

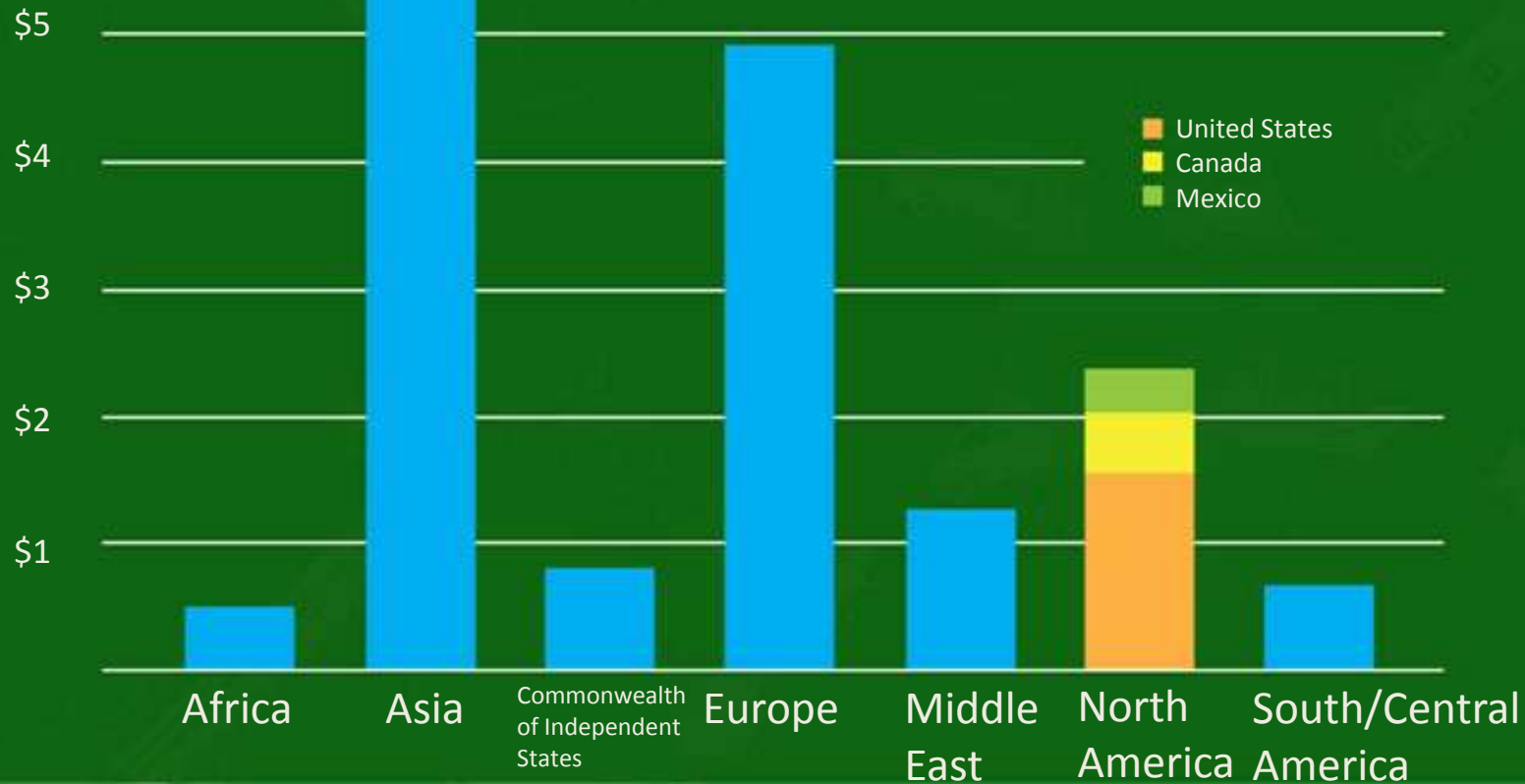
Profile of Trade and Transportation in North America

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Exports from Other Regions of the World versus Those from North America, 2012 (trillions of US dollars)



Total world merchandise exports for 2012 are valued at US\$18.3 trillion
North America's share is estimated at US\$2.3 trillion.



