



A **stronger** economy.

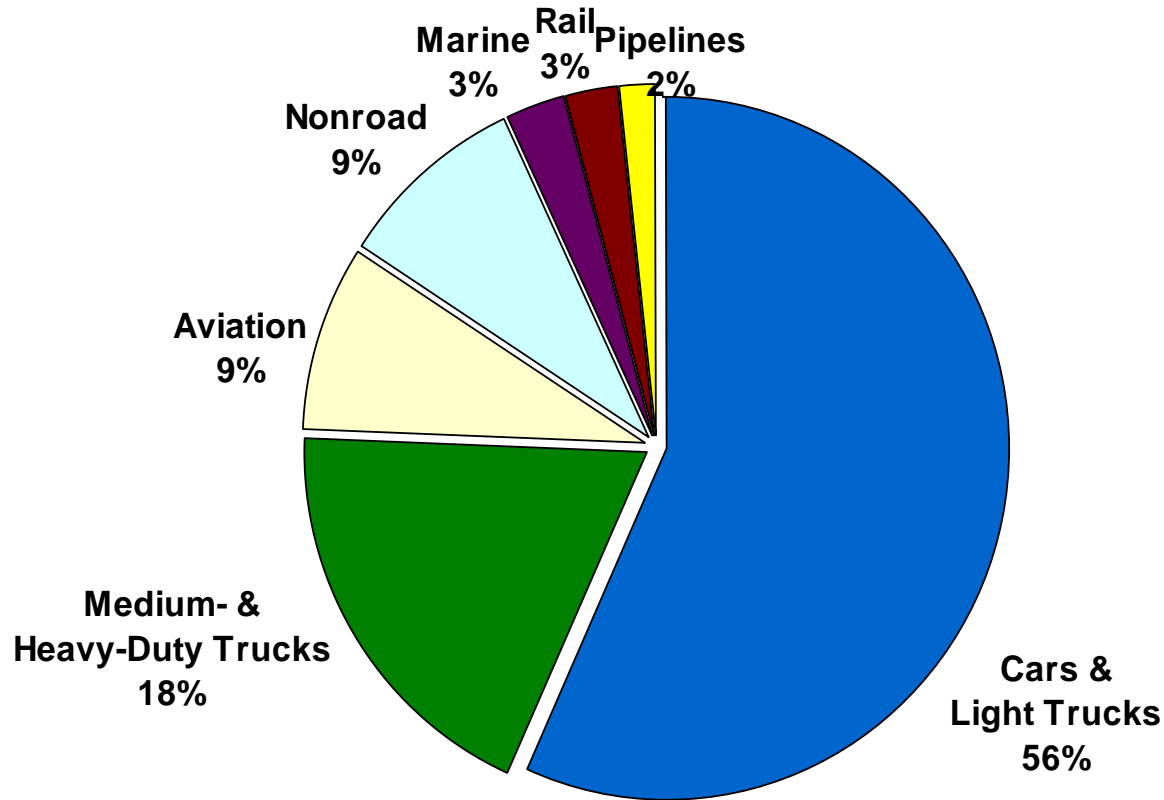
A **healthier** environment.

SmartWay
Transport Partners
DELIVER.



