



*Commit. Act. Impact.*

## Leveraging EPA's SmartWay Program to Improve your Distribution Emissions

16. November. 2018





a project of



**COMMIT. ACT. IMPACT.**

# Climate Collaborative Commitment Areas



Integrate carbon farming into the agricultural supply chains



Increase energy efficiency



Reduce food-waste in the supply chain



Remove commodity-driven deforestation from supply chains



Responsible engagement in climate policy



Reduce the climate impact of packaging



Commit to 100% renewable power



Reduce short-lived climate pollutant emissions



Reduce climate impacts of transportation



# How to commit



TAKE ACTION

BLOG

MEDIA & RESOURCES

EVENTS

ABOUT

DONATE



More companies are taking action to reverse climate change than ever before. They're tackling this global challenge not only because it's essential to the future of our planet but also because doing so offers tremendous opportunities for growth, job creation, and prosperity.

Companies can help reverse climate change by making a commitment to one or more of these initiatives.

## WHY TAKE ACTION?

Climate change is both the greatest threat our planet has ever faced

**MAKE A COMMITMENT**

**SIGNUP FOR UPDATES**

Add Your Email Address



# How many companies have committed?

Justin's



gaia  
HERBS

317

Companies  
Committing to Action

1194

Commitments



Community  
FOOD CO OP



Veritable  
Vegetable



REBBL

seventh  
generation.



MegaFood  
Fresh From Farm To Tablet™

nutiva  
NURTURE VITALITY™



# THANK YOU TO OUR DONORS!

Alter Eco

Annie's

Associated Brands

Califia Farms

California Olive Ranch

Cheer Pack

Clif Bar & Company

Connective Impact

Danone North

America

Decker and Jessica

Rolph

Dr. Bronner's

Elk Packaging

Foodstirs

Gaia Herbs

General Mills

Good Earth Natural

Foods

GrandyOats

GreenSeed Contract

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Numi

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Organic India

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Outpost Natural Foods

Patagonia

Plum Organics

Pluot Consulting

Presence Marketing

Rebbl

Stahlbush Island Farms

Stonyfield

Straus Family

Creamery

Studio Fab

Tacoma Park Silver

Spring Co-op

Traditional Medicinals

Trayak





# COMMITMENT: REDUCE THE CLIMATE IMPACT OF TRANSPORTATION

## Why Commit To Reducing The Climate Impact of Transportation?

Switching to alternative fuels and transitioning fleets from traditional gasoline and diesel-powered vehicles to hybrid and electric vehicles can reduce or eliminate greenhouse gas emissions from ground fleets.

Adopting efficiencies in shipping cargo, logistics optimization, and intermodal transport can significantly reduce greenhouse gas emissions from the global movement of goods while also providing significant savings.

**120 Companies** have made the  
Transportation Commitment!

# Our Speaker



Moderator: **Lisa Spicka**  
*Associate Director*  
Sustainable Food Trade  
Association, SFTA



**Francisco Dóñez**  
*Ports/Marine and Rail Sector Lead,*  
*West Collaborative*  
EPA





# BUILDING SUSTAINABLE SUPPLY CHAINS

Francisco Dóñez, Ph.D.  
US EPA Region 9  
Los Angeles, CA





## WHY FREIGHT MATTERS TO BUSINESS – U.S. SNAPSHOT

- Economic cornerstone
- Trucking, rail, water, air deliver goods and materials that drive economic growth and development
  - \$17.9 trillion value
  - 20 B tons annually; 55 M tons daily
- Essential to competitiveness, jobs, economies
  - 10 M U.S. jobs related to freight activity
  - 8.6% of U.S. GDP (\$1.4 trillion)



- ▶ Myth: Freight is not core to our business
- ▶ Reality: Freight is essential to the success of our core business
- ▶ Freight trends emerging now and over next few decades will have a major impact on our bottom line.