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Source: Graph and text adapted from the World Trade Organization, *International Trade and Market Access Data, Trade, 2012. Leading Reporters*. Accessed from http://www.wto.org/english/res_e/statis_e/statis_bis_e.htm?solution=WTO&path=/Dashboards/MAPS&file=Map.wcdf&bookmarkState={%22impl%22:%22client%22,%22params%22:%22langParam%22:%22en%22}>..

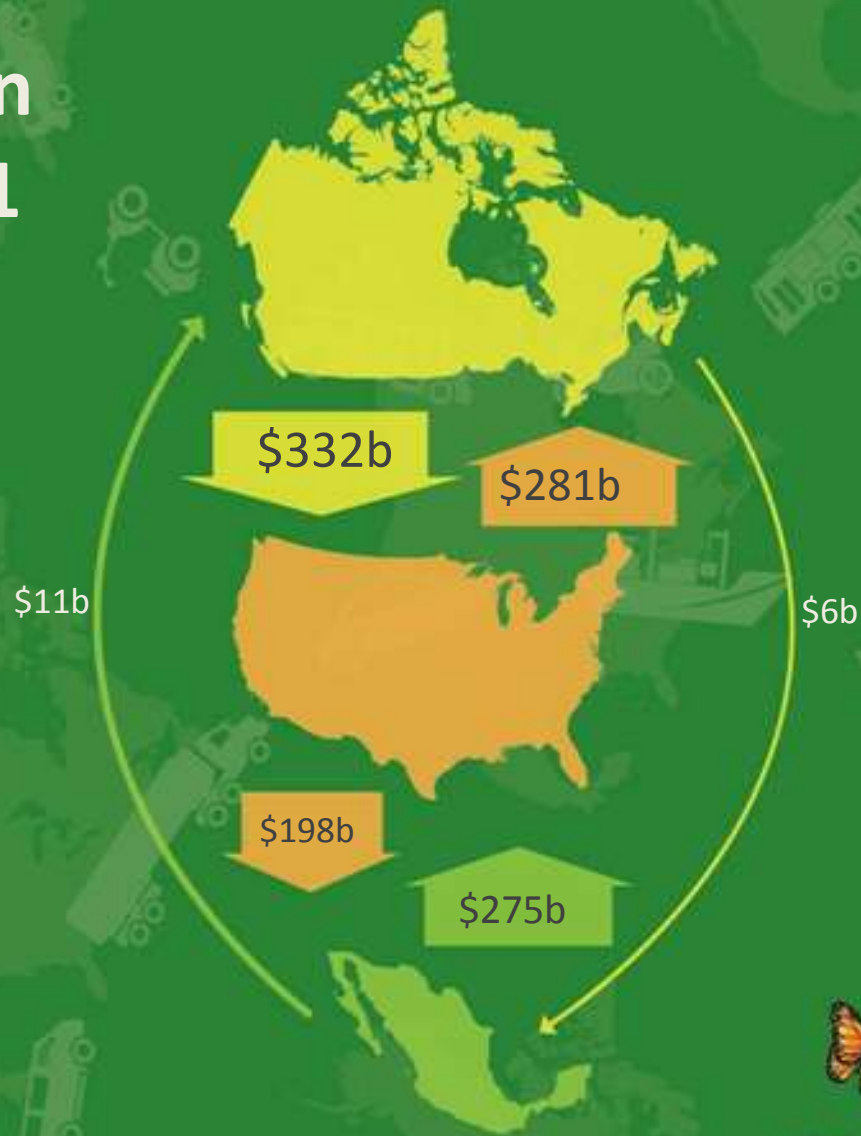
Share of International Trade as a Percentage of GDP, 2009



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Source: Graph adapted from OECD Factbook 2011-2012. *Economic, Environmental and Social Statistics. Trade Share of International Trade in GDP.* Accessed from <http://www.oecd-ilibrary.org/docserver/download/3011041ec033.pdf?expires=1372882513&id=id&acname=guest&checksum=F4F7D11F7DCE9D582B7D0AA75616BCF9>.

