



MARBEK
Resource Consultants Ltd.

**TRANSPORT CANADA`S 2007-2009 SUSTAINABLE
DEVELOPMENT STRATEGY WORKSHOPS**

–Freight Transportation Workshop–

Final Summary Report

Prepared for:

Transport Canada

Prepared by:

Marbek Resource Consultants

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1. INTRODUCTION

1.1 BACKGROUND

The *Auditor General Act* requires departments to prepare updates to their Sustainable Development Strategies (SDS) every three years. In February 2004, Transport Canada (TC) tabled its third SDS. The Strategy featured 32 commitments organized into seven strategic challenges:

- Encourage Canadians to make more sustainable transportation choices
- Enhance innovation and skills development
- Increase system efficiency and optimize modal choices
- Enhance efficiency of vehicles, fuels and fuelling infrastructure
- Improve performance of carriers and operators
- Improve decision-making by governments and the transportation sector
- Improve management of TC operations and lands.

Since the Strategy was tabled, the department has made steady progress in meeting these commitments, and has learned additional lessons that will be useful in preparing its fourth SDS, covering the period 2007-2009. As part of the preparation of this fourth SDS, TC has adopted the following principles:

- Maintain continuity with previous strategies and retain the seven strategic challenges
- Follow a streamlined approach and substantially reduce the number of commitments and targets
- Avoid “business as usual” commitments in favour of those that stretch or push the envelope
- Focus on three areas of interest: urban, marine and freight.

TC engaged selected experts and stakeholders to provide focused guidance in each of the three areas. This consultation process took place through a series of three workshops, each covering one of the themes: marine transportation, urban transportation, and freight transportation. The purpose of the workshops was to assist TC in defining the challenges and identifying potential commitments for the next SDS.

For each workshop, a discussion paper was commissioned to provide context about the main issues within each theme area, consider challenges faced by TC in making progress to address these issues, and provide recommendations regarding potential measures which could be included in the next SDS. Discussion papers were developed by experts in each theme area, and were provided to participants in advance of the workshop. These papers do not necessarily reflect TC's viewpoint but were used to provide context and a starting point for the discussion. The discussion paper prepared for this workshop was entitled: *Sustainable Development Strategy 2007-2009 Issue Paper: Freight Transportation*, by the Research and Traffic Group. This paper examined key trends and issues pertaining to freight transportation, reviewed TC's past SDS freight initiatives, explored roles and responsibilities of TC in relation to freight, and examined the opportunities for and constraints to sustainable freight transportation in the context of TC's next SDS.

The freight transportation workshop was hosted by TC at the Ramada Inn and Suites in Toronto on June 14, 2006. The workshop was facilitated by Marbek Resource Consultants. A total of 34 participants took part in the workshop (see Appendix A for list).

This summary report summarizes the results of the discussion as well as written submissions received from participants and others who were unable to attend.

1.2 OPENING REMARKS

Mr. Bob Lyman, Director General of Environmental Affairs at TC welcomed participants to this workshop. He outlined the requirement for each department to prepare a SDS and noted that beyond meeting the expectations of the Commissioner of Environment and Sustainable Development, the SDS also provides TC with specific direction regarding policy, program and regulatory instruments to achieve a more sustainable transportation system.

Mr. Lyman explained that the intent of the SDS is to frame the integration of environmental issues into departmental decision-making along with social and economic considerations. It is to be used as a reference by decision makers. He also noted that the Strategy needs to be situated within the mandate of TC. As well, the SDS should include measurable results to enable the department to monitor progress in attaining the objectives. He noted that for the development of previous Strategies, TC had drafted proposals on potential measures for the SDS and used the proposals as a basis for stakeholder discussion through a broad-based consultation processes covering a wide range of transportation issues. The process for this SDS differs substantially; with the commissioning of a series of issue papers prepared by expert stakeholders used as a basis for consultation, and the decision to focus on three key theme areas: marine, urban, and freight transportation issues. He also pointed out that for the first time this SDS will have a specific funding allotment associated with it (\$3 million over three years has been approved in principle).