## WHY FREIGHT MATTERS TO INDIVIDUAL COMPANIES



# ENERGY IMPACTS

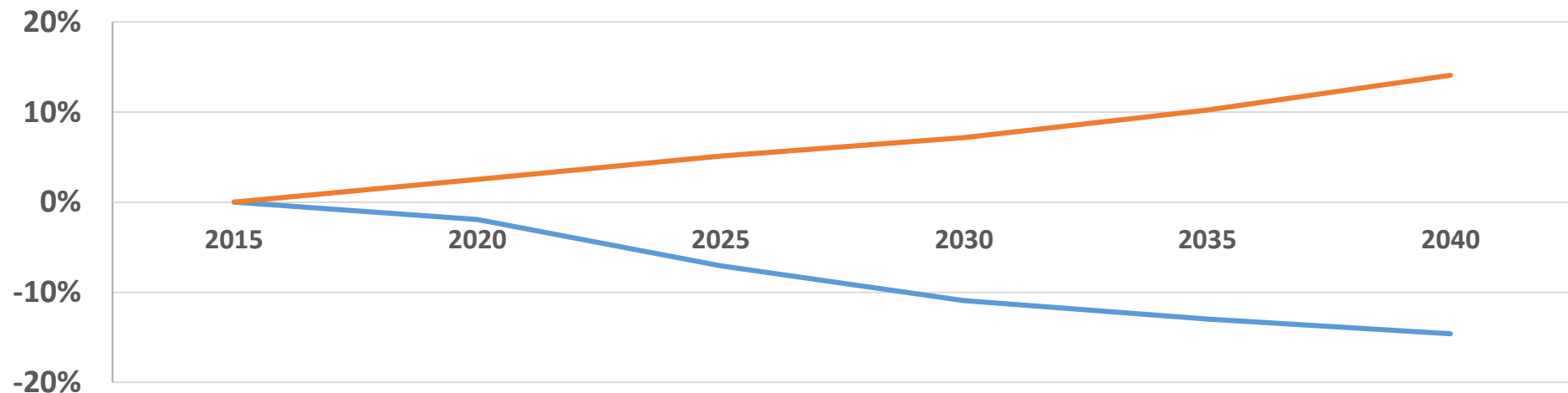
- Freight modes account for about 39% of total world transportation energy use
- Experts project that global freight transport volumes will more than quadruple by 2050.





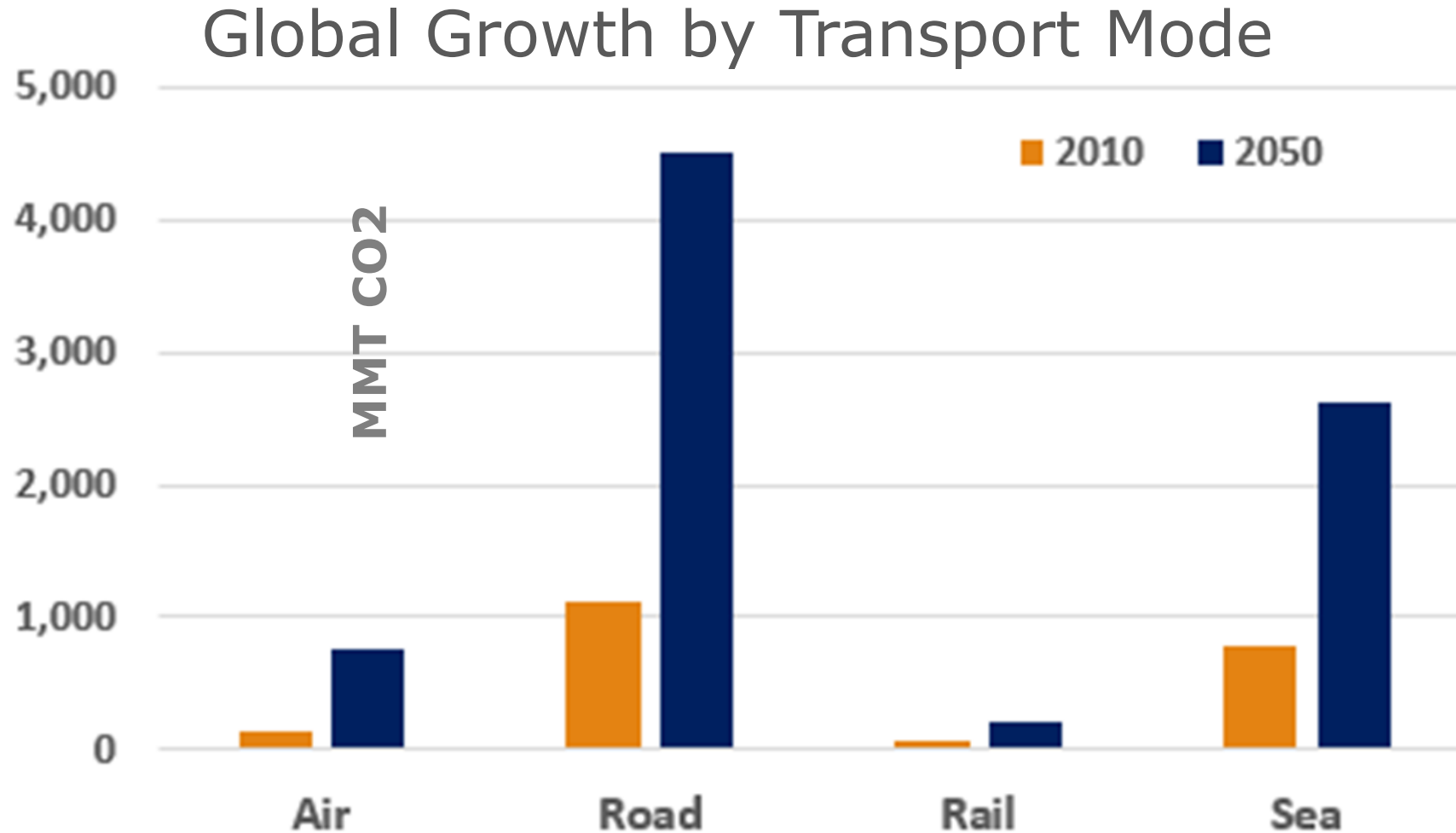
# FREIGHT'S SHARE OF CARBON EMISSIONS IS GROWING

