EPA Green Freight Collaboration in China

- **City - Guangzhou Green Truck Pilot 2009-2010**
  - Joint collaboration with World Bank, CAA and Cascade Sierra
  - Retrofit six trucks from three companies with SmartWay technologies
  - Developed driver training program for fuel efficiency
  - Demonstrated 2% - 18% fuel savings

- **Province - Green Truck Demonstration Project 2010 – 2015**
  - World Bank and GEF funding leverage commercial bank lending
  - Goal – retrofit trucks in Guangdong with fuel saving technologies
    - Components include driver training, improved logistics, capacity building
    - US Green Freight study tour, June 2010

- **National - Green Freight China Initiative 2011 -**
  - Program design builds upon GZ and GD projects
  - MOT, CRTA, CAA, Energy Foundation developed CGFI with key stakeholders
  - Annual Green Freight Summits with broad stakeholder participation
  - EPA SmartWay training to share best practices & lessons learned (July 2014)
  - EPA supporting CGFI Shipper Day Nov 5, 2015
U.S.-China Climate Change Working Group

• CCWG established to spur large-scale, cooperative efforts to address the climate challenge, including expanding existing work.
  • Reflects strong commitment to work together to address threat of climate change and put the world on the path to a clean-energy economy
  • U.S. and China agreed to many new initiatives to reduce GHG emissions & air pollution from largest emissions sources in both countries

• Smart Grids
• Energy Efficient Buildings and Industry
• Carbon Capture & Storage
• GHG Measurement, Reporting and Verification
• Heavy-Duty and Other Vehicles
  1. Enhanced heavy-duty and other vehicle fuel efficiency standards
  2. Clean fuels and vehicle emissions control technologies
  3. Promotion of efficient, clean freight
    • Share best practices on program development
    • Work with joint stakeholders to enhance program capabilities
    • Enhance technical expertise, demonstrate technologies
    • Promote fuel-saving technologies, practices and strategies
Freight Sector Impacts in U.S.

**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.

*Source: U.S. Energy Information Administration, Annual Energy Outlook 2014*
Economic Impacts of Freight in U.S.

- **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

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 is largest cost center for truck carriers: 38% of operating costs in 2013 (driver wages = 26%)

- **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
# Climate Risk for Shippers

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Risk to Suppliers</strong></td>
<td>Risk of abnormal weather and other physical climate risks impacting suppliers’ assets and operations. This includes direct impacts such as damage to facilities and investments, and has a ripple effect of disruption to manufacturing and distribution.</td>
</tr>
<tr>
<td><strong>Input Risk</strong></td>
<td>Risk of reduced availability or increased cost of key business inputs such as raw materials, water, and energy.</td>
</tr>
<tr>
<td><strong>Regulatory Risk</strong></td>
<td>Risk of changing regulations in sourcing or distribution markets that result from a rising price on high carbon sources and energy-intensive activities that depend on them.</td>
</tr>
<tr>
<td><strong>Labor and Community Risk</strong></td>
<td>Risk of climate-related disruptions in community social, environmental, and economic infrastructure that impact supplier workforce availability and productivity, and undermine the realization of human rights in supplier communities.</td>
</tr>
<tr>
<td><strong>Stakeholder (Reputational) Risk</strong></td>
<td>This is inherent in all of the above risks, as they all have potential reputational implications both for businesses and their supply chain partners.</td>
</tr>
</tbody>
</table>
Why Focus on Carbon Data?

• Carbon accounting & disclosure now standard practice
  • Address carbon to reduce costs, compete globally, sustain operations
  • Reduce climate risk and supply chain risk

• Carbon Disclosure Project findings (2013)
  • 90% of members report business risks from climate change
  • 73% of members report $ savings from emission reduction activities
  • Transportation ranked among greatest areas for efficiency gain potential with shortest payback period
  • Performance measurement and data quality are keys to success

• Supply Chain sustainability efforts create business value
  • New products and services
  • Premium pricing opportunities
  • Enhanced corporate reputations
What do Shippers need?