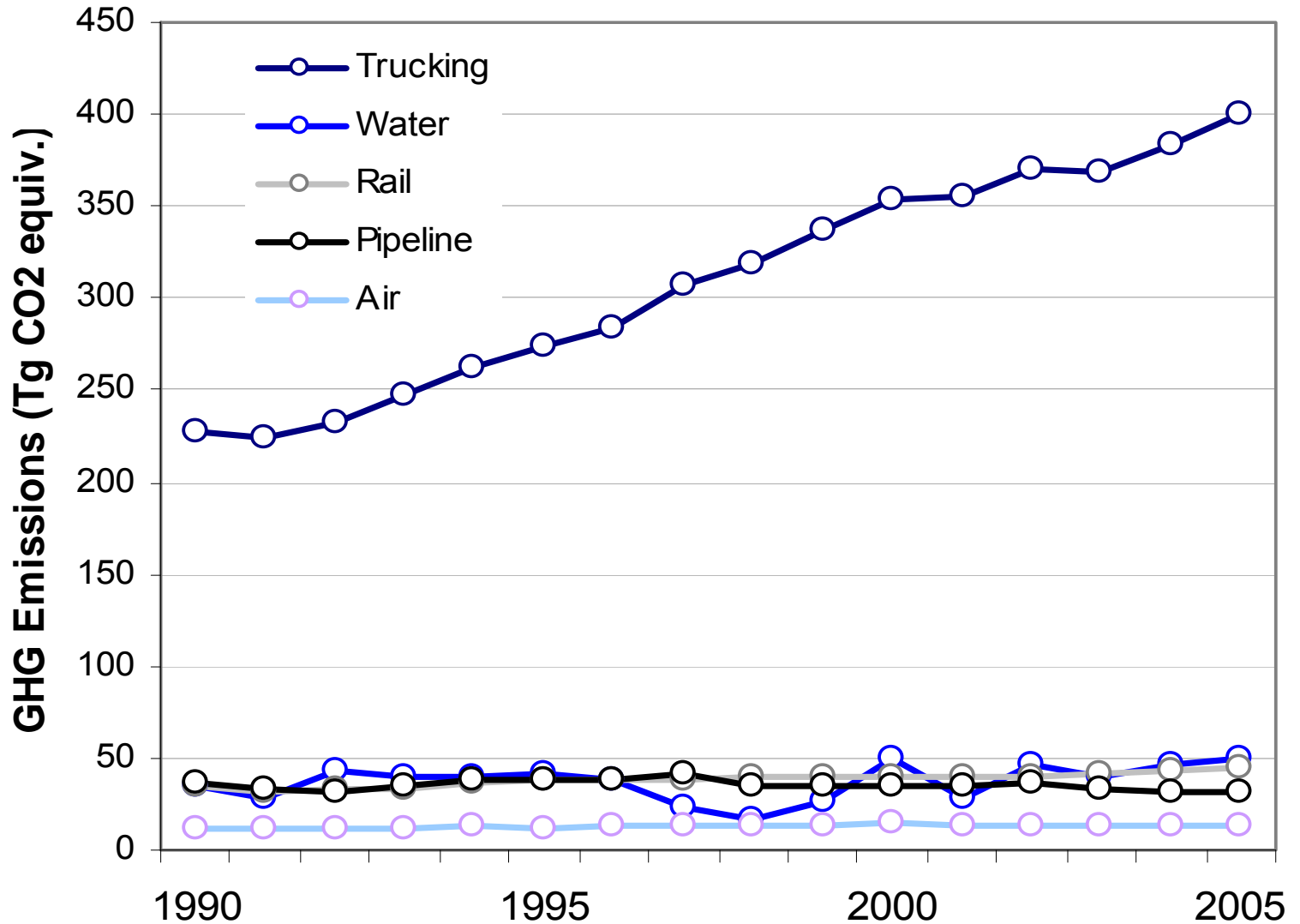
Abby Swaine
RTAC Freight Committee Meeting
February 10, 2010

U.S. Transportation GHG Emissions



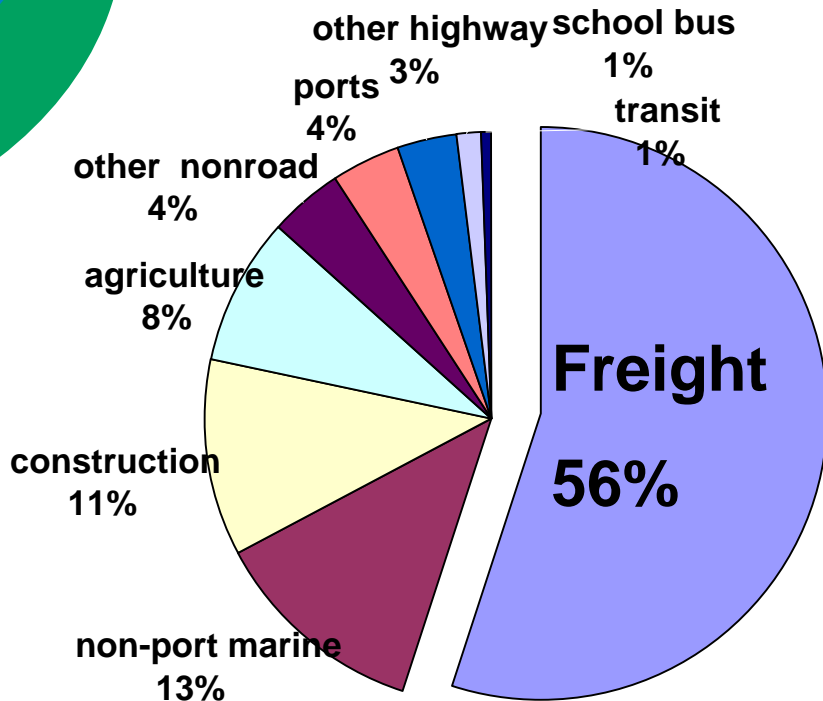
GHG (2,193 mmt CO₂-eq, 2007)