Percent Change in US CO<sub>2</sub> Emissions Compared to 2015



- Passenger Transport (LDV, Bus, Passenger Air & Rail, Recreational Boats)
- Freight Transport (HDV, Freight Air & Rail, Shipping)

# TRUCKING IS A SIGNIFICANT DRIVER







- Market driven partnership that helps businesses:
- Save money
- Stay competitive
- Demonstrate economic and environmental leadership by moving goods in the cleanest most efficient way possible.
- Exchange performance data in ways that contribute to a stronger and more competitive economy and healthier air



# HOW SMARTWAY WORKS

- Companies submit data on freight transportation activity using EPA assessment and tracking tools
- Tools calculate annual carbon footprint along with annual emissions of other air pollutants from transporting goods
- EPA ranks companies by environmental performance
- Recognition for top 1 – 2% environmental performance



# SMARTWAY APPROACH

## *Simplicity*

- Standard benchmarking tools and methods

## *Accuracy*

- Performance based assessment of CO<sub>2</sub>, NO<sub>x</sub>, PM

## *Flexibility*

- Multiple metrics, multimodal, multi-fleet, multi-categories

## *Transparency*

- Manageable granularity, protects sensitive information



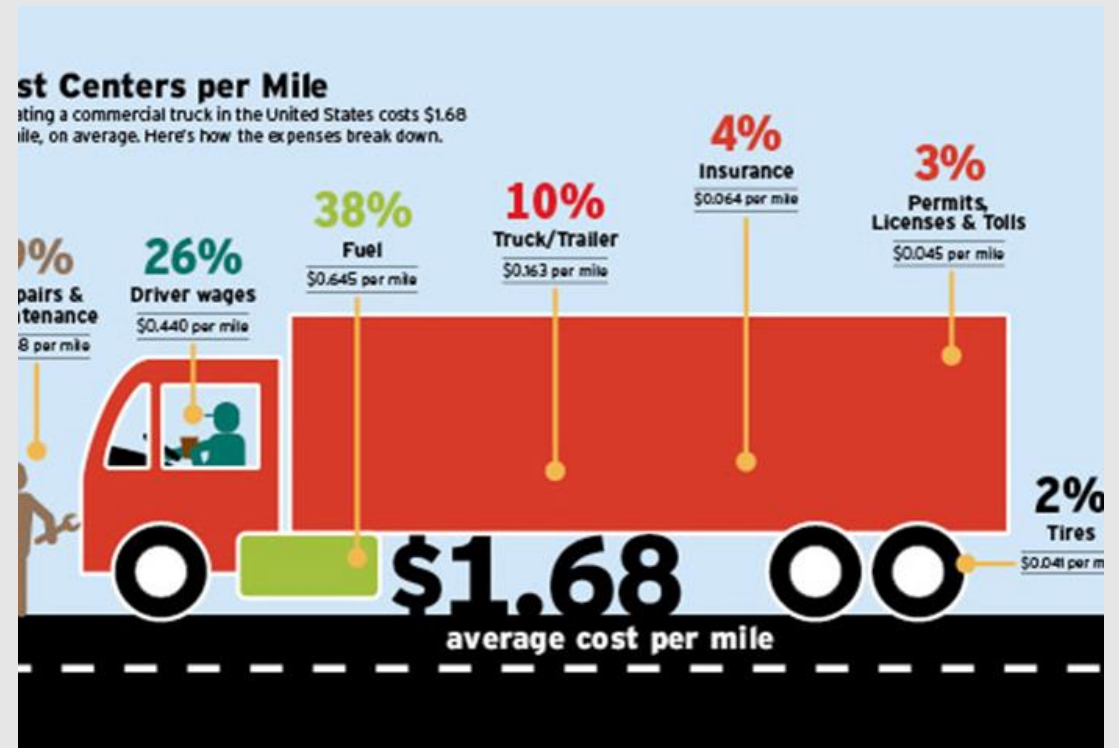
# WHAT SHIPPERS SEE

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- 
- Despite its importance, freight isn't their main business
  - Shippers want to strengthen their brands by highlighting sustainability efforts:
    - Carbon and sustainability reporting
    - Improving environmental performance
  - But how to improve what you can't see?

