

November 2003

Federal Fuel Tax Allocation to the National Highways System (NHS)

Transportation – Its National Importance

"Good transportation is central to maintaining Canada's place among the world's most advanced economies. Canadians need to know that the transportation network – roadways of steel and asphalt, waterways and airborne highways – is just as critical to their economic well-being as the currently more fashionable information highway.¹"

"Roads - and the cars, trucks and buses that use them - are the core of the transportation system and likely to remain so for the foreseeable future. In a country with Canada's dimensions and dispersal of activities, aircraft, urban transit, trains and ships play crucial roles in carrying passengers and freight, but roads continue to carry most of the traffic. Most passenger travel is entirely by road, using private vehicles, or, much less frequently, bus service (urban transit, school, chartered or scheduled intercity buses). Of all freight traffic, something approaching half makes its entire journey by truck, and most of the remainder that is hauled by train, ship or aircraft relies on truck transport at one or both ends of its trip²."

The National Highways System (NHS) developed in the late 1980s, consists of a network of major highways — mainly those linking capitals and major border crossings or ports - with a total length of about 24,000 km. The NHS represents only 3% of the total road network, but it carries about one-quarter of national traffic.

The NHS is a vital national asset that should be sustained and improved by a reasonable share of federal fuel taxes.

Policy Rationale

Approximately half of freight traffic in Canada is carried entirely by truck, and most of the freight traveling by other modes relies on truck transport during a portion of its journey.

The road systems in Canada are currently a provincial and municipal responsibility. While a Trans Canada Highway System was designated in 1949, the federal government only committed to the initial road construction.

The Federal government taxes road users through the federal fuel tax, which provides funds to the federal government's general revenues. The tax is not considered a user charge nor is it based upon costs imposed on users. It is a tax similar to those charged against cigarettes and alcohol³.

The money spent by the Federal government on highways is a small portion of the annual federal fuel tax revenues. In 2002 the federal government collected roughly \$4.7 billion in fuel taxes and invested barely

¹ *Vision and Balance* Canada Transportation Act Review Panel - June 2001

² *Vision and Balance* Canada Transportation Act Review Panel - June 2001

³ Fuel tax surcharges were implemented in 1995 aimed specifically at debt reduction.

\$190 million in highways. The gap between federal fuel tax revenues and total federal spending on roads is alarming with barely 4% of revenues collected from road users being returned to highway programs.

Between 1990 and 2000 federal fuel tax revenue doubled while investment levels dropped. The federal fuel tax, as it is presently used, is not justified by the benefits it returns to the road users from whom the tax is extracted. This disparity fuels contempt for the existing practice.

Further, there appears to be no rationale for the appropriation of federal highway investments. From 1991 through 2002 the federal government contributed the following amounts, expressed in millions to provinces for highways construction:

NB \$462.10	NS \$216.20	PEI \$147.90	NFLD \$568.80
BC \$30.80	AB \$30.00	SK \$35.30	MB \$35.20
ON \$102.90	PQ \$235.60		

The absence of a road fund places Canada behind the USA relative public economic policy. The United States implemented a National Transportation Policy more than 50 years ago, with dedicated funding via the Highway Trust Fund. Existing U.S. federal expenditure levels outstrip Canada's by nearly 10:1, even after accommodating the GDP difference.

In a system where vehicle road use fuel charges are directly related to use of the road infrastructure, one would expect a similar increase in road spending over the same time period. This is not the case in Canada.

The revenue collected by the federal government is significant, but its spending is not. For example the Strategic Highways Infrastructure Program (SHIP) is a five year, \$500 million highway construction program launched in 2000. There are 3 major criticisms of SHIP:

- It is an ad hoc program of short duration;
- Funding criteria is partially population based, but does not recognize the importance of the National Highway System in the low population density areas of Canada; and
- The \$500 million over five year program is a fraction of the estimated \$19 billion investment deficit.

PUBLIC SUPPORT

In a public opinion survey of Canadians, conducted in July 2002 for the Coalition to Renew Canada's Infrastructure (CRCI), by Pollara:

- 58% supported federal funding for the NHS through an allocation of gasoline taxes;
- 55% believed that funding improvement of Canada's NHS should be shared between the federal and provincial governments;
- 38% of prairie respondents believe that the federal government should fund 75% or more, of the NHS cost.

