Appendix 3
Design Considerations for the Proposed Roads and Transport Funding Agencies

The Panel believes that some much needed discipline can be applied to road pricing and investment decisions through the use of 'road funds' or, more generally, funding agencies for roads and transport with defined objectives and a means of including users in agency decisions. The basic purpose of these agencies would be to

- promote efficient charges that reflect the costs of the activities engaged in by different classes of road users; and to
- promote spending decisions that will give road users the highest possible return on their funds.

In other areas of transportation infrastructure, the federal government has turned to the use of self-financing not-for-profit organizations to achieve more efficient service delivery. The agencies established to manage airports, ports, air navigation and the St. Lawrence Seaway provide useful models. The Panel sees merit in establishing such an agency, or agencies, for roads, with a mandate based on the principles of efficient management.

The model used for the infrastructure agencies must be adapted, however, to the particular economic and political features of the Canadian road system, to take account of several significant differences between roads and these other types of infrastructure:

- network interrelationships are much more important in roads;
- road access has been provided customarily, without explicit cost recovery, to all but the most remote communities;
- road operations, revenue collection and funding are managed by multiple jurisdictions; and
- fuel charges, licence fees and other road-related charges are important government policy concerns, not likely to be delegated to non-elected bodies unless the advantages are overwhelming.

In particular, these complicate the choice of which parts of the road network would be managed by the proposed new agencies and which revenue sources they would become responsible for.

At the same time, there are examples around the world of agencies or practices with at least some of the attributes the Panel believes should govern road and transportation funding and management.[1] They include the U.S. Highway Trust Fund, which is funded in part through dedicated revenues; Japan's Road Improvement Special Account, a road fund that includes both national and local taxes, as well as an oversight board; and forms of road fund approaching the World Bank's model in a number of developing countries. In addition, semi-autonomous operating agencies have been created to manage highways in the UK, Sweden, Finland, Spain, Ireland, and a number of developing countries. Finally, New Zealand has established the most comprehensive version of funding and management arrangements of the type the Panel proposes for Canada.

The evolution of the New Zealand approach is instructive. In 1989, a special operating agency, Transit NZ, was put in charge of the main highways system. It was placed under the direction of a board with user representation. Existing charges for road use were transferred to it, and it was given the authority for spending decisions on both maintenance and expansion. It was also given responsibility for joint funding of secondary roads (owned by local authorities) and for funding urban transit or alternatives to roads in other modes, if they were more cost-effective than road spending.

After Transit NZ had been in place for five years or so, it was judged that the agency's spending was favouring primary highways, to the relative neglect of secondary roads and alternatives to roads. In 1996, a new agency, Transfund NZ, was created to remedy this. It is entirely a funding agency (not an operational provider of any services), receiving revenues from the government and allocating them among the competing demands for maintenance and expansion of the primary highways (still operated by Transit NZ), local authority roads, urban transit, and investment projects in modal alternatives. Its 5-person board is now composed of two representatives of Transit NZ, one representative of road users, one of local authorities, and one representing 'other public interests'.

Options for Roads and Transport Funds in Canada

The road fund concept emphasizes effective management to achieve efficient resource allocation. The idea is to discipline decisions on road spending by requiring that a network be self-sufficient from its revenues and by establishing a decision-making body in which the road users obliged to pay for the system have a major say in how the money is spent. These decision makers would naturally be inclined to minimize spending and charges to create their desired system. They would want to charge as directly as possible for costs occasioned, in order to economize on those costs — encouraging the types of vehicles and patterns of road use that reduced those costs. Users would seek to maintain the network in a way that minimized its life-cycle costs and to spend on expansion projects that maximized the benefits they obtained from the user charges they paid.

The simplest type of road fund would therefore be one responsible for achieving self-sufficiency in the infrastructure costs of a defined and viable network. Imposing additional public interest objectives — such as supporting less viable feeder roads or incorporating environmental charges — would require careful design, because of the added complexity and to avoid diluting the internal discipline of the self-sufficient network. Charging for external social costs such as pollution would substantially complicate the design, as those charges should not be allocated to network improvement (but should be used possibly to reduce distorting taxes elsewhere). Such charging also requires a public consensus that does not yet exist and is probably a more remote prospect than converting existing infrastructure charges to a new funding agency, which is possible immediately.