# WHAT CARRIERS SEE

- Thin profit margins – fuel and wages = 64% of operating costs
- Shippers can't value investments carrier efficiency, unless they "see" them
- New technologies and strategies can seem risky



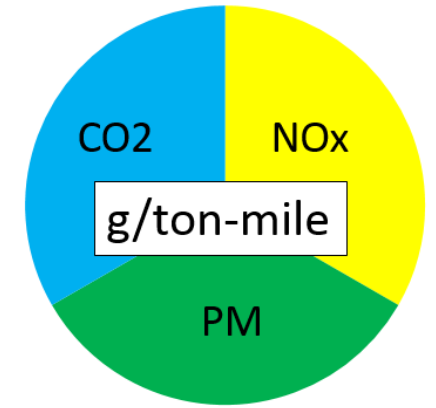
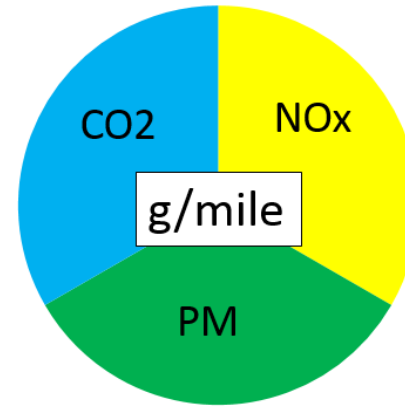
# TRUCK CARRIER DATA

- Short Haul vs. Long Haul
- Fuel types and gallons consumed
- Particulate Matter Reduction (pre-2006)
- “Cube Out” Percentage
- Model year and truck class
- Miles (revenue and empty)
- Average Payload (Tons) – Cargo Weight Only
- Average Capacity Volume (Cubic Feet)
- Percent Capacity Utilization (Excluding Empty Miles)
- Road Type / Speed Categories
- Average Annual Idle Hours per Truck



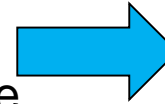
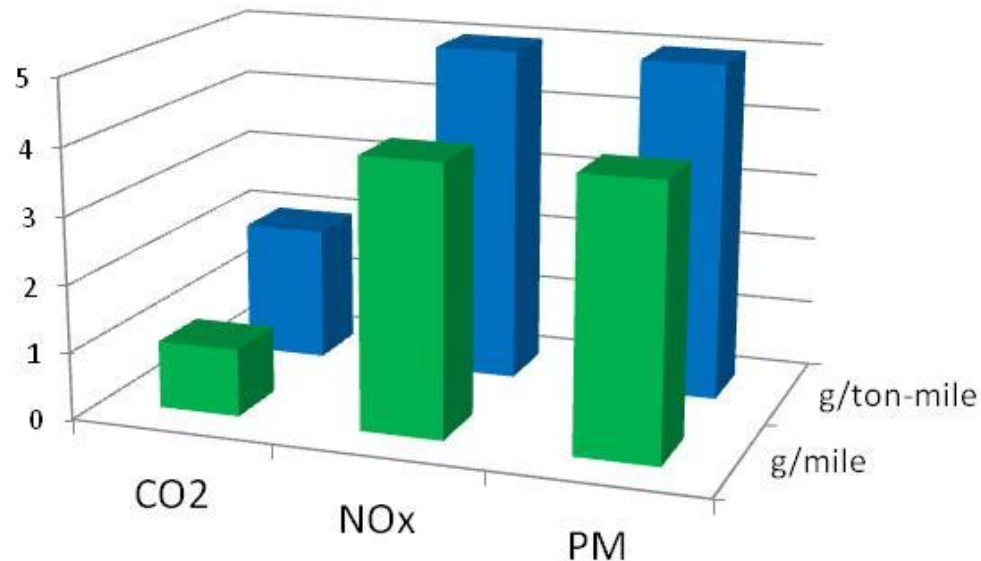
# CARRIER PERFORMANCE RANKING

- The data are reviewed by EPA for quality (source, completeness) and consistency
- Once approved, EPA uses the data to generate six environmental performance metrics:
  - 3 pollutants: CO<sub>2</sub>, NO<sub>x</sub>, and PM
  - Expressed in: grams/mile, and grams/ton-mile



# PERFORMANCE BENCHMARKING

- Emission metrics are benchmarked using performance ranges.
- All carriers within a given range receive the same benchmark; the midpoint of the range.
- This approach provides enough information to inform the market, while maintaining carrier confidentiality.



