

Canadian Marine Vessel Regulatory Overview

West Coast Region Conference On Marine Port Air Quality Impacts

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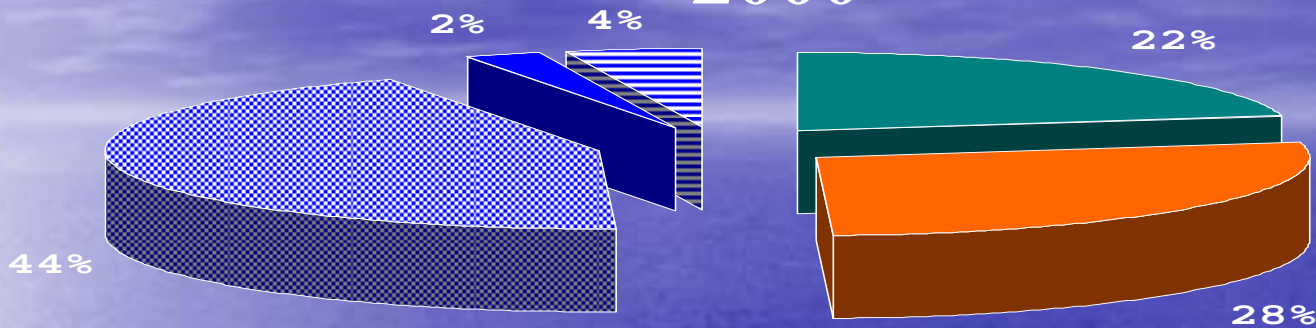
OUTLINE

- Contribution of Marine to Emissions
- Contribution of Marine Vessel to Local Emissions
- Fuel Quality Regulations
- Canadian Regulatory Authorities
- Canadian Federal Initiatives for Vessels
- International Maritime Organization
- Potential instruments in Canada
- Environment Canada National Activities
- Concluding Remarks

CONTRIBUTION TO CANADIAN SOX EMISSIONS FROM TRANSPORTATION

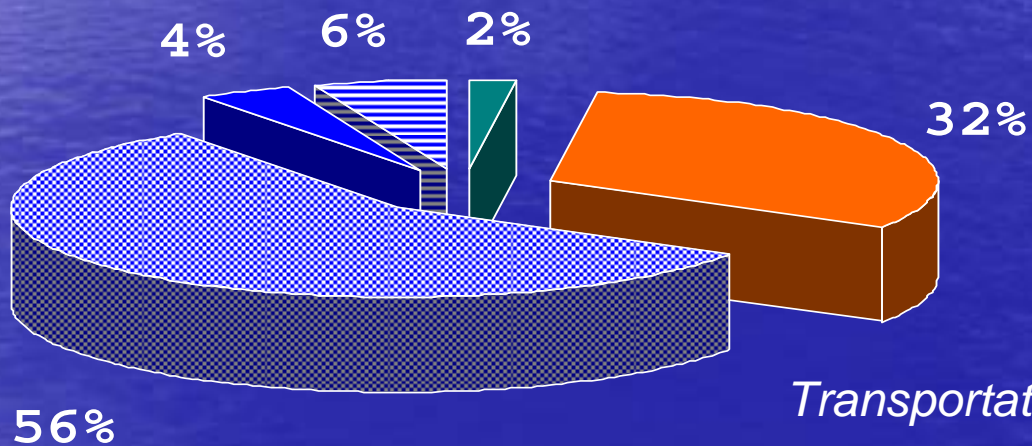
(EC's current forecast, methodology under revision)

