DESTINATION **SUSTAINABILITY**

SUSTAINABLE FREIGHT TRANSPORTATION IN NORTH AMERICA

Backgrounder

Destination Sustainability: Commission Report Plots an Environmental and Economic Road Map

Transportation is second only to electricity generation as a source of greenhouse gas (GHG) emissions and freight transportation is the fastest rising component in that category. While emissions from passenger vehicles grew by 33% between 1990 and 2008, freight-related emissions grew by 74%.

KEY FINDINGS

The research and consultations conducted for this study reveal eleven action areas in which progress is required at a North American scale:

- Pricing carbon
- Reducing border delays and enhancing security
- Integrating transportation and land-use planning
- Shifting to more-efficient transportation modes
- Shifting to lower-carbon fuels
- Increasing the efficiency of transportation technologies
- Funding transportation infrastructure and pricing its use
- Greening supply chains and implementing best practices
- Acquiring data and developing performance metrics
- Reducing demand for inefficient freight transportation
- Improving freight transportation governance and stakeholder networking

For more information about *Destination Sustainability: Reducing Greenhouse Gas Emissions from Freight Transportation in North America* and the CEC Secretariat's initiative on sustainable freight transportation in North America, please visit: http://www.cec.org/freight. Printed copies of the report are available on request to info@cec.org. Contact: Eduardo Viadas, 514.350.4331, eviadas@cec.org

Canada, Mexico and the United States, the parties to the North American Free Trade Agreement (NAFTA), face two interlocking challenges, one environmental and one economic.

From an environmental perspective, the livability and sustainability of our region is under strain, from population growth and concentration, from climate change, and from the impact of how we currently live and trade within and among our three countries. From an economic perspective, we face competitive pressure from other global trading blocs. While trade within the NAFTA bloc has grown by a seemingly impressive 42% since 2000 (from $700 billion to $1 trillion annually), trade with countries outside the region has doubled (from $1.5 trillion to $3 trillion).

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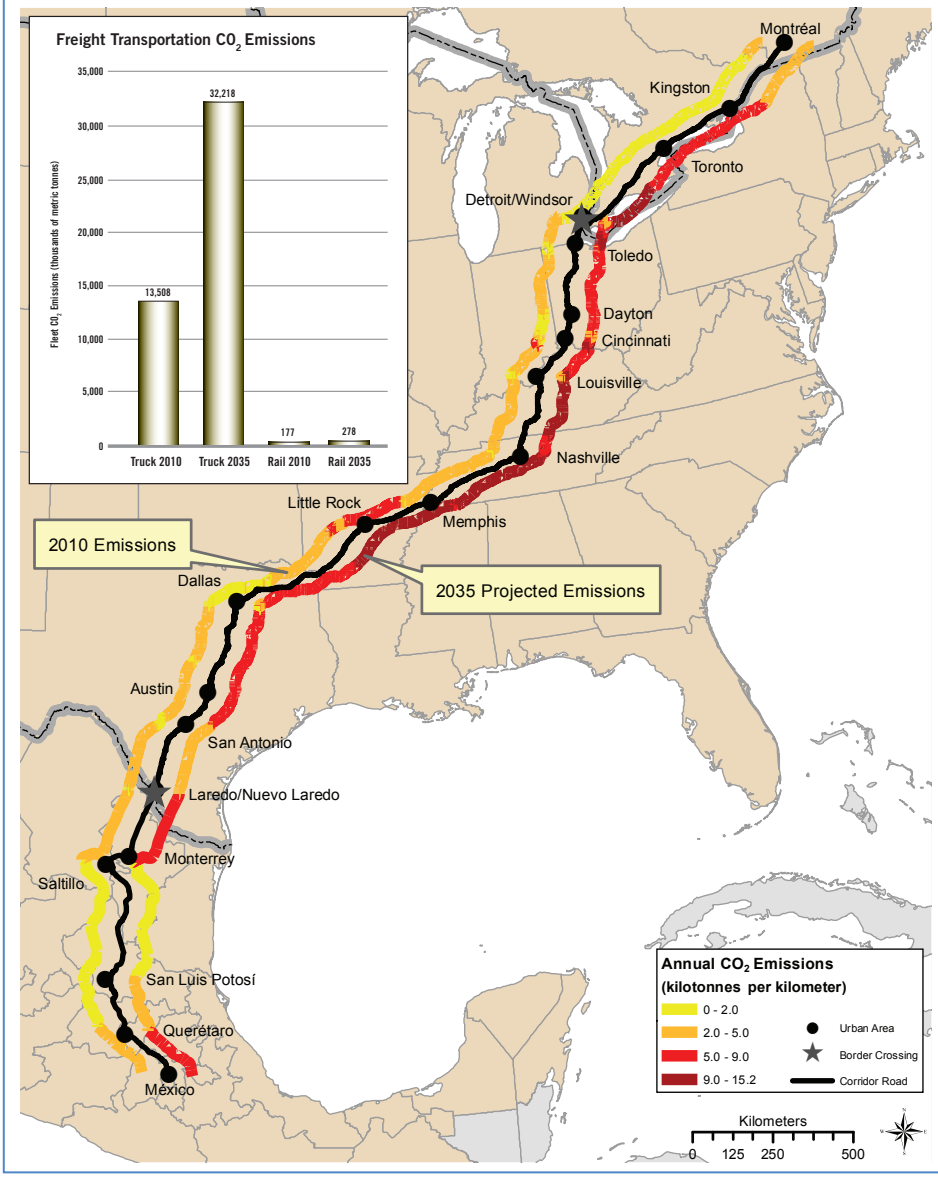
Freight transportation figures prominently in both of these challenges. Transportation is second only to electricity generation as a source of greenhouse gas (GHG) emissions and freight transportation is the fastest rising component in that category. While emissions from passenger vehicles grew by 33% between 1990 and 2008, freight-related emissions grew by 74%. In the next two decades, that imbalance is predicted to remain, with emissions from private and light-duty vehicles actually dropping by 12%, while freight-related emissions are expected to rise by a further one-fifth.