GHG Emissions by Freight Mode

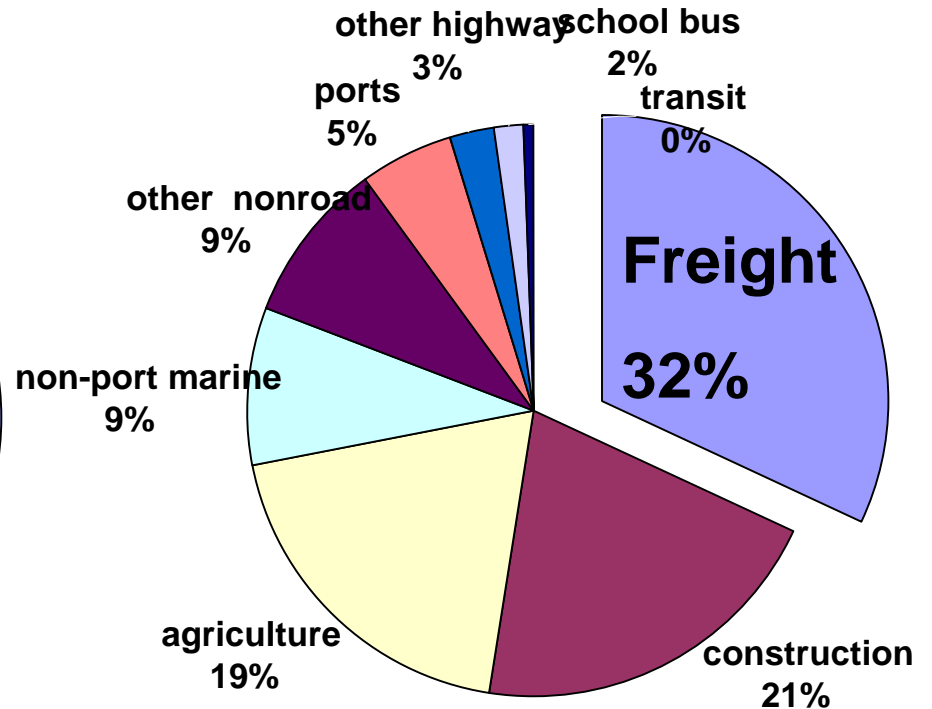


Freight Sector Diesel Emissions

NO_x
(6.3 million tons)



PM 2.5
(305,000 tons)



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Mobile Source Diesel Emissions Inventory by Sector (2004)

Regulations: Cleaner Fuels & Vehicles

- **Clean Cars and Passenger Trucks (1999; done 2009)**
 - Tier 2 Standards
 - Gasoline sulfur control (30 ppm avg / 80 ppm max, 2006 for most refiners)
 - 77-95% lower emissions
 - Same standards for light trucks and cars; gasoline and diesel
- **Clean Heavy-Duty Trucks and Buses (2000; done 2010)**
 - Diesel sulfur control (15 ppm maximum, beginning in 2006)
 - 90% lower emissions
 - PM filter forcing standards, NOx catalyst based standards
- **Clean Nonroad Diesel Engines and Equipment (2004; done 2015)**
 - Nonroad Tier 4 Standards
 - Diesel sulfur control (2 steps - 500 ppm in 2007, 15 ppm in 2010)
 - 90-95% lower emissions - based on highway technology
- **Locomotive and Marine Diesel Standards (2008; done 2017)**
 - Marine diesel sulfur control (15 ppm maximum) in 2012
 - 2008 engine standards
 - Emission Control Areas
 - 80-90% lower emissions

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National Clean Diesel Campaign

The SmartWay Challenge

- How to maximize efficiency within each mode & in mode choice, to reduce emissions by saving fuel?
- SmartWay Transport Partnership launched Feb 2004 with ATA, top carriers & shippers.