The simplest design would be a *highway agency* responsible for the infrastructure costs of the primary highway system. Such a network would include the parts of intercity highways that pass through cities, but not other essentially urban highways or expressways. That network, in any province or nationally, could clearly be self-sufficient from user fees.

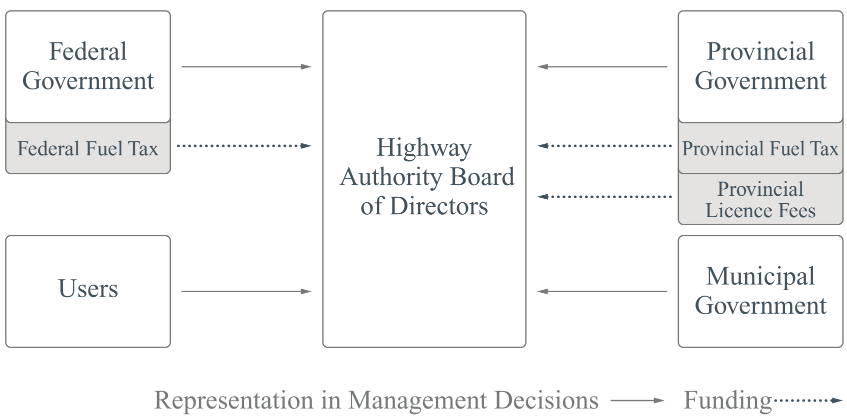
A key question would be which existing revenues to assign to a highway agency initially. In the long term, the agency could adopt efficient charges aimed precisely at its needs. But initially some or all existing fuel taxes and licence fees would be allocated to it. An initial model might see the federal and a provincial government allocating the estimated fuel tax revenues generated on the primary highway system to the highway agency for that province. The remainder would be allocated for use on secondary highways and municipal roads. It would probably also be reasonable to assign only some portion of annual licence fees to the agency (probably on the basis of vehicle-kilometres), with the rest remaining for use on other roads. (At present provincial fuel taxes and licence fees are allocated mostly to provincial road authorities, though transfers for roads from provinces to municipalities could be interpreted as originating in the fees and fuel taxes.)

A province's highway agency should be directed by a board that includes representatives of users, possibly motorists and trucking associations, as well as the government(s) involved. (The model would be that of Transit New Zealand.) It would probably not have the authority to set its own charges at first, but should be given the task of advising the relevant minister on appropriate charges (and doing the necessary research).

The agency would receive the revenues from the assigned charges and would have authority for all expenditures on the network. It might be given authority to borrow for network investment, pledging only future revenues. It would need to budget for network maintenance expenditures, based on life-cycle costing models. It would consider proposals for investments in network improvement and expansion and allocate funds to them based on its own assessments of priorities. It should be required to report comprehensively on network performance, costs and expenditures and be subject to external review.

A schematic representation of this type of agency is shown in Figure 1.