## Quintile Rankings

(ex: Truckload CO<sub>2</sub> g/mile)

Top 20% TL Dry Vans  
600-1600 g/mile

• 1550 g/mile

Second 20% TL Dry Vans  
1600-1700 g/mile

• 1650 g/mile

Middle 20% TL Dry Vans  
1700-1800 g/mile

• 1750 g/mile

Fourth 20% TL Dry Vans  
1800-1900 g/mile

• 1850 g/mile

Bottom 20% TL Dry Vans  
1900-3600 g/mile

• 1950 g/mile

# SmartWay Performance Rankings

- SmartWay provides carrier emissions and relative rankings:
- By mode (Logistics, Multimodal, Rail, Air)
- By submodes within Trucking (15 trucking categories)
- Categorization helps to insure that comparisons are “apples to apples and oranges to oranges” i.e., fair
- Emissions and relative rankings are provided in a public spreadsheet on the SmartWay web page

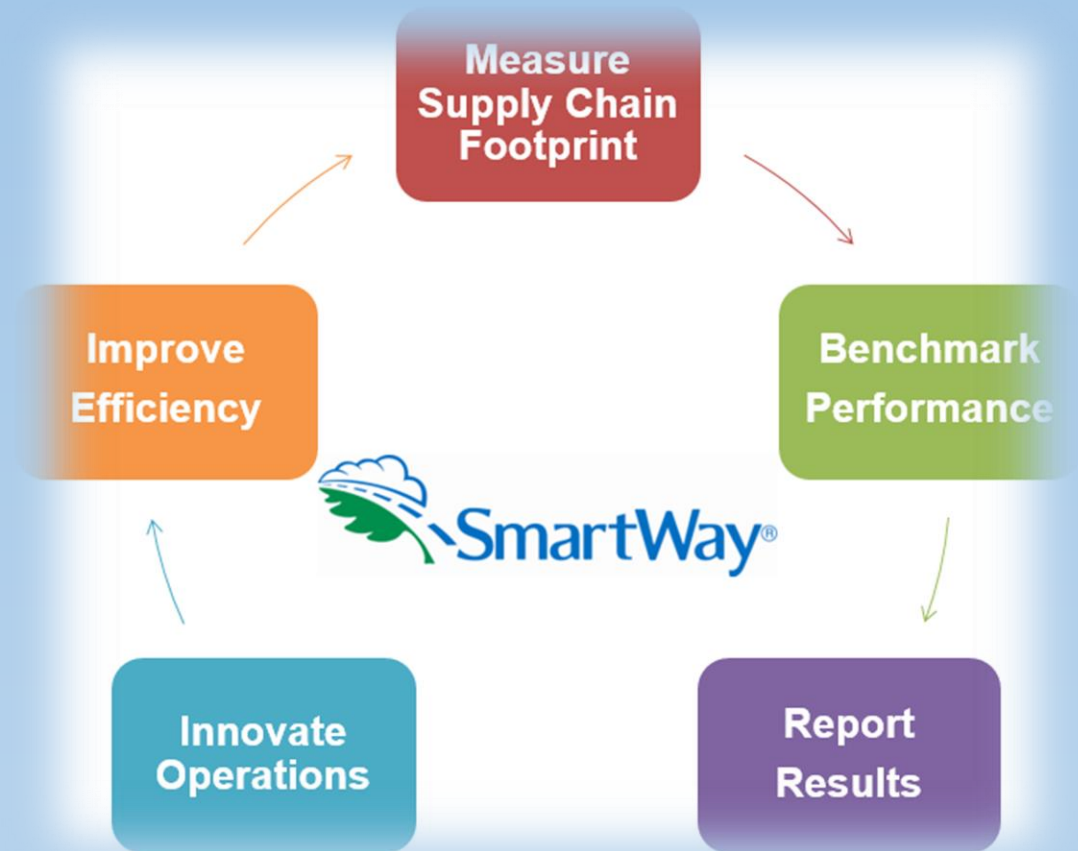


ce range for the metric

						Performance Rankings and Emission Factors											
						Grams per Mile					Grams per Ton-Mile						
Mode	SubMode	Fleet Type	SCAC	MCN		g/mile CO2 Rank	g/mile CO2	g/mile NOx Rank	g/mile NOx	g/mile PM Rank	g/mile PM	g/tm CO2 Rank	g/tm CO2	g/tm NOx Rank	g/tm NOx	g/tm PM Rank	g/tm PM
Truck	TL/Dry Van	For-Hire	OZOT	MC625894		2	1560	3	5.9	3	0.153	1	74	2	0.225	3	0.01
Truck	TL/Dry Van	For-Hire	MNMR			2	1560	2	3.4	2	0.063	2	84	2	0.225	1	0.0005
Truck	TL/Dry Van	For-Hire	ROAD			5	1800	3	5.9	4	0.243	3	94	2	0.225	3	0.01
Truck	TL/Dry Van	For-Hire	OSTG			2	1560	5	10.9	5	0.333	2	84	5	0.675	5	0.022
Truck	TL/Dry Van	For-Hire	FSEP	MC181440		3	1640	3	5.9	3	0.153	4	104	3	0.375	3	0.01
Truck	TL/Dry Van	For-Hire	TTWT			5	1800	3	5.9	2	0.063	5	114	3	0.375	2	0.004
Truck	TL/Dry Van	For-Hire	THLL	MC716290		1	1480	1	0.9	1	0.009	1	74	1	0.075	1	0.0005
Truck	TL/Dry Van	For-Hire	FDRP	MC488737		3	1640	3	5.9	2	0.063	4	104	3	0.375	2	0.004
Truck	TL/Dry Van	For-Hire	RKWT			2	1560	3	5.9	4	0.243	1	74	3	0.375	3	0.01
Truck	TL/Dry Van	Private	VTIL			4	1720	4	8.4	2	0.063	5	114	4	0.525	2	0.004
Truck	TL/Dry Van	For-Hire	AALM			3	1640	1	0.9	1	0.009	2	84	1	0.075	1	0.0005