- **Data** to optimize carrier selection, supply chain performance, carbon management & reductions
- **Benchmarking & reporting** capabilities using data
  - Responding to shareholder resolutions, customers
  - Ability to do CDP, GRI and CSR reporting
- **Credibility** of data used, rigorous data quality control
- **Neutral party** to facilitate data exchange
- **Balanced approach**, level playing field
  - Simplicity, accuracy, transparency, flexibility
- **Recognition and Incentives**
  - Branding, marketing, awards
SmartWay Snapshot

- Since 2004, SmartWay has grown to about 3,000 partners with broad freight industry support in U.S. and Canada
  - Top 100 U.S. truck carriers
  - All Class 1 rail lines
  - Fortune 500 shippers from key economic sectors
  - Major logistics firms
  - SmartWay Carriers operate 10% of freight trucks on the road
    - 663,000 class 4 – 8 trucks
    - 30% of total trucking miles
    - 49 billion miles annually

- Since 2004, SmartWay Partners saved:
  - 61.7 million metric tons of CO$_2$
  - 1,070,000 tons NOx
  - 43,000 tons PM
  - 144.3 million barrels of oil and 6.1 billion gallons of fuel
  - $20.6 billion dollars in fuel costs

Equivalent to taking 13 million cars off the road for one year
SmartWay Success Factors

- SmartWay provides balanced approach
  - *Simplicity* – standard benchmarking tools and methods
  - *Accuracy* – performance based assessment of CO$_2$, NOx, PM
  - *Flexibility* – multiple metrics, multimodal, multi-fleet, multi-categories
  - *Transparency* – manageable granularity, protects sensitive info

- EPA lends credibility and neutrality
  - Facilitates exchange of performance data to inform marketplace
  - Data QA/QC program ensures rigor

- SmartWay triggers market mechanisms
  - Based on business case for freight sustainability
  - Partner incentives, e.g., shipper demand for cleaner/greener carriers

- SmartWay provides supplemental value for Partners
  - Technology verification
  - Operational best practices
For more information:

www.epa.gov/smartway

smartway_transport@epa.gov

SmartWay Helpline
+1-734-214-4767

Buddy Polovick
+1-734-214-4767
Appendix:
How to Address Supply Chain Carbon

Measure Supply Chain Footprint

Benchmark Performance

Innovate Operations

Improve Efficiency

Report Results
SmartWay is an Integrated System

- Carrier Data Collection Tools
  - Truck, Logistics, Barge, Rail, Multimodal Suite
  - Beta Air Tool in 2015

- SmartWay “Process”
  - Data collection, processing, QA/QC, benchmarking
  - Produces 6 emission factors for public use

- SmartWay Database
  - Stores and manages all SmartWay data
  - Allows industry benchmarking

- Shipper Tool
  - Calculates carrier emission footprints for Shippers

- SmartWay Website
  - Contains downloadable versions of all tools, user guides, technical documentation, webinars, program descriptions
Carrier Data Collected

- 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
SmartWay Carrier Benchmarking

15 Carrier Categories
- TL, LTL, Refrigerated, Tanker, etc.

6 Emission Factors
- 2 metrics x 3 pollutants

Quintile Rankings
(ex: Truckload CO₂ 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
Shipper Data Collected

- North American Industry Classification System (NAICS) code(s)
- Accounting of all SmartWay carriers utilized
  - All truck, rail, multimodal and logistics providers
- Activity data for amount of freight, distance shipped
  - Total miles contracted and/or ton-miles contracted by SmartWay carrier and non-SmartWay carrier category
  - Freight characterization (avg density, avg payload)
- Mileage and ton-mileage data recommended
  - Flexibility for other data types
- Optional data on operational, mode shift strategies
SmartWay for Carbon Reporting

Step 1 - Complete the Shipper Tool

Step 2 - Generate SmartWay Data Reports

Step 3 - Use results in:
- Benchmarking and Operations
- Environmental Reporting
- Carbon Disclosure Submittals
- Shareholder Response
SmartWay used for Scope 3 Reporting

Figure 1.1 Overview of GHG Protocol scopes and emissions across the value chain

WRI-GHG Protocol
SmartWay for Carbon Optimization

Step 1- Complete Shipper Strategies analysis

Step 2 - Generate SmartWay Data Reports

Step 3 - Use results in:
- Performance tracking
- Progress reporting
- Case Studies
Working to Build a Better World