ESTIMATED TRUCK CO_2 EMISSIONS, 2010 vs 2035



Source: Adapted from Texas Transportation Institute, *Greening North American Transportation Corridors: Challenges and Opportunities*, May 2010, Montreal: Commission for Environmental Cooperation, drawing on data for 2010 from US FHWA, National Freight Transportation Trends and Emissions, and TTI projections to 2035.

In the freight field, these two issues—GHG emissions and competitive advantage—are linked by the factors of efficiency and expense. Freight operations that are run inefficiently tend to burn more fossil fuels (the freight sector as a whole is 98% dependent upon petroleum). Burning more fuel creates more GHG emissions—and costs more money. An inefficient system also slows the movement of goods, compromising NAFTA's trading advantage relative to more innovative foreign competitors.

With those challenges in mind, the Secretariat of the trinational Commission for Environmental Cooperation (CEC) set out in the fall of 2009 to prepare an independent "Article 13" report on the options and implications of reducing freight-related greenhouse gas emissions within the NAFTA bloc. Article 13 is the section of the North American Agreement on Environmental Cooperation (NAAEC) that mandates the CEC Secretariat to study issues of environmental importance and to present its findings to the governments and people of Canada, Mexico, and the United States. (NAAEC is the environmental side agreement to NAFTA, representing the signatories' commitment to protect and enhance the environment of North America in the realm of continent-wide liberalized trade.)

In preparing its report, the CEC Secretariat established an advisory group comprising industry stakeholders, experts, academics, representatives from civil society groups, from the

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CEC / Jacqueline Fortson

SUMMARY OF KEY RECOMMENDATIONS

1 **COORDINATION AND NETWORKING** The NAFTA partners should consider forming a ministerial-level North American Transportation Forum that will work in cooperation with an industry, expert and stakeholder group to foster an integrated, intelligent freight transportation system, a more seamless and efficient set of linkages that bring the three countries—functionally if not literally—closer together.

2 **CARBON PRICING AND SYSTEM EFFICIENCY STRATEGIES** Canada, Mexico and the United States should consider putting a price on carbon to give everyone a clear signal that they should be investing in efficiency and in low-carbon fuel alternatives.

3 **INVESTMENTS TO IMPROVE THE EFFICIENCY OF THE FREIGHT TRANSPORTATION SYSTEM** The three countries should re-invest in the transportation system itself—in road, rail and waterway infrastructure that is, in many places, congested and deteriorating. The countries should provide meaningful incentives for advanced fuel-saving technologies and the adoption of intelligent transportation systems.

4 **SUPPLY CHAIN MANAGEMENT** Transportation agencies, and businesses operating nationally and across international borders, could reduce costs and GHG emissions by managing the transportation system more efficiently. For example, emissions go down (and profits up) if fewer long-haul trucks return empty or travel over routes that are better served by more carbon-efficient rail freight (see figure).