Export Trade Flows in North America, 2011 (billions of US dollars)



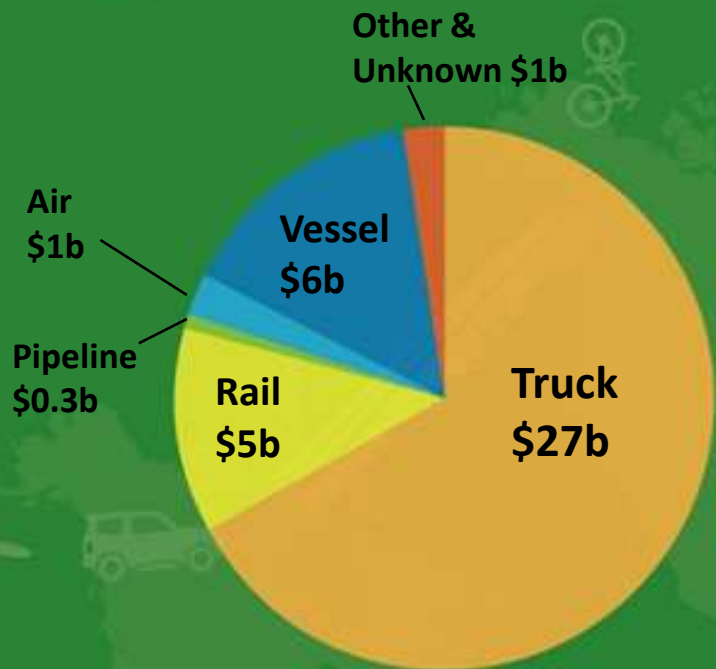
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Source: Data taken from the World Trade Organization, *International Trade and Market Access Data, Trends*. 2011. Accessed from http://www.wto.org/english/res_e/statis_e/statis_bis_e.htm?solution=WTO&path=/Dashboards/MAPS&file=Map.wcdf&bookmarkState=%7b%22impl%22:%22client%22,%22params%22:%7b%22langParam%22:%22en%22%7d%7d.

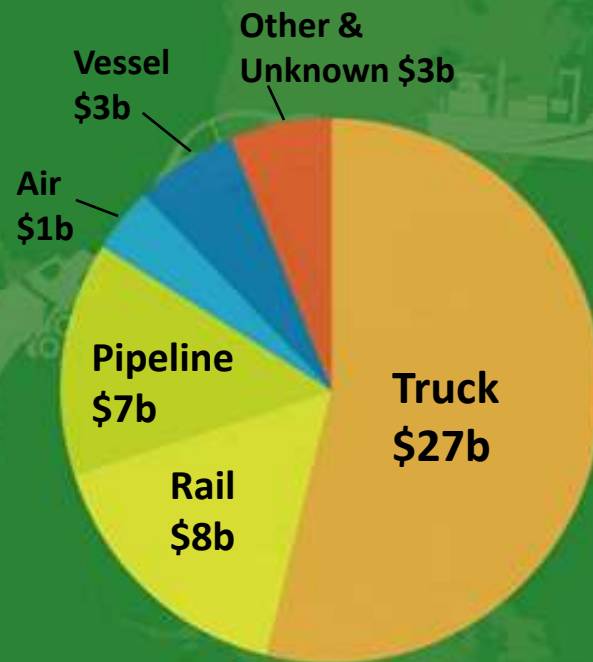
Main Modes of Transportation Used for Trade with United States

“By value, truck is the most heavily utilized mode for trade with both US-NAFTA partners, accounting for \$25.7 billion of imports and \$28.0 billion of exports.”

Mexico Freight by Mode (billions of US dollars)



Canada Freight by Mode (billions of US dollars)