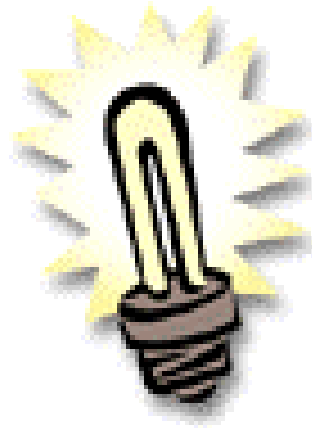


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The Dynamics

Carriers:

- Save fuel & money
- Attain preferred shipper status
- Get recognition
- Improve public image



EPA:

- Reduce emissions
- Improve energy security
- Bring agencies & industry together

Shippers:

- Get better data on operations
- Understand options for increasing efficiency
- Shrink carbon foot print
- Get recognition

The Results So Far

- Over **2,400** Partners, representing over
 - 10% of trucks
 - 30% of miles
 - 32% of fuel
- To date, carriers & shippers have saved 1.5b gal fuel, 16m mt CO₂, 217k mt NO_x, 12k mt PM.
- Are on track for 2010 to save (yearly):
 - **622 million gallons** of diesel fuel
 - Almost **7 million tons** of CO₂
 - Over **\$2 billion** in fuel and maintenance costs

Some Partners





The Smart Way to Save Fuel,
Money, and the Environment

SmartWay Certified Vehicles



Shopping for SmartWay Certified Vehicles? **Look for the leaf on the EPA Green Vehicle Guide!**

- Smart Buying and Driving Tips
- Learn More about SmartWay Certified Vehicles
- Financing discounts for SmartWay Certified Vehicles

SmartWay Financing Options

New for Freight Companies and Owner-Operators!



Get technology and truck financing through our **Innovative Financing!**

- SmartWay Clean Diesel Finance Program
- SmartWay Finance Center [\[EXIT Disclaimer\]](#)

New Leaf Campaign



Learn how **choosing green cars and trucks** can save money, and help the environment!

- Watch the TV commercial
- Listen to the radio commercial
- View the print PSAs

SmartWay Transport



Ready to **join a partnership** that will save money and reduce fuel use?

- Join SmartWay
- Download the FLEET Models
- View the Partner List
- SmartWay Publications
- Verified Technologies

SmartWay Tractors & Trailers



Learn about the benefits of **Certified SmartWay tractors and trailers!**

- Partner FAQs
- OEM Specifications
- Idling Reduction Strategies
- Federal Excise Tax Exemption

News & Features

- **New!** August 27, 2009-- EPA Awards \$20 Million in Recovery Act Funding for Clean Diesel Finance Program
- **New!** August 27, 2009-- SmartWay begins Transition to multi-modal program called SmartWay 2.0 Transition
- **Now online!** Interim guidance for certifying SmartWay tractors and verifying SmartWay components

[Read More SmartWay News](#)

Financing



- Nationwide EPA-funded programs: \$21 million capital for upgrading, replacing trucks & trailers
- Region-specific (Great SmartWay Rebate Program)
- State-specific (Maine PUC)
- SmartWay Finance Center
- DOE too:
 - \$22m to Cascade Sierra Solutions for mobile & stationary idle reduction
 - \$115m to 3 OEMs to develop “SuperTruck”s
- MA DOER: Hybrid truck upgrades/subsidies
- DERA: NE Produce Mkt TRU repower, MBTA HEP repower, Massport Fish Pier electrification...

GREAT SMARTWAY



REBATE PROGRAM

EPA New England has awarded over \$1 million in Recovery Act / Clean Diesel funding to Cascade Sierra Solutions (CSS) to provide rebates for installing SmartWay verified technology upgrades on diesel trucks titled in the six New England states (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut).

Rebate amounts from \$100 to \$1,000 per equipment item and multiple items per truck allowed.

Participating Companies are limited to projects up to 10% of the total Rebate Program Funding.



WHO CAN APPLY:

- Owners of heavy-duty diesel trucks physically based and operating in New England States.
- Upgraded tractor and/or trailer must be owned or on a lease-to-own basis (no operational leases).
- Independent owner-operators and fleets are eligible.
- Equipment must have five years of projected useful life remaining.

