



## Government of Canada Initiatives to Reduce Air Emissions from Freight Transportation

Phil Kurys, Director, Sustainable Development Policy

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Canada

### Outline

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- **Context**
  - Transportation and economy
  - Transportation air emissions
    - GHG
    - Air pollutants
- **Addressing Freight Transportation Air Emissions**
  - Canada's sustainable transportation approach.
  - Key elements:
    - voluntary agreements
    - regulation
    - ecoTRANSPORT programs
    - infrastructure/gateway investments
- **Moving Forward**



## Transportation and Economy

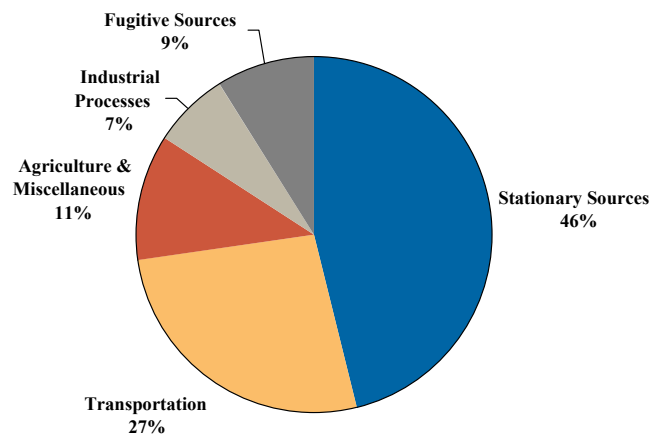
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- Canada's transportation system is major enabler of economic activity – important in its own right and as a mover of people and goods.
- Canada is a trading nation - exports accounting for 42% of GDP.
- United States is our biggest trade partner: 70% of overall trade, and over 80% of exports, but Asian market is growing.
- An efficient transportation system is key to well being, competitiveness, and expanded trade.
- Challenge is to decouple economic growth from associated increases in air emissions

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## Total GHG Emissions By Sector – 2005

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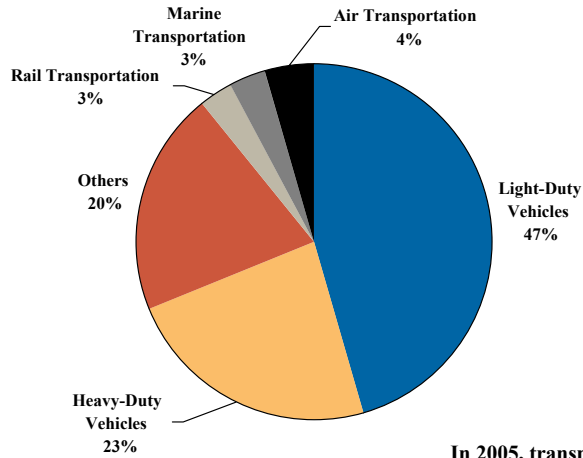


In 2005, Canada's total GHG emissions were 747 MT

Source: Canada's Greenhouse Gas Inventory, 1990-2005, Environment Canada

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## Mode Share of Transportation GHG Emissions – 2005

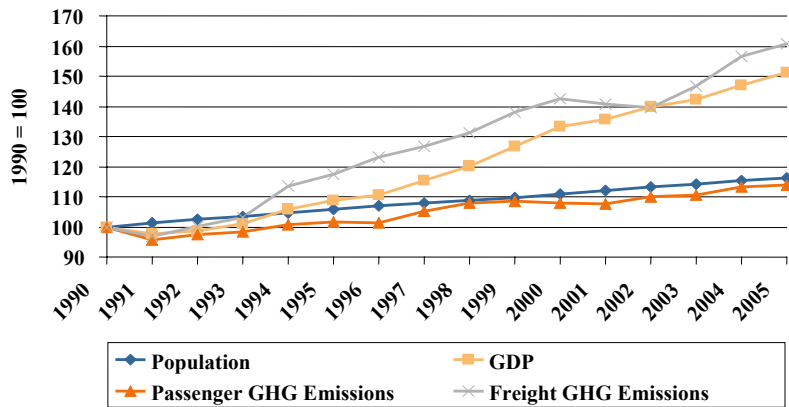


In 2005, transportation-related GHG emissions were 200 MT

Source: Canada's Greenhouse Gas Inventory, 1990-2005, Environment Canada

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## Trends in Passenger and Freight Transportation GHG Emissions, Population and GDP – 1990-2005