2000



2020

Transportation 5% of total



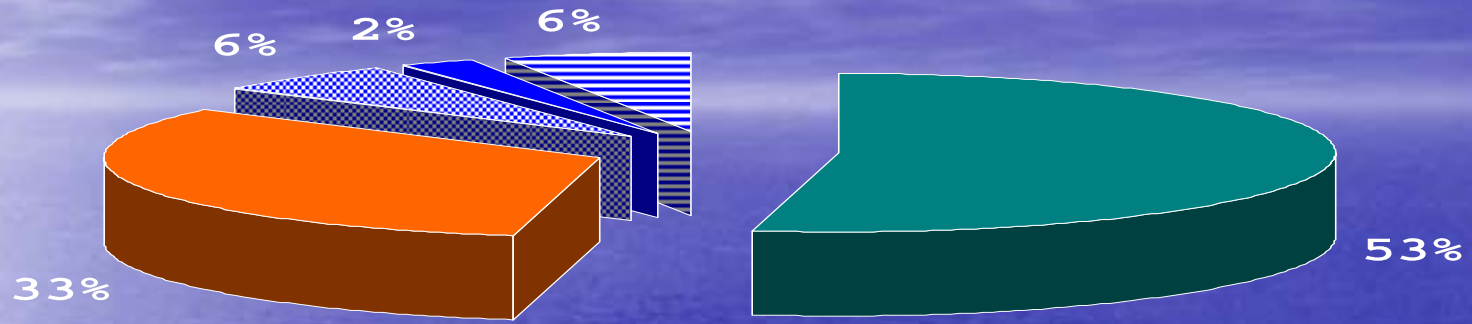
Transportation 5% of total

On Road
 Off Road
 Marine
 Air
 Rail

CONTRIBUTION TO CANADIAN NOX EMISSIONS FROM TRANSPORTATION

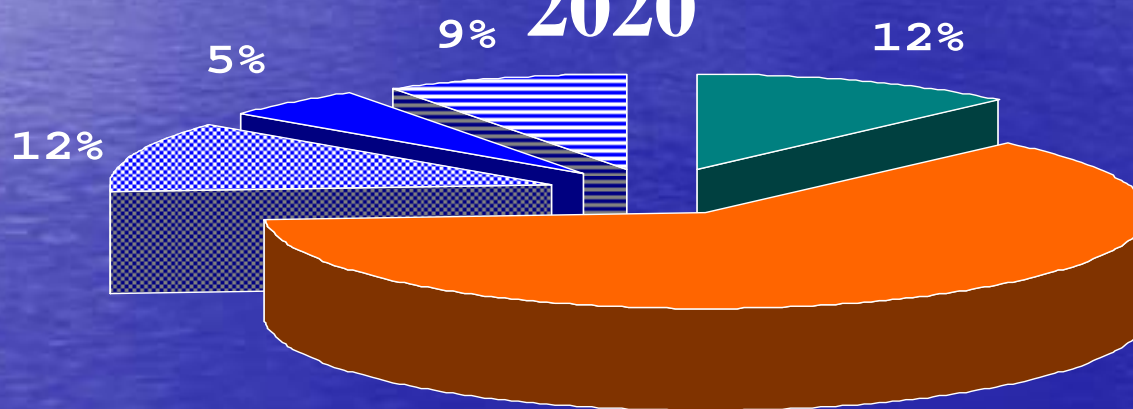
(EC's current forecast, methodology under revision)

2000



Transportation 62% of total

2020



Transportation 40% of total

■ On Road ■ Off Road ■ Marine ■ Air ■ Rail

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CONTRIBUTION OF MARINE VESSELS TO LOCAL EMISSIONS

- Lower Fraser Valley airshed - in 2000, marine vessels contributed
 - 22% of total NOx emissions
 - 33% of total SOx emissions
 - and 12% of total PM2.5 emissions
- Halifax Harbour airshed - in 2002, marine vessels contributed
 - 9 % of total NOx emissions
 - 8 % of total SOx emissions
 - 1 % of total PM emissions

FUEL QUALITY REGULATIONS

Canada's Policy: generally align with the U.S. with respect to environmental standards for fuels

- taking into account European Union standards (an important supplier of fuels to Canada)
 - on occasion going further to protect the health of Canadians and the environment
- Sulphur in Diesel Fuel Regulations (2002)
 - 15 ppm – 2006 (on-road only)
 - Sulphur in Gasoline (1999)
 - 150 ppm – 2002; 30 ppm - 2005

CANADIAN REGULATORY AUTHORITIES

- Transport Canada has authority for:
 - regulating marine engine emissions for engines >37 kW
 - in-use fuel standards
- Environment Canada has authority for:
 - regulating emissions from marine diesel engines (<37 kW)
 - quality of fuel produced, imported and sold in Canada

CANADIAN FEDERAL INITIATIVES FOR VESSELS

- Canada Shipping Act: Pollution Prevention Regulations are under development to align with IMO MARPOL 73/78 ANNEX VI.
- Pollution Prevention Guidelines for the Operation of Cruise Ships Under Canadian Jurisdiction was approved January 2004.

INTERNATIONAL MARITIME ORGANIZATION MARPOL ANNEX VI

- MARPOL Convention - main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.
- Annex VI (Regulations for the Prevention of Air Pollution from Ships) adopted September 1997.
- To date, 13 countries representing 54% of world tonnage have ratified – another 2 countries are required for ratification. Barbados, Cyprus, Japan & Poland are in the final stages of ratification and is expected to be completed by end of 2004.
- Canada proposing to ratify by 2006.

POTENTIAL INSTRUMENTS IN CANADA

- Voluntary measures
 - Guidelines, as have been developed for Cruise Ships
 - Adoption of best practices
 - Low sulphur fuel procurement
- Regulations
 - Ship emission standards
 - Fuel requirements:
 - Authority for addressing fuel use – Canada Shipping Act
 - Authority for addressing import/production/sale of fuel – CEPA 1999

ENVIRONMENT CANADA - NATIONAL ACTIVITIES

- Planned amendments to Sulphur in Diesel Fuel Regulations
 - Sulphur in off-road diesel fuel (including marine diesel) to be reduced to 500 ppm effective 2007
 - Further reduction to 15 ppm (excluding marine diesel) effective 2010
- Planned Off-Road Compression-Ignition Engine Emission Regulations
 - To include marine propulsion engines of up to 37 KW and auxiliary engines
- Regulations are planned for marine spark-ignition engines & recreational vehicles & will address outboards and personal watercraft. Discussion document will be released Spring 2004.

ENVIRONMENT CANADA - NATIONAL ACTIVITIES (cont.)

- Continue to support technology options study for major Canadian ports to evaluate technology and management options - possible locations for 2004/2005: Montreal, Quebec City, Hamilton, Saint John.
- Carrying out international & domestic marine traffic study
- Continue to be involved with international activities – IMO – MEPC, including participation in the Prevention of air pollution from ships Working Group.
- Provide support to Environment Canada's Regions as national coordinator on marine air emissions.

CONCLUDING REMARKS

- Canada has a variety of tools available to address marine emissions and would like to encourage Industry to engage in voluntary measures to reduce emissions.
- We believe that it is possible to achieve emissions reductions and still maintain a healthy and competitive marine industry.