1.3 OBJECTIVES

The objectives for the day were to:

- Analyse key sustainable transportation problems and opportunities for improvement
- Identify possible commitments for TC's SDS
- Recommend initiatives that seem to be most promising
- Offer general recommendations as to what longer term objectives might be pursued.

1.4 AGENDA

The morning segment of the workshop consisted of a plenary session with presentations and discussion. The afternoon session consisted primarily of a break-out session to identify potential measures for inclusion in the SDS.

The Final Agenda is provided in Appendix B.

1.5 WRITTEN SUBMISSIONS

Following the workshop, three written submissions were received as further input to the workshop report. These have been incorporated in this report in a non-attributed fashion following the summaries of each breakout session within Section 3 of this report.

1.6 ORGANIZATION OF THE REPORT

The following sections of the report provide: an overview of the presentations and discussion regarding the challenges of sustainable urban transportation; identification of issues, objectives, and measures to address the challenges; and an assessment of the most promising measures.

2. THE CHALLENGE OF SUSTAINABLE FREIGHT TRANSPORTATION

2.1 PRESENTATIONS

Three presentations were delivered in the morning plenary session. Highlights of each are presented below.

Gordon English of the Research and Traffic Group presented his Issue Paper, entitled: *Sustainable Development Strategy 2007-2009 Issue Paper: Freight Transportation*. He indicated that, in recognition of the fact that urban issues were covered separately, the focus of the paper was on intercity freight. In that context, he highlighted five sustainability issues: climate change; interference and congestion costs; accidents; local air pollution; and local noise pollution.

The paper reviewed air emissions data as the key environmental issue in relation to freight transportation. Greenhouse gas emissions were outlined by freight transportation modal share, including a trend analysis from 1990 to 2003. The data indicate that freight transportation accounts for over one third of overall transportation greenhouse gas emissions and that freight trucking is the main source of greenhouse emissions among the modes considered in the analysis (truck, rail and marine) - due to the significant growth in truck freight traffic this past decade.

Available federal government instruments to address these issues were reviewed, along with the challenges for TC in addressing these issues. Priorities identified for inclusion in TC's SDS consisted of the following:

- In cooperation with other levels of government, TC should contribute to freight origin and destination data collection and analysis, using multi-jurisdictional cooperation.
- TC should study the drivers for shippers choices (e.g. analysis of the use of "just in time" delivery concept to explore it's perceived and actual value in different industries; and assess the sensitivity of service demands to transportation costs). Using this information, TC should encourage shippers to make more sustainable transportation choices.
- TC should give priority to completing existing full cost investigations.
- TC should promote awareness of the reasons for cost allocation concepts (such as road pricing).

Victor Deyglio of the Logistics Institute gave a presentation on *Freight Transportation Logistics*. His presentation supported the need to understand shippers choices. In his view, these choices are best viewed through the lens of supply chain logistics whose choice mechanisms are defined by multiple dimensions, with multiple players, and multi-jurisdictional effects. The presentation reviewed the critical success factors in a global logistics perspective, such as competitive strategy, business process, and people. Globalization has refocused the dynamic of supply chain logistics, so that the key issue facing business today is inventory management. Transporting goods from one location to another is only one of the elements (perhaps the key element) of an inventory management strategy. Because of the increasing demands and constraints of inventory management, some observers anticipate a resurgence of local manufacturing and local supply as core business planning elements.

James Nolan of the University of Saskatchewan gave a presentation on *Sustainability in the Transportation Sector*. His presentation highlighted the role that government plays in reconciling the conflicting goals of economic and environmental sustainability (particularly in the context of transportation which plays a major role in the economy). In his view, the public interest would best be served by aligning the interests of shippers and transportation service providers with those of sustainable transportation, and by giving equal consideration to economic efficiency. In practice, this may require some form of pricing for externalities (e.g. fuel taxes, road pricing, etc.) but the imposition of such costs requires careful assessment, especially in light of competitiveness concerns.