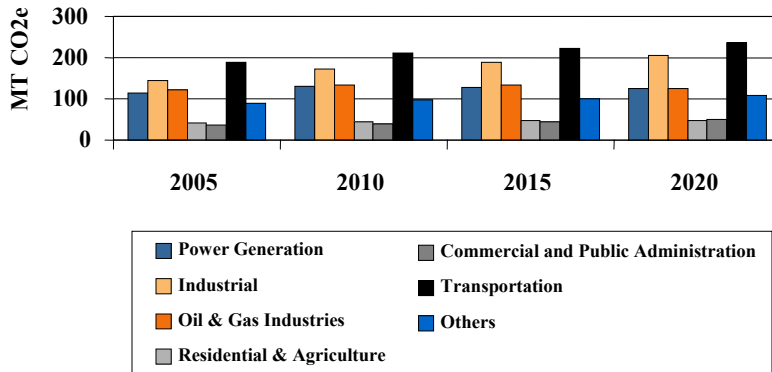


Sources: Informetrica Limited Reference Case, October 15, 2007  
Natural Resources Canada, Energy Efficiency Trends Analysis Tables, 1990 to 2005.

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## Canadian GHG Emissions by Sector

Transportation emissions are projected to increase by 24% from 2005 to 2020  
 → *Fastest growth in freight!*

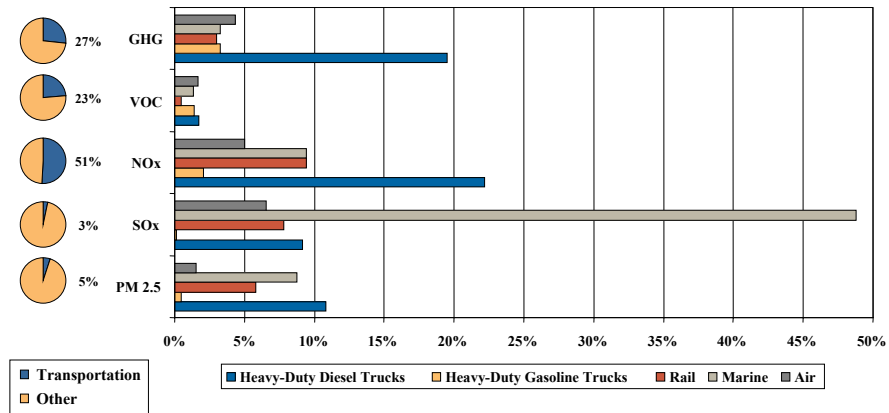


Source: "Canada's Energy Outlook: The Reference Case 2006", Natural Resources Canada, 2006

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## Contribution of Transportation to Air Emissions – 2005

Mode Share of Transportation Freight Emissions (2005)



Source: Environment Canada, Criteria Air Contaminants Division and Canada's Greenhouse Gas Inventory 1990-2005

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## Sustainable Transportation Approach

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- Environment is important, but so is economy and safety.
  - Government of Canada strives to balance goals
  - Sometimes trade-offs are inevitable.
- Approach based on entire transportation system and is multi modal, covering trucking, rail, air and marine.
- Important to provide stable predictable business climate.
- Using a variety of tools to achieve results, including:
  - Voluntary agreements to manage issues in the short to medium term;
  - Regulation to provide longer term certainty;
  - Complementary programs; and
  - Economic Instruments.