Making Sustainability a Way of Doing Business

“Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

United Nations-sponsored Brundtland Commission Report

Report your Corporate Citizenship

Sustainability

Hunger and Affordable Nutrition

Health and Wellbeing

Food Safety and Quality

Workplace and Culture

Compliance and Integrity

Corporate Governance

Shipping and storing product more efficiently

Improving our global transportation and distribution network so that we move products and raw materials more efficiently saves truck fuel, cuts carbon dioxide emissions and reduces traffic. Since 2005, improved internal processes along with our collaborations with customers and suppliers have saved more than 50 million road miles (80 million kilometers)—the equivalent of driving from Madrid to Beijing more than 8,500 times.

Sometimes the answer is right under our feet. Like our underground refrigerated-storage facility built into the natural limestone caves at Springfield, Missouri, U.S. Not only do the naturally cool caves require 65 percent less energy than conventional storage facilities, their large size and central location enable us to consolidate inventory and transport our products to our customers more efficiently. Annual savings: 180,000 gallons (660,000 liters) of fuel, 4 million pounds (1,500 metric tons) of carbon dioxide emissions, and more than 1 million miles (1.6 million kilometers) of truck travel.

Another solution is to use other, more efficient modes of transportation. In North America, we’ve saved more than 1 million miles, replaced 10,000 truck shipments and cut nearly 2,000 metric tons (4 million pounds) of emissions by shipping wheat to our Toledo, Ohio, flour mill by waterway rather than road. In Brazil, in just six months of shipping by water we reduced 125 truck shipments—nearly 250,000 miles (390,000 kilometers) and 300 metric tons (more than 600,000 pounds) of carbon dioxide emissions.

The right technology can make a difference, too. Using the Oracle Transportation Management system to manage and optimize truck movements and minimize “empty miles”, we in our U.S. operations saved us more than 500,000 miles (800,000 kilometers) in 2009.

Better World Snapshot

Since 1993, we shipped coffee beans to our Berlin, Germany, roasting plant by rail rather than truck. That’s reduced fuel consumption by 60 percent, eliminated 100,000 truck transports, cut 1.8 million miles (2.8 million kilometers) and eliminated carbon dioxide emissions by two thirds, or 2,300 tons (2,000 metric tons).
SmartWay Excellence Award

- Recognizes top 1% of all partners
- Based on environmental performance
- Recognizes large & small partners
- Includes additional criteria
  - data quality
  - brand visibility

High Praise For Going the SmartWay.

Congratulations to the 2013 SmartWay Excellence Award Winners

SmartWay partners know about increased supply chain efficiency and environmental stewardship. This award recognizes excellence in their achievements toward helping the environment, incorporating sustainability, and reducing their carbon footprints.

Learn more at epa.gov/smartway

The SmartWay Transport Partnership is an innovative collaboration between the U.S. Environmental Protection Agency and the freight industry. The partnership is designed to increase energy efficiency while significantly reducing greenhouse gases and air pollution.
Partner Spotlights

SmartWay Helps Tyson Foods Drive Out Miles, Tackle Greenhouse Gas Emissions

Company Message
"We’re very serious about our responsibility to the environment, which is why I joined the SmartWay Transport Partnership. The framework enabled us to evaluate, measure and reduce our emissions. Specifically SmartWay has helped reduce fuel usage and emissions, and improve our operational efficiency." – Kevin J. Iqbal, SVP and Chief E

Why Tyson Foods joined SmartWay
Tyson Foods has been a long-time supporter of SmartWay’s efforts for reducing pollution. Since joining the partnership, they have improved their fuel efficiency through various initiatives, such as using SmartWay tools to accurately measure carbon emissions and in 2007 Tyson Foods was recognized by the SmartWay Transport Partnership for its efforts in reducing greenhouse gas emissions.