2.2 PLENARY DISCUSSION

The Role of Government

There was some discussion about the enabling role of government in relation to sustainable transportation and freight movement. One participant suggested that infrastructure development should be a key government role because this is a public good that supports overall economic development.

Several participants commented on the government's role in data collection and analysis. One participant noted the value in having information pertaining to freight movements within greater urban areas and the importance of enabling municipalities to collect this data. TC and municipalities were encouraged to make use of the information and best practices generated from recent initiatives by the Transportation Association of Canada's (TAC) dealing with this kind of data. Another participant noted the need for more data on freight movement in the airline industry.

Participants discussed the federal role in relation to technology development and deployment, in particular technologies to relieve congestion at border crossings. There was some discussion about the need to engage the federal and municipal governments to coordinate and fulfill their responsibilities in supplying urban freight infrastructure capacities at border crossings. Some thought that this should be primarily a federal government responsibility because the key consideration was international trade, and this is not really a local issue. Another participant suggested that TC could take the lead in developing truck engine technology (e.g. hybrids). On the theme of hybrids, it was suggested that government support for implementation of the technology would encourage uptake by the private sector; one courier company noted that although they have 14 hybrid vehicles in their fleet, the cost cannot yet be fully justified.

Participants pointed out that, in the long term, technological change is likely to provide a path to sustainability. However, in the short term, it will be necessary to find a way of internalizing the external costs of transportation impacts. Business concepts such as "just in time" are particularly worthy of analysis since there may be hidden economic, as well as environmental externalities involved. However, the difficulties in influencing the application of this concept were also noted. A reference for completed analysis on this issue and the private sector impacts was noted (Mr. David Lewis). The point was made that other concepts should also be considered in this analysis, including Vendor Managed Inventory, and Customer Relationship Management (customer pattern tracking). Although TC representatives noted their agreement with the principles of full cost pricing, and their interest in exploring these concepts, they also sought

advice on more specific measures that could be targeted for the short term, such as changing speed limits, congestion pricing, idling reduction, etc.

There was some discussion about the limited ability to influence customer demand for more sustainable transportation options. Most agreed that options were limited, but that government could play a leadership role. One participant suggested that government should concentrate on positive incentives rather than negative (e.g. removing barriers such as the regulations that unnecessarily impede efficiency). Many corporations have already integrated Corporate Social Responsibility (CSR) or environmental objectives into company policies, however they may not realize the full extent of how these can be implemented. The suggestion was made that advertising can play a role in influencing demand through consumer behaviour; although some felt that it would be more effective to challenge the private sector directly to demonstrate that their environmental policies are successful.

Modal Shift

Participants discussed the merits, and risks, of shifting modal shares (e.g. from truck to rail). The point was made that regional differences in infrastructure availability must be considered in this debate since, for example, Atlantic Canada does not have adequate rail infrastructure. The importance of involving shippers in more sustainable decision-making in relation to their transportation choices was highlighted as a challenge since the key decision factors are primarily quality of service and price.

Some participants highlighted the positive externalities generated from use of rail in comparison to road trucking (i.e. reduced congestion, improved air quality and health benefits) and suggested that this should provide a rationale for more government investment in rail infrastructure. The U.S. example of a 25% new rail infrastructure tax credit was cited. The suggestion was made to work with Finance Canada to offer a shipper a tax credit for mode shifting from truck to rail, or to provide offset credits, through the greenhouse gas offset system. Other participants felt that the trucking industry is the backbone of the national economy and should be preserved. The point was made that trucking is the only mode for which air emissions are regulated in Canada, and that, to ensure modal neutrality, there should be similar emission regulations for other modes.

There was some debate regarding whether modal shifting should be explored in this SDS at all, given that TC has a policy of modal neutrality. Many felt that the SDS could seek to improve the environmental footprint of all modes through incremental changes that are possible in the short term.

Funding for the SDS

Questions were raised regarding the relative lack of funds available for TC to address these issues, and the reduction of greenhouse gases in particular. TC staff clarified that although the department's overall share of the intergovernmental budget appeared to be a small, its share of funds for mitigation activities (as opposed to R&D or work on adaptation), was significant (i.e. approximately 17%).