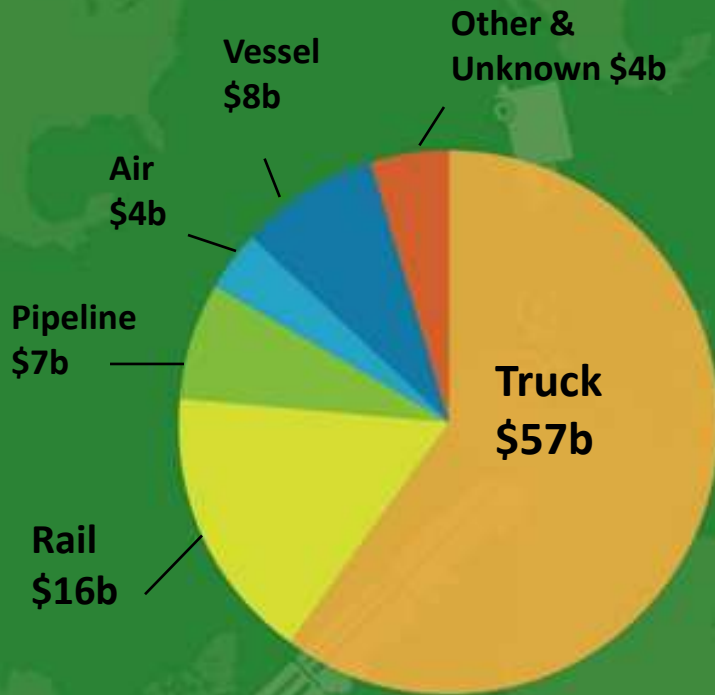


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Source: Graphs taken from the United States Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics. *North American Trade Numbers by Mode of Transportation for January 2013*. Accessed from <http://www.rita.dot.gov/bts/press_releases/bts014_13>.

US-NAFTA Freight by Mode, March 2013

(billions of US dollars)