Partner Profile
Penske Logistics

Company Message
"We are committed to optimizing our fleet as it relates to responsible business practices, which include the reduction of greenhouse gases. We believe in using technology to reduce our environmental impact." – Michael W. Walko, President, Penske Logistics

Why Penske Logistics joined SmartWay
Penske has always been a leader in the transportation industry and a proponent of reducing its carbon footprint. By joining the SmartWay program, Penske is able to implement new technologies and practices that help reduce its environmental impact.

Stanley Black & Decker Uses SmartWay Tools to Reduce Freight Footprint

Company Message
"Our success in measuring, and then lowering, energy demand and related Scope 1 and Scope 2 emissions associated with our brick-and-mortar operations has allowed us to apply the same productivity tools to reducing Scope 3 value chain 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

Why Stanley Black & Decker Joined SmartWay
Stanley Black & Decker is a leading global provider of hand tools, power tools and related accessories, mechanical access solutions and electronic security solutions, health care solutions, engineered fastening systems, and more. Learn more at www.stanleyblackandecker.com.

Company Profile
Stanley Black & Decker, Inc.
500 Corporate Center Drive
New Britain, CT 06053
Tel 860-872-8820
Fax 860-207-2775
www.stanleyblackandecker.com

Stanley Black & Decker 2010-2011 SmartWay Emissions Reductions

2010

| Mode       | 2011
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>truck</td>
<td>42</td>
</tr>
<tr>
<td>multi-modal</td>
<td>12</td>
</tr>
<tr>
<td>locomotive</td>
<td>18</td>
</tr>
<tr>
<td>TOTAL</td>
<td>67</td>
</tr>
</tbody>
</table>

2011

| Mode       | 2011
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>truck</td>
<td>42</td>
</tr>
<tr>
<td>multi-modal</td>
<td>12</td>
</tr>
<tr>
<td>locomotive</td>
<td>20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>74</td>
</tr>
</tbody>
</table>
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, improve profitability, and gain a competitive edge. For more information, visit [epa.gov/smartway](http://epa.gov/smartway).

Any way you ship it, move it the SmartWay.

**SmartWay**

SmartWay Transport Partnership gives you user-friendly tools and streamlined reporting systems to help you increase operational efficiency. So, for everything you ship with SmartWay, you improve your bottom line, gain 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/smartwayforshippers](http://epa.gov/smartwayforshippers).
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
Leverage SmartWay Brand Business-to-Business Consumers

UPS @UPS: Congrats! MT @MenloLogistics: Menlo honored w/ @EPA SmartWay Excellence Award for leadership in supply chain efficiency ow.ly/q6Gc5P

Menlo Logistics @MenloLogistics: Menlo honored with the 2ND EPA SmartWay Excellence Award for its leadership in... Expand.

The U.S. Environmental Protection Agency recognizes Heniff Transportation Systems, LLC. As a Registered SmartWay Transport Partner SmartWay ID: 1060754 Expires: 14/09/2016

SmartWay Transport Partnership
Sample Uses of Partner Logo: Websites
Sample Uses of Partner Logo:
Advertising
Sample Uses of Partner Logo: Reports

Emission Reduction

2010 Goal
To achieve net-zero emissions for 5 years beginning 2010.

2010 Status
Net zero emissions achieved in 2010.

Program Description
Kohl’s recognizes that human activities are changing the climate and that the environment comes from our energy use. With this in mind, Kohl’s embarked on a path to reduce our carbon footprint.

Carbon Emissions Management
Kohl’s annually measures its total consumption of all energy sources. This enables the company to understand its energy consumption and identify opportunities for improvement. Kohl’s also publishes a carbon footprint that is reflected in its annual sustainability report.

Kohl’s Carbon Footprint

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Emissions</td>
<td>1,100,000</td>
<td>1,050,000</td>
</tr>
<tr>
<td>Indirect Emissions</td>
<td>300,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Travel Emissions</td>
<td>100,000</td>
<td>90,000</td>
</tr>
<tr>
<td>Total Emissions</td>
<td>1,500,000</td>
<td>1,390,000</td>
</tr>
</tbody>
</table>

Sustainability

Since 2010, we have:

- Increased sustainable sourcing by 36%.
- Cut packaging: 20,500 metric tons (45 million pounds).
- Eliminated travel miles: 20 million kilometers (12.5 million miles).
- And reduced energy, greenhouse gas emissions, water and waste by 15%.