3. OBJECTIVES AND MOST PROMISING MEASURES

In the afternoon, participants were assembled into break-out groups. Their task was to identify five key measures which should be priorities for TC's consideration in its next SDS. This was done by a group discussion and ranking of each measure identified as high, medium or low importance, followed by high, medium or low practicality. A summary of the outcomes of these sessions is provided below.

Break out Group 1

Break out Group 1 thought that improving overall system efficiency was a key long term objective. They also identified the following considerations in developing the SDS:

- Considering regional differences in program and policy development.
- Ensuring the SDS measures are results oriented, with measurable performance.

Group members identified their top five priority measures, as outlined below. The top three measures listed were ranked as highly practical, while the remaining two measures received a "medium" level ranking in terms of practicality.

- *Explore mechanisms for full cost pricing.* This could include pilot projects, and could start with a survey of transportation system users to examine the potential for externality pricing. A key objective of this measure would be to ensure transparency of increased prices and revenue transfer to users of transport services.
- *Support for research, development, and implementation of new technologies.* New technologies include lighter designs for heavy trucks, engine or equipment improvements for ground transportation (including vehicles used for inter-modal freight movements from air to truck), and alternative fuels for trucking. Support could include information on best practices, tax breaks, funding, regulations, or improvements in standards (e.g. to remove inconsistencies).
- *Explore options for influencing sustainable development within the private sector.* This could include analysis to demonstrate the business case for sustainability.
- *Improve data capabilities to better inform decision-making and support policy and program development.* This would include communicating clear objectives regarding data collection activities, as well as reviewing and updating the data and information already generated for the climate change table.
- *Explore measures to enhance the competitiveness of the rail industry to improve overall system efficiency.* Examples could include removing tax barriers or shared funding for upgrading infrastructure, as well as the conduct of studies regarding modal options.

Other measures of medium or low importance identified by this group included:

- Offer support for ITS technology deployment.
- Design integrated program plans among federal departments for program funding.
- Explore possibilities for influencing modal shifts to mitigate truck dependency.
- Develop a national freight transportation policy with sustainable development objectives.

Break out Group 2

Break out Group 2 identified the following long-term objectives for the SDS:

- Improve decision-making regarding investment making and operations planning
- Accelerate the adoption of greener equipment in each mode
- Improve competitiveness while encouraging sustainable transportation planning
- Reduce congestion and improve fuel efficiency
- Focus on practical and affordable options.

This breakout group identified areas within the federal government's jurisdiction (broader than TC), including:

- Air, rail, marine
- Economic regulation
- Inter-provincial trucking
- Taxation
- Investment and encouragement
- Research on technologies and policy to improve operational efficiency

Break out Group 2 also identified areas with significant challenges for action:

- Maintaining the federal objective of modal neutrality is a constraint for action, however mode shifting in some instances could increase system efficiency
- Policy making should not separate modes
- Demand restraint is a limited area of influence
- Contentious views in relation to the proposed bill for the *Canada Transportation Act*.

Break out Group 2 identified a total of twenty potential measures for TC's SDS, which they distilled to five priorities. Of these five priorities, the first two were ranked as highly practical, while the others were of medium or low practicality.

- *Support for R&D for technological improvements.* Technologies requiring further R&D support include ITS, alternative fuels, and engine upgrades. Support could include leveraging R&D already in place, and learning from other initiatives underway in the U.S. and Japan.
- *Explore mechanisms to address congestion at gateways and trade corridors.* Existing and possible gateways and trade corridors that have been proposed include: Pacific and/or Greater Vancouver, Southern Ontario, Greater Toronto, mid-continent corridors at border crossings and Halifax. Support should be focussed on key bottlenecks, and should be tied to performance indicators.