Polling in western Canada by the Canada West Foundation in 2002 found that transportation was regarded by western Canadians as one of the top 3 priorities to the economic success of the region.

National polling of more than 2565 Canadians conducted by Probe Research between November 2002 and January 2003 in seven major Canadian cities (Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Ottawa and Montreal) found that:

- Concerns about transportation infrastructure are more prevalent in Calgary and Winnipeg;

- 81% of the public supports allocation of a portion of federal fuel taxes to fixing urban roads and bridges.

The conclusions, which might be drawn from the national, regional and provincial polling, are:

- There is dissatisfaction with the condition of streets and highways;
- Canadians believe that the federal and provincial governments are responsible to improve the condition of the National Highways System with a sizable percentage believing that the federal government should shoulder the primary responsibility;
- There is strong support for dedicating provincial fuel taxes towards provincial highways and federal fuel taxes towards the National Highways System;

What remains is that practical, cost-effective solutions be implemented to address the problems.

Economic Benefits

Economic benefits would accrue from sustained programs of reinvestment and enhancement of Canada's National Highways System. Those include:

- Transportation represents a significant cost in both the manufacture and delivery of product to the market place. The ability therefore to reduce transport costs improves economic competitiveness and growth regardless of economic sector.
- Roadway improvements which reduce transportation costs not only increase industrial productivity, competitiveness and profits, but can act as a regional economic stimulus⁴. The impact of a new road or rail line that reduces shipping costs from an isolated region can motivate farmers to "expand their production, hire more workers and purchase more equipment at local stores, increasing economic development in that area."⁵
- Failure to invest in highway transportation to enhance efficiencies, results in cross subsidization of other road users, which effectively are non-productive expenditures, doing nothing to enhance economic growth.
- User's external expenses increase as a result of poorly maintained highways. These include higher vehicle maintenance costs, increased fuel consumption therefore costs and, regional opportunity costs from an inability to attract business and tourism due to poorly maintained highways.
- Private citizens also benefit from non-business use of roadways. Highway improvements are important to society and progress the "quality of life" for individuals. It is estimated that the typical household spends between 15-20% of net income directly on transportation, plus indirect costs for parking, and taxes for transportation facilities.⁶ Accordingly, investments which enhance travel efficiency can result in reduced household expenditures, freeing up personal income for productive expenditures.
- Business investment in heavy machinery and related support equipment would be considerably higher because the increased demand for construction services would justify and rationalize the

⁴ *Dedication of Federal Fuel Tax Funds*, Yellowhead Highway Association 2003

⁵ Victoria Transportation Policy Institute online document.

⁶ Victoria Transportation Policy Institute online document.

fiscal ability and business rationale for such investments. This was one of the side effects of the Canada Infrastructure Works Program (CIWP).

- Federal government revenues would increase over current baseline levels fuel taxes including road, rail and air, income, corporate, sales and GST as a result of the added economic activity and related spending. Similar impacts would benefit provincial treasuries as well.
- Improved highways reduce accident costs. Highway crashes involve significant economic costs, including medical, rehabilitation, lost wages, legal fees, property damage and reduced productivity at home and the workplace. Highway investments which improve road safety – widening, twinning, realigning, grade separations - can reduce the number and severity of accidents and therefore their related economic costs.

Environmental Benefits

Investing in the upgrading and thereafter maintaining Canada's national highways system, is consistent with environmental stewardship and sustainability objectives. Its contribution therefore to the environment is positive and includes:

- Vehicles traveling on good roads cost 20 per cent less to operate than those on substandard road surfaces;
- A reduction on one minute of 'unexpected' travel time is worth 2.5 minutes of travel under normal circumstances;
- The cumulative impact of the above two points is both economic and environmental as they effect lower fuel consumption, less greenhouse gas emissions, cleaner air;
- Congestion along the system has not only safety but environmental impacts. Eliminating or reducing congestion reduces accident rates, fuel consumption and air pollution;
- A substantial portion of asphalt removed in road projects is recycled, reducing demand for aggregates and petroleum based products.