Transportation Programs
In 2010, Kohl’s executed 17,5000 backhaul trips to its distribution centers from our vendors on return trips to stores. This eliminated 1,151,000 empty miles. These once-empty backhauls now carry merchandise from our vendors, ultimately reducing the number of inbound transportation trips. Kohl’s also uses rail transportation for 95% of all inbound transportation since rail uses less fuel and causes fewer emissions than truck services.

Kohl’s joined the EPA SmartWay program in 2003 and was re-certified in 2008 and 2009 with the SmartWay Shipper Excellence Award for achievements in efficient shipping of merchandise. In 2010, nine of our top 10 carriers had the highest rating of 1.25 in the EPA SmartWay program, a program that promotes fuel efficiency and carbon reduction strategies. In total, Kohl’s achieved a 1.16 out of 1.25 rating for miles traveled in 2010 on EPA SmartWay-rated carriers.
Sample Uses of Partner Logo: Reports

Transport Efficiencies

In 2012, we continued our involvement in the U.S. Environmental Protection Agency’s SmartWay Transportation Partnership. Through it, we are reducing carbon dioxide emissions and saving fuel with the active participation of our logistics team and supply chain. Kimberly-Clark has adopted several programs that are increasing intermodal usage and reducing length of haul, total miles and empty miles, as well as wait time and idling at shipping and receiving docks.

Maintaining Air Quality and Managing Greenhouse Gas Emissions

The primary air emissions managed by Tyson Foods operations include:

- Particulate matter, particulate matter of 2.5 micrometers or smaller, and particulate matter of 10 micrometers or smaller (PM 10) from operations such as feed milling and cooking;
- Sulfur oxides, nitrogen oxides, carbon monoxide, and PM10 emissions from the combustion of fossil fuels; and
- Volatile organic carbon emissions that may result from fryer operations.

In the United States, air emissions are regulated by various federal, state, and local environmental agencies. Our compliance with these regulations is verified through annual emissions inventories, annual and semi-annual emission compliance certifications, sampling, periodic state agency audits, and internal compliance monitoring systems.

Our air emissions management approach also includes the implementation of pollution prevention programs, the installation of pollution control equipment, and investment in air emission control technologies, as needed. We have completed a potential-emissions inventory for our U.S.-based operations as a component of the ongoing process of managing air permits and operational changes.

 Tyson Foods compiled its corporate-wide GHG inventory in accordance with the Climate Leaders Greenhouse Gas Inventory Protocol. This inventory includes GHG emissions from our U.S. office, beef, pork, and prepared foods operations as well as our hog buying stations and transportation operations. Additionally, it includes information from our U.S.-based Cato-Ventas and Pink Pigus subsidiaries. It does not include information from our independent poultry producers.

Our GHG footprint during calendar year 2004 was 5.35 million metric tons. This baseline inventory includes data related to facility fuel and electricity usage, transportation fuels, refrigeration usage, and anaerobic digester production. Based on this inventory, the company is evaluating its energy profile and considering a process for establishing energy metrics tied to GHG emissions. We believe any approach selected must provide a consistent framework for measurement to align with future regulatory and policy expectations related to carbon management. At light of the current uncertainty surrounding the legislative and scientific discussions related to climate change, however, we may choose to delay our decision on greenhouse gases in order to better understand the future legal landscape and role of carbon in the economy as well as its potential financial implications on our company.