- *Facilitate data collection to inform better decision making, improve global competitiveness, and enable allocation of costs, including environmental costs.* Data of interest includes goods movement (origin and destination), load efficiency, and multi-modal movements. Capabilities required include data collection, analysis, and modeling. Use of partnerships and scoping of the data collection activities were highlighted as important.
- *Provide incentives to adopt greener technology for equipment.* This includes demonstrating leadership, exploring the use of financial incentives, removing regulatory impediments, and reviewing possibilities regarding new equipment standards.
- *Facilitate a communications strategy to build public support for investments in sustainable freight transportation.* This could include use of media, universities or other local partners to target the public, and use of labour groups to target employees. The targeted message should focus on green freight, and link to other ongoing initiatives.

Written Submissions

Written submissions outlined the following views on key measures for TC's consideration in developing its SDS:

- Research on a full cost accounting approach should be a low priority. It is a long term objective, and the SDS should focus on more effective short term measures, such as R&D on technologies, data collection and analysis, gateway strategies, skills enhancement, communication/education, and infrastructure improvements.
- Full cost accounting methods should be a high priority. TC should establish methods to quantify the sustainability of services within each mode in order to provide information to enable private sector decision-making on better transportation choices. This may facilitate modal shifting if the alternative is a more sustainable choice.
- TC should focus on improving efficiencies within each mode. Each mode is needed and there is limited potential to shift freight from one mode to another, since many aspects besides cost determine modal choice (weight/volume/handling, distance, flexibility/other service dimensions). A priority example is to improve fuel efficiency for the trucking sector, while improving rail infrastructure.
- Through participation in the National Task Force on Vehicle Weights and Dimensions, TC could promote consideration of sustainability by the provinces and territories in establishing truck weight and dimension limits.

Long-term objectives outlined in written submissions include:

- A need for more effective leadership and communication of sustainable transportation objectives in public policy at all levels of government. This would alleviate practices such as decisions to truck garbage from three Toronto area municipalities to Michigan, rather than dispose of the waste locally.
- Focus on system efficiencies: reduce highway congestion, increase fuel efficiency.
- Ensure that short rail lines will be sustainable and offer a safe and economical link with the North American Class I Railroad network
- Improve safety by mode switching to rail.

- Communicate the importance of transportation as an important engine for economic development, and as a career opportunity.

Summary

Key priority measures that emerged from this workshop include the following, grouped into four categories:

Funding

- Performance based funding arrangements should be established to improve the efficiency of the existing transportation system within each mode and to maximize practical improvements achievable within the short term. This includes alleviating congestion at border crossings and gateways as a key area (through the use of ITS and infrastructure upgrades).

Information

- Data collection should be undertaken to inform better decision making, improve global competitiveness, and enable allocation of costs. Data of interest includes goods movement (origin and destination), load efficiency, and multi-modal movements. Required capabilities include data collection, analysis, modeling, and use of partnerships. Accurately scoping the data collection activities was highlighted as important.

Governance

- Alternatives to encourage sustainable transportation shipping choices within the private sector should be explored. This should include analysis to demonstrate the business case. Full cost accounting methods to quantify the sustainability of services within each mode may be one aspect of this analysis (though there is no consensus on this).

Technology

- Support should be provided for research, development, and implementation of new technologies. Technologies could include lighter designs for trucks, engine or equipment improvements (including vehicles used for inter-modal freight movements from air to truck), alternative fuels, and ITS. Support could include information on best practices in other jurisdictions, tax breaks, funding, leveraging funding already in place, developing regulations or removing regulatory impediments, ensuring consistency in standards, and demonstrating leadership.

Closing Remarks

Bob Lyman provided closing remarks and thanked participants for their input at this session. With respect to ideas and recommendations, he assured participants that all input will be reviewed carefully by TC. He also noted that although written comments on this particular workshop should be submitted by June 23rd, other written comments on the broader SDS process can be submitted after that date to www.tc.gc.ca/SDS.