Truck	TL/Dry Van	For-Hire	ALKM	MC217072		4	1720	4	8.4	3	0.153	1	74	3	0.375	2	0.004
Truck	TL/Dry Van	For-Hire	ANSW	MC164166		3	1640	2	3.4	2	0.063	5	114	3	0.375	2	0.004
Truck	TL/Dry Van	For-Hire	XQGW	MCN/A		1	1480	5	10.9	5	0.333	5	114	5	0.675	5	0.022
Truck	TL/Dry Van	For-Hire	AKGM	MC196190		3	1640	3	5.9	2	0.063	1	74	2	0.225	2	0.004
Truck	TL/Dry Van	For-Hire	ADXN	MC195625		2	1560	1	0.9	1	0.009	5	114	2	0.225	2	0.004
Truck	TL/Dry Van	For-Hire	WANQ	MC147008		3	1640	2	3.4	2	0.063	3	94	2	0.225	2	0.004
Truck	TL/Dry Van	For-Hire	AUCR	MCN/A		3	1640	4	8.4	3	0.153	4	104	4	0.525	3	0.01

# SHIPPER DATA

- Shipper tool accounts for all its freight movements
  - Truck, rail, air, multimodal and logistics
- Activity data for amount of freight, distance shipped
  - Total miles and/or ton-miles contracted by SmartWay and non-SmartWay carriers
  - Flexibility for other data types
  - Freight characterization (avg density, avg payload)
- Optional: can assess operational and modal shift strategies





# CARBON AND SUSTAINABILITY REPORTING



## Step 1- Complete the Shipper Tool

The screenshot shows the "SmartWay Introduction" window for the "Shipper" tool. The title bar reads "SmartWay Introduction" and "Shipper". The main content area includes an introduction paragraph, a link to the "SmartWay Shipper Tool Website", and contact information for the SmartWay Helpline. Below this is a "Tool Help and Navigation" section with several buttons: HELP, ADD/VIEW COMMENTS, VALIDATE SCREEN, ZOOM IN, PRINT SCREEN, and a question mark icon. At the bottom, there are "ZOOM IN" and "NEXT" buttons.

**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**

## Step 2 - Generate SmartWay Data Reports

The report shows the SmartWay logo at the top, followed by the title "EMISSIONS SUMMARY" and the partner and company names "ABC Shipper". Below this is a table with four columns: Mode, CO2 g/Mile, CO2 g/Ton-Mile, and CO2 Mass Emissions (Tons/Year). The rows include Rail, Truck, Multi-modal Logistics, and a Composite/Total\* row.

