Target As" in Microsoft Explorer or "Save Link As" in Mozilla Firefox. Opening the file in the browser instead of saving may render some features unavailable.

The file is refreshed every Monday afternoon. (For reference purposes only)

Guidance for Shippers

Guidance to shippers on how to use this information is included on the "Start Here" tab of the spreadsheet and in this pdf document:

- Understanding SmartWay Data: A Primer for Shippers (PDF) (EPA-420-F12-018, 3 pp, 390 KB) .

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For questions, technical assistance or more information: [Contact Us](#)

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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[EPA.GOV/SMARTWAY](https://www.epa.gov/smartway)