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## Regulatory Framework for Air Emissions

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- The Regulatory Framework includes mandatory and enforceable reductions in emissions of GHG and air pollutants that will deliver tangible benefits to the health of Canadians and their environment.
- It focuses on large final emitters (LFE), which ~50% of GHG
- However, it provides for regulatory action on transportation on:
  - Motor vehicles;
  - Rail;
  - Marine; and
  - Aviation

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## Regulating Rail Emissions

- Government of Canada intends to develop and implement new regulations coming into effect in 2011 under the *Railway Safety Act* to reduce air emissions from the rail industry in Canada.



- In the meantime, the Canadian Government supports a Memorandum of Understanding (MOU) that has been signed with the Railway Association of Canada (RAC) that ensures that the rail industry continues to reduce its emissions of greenhouse gases between 2007 and 2010.

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## Aviation and Marine Sources

### Marine

- Adopting current international standards established by the International Maritime Organization (IMO) for controlling air pollution emissions from ships and supporting the development of new, stricter international standards.
- Application domestically under the *Canada Shipping Act*
- Exploring possibility of some SO<sub>x</sub> Emission Control Areas (SECAs)



### Aviation

- The Canadian Government supports the development of international standards and recommended practices with the International Civil Aviation Organization (ICAO).
- These standards and recommended practices will be considered in the development of domestic regulations under the *Aeronautics Act*.
- MOU with aviation industry to reduce emissions of GHGs



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## ecoTRANSPORT Strategy

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- Program measures to complement the regulatory agenda
- Implements in areas not fully covered by regulation
- Protects health and environment
- Promotes behavioral and technological change
- Addresses both supply and demand
- Cuts across all modes



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## ecoFREIGHT Program

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- Provides \$39 million of funding over 4 years for several initiatives which target the freight sector for air pollutant and GHG emissions reductions:
  - **National Harmonization Initiative for the Trucking Industry** (\$6 million) – identifying regulatory barriers and solutions for trucking emissions-reducing technologies.
  - **Freight Technology Demonstration Fund** (\$10 million) - testing and measuring new freight transportation technologies in real-world conditions.
  - **Freight Technology Incentives Program** (\$10 million) - helping companies to purchase and install proven emission-reducing technologies.
  - **ecoFreight Partnership Initiative** (\$7 million) - partnering within the transportation sector to reduce emissions from freight transportation through fast and flexible voluntary actions that can support the regulatory framework.
  - **Marine Shore Power Program** (\$6 million) - demonstrating the use of shore-based power for marine vessels in Canadian ports to reduce air pollution.

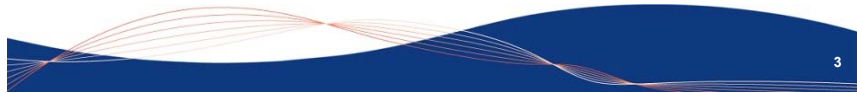
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## Long-Term Commitment to Infrastructure



*"...the largest infrastructure development program in this country in over half a century"*

— Prime Minister Stephen Harper



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## The Asia-Pacific Gateway and Corridor

The system-based APGCI combines infrastructure, policy, governance and operational issues together into one integrated, multi-modal, public-private strategy.



Intermodal, system-wide efficiencies can result in environmentally sound transportation alternatives and significantly reduce greenhouse gas emissions.

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## The Asia-Pacific Gateway and Corridor : The Roberts bank Rail Corridor example

Through close collaboration between federal, provincial, municipal and private sector stakeholders, a package of investments was developed to construct road-rail grade separations and road reconfigurations to enhance rail efficiency, as well as provide environmental and quality of life benefits to surrounding communities.



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## Moving Forward for a More Sustainable Transportation

- Canada has sound base for moving ahead.
- However, sustainable transportation system will not be achieved overnight.
- Many challenges, but also many opportunities:
  - As our economy continues to grow, we need to continue addressing sustainability issues
  - Technology will be key to decoupling economic growth and emissions growth in the transportation sector
  - Intermodal opportunities and better system integration can improve efficiencies and reduce environmental impacts
- Both Public and Private Sectors have an important role to play.
- Canada and the United States must continue to work together in order to move forward.

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