Trucks Transported 60% of US-NAFTA Trade in March of 2013

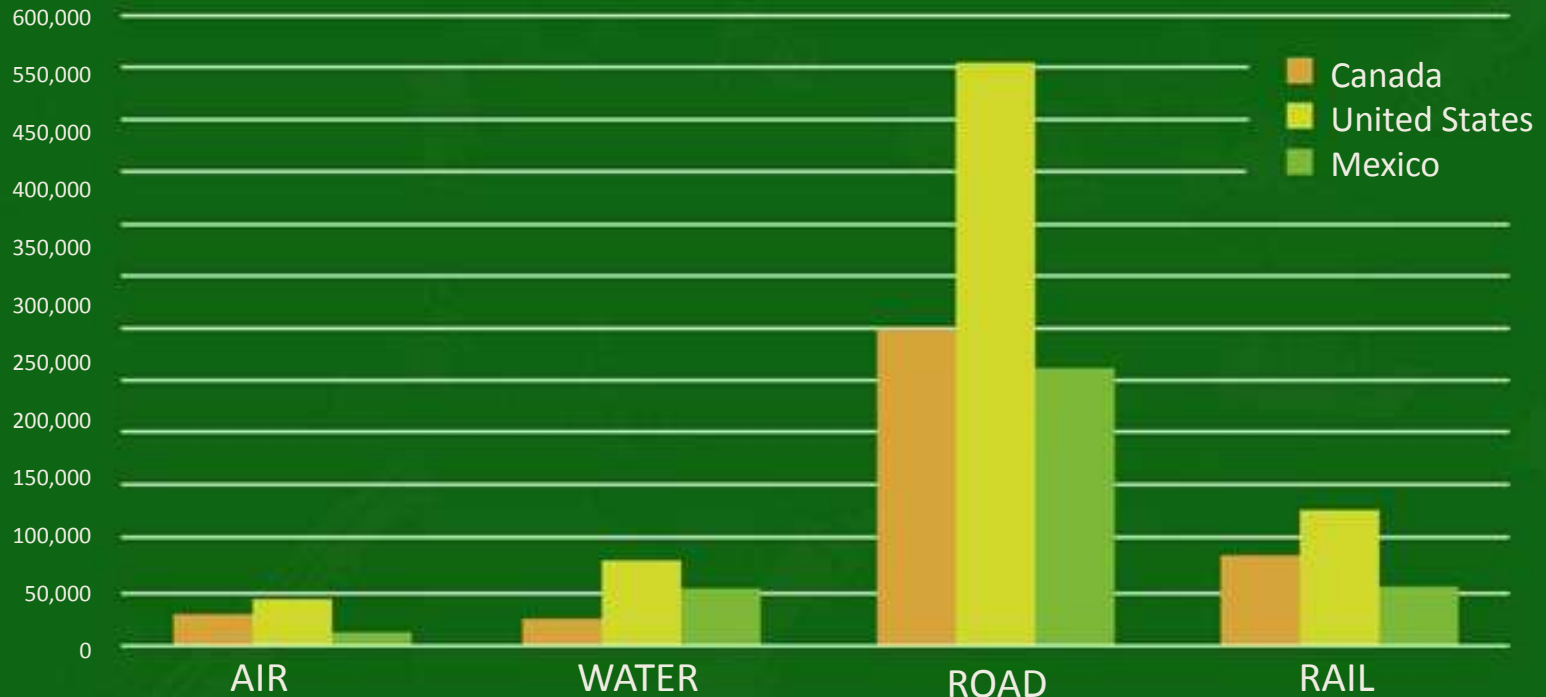


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Source: Graphs taken from the United States Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics. "Trucks Transported 60% of U.S.-NAFTA Trade in March 2013". Accessed from <http://www.rita.dot.gov/bts/press_releases/bts025_13>.

North American Merchandise Trade by Mode, 2010

(millions of current US dollars)