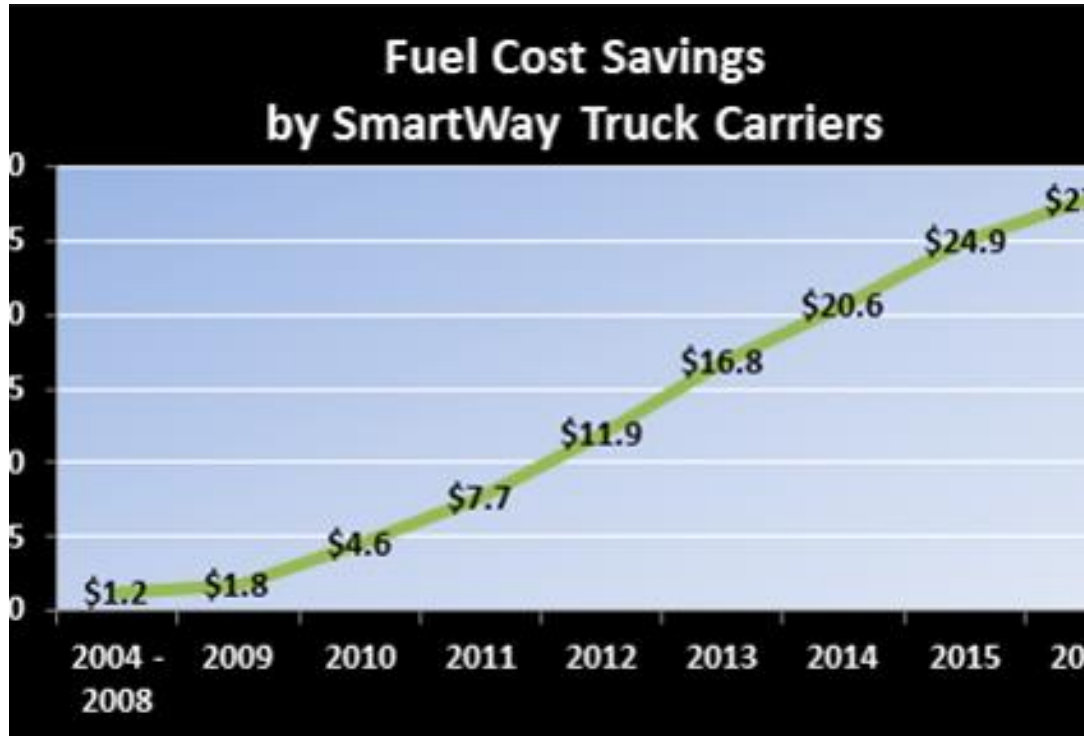
**SmartWay**

**EMISSIONS SUMMARY**  
Partner Name: ABC Shipper  
Company Name: ABC Shipper

Mode	CO2 g/Mile	CO2 g/Ton-Mile	CO2 Mass Emissions (Tons/Year)
Rail	1,163	20	111,333
Truck	2,044	285	62,722
Multi-modal Logistics	1,200	50	2,756
Logistics	2,300	500	41,337
<b>Composite/Total*</b>	<b>1,212</b>	<b>37</b>	<b>218,147</b>

## Step 3 - Use results in:

- Benchmarking and Operations
- Environmental Reporting
- Carbon Disclosure Submittals
- Shareholder Response



# IMPROVING CARRIER RELATIONS

- SmartWay helps shippers improve carrier relations and helps carriers improve performance
  - Incorporate into carrier contracts, education and KSA's
- Carriers win by saving money on fuel and maintenance costs
- Shippers win with more better data, improved sustainability

# HOW CARRIERS CAN USE SMARTWAY TO GREEN SUPPLY CHAINS

- Use SmartWay reports to analyze emissions and see how this year's performance compares with prior years' and with peers
- Assess operations to identify best practices and areas for improvement
- Develop an improvement plan by benchmarking, and setting a goal to improve
- Work with SmartWay to consider fuel reduction strategies (aerodynamics, speed reduction, driver training and incentives, automatic transmissions, efficient tires)
- Investigate intermodal options: Choose more efficient modes and de-speed your supply chain as long as it meets customer requirements
- Investigate improved asset utilization: optimized trailer loading, reduced empty miles, fewer idle hours, tag team drivers



# Featured Partner: Mesilla Valley Transportation

- Benchmarking is a great motivator
- Technology and operational innovations
- Sustainability Management – Present and Future



See fact sheet at <https://www.epa.gov/sites/production/files/2018-08/documents/420f18015.pdf>



# HOW SHIPPERS CAN USE SMARTWAY TO GREEN SUPPLY CHAINS

- Use the SmartWay data to analyze emissions
- Work directly with SmartWay on emission reduction strategies
- Choose more efficient modes and within mode, choose SmartWay over non-SmartWay
- Begin using more efficient SmartWay carriers
- Phase-in requirements as part of bid process and/or KPAs
- Provide incentives, like preferential fuel surcharge rates, bonus points in bid proposals, preferred lanes or delivery hours
- Assess freight network for opportunities to optimize: load-share, reduce empty backhauls, loading and routing software, flexible delivery hours, reduced packaging



# BECOME A SMARTWAY AFFILIATE

- If your enterprise does not control freight shipments, you can still advance supply chain sustainability by becoming a SmartWay Affiliate.
  - Industry trade and professional associations
  - Environmental organizations
  - Nongovernmental organizations
  - Academic institutions
  - Municipal, county, state, and federal government agencies
  - Truck/trailer dealers and leasing companies
- SmartWay Affiliates commit to spreading the word about SmartWay within the freight transport industry, for example by educating members about the SmartWay program and supply chain sustainability.
- For more information, see <https://www.epa.gov/smartway/become-smartway-affiliate>