5 **TRAINING ECO-DRIVERS** Each jurisdiction can improve the training and equipping of drivers to optimize their environmental and economic performance by driving in ways that conserve energy.

6 **GATHERING AND SHARING DATA** Transportation, environmental and statistical agencies in all three countries should work through the North American Transportation Statistics Interchange (NATS-Interchange) to enhance the quality and comparability of freight data, including the measurement of environmental impacts, to better manage freight transportation as a continent-wide system.

OECD and from the respective governments. The group then guided a series of public consultations, as well as government consultations with ministries or departments of environment, trade and commerce at the federal, state and provincial levels.

The result is *Destination Sustainability: Reducing Greenhouse Gas Emissions from Freight Transportation in North America*, and it confirms that the policies and investments for reducing freight-related GHG emissions are, in many cases, the most effective measures for driving improvements to efficiency and economic competitiveness.

The report's first recommendation (see box) urged governments in all three countries and at every level to cooperate more extensively and effectively in the effort to create an integrated North American production and distribution network. A cogent, current example of the potential for future cooperation might be found in the recent initiative by US President Barack Obama and Mexican President Felipe Calderón to resolve a long-standing dispute that has blocked Mexican truckers from operating in the United States. An agreement to resolve this dispute, arising out of the Obama/ Calderón negotiations from early March 2011, could clear the road for additional cooperative efforts that will help create a borderless supply chain among the three countries.

Another aspect of the first recommendation called for the parties to embrace the vision of an integrated, intelligent transportation *system* uniting our three countries. North America, and especially the United States and Canada, have consolidated a competitive economic position, in part by making visionary investments in transportation infrastruc-

ture, of which the US Interstate highway system is a good example. But future success will depend equally or more on making the system more intelligent, through the use of sensors, computers and communication technology. Information technology can play a key role in the safety, efficiency and convenience of transportation—for cars, trucks and mass transit. Intelligent transportation systems (ITS) may include on-board, real-time traffic and transit information, new types of road pricing, adaptive traffic signal timing, and better safety warning systems.

While many nations have made significant investments in ITS, the NAFTA bloc currently trails world leaders in this category, potentially giving up an advantage that could solve environmental and economic problems by making existing infrastructure operate to its optimum capacity—and pointing out where improvements will be most cost-effective.

CEC / Pablo Añieli

***Destination Sustainability*, a report from the CEC Secretariat, has been developed with the assistance of an advisory group of representatives from transportation industries, nongovernmental organizations, and government agencies:**

Bruce Agnew	Cascadia Center for Regional Development
Lloyd Axworthy	University of Winnipeg
Scott Belcher	The Intelligent Transportation Society of America (ITS America)
Nils Axel Braathen	Environment Directorate, Organisation for Economic Co-operation and Development (OECD)
Jeanne Broad	Coalition for America's Gateways and Trade Corridors
Juan Carlos Camargo	Wal-Mart Mexico
Mariana Chew-Sánchez	Sierra Club
Mitch Jackson	FedEx Corp.
Glen P. Kedzie	American Trucking Association
Rodolfo Lacy	Mario Molina Center for Strategic Studies on Energy and Environment
Jason Mathers	Environmental Defense Fund
Robert McKinstry	Railway Association of Canada
David L. Miller	Con-way, Inc.
Nick Nigro	Pew Center on Global Climate Change
Robert Oliver	Pollution Probe
Susan Shaheen	Transportation Sustainability Research Center University of California, Berkeley
Glen Wright	CEC Joint Public Advisory Committee (JPAC)

Ex Officio Members of the Advisory Group*

Roberto Aguerrebere Salido	Instituto Mexicano del Transporte
Pierre Marin	Transport Canada
Christopher "Buddy" Polovick	SmartWay Transport Partnership US Environmental Protection Agency
Robert Ritter	Federal Highway Administration

* Note: *Ex officio* government representatives participated in the meetings, discussions and all of the other activities related to membership in the Advisory Group. However, they did not take part in any vote involving the decisions and/or recommendations made by the Advisory Group and the recommendations in this report do not necessarily reflect their positions or those of other government participants.

Commission for Environmental Cooperation
393, rue St-Jacques Ouest, Bureau 200
Montréal (Québec) Canada H2Y 1N9
t (514) 350-4300 f (514) 350-4314
info@cec.org / www.cec.org

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