ELIGIBLE EQUIPMENT:

\$1,000

- Auxiliary Power Units (APU)
- Exhaust Retrofits (DPF)
- Transport Refrigeration Unit (TRU)
 - Replacements (scrap old unit)

\$500

- Trailer Skirts
- SmartWay Tires
- Trailer Tail Fairings
- Transport Refrigeration Unit (TRU)
 - Repower (scrap old engine)

\$250

- Bunk Heater / Heat Recovery Units
- Electric Idle Reduction (HVAC)

\$100

- Trailer Gap Fairings

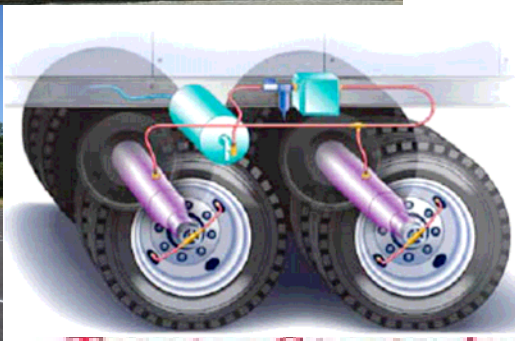
How Partners Participate

- www.epa.gov/smartway/transport/become-partner/join.htm
- Analyze operations using model
- Sign partner agreement
- Send model and agreement to SmartWay
- With assigned PAM, work out any kinks in model
- Choose strategies & implement
- Report progress yearly using model
- Qualify for “partner” mark
 - Carriers: medium CO₂ + NO_x + PM efficiency
 - Shippers: 50%+ freight shipped with medium-efficiency carriers
- Strive to improve score

What Carriers Do

- Idle reduction—mobile, stationary
- Speed control
- Driver training & incentives
- Improved aerodynamics
- Advanced tire technology
- Advanced lubricants
- Advanced power train technologies
- Improved freight logistics
- Weight reduction
- Intermodal and multi-modal alternatives
- Renewable fuels, hybrid technology