# RECOGNIZING ACHIEVEMENT



- Annual SmartWay Excellence Award recognizes top 1% of all partners
  - Based on environmental performance
  - Recognizes large & small partners
- Multiple other ways to recognize partner achievements and showcase innovative strategies and practices
  - Events
  - Webinars
  - Social media
  - E-newsletter
  - Web site
  - Working with Affiliated groups



# Save Fuel, Money and the Environment with a SmartWay Truck



**A SmartWay tractor and trailer annually save 2,000 to 4,000 gallons of fuel and reduce CO<sub>2</sub> emissions by up to 20% as compared to similar trucks on the road. Learn more at [www.epa.gov/smartway](http://www.epa.gov/smartway)**

- Since 2004, SmartWay partners saved 29 billion dollars in fuel costs, and reduced harmful air pollutants by 103 million tons
- Corporations have benefitted from free access to a suite of harmonized tools and data for use in business analytics and sustainability reporting

Barge



Rail



Truck



Air



## RESULTS



QUESTIONS? THANK YOU!





*Commit. Act. Impact.*



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@theclimatecollaborative

[www.climatecollaborative.com](http://www.climatecollaborative.com)

a project of



# Appendix

# SMARTWAY NORTH AMERICA



- Canada adopted SmartWay in 2012
- Fully integrated seamless program
  - Administered by Natural Resources Canada
  - Metric and French tools
  - Joint Smart Driver online curriculum



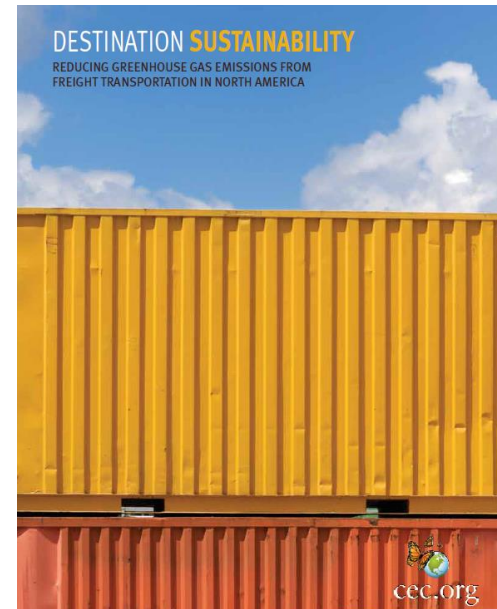
- Mexico operating Transporte Limpio since 2010
- Modeled on earlier version of SmartWay



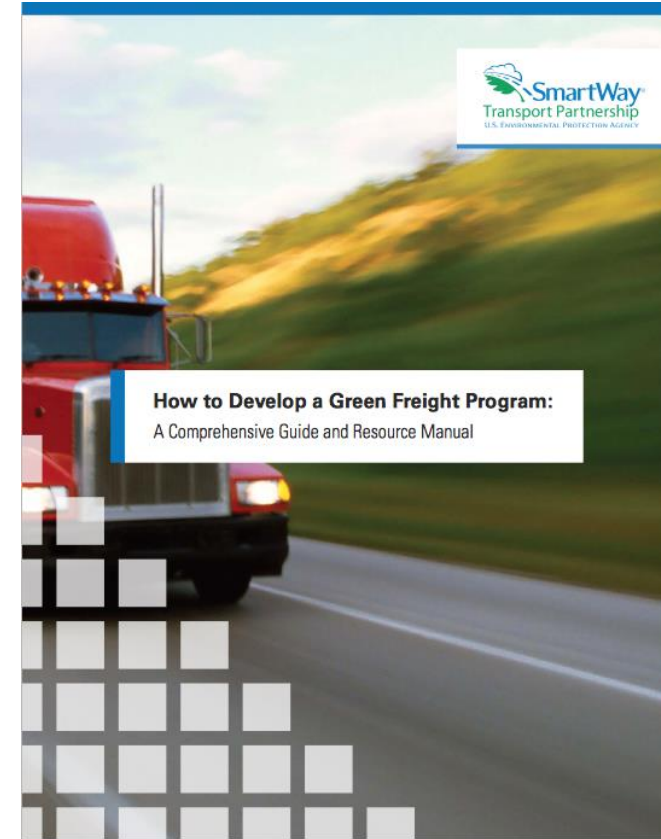
- Commission for Environmental Cooperation issued report recommending aligning North American freight efforts



- EPA and NRCan working to further develop options for SmartWay in Mexico – which could set the stage for future Latin American efforts



- SmartWay is a leader in the Global Green Freight movement
- Building capacity for other countries to design Green Freight programs
- Published “How to Develop a Green Freight Program” available in English, Mandarin, Spanish, Portuguese, French
- Conduct trainings and share expertise
- Develop tools that can be adapted for other regions



# GLOBAL INFLUENCE