Funding Principles

Funding of Canada's National Highways System (NHS) should support the following principles:

- Federal road use fuel taxes, should be regarded as a user fee paid for road use. They should be **allocated** in whole or in part for investment in the construction and maintenance of the National Highways System (NHS);
- Funding must be **sustainable, reliable, predictable, transparent and accountable**;
- Participating jurisdiction contributions are **incremental** to their established base line budgets;
- Project funding should be rationalized, based on **objective selection criteria** including cost/benefit, environmental, remoteness, population density, national interests, and social benefit considerations;

- Management of priorities, investment strategies, selection process and funds, should involve the participation of government, user groups and industry, to assure **transparency** of decision making and minimize undue political influence;
- Funds should be **allocated to a separate account**, and subject to annual technical and financial audits to assure public accountability.

The above guidelines support the seven guiding principles enunciated in *Straight Ahead: A Vision for Transportation in Canada* (Transport Canada 2003) and those of the US Highways Trust Fund – see Schedule “A.”

Funding Management Options

Funding management options should support transparency of, and accountability for, decisions made. Two funding management options are offered for consideration. These are based upon international practice and recommendations offered by Canadian review of the issue⁷.

1. A national **Highways Trust Fund (HTF)** administered by a department of government. It offers the following benefits:

- Ensures a sustainable, dependable, reliable and predictable source of NHS financing derived from federal road use fuel taxes.
- Creates a public and transparent relationship between motor fuel road use tax revenues, and funding for Canada’s NHS.
- Provides a financing mechanism established by law to account for road use tax receipts collected by the federal government dedicated for expenditure on the NHS⁸.

2. Creation of an **arm’s length federal agency**⁹ to administer allocated federal road use fuel taxes to the NHS. This in fact is a recommendation of the Canada Transportation Act Review Panel (June 2001). Such an agency would support the principles of sustainability, accountability and transparency of decision making. It should in its structure, accommodate the participation on its board of directors, user groups and industry¹⁰. National Highways System asset management principles could include those identified in Schedule “C.”

Summary of Benefits to Dedicated Fuel Tax Funds

Benefits of dedicating revenue to fund investment in the NHS include:

1. Enforces the principle of matching cost to benefit; it links the costs of the system to those who benefit by its use;
2. Assures continuity of an identified funding stream;

⁷ The Canada Transportation Act Review Panel Report (June 2001) suggested three funding management mechanism options:

1. Establish a Federal roads and transportation funding agency to disburse Federal fuel tax revenue to projects identified by the Provincial governments, e.g. the projects identified in the National Highway Program proposal.
2. An agency responsible for the National Highway System could be established which is funded by all levels of government. Funding would come directly from the tax receipts collected along this system.
3. The Federal government could give the provinces an annual sum reflecting the Federal fuel tax receipts provided the agencies be established for administering the funds, are given specific mandates.

⁸ Based on the US Highways Trust Fund - see Federal Highway Administration, HTF Primer.

⁹ See suggested agency attributes – Schedule “B.”

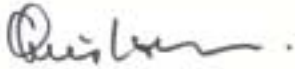
¹⁰ New Zealand has implemented such an approach. The ‘*Transfund*’ is an arm’s length government agency, which is responsible for the spending decisions for roads. Its financing includes fuel taxes, vehicle registration fees, and eight-distance charges for trucks. Its board of directors is comprised of representation from government, road users, and industry.

3. Facilitates progressive improvement to the NHS and incrementally addresses the investment deficit;
4. Provides the nation with a strategically important highways system which underpins all commercial, tourism and personal transportation requirements.

Conclusion

"Road funds, which earmark fuel tax dollars for highway spending have been used successfully in several countries and are recommended by the World Trade Organization for developing countries based on their success. Most notable, and comparable to Canada, is the use of road funds by the USA. The road fund in the USA was established in the 1950s and each successive generation has been the benefactor of good highways and the funds to maintain and develop them¹¹."