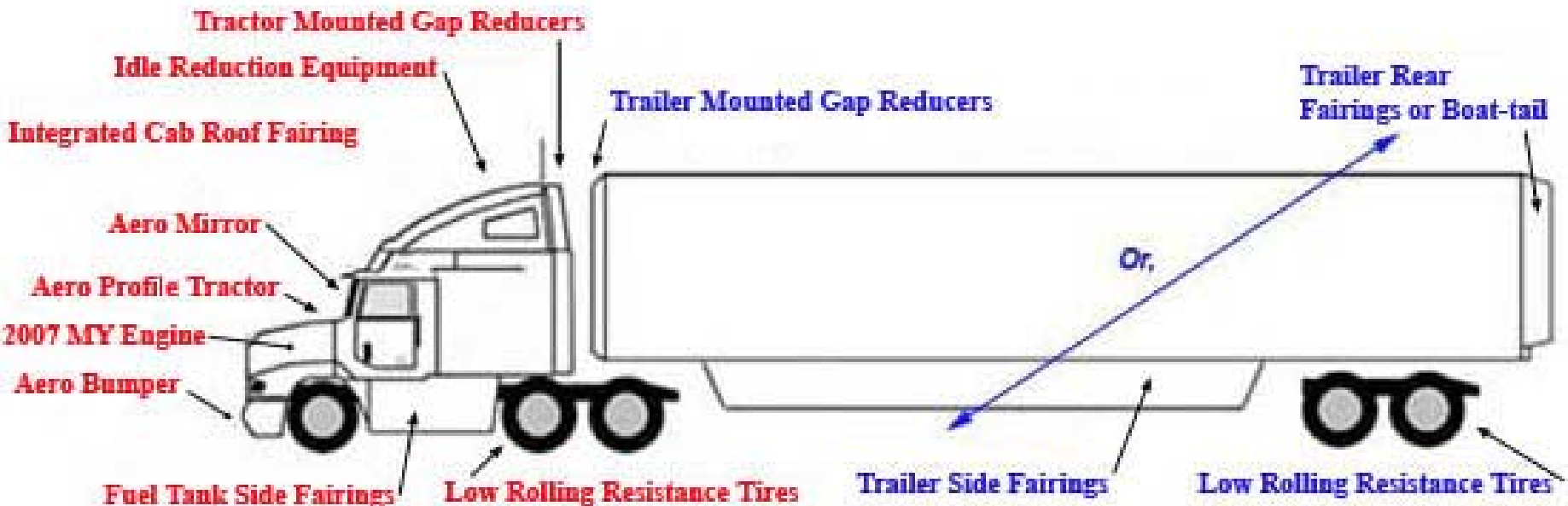


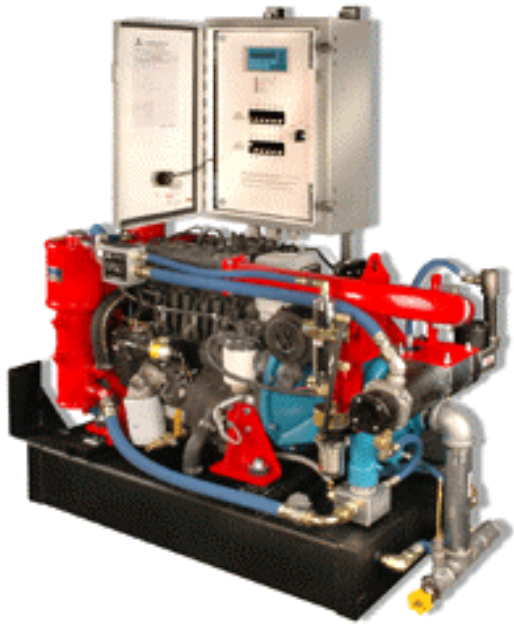


Tractor Strategies
~12% Reduction



Trailer Strategies
~11% Reduction





SmartWay Tractors and Trailers

10-20% efficiency gain through 2007+ engine, idle reduction, low rolling resistance tires, and aerodynamic equipment

Cummins
Freightliner
International
Kenworth
Mack
Peterbilt
Volvo
Great Dane
Hyundai
Manac
Stoughton
Trailmobile
Utility Trailer
Wabash



What Shippers Do

- Ship more freight with SmartWay Carrier Partners
 - Model imports carrier scores
- Intermodal and multi-modal shipping
- Improved scheduling & routing
- Full truck loads
- Idle reduction at docks
- Driver comfort stations
- Warehouse improvements
- Electric forklifts
- Light fleet efficiencies

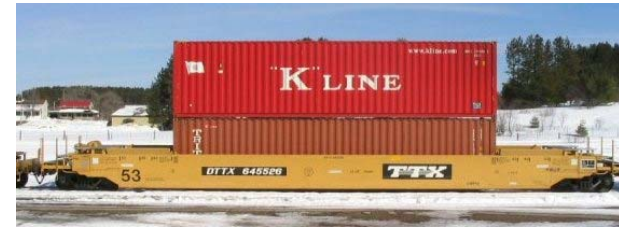




NE Shipper Partner Success

- Increased freight tons shipped by SWT carriers 14% → 100% in about 18 months.
- Using 100% rail for shipments to Pacific Northwest. Transit times the same as truck.
- Overseas shipments consolidated with others'.
- Consolidated loads, increased order lead times & minimums, rerouted shipments → 15 % ↓ empty miles.
- Reduced pallets/load, required longer trailers & eliminated LTLs → 13% ↓ in truck loads shipped.
- Reduced CO2 40%/yr & \$2.5m in fuel over 2 years.
- In NE, use SmartWay & RydeGreen trucks.

We're on a Roll...



- Carriers saving fuel
- Shippers hiring fuel-efficient carriers
- Both improving logistics
- Both using more rail
- New technology blossoming
- Companies clamoring to join
- Half of all states have anti-idle laws