INTERMODAL TRANSPORTATION

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total loads</td>
<td>57,499</td>
<td>64,555</td>
<td>78,502</td>
<td>87,934</td>
<td>91,383</td>
</tr>
<tr>
<td>Annual change</td>
<td>0.14</td>
<td>0.12</td>
<td>0.22</td>
<td>0.12</td>
<td>0.04</td>
</tr>
<tr>
<td>Miles travelled (millions)</td>
<td>78.5</td>
<td>88.9</td>
<td>109.4</td>
<td>117.8</td>
<td>118.8</td>
</tr>
<tr>
<td>Savings (SM)</td>
<td>42.7</td>
<td>32.4</td>
<td>44.2</td>
<td>55.8</td>
<td>69.3</td>
</tr>
<tr>
<td>Fuel use (million gallons of diesel)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermodal</td>
<td>8.4</td>
<td>7.4</td>
<td>9.1</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Comparable truck-only fuel use</td>
<td>12.7</td>
<td>14.8</td>
<td>18.2</td>
<td>19.0</td>
<td>19.9</td>
</tr>
<tr>
<td>Savings</td>
<td>8.4</td>
<td>7.4</td>
<td>9.1</td>
<td>9.0</td>
<td>10.0</td>
</tr>
<tr>
<td>CO₂ emissions (million pounds—Scope 3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermodal</td>
<td>143.1</td>
<td>165.2</td>
<td>204.7</td>
<td>220.4</td>
<td>223.8</td>
</tr>
<tr>
<td>Comparable truck-only fuel use</td>
<td>286.2</td>
<td>332.5</td>
<td>409.4</td>
<td>440.9</td>
<td>447.7</td>
</tr>
<tr>
<td>Savings</td>
<td>143.1</td>
<td>165.2</td>
<td>204.7</td>
<td>220.4</td>
<td>223.8</td>
</tr>
</tbody>
</table>

Notes:

Numbers are estimates.

Drop in savings for 2009 is due to a significant drop in fuel prices.

Pounds of carbon dioxide emitted for each gallon of diesel fuel burned: 22.45

Since 2006, we have more than doubled intermodal utilization, from approximately 42,000 loads to more than 91,000 loads, a 117 percent increase that has resulted in:

- Savings of 33 million gallons of diesel fuel
- Reduction of CO₂ emissions by more than 540,000 tons
- Cumulative saving (CS) equal to $204 million as compared to usage of over-the-road trucks

We also became a partner in the EPA SmartWay® Transport Partnership in 2004. The SmartWay partnership is a voluntary environmental and energy conservation program for companies that ship and haul freight. In 2006, we expanded our involvement in the program, and gained national status and recognition from the EPA as an authorized shipper/partner. At the time this status was achieved, we were one of only seven companies to be recognized as both a shipper and carrier partner.

On October 4, 2012, the U.S. Environmental Protection Agency’s (EPA) SmartWay Transport Partnership awarded Tyson Foods for its efforts to reduce emissions and overall truck miles. As part of its participation in the program, Tyson Foods’ Team Members eliminated more than 145 million over-the-road truck miles during fiscal years 2011 and 2012. The SmartWay partnership noted Tyson Foods’ work to purchase lightweight equipment, its innovative package design, use of rail shipping and logistics as successful improvements.

Approximately 95 percent of Tyson Foods refrigerated shipments are transported by SmartWay Carriers. In addition, below are recent initiatives designed and implemented by Tyson Foods to reduce the company’s environmental impact and improve its overall sustainability.
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.
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 CO2 emissions by up to 20% as compared to similar trucks on the road. Learn more at www.epa.gov/smartway
EPA engaged through bilateral & multi-lateral mechanisms to work with other nations

- **China** - *Climate Change Working Group*
  - China Green Freight Initiative

- Multilateral collaboration in Brazil

- **UNEP** - *Climate and Clean Air Coalition*
  
  Global Green Freight Action Plan
  1. **Align/Enhance Existing Green Freight Efforts**
  2. **Develop/Support New Green Freight Programs**
  3. **Address Black Carbon in Green Freight Programs**

- **Global Logistics Emissions Council**
  - Creating global framework for freight supply chain logistics emissions methodologies
Why Should Countries develop Green Freight Programs like SmartWay?

- **Standardized approach to assess supply chain efficiency and emissions**
  - For any business that ships, carries or receives goods
  - Adopted by industry leading corporations

- **Designed with and for the freight sector**
  - Delivers solutions to marketplace needs and challenges
  - Voluntary and no-cost

- **Credible, neutral data oversight**
  - Program can oversee data quality assurance and control

- **Proven marketing benefits**
  - Shippers identify greener carriers
  - Carriers gain competitive advantage for leading shippers

- **Strengthens brand equity to investors, customers**
  - Carbon assessment, corporate responsibility