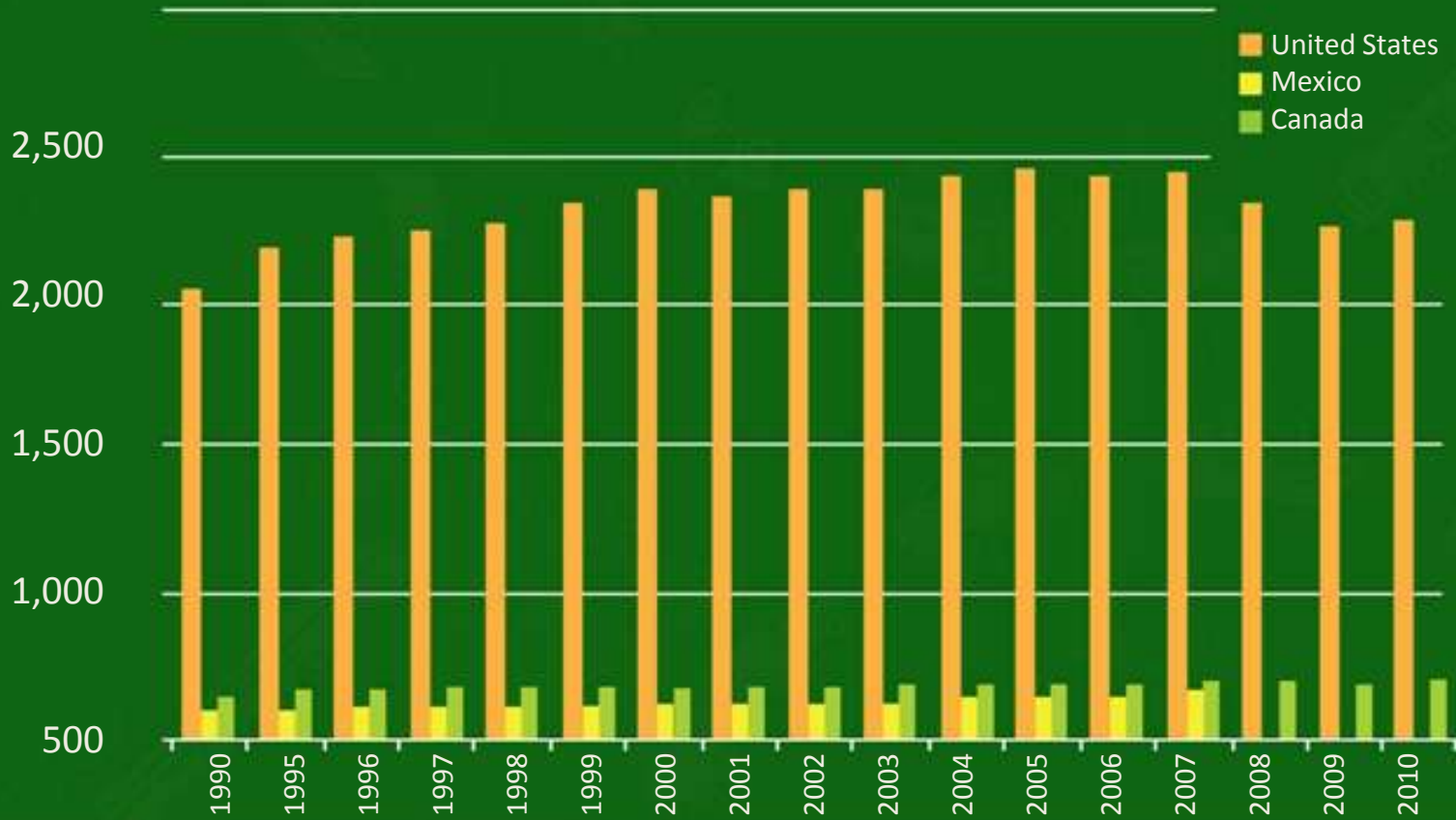


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Source: Graph adapted from Research and Innovative Technology Administration, Bureau of Transportation Statistics. *North American Transportation Statistics Online Database Quick Stats: 2011 Highlights: North American Merchandise Trade by Mode*. 2010. Accessed from <http://apps.bts.gov/programs/international/2011_highlights/>.

Total Greenhouse Gas Emissions From Transportation Sector

(millions of metric tons of CO₂ Equivalents)



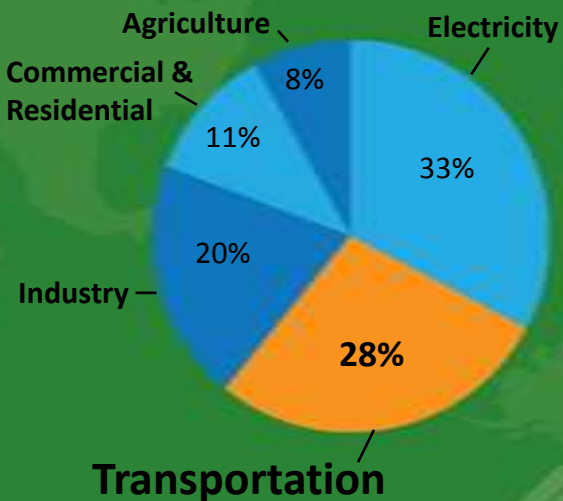
Focusing on North American GHG emissions by transportation sector, emissions trends show a slight variation in the last two decades, and an increase since reported levels of 1990. “Freight transportation CO₂ emissions are projected to continue to increase their share relative to passenger transportation emissions in all three countries.”



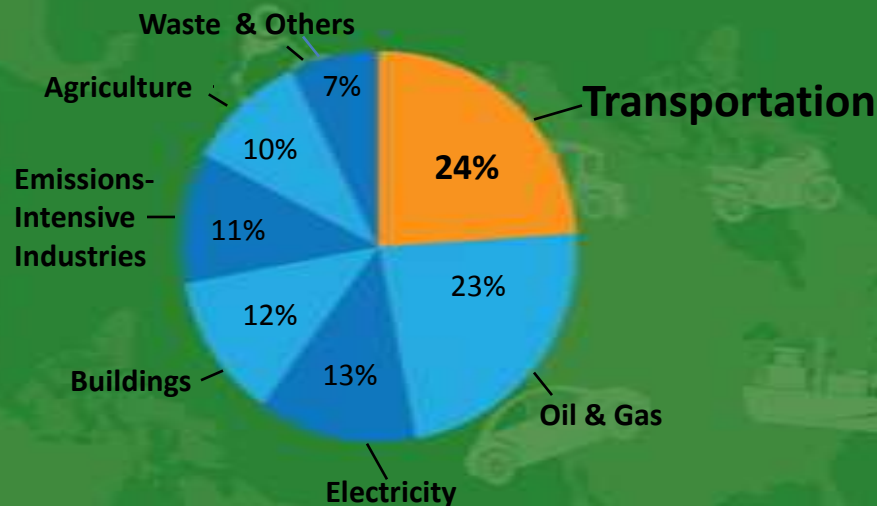
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GHG Emissions by Economic Sector