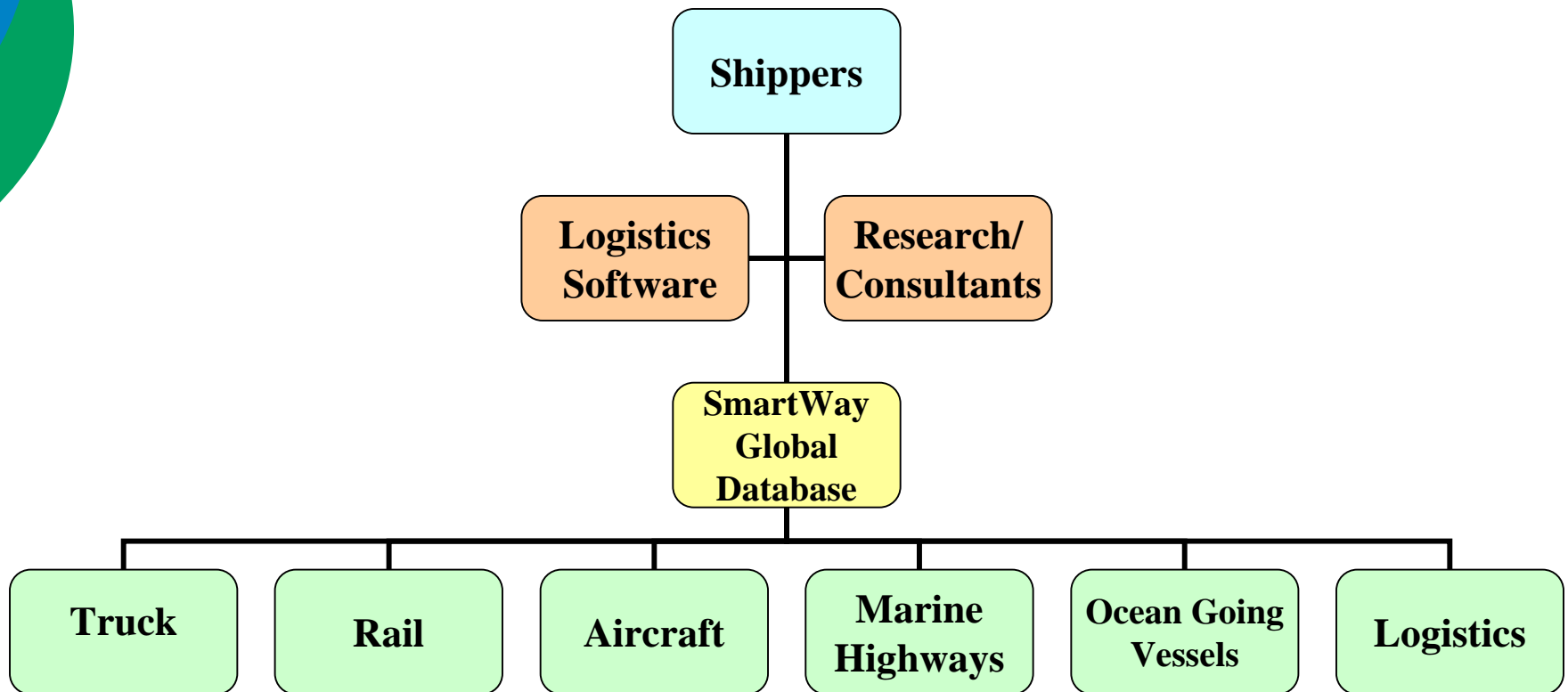
What more could we ask for?? (other than \$7 diesel)

SmartWay 2.0: The NEXT GENERATION



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SmartWay 2.0 Architecture



SmartWay 2.0 Specifics

- More truck carrier distinctions
 - Company vs. division, operation/duty type, engine/body type, trailer type...
- ACTUALS rather than AVERAGES.
- Finer-grained rating system.
- Strategies for marine, air, rail, barge similar to truck: engine & body technologies, fuel type, carrier operations, shipper operations.
- Some 3rd party auditing.
- Carriers converted Fall 2009; shipper model launch Spring 2010.

International SmartWay Network

- Canada: FleetSmart
- International Summit December 2008 at U of Michigan
- Countries working on SmartWay sister programs:
 - Belgium, France, Netherlands, Sweden, Switzerland, UK, Australia, New Zealand, Mexico, India, Japan
 - EU launching SmartWay platform
 - Commission for Environmental Cooperation: use SmartWay for NA trade corridor
 - China!
- Harmonize supply chain GHG accounting methods, share data



Asia-Pacific
Economic Cooperation



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Domestic SmartWay Collaboration

- **DOT (MARAD):** America's Marine Highways; Ship Operations Cooperative Program; 2.0 for marine.
- **DOT (FHWA):** Office of Freight Planning "Talking Freight" webinars; EPA/DOT/HUD Livability Initiative; Virtual Freight Team; I-95 Corridor Coalition.
- **DOE:** \$ for Alt Fuel and Idle Reduction (mobile, stationary) technology & infrastructure; Clean Cities Coalitions.
- **Industry:** ATA, AAR, CSCMP, CRT...

SmartWay Goes Local

- Preserve existing infrastructure
- Include freight in SG, TOD; use brownfields
- Consider freight villages
- Work with short line RRs
- Add new rail spurs and sidings
- Allow adequate parking/staging areas
- Install gate control
- Use electrified truck parking
- Provide shore power at loading docks
- Include comfort stations for drivers





SmartWaySM

Transport Partnership

U.S. ENVIRONMENTAL PROTECTION AGENCY



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www.epa.gov/smartway

www.epa.gov/smartway/documents/2009awards.pdf



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