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APPENDIX A

List of Participants

LIST OF PARTICIPANTS

First Name	Last Name	Title	Organization
Les	Aalders	Vice President, Engineering and Maintenance	Air Transport Association of Canada
Malcolm	Cairns	Director, Strategy Research	Canadian Pacific Railway
Rod	Taylor	Consultant	Consulting in Freight Transportation
		Representative (preferred anonymous)	Hudson's Bay Company
Terry	Zdan	Policy Consultant, Sustainable Transportation Development	Manitoba Transportation and Government Services
Alex	Long	Policy Advisor	National Round Table on the Environment and the Economy
Nancy	Lynch	Assistant Directory/Policy	New Brunswick Dept. of Transportation
Kim	Lambert	Director	Ontario Ministry of Transportation
Bill	Raney	Manager, Freight Policy Officer	Ontario Ministry of Transportation
Brian	Welsh	Manager, Supply Chain, Inspection and Maintenance services	Ontario Power Generation
Stephen	Laskowski	Manager & Director, Policy Development	Ontario Trucking Association/Canadian Trucking Alliance
Serge	Viola	Fleet Manager	Purolator
Nicholas	Vincent	Senior Policy Consultant	Railway Association of Canada
Eric	Chan	Transportation Planner	Region of Peel
Murray	McLeod	Manager of Transportation Planning	Region of Peel
Gordon	English	Partner	Research and Traffic Group
Alain	Godard	Transitional Manager	St. Lawrence Seaway Management Corporation
Victor	Deyglio	Presenter	The Logistics Institute
Michael	Sheflin	Chair- Roads, NGSMI, FCM-NRC	Transportation Association of Canada
James	Nolan	Professor, Department of Ag. Economics	University of Saskatchewan
Ruth	Sol	President	WESTAC
Kevin	McAuley	Environment & Dangerous Goods Advisor	Westjet
Transport Canada Representatives			
Elias	Abourizk	A/Technology and Program Analyst	Transport Canada
Nicole	Galvin	Project Manager, Surface Programs	Transport Canada
Phil	Kurys	Director, Sustainable Development Policy	Transport Canada
Robert	Lyman	Director General, Environmental Affairs	Transport Canada
Diane	McLaughlin	A/Manager, Sustainable Development	Transport Canada
Sebastien	Richard	Economic Analyst	Transport Canada
Marty	Risen	Senior Environmental Engineer	Transport Canada
Rebecca	Smalley	Sustainable Development	Transport Canada
Lindsay	Smith	Sustainable Development Officer	Transport Canada
David	Weber	Environmental Analyst	Transport Canada
Facilitators			
Laurie	Giroux	Facilitator	Marbek Resource Consultants
Greg	McGuire	Facilitator	Marbek Resource Consultants



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APPENDIX B

Final Agenda

TRANSPORT CANADA'S 2007-2009 SUSTAINABLE DEVELOPMENT STRATEGY WORKSHOPS

FREIGHT TRANSPORTATION WORKSHOP

AGENDA

Time	Activity
8:00	Coffee and Continental Breakfast
8:30	Registration and Networking
9:00	Overview of the day and expected outcome Introduction of panel members (Facilitator – Greg McGuire, Marbek Resource Consultants)
9:15	Transport Canada's SDS – Context Setting: Robert Lyman, Director General, Environmental Affairs, Transport Canada.
9:35	Presentation 1 – <i>SDS Issue Paper</i> : (Gordon English – The Research And Traffic Group)
9:55	Plenary – Q & A
10:10	Health Break Networking
10:25	Presentation 2 – <i>Freight Transportation Logistics</i> : (Victor Deyglio – The Logistics Institute)
10:45	Plenary – Q & A
11:00	Presentation 3 – <i>Sustainability In The Transportation Sector – Reflections And Challenges For The Afternoon</i> : (Dr. James Nolan – University Of Saskatchewan)
11:25	Plenary – Q & A
11:45	Lunch
13:00	Round Tables / Breakouts - <i>Focus Questions (TBD)</i>
15:00	Health Break Networking
15:15	Review of Round Tables / Plenary Discussion
16:00	Identification of key areas for action and strategic partnerships
16:30	Wrap-up and concluding remarks

NB. Please note that the times indicated above represent general guidelines only and that health breaks will be scheduled at appropriate times during the day.