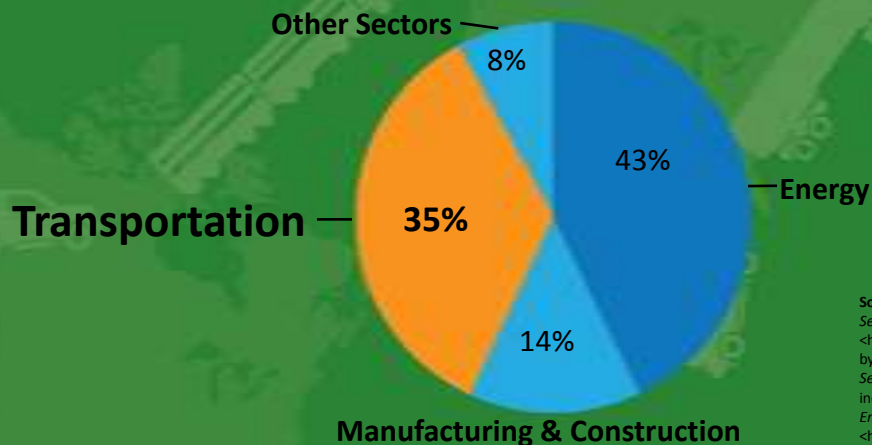
United States, 2011



Canada, 2011



Mexico, 2007 (CO₂ only)



Source: Sources of Greenhouse Gas Emissions. *Total U.S. Greenhouse Gas Emissions by Economic Sector*, 2011. EPA. Accessed from <http://www.epa.gov/climatechange/ghgemissions/sources.html> & Greenhouse Gas Emissions by Economic Sector. *Distribution of Greenhouse Gas Emissions by Economic Sector, Canada*, 2011. Environment Canada. Accessed from <http://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=F60DB708-1> & *Reducing Transport Greenhouse Gas Emissions: Trends & Data 2010*. International Transport Forum. OECD, 2010. Accessed from <http://www.internationaltransportforum.org/Pub/pdf/10GHGTrends.pdf>.



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North American Fuel Efficiency For New Passenger Cars and Light-duty Trucks in Miles/Gallon

<u>New Passenger Cars</u>	Canada (2010)	USA (2010)	Mexico (2007)
Goal	27.3	27.5	N
Fleet Average	34.6	33.9	14.7
<u>New Light-duty Trucks</u>			
Goal	23.5	23.5	N
Fleet Average	27.8	25.2	10.4

New upcoming regulations will align Canada with new US EPA standards.

- Estimated 2013 Fuel Efficiency Standards:

Passenger car	Light-duty Truck
33.5 mpg	25.7 mpg
- New Projected Fuel Efficiency Standards for MY 2017-2025 Program for passenger cars, SUVs and pick-up trucks in the US and Canada: average of **54.5 mpg**

A regulation published by the Mexican government on June 21st, 2013, aims to regulate CO₂ emissions and the fuel economy equivalent for new passenger vehicles, including cars, pickup trucks, and SUVs. The goal of the final regulation is to raise a new car fleet average fuel economy of **35 mpg by 2016**.

Source: Research and Innovative Technology Administration, Bureau of Transportation Statistics. North American Transportation Statistics Online Database Quick Stats: 2011 Highlights. Accessed from <http://apps.bts.gov/programs/international/2011_highlights/> & New emissions regulations released for heavy-duty trucks: Regulations to align Canada with U.S. standards expected to cut operators' fuel costs. CBC News. 2013. Accessed from <<http://www.cbc.ca/news/business/story/2013/02/25/pol-cp-kent-greenhouse-gas-emissions-trucks.html>> & Driving to 54.5 MPG by 2025. The PEW Charitable Trusts. Environmental Initiatives. 2012. Accessed from <<http://www.pewenvironment.org/news-room/data-visualizations/infographic-driving-to-545-mpg-by-2025-85899431047>> & Summary of Fuel Economy Performance (Public Version). US Department of Transportation, NHTSA. 2013. Accessed from <www.nhtsa.gov/staticfiles/.../pdf/cape/April_2013_Summary_Report.pdf>.