Respectfully submitted,
Western Canada Roadbuilders &
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¹¹ *Dedication of Federal Fuel Tax Funds*, Yellowhead Highway Association 2003

Schedule "A"

The seven guiding principles enunciated in *Straight Ahead: A Vision for Transportation in Canada* (Transport Canada 2003) are summarized as follows:

1. Highest practicable safety and security of life and property
2. Efficient movement of people and goods to support economic prosperity and a sustainable quality of life.
3. Respect for the environmental legacy of future generations of Canadians.
4. User pricing that better reflects the full costs of transportation activity and transportation infrastructure.
5. decisions that meet user needs – based on governance models that provide for stakeholder involvement and transparency.
6. Reasonable access to the NHS for Canada's remote regions.
7. Accessibility of the national transportation network without undue obstacles for persons with disabilities.
8. Partnerships and integration among jurisdictions and with the private sector.

Principles supporting the US Highways Trust Fund as applied to Canada are the following:

1. *Economic Vitality* – support Canada's economic vitality both domestic and international.
2. *Safety* – increase the safety and security of the NHS for all users.
3. *Accessibility* – increase the accessibility and mobility options including remote areas;
4. *Environment* - protect Canada's environment and promote energy savings.
5. *Integration* – promote seamless integration of transportation modes.
6. *Efficiency* – promote efficient system management and operation (including efficient user movement and costs); and
7. *Preservation* – emphasize preservation of the existing transportation system¹².

Schedule "B"

Key agency attributes should include:

- ❑ Responsibility for the National Highways System (NHS).
- ❑ Financial self-sufficiency with dedicated, transparent, direct user charges generating revenues matching expenditures.
- ❑ Rational priority setting for maintenance and investment using both economic and social objectives as the guiding principles.
- ❑ User representation in board structure appointed by the federal government.
- ❑ The corporate mandate reflects a "project management" emphasis. Its operations are governed by best management principles while understanding public sector needs.
- ❑ Board authority to manage the system is based upon clearly articulated and adopted national priorities.
- ❑ Agency decisions must be transparent and take into account less populated and remote regions of Canada.
- ❑ Agency is subject to regular technical and financial audits conducted by the Federal Auditor, released annually by way of a report to the House of Commons.

¹² Based on the US Highways Trust Fund - see Federal Highway Administration, HTF Primer.

Schedule "C"

The following are important asset management principles:

- Value Engineering Reviews of projects to determine that the most economical solution or option has been considered and all aspects of the project and their impacts on the end user have been taken into consideration. Value Engineering has resulted in significant construction cost savings.
- A commitment to all phases of a Highway project rather than a staged approach, where only budgets for certain phases of a project are approved. The staged approach is inefficient as the "shelf life" of designs, and property implications need to be re-evaluated if considerable time has elapsed between the latest design and the approval to proceed to construction.
- Ensure early tender calls and contract awards to the design and construction communities, with 80 per cent of the baseline budget being tendered and awarded October through January, and the remaining 20 per cent before the end of August.

This would also have the impact of extending the construction season from five months (currently mid-May to early October), to eight months (April 1 to November 30), thereby enhancing industry employee incomes, revenues to government and minimizing social costs related to Employment Insurance and Welfare.

- An annual and five-year NHS Capital and Maintenance Program allows industry to better plan for human and capital resource decision making. This facilitates a more efficient design, material supply and construction process in which the final product is delivered to the roadway user in a shorter time frame and to the owner, at a lower cost.
- Employ a partnering philosophy between the agency, the consulting and construction industries to allow the experience and skill sets to be applied to the financial and end product benefit of all parties.
- Encourage Design/Build where applicable to facilitate product delivery at significantly less cost and within a shorter time frame.
- Encourage the application of leading edge Canadian technologies, materials, and products in roadway/structural design and construction. Focus on technologies and practices which provide:

- longer life cycle	reduced maintenance costs
- superior strength	enhanced durability
- resistance to corrosion	increased productivity
- increased cost efficiencies	expanded design options
- early warning systems for structural fatigue	reduction of site inspections
- Application of life cycle costing in concert with new technologies, material and practices. Seventy-five (75%) per cent of asset costs relate to maintenance and rehabilitation; 23.5% for initial capital cost; and 1.5% for initial engineering and design. When considering a new project, or upgrading an existing system, a proper life cycle costing analysis should be completed and applied in the design of the work to minimize the life cycle maintenance costs.
- Minimize deferral of optimum maintenance and rehabilitation to circumstances where the impact on the life expectancy and life cycle of the asset is minimal.