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North American Fuel Efficiency Standards For Heavy-Duty Vehicles

Total percentage of expected reductions in GHG from MY 2010 with implementation of *HD National Program* for MY 2014-2018:

Pick-up Trucks/Vans : 12-17%,

Class 7-8 Tractors: 9-23%,

Vocational Vehicles : 6-9%

Example:

Class 8 Tractor Sleeper Cab High Roof

2010	2017 target
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94 g/ton-mile	72 g/ton-mile
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The new combined US standards will reduce GHG emissions from the US heavy-duty fleet by approximately **76 million metric tons of CO₂-equivalent annually by 2030.**



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Source: Heavy-Duty Vehicle Fuel Efficiency Regulatory Developments Around the World. The International Council on Clean Transportation (ICCT). 2012. p.14-15 . Accessed from <http://www.theicct.org/sites/default/files/Bandivadekar_Bangalore_july2012.pdf> & EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles. Regulatory Announcement. EPA. 2011. p. 3. Accessed from <<http://www.epa.gov/otaq/climate/regs-heavy-duty.htm>>.

ESTIMATED TRUCK CO₂ EMISSIONS, 2010 vs 2035



ESTIMATED RAILWAY CO₂ EMISSIONS, 2010 vs 2035



“Heavy-duty trucks (classes 7 and 8) account for almost 80% of all trucks’ fuel consumption in the US.” Use of heavy-duty trucks for freight transportation is expected to continue to rise over the next decades.



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Main Trade Corridors in North America



“By value, about 88% of US trade with Canada and Mexico moves on land.”

“At the US-Canadian border, more than 75% of the surface trade was handled by only five land ports of entry, while at the US-Mexican border only four ports of entry handled about the same amount of the total land trade.”



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Source: Map developed by the CEC from: Texas Transportation Institute, Greening North American Transportation Corridors: Challenges and Opportunities, May 2010, Texas A&M University. Text taken from *Destination Sustainability: Reducing Greenhouse Gas Emissions from Freight Transportation in North America*. 2011. P 17-18. Commission for Environmental Cooperation (CEC).

Main North American Trade Corridors, Gateways and Inland Freight Clusters



“In 2008, approximately half of the total truck and rail traffic by value in North America was handled by three land ports of entry: Detroit/Windsor, Nuevo Laredo/Laredo, and Buffalo/Niagara Falls.”



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Source: Map: *Main North American Trade Corridors, Gateways and Inland Freight Clusters*. The Geography of Transport Systems. By Dr. Jean-Paul Rodrigue, Dept. of Global Studies & Geography, Hofstra University, New York, USA. Accessed from <http://people.hofstra.edu/geotrans/eng/ch2en/conc2en/img/Map_NA_Trade_Corridors.pdf>. Text taken from *Destination Sustainability: Reducing Greenhouse Gas Emissions from Freight Transportation in North America*. 2011. P 18. Commission for Environmental Cooperation (CEC).

Main Ports of North America

Top Handling Ports in North America by TEUs*, 2010	TEUs
Los Angeles, CA	5,559,046
Long Beach, CA	4,433,994
New York, NY & NJ	4,043,060
Metro Vancouver, British Columbia	2,515,045
Savannah Harbor, GA	2,170,339
Manzanillo, Colima	1,511,378
Oakland, CA	1,505,446
Norfolk, VA	1,435,098
Houston, TX	1,417,070
Seattle, WA	1,348,072
Montréal/Contrecoeur, Quebec	1,212,354

*TEUs = twenty-foot equivalent units. One 20-foot container equals one TEU, and one 40-foot container equals two TEUs.

Top Land Ports of Entry, 2011

Port/City	Total Trade Value (millions of US\$)
Laredo/Nuevo Laredo	\$211,532
Detroit/Windsor	\$202,745
Buffalo-Niagara Falls/Fort Erie	\$106,525



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Source: Adapted from North American Transportation Statistics database. *Transportation Infrastructure*, Table 11-2 Top Handling ports by TEUs. Accessed from <http://nats.sct.gob.mx/11-2_en.html> & The North American Transportation Statistics database. *6- North American Merchandise Trade*, Tables 6-3a, 6-3b, 6-3c. Accessed from <http://nats.sct.gob.mx/6-3a_en.html>.



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