Schematic of Provincial Primary Highway Agency

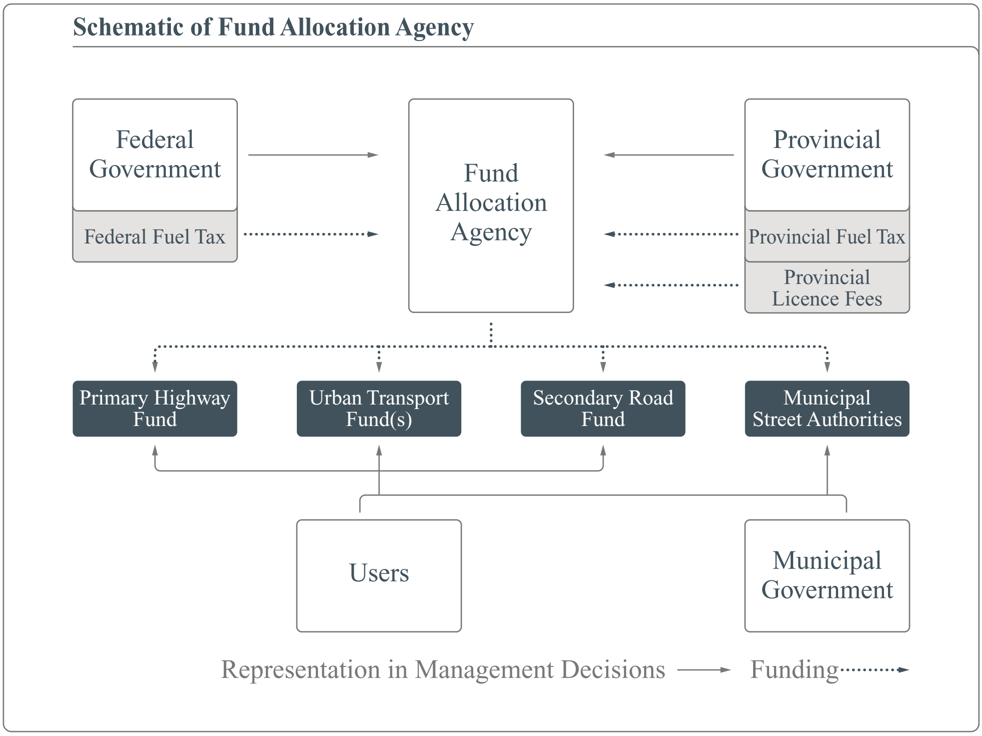


A broader design would be a *highway and rural roads agency*, with responsibility for secondary highways and main rural arterial roads, in addition to primary highways. At present those additional roads are normally funded partly by the province or territory and partly by regional or municipal authorities, from property taxes. If the agency were to be self-sufficient, it would need to have assigned to it sources of sufficient additional revenues to pay for the added network. This would include the relevant fuel taxes and proportions of licence fees; but it is not likely that traffic volumes on the secondary roads would generate enough revenues from those sources to replace all current regional or municipal spending, given the breadth of these rural networks (particularly in Prairie provinces, for example). Some regional or municipal contribution would still be necessary. A simple solution would be for the agency to pay a fixed proportion of the amounts required to maintain and expand the secondary network. (The New Zealand solution is to pay 50% of the costs of such work.)

Conceivably, municipal roads and streets could also be added to the agency's responsibilities — so that it managed all highways, rural and urban roads. In practical terms, however, the differing objectives for municipal streets in providing access and other services, the alternatives to vehicle use available for them, and general municipal planning objectives, separate from transport planning, suggest that municipal road decisions should remain with that level of government. If self-sufficient funding and management agencies were set up for highway networks, it would be appropriate to assign the relevant portions of fuel taxes and licence fees collected from municipal roads to municipal authorities.

Similarly, in larger urban areas, it would be appropriate to consider instituting urban transport authorities, expanding on the examples now in place: TransLink in Greater Vancouver and AMT in Greater Montreal. These agencies should have responsibility for self-sufficiency and governance, again involving users in charging and spending decisions. They should permit alternatives to road spending, such as transit system expansion, to compete for funds from the road agencies.

Alternatively, if the aim were to have a single *roads and transport agency* in each province/territory, which funded cost-effective alternatives as well as roads, it should have the revenue sources and network responsibility for at least the major urban links. It might in fact be appropriate to make it responsible for all urban public transport subsidies. The model for this



management approach is Transfund New Zealand. A schematic illustration of such an agency is shown in Figure 2.

Finally, if the Panel's proposals in Chapter 11 were adopted, they envisage the federal government negotiating the transfer of responsibility for other primarily intraprovincial services, including passenger rail services and ferries, to the provinces. In this case, negotiations would probably require the federal government to transfer some capitalized amount, or annual payment, to the province in question. These funds would be added to the revenues of the new funding agency, which would then have full authority to decide how to spend them — on the services for which they were negotiated, or on any higher priority, notably including alternative bus services, but also urban transit or roads.

In conclusion, the Panel suggests that the potential efficiencies of such agencies should make it worthwhile for the federal government to allocate fuel tax revenues to the other governments. The precise design and management approach would need careful thought and would probably be the subject of serious negotiation among the governments concerned.

Notes

[1] Examples from I.G. Heggie and P. Vickers, *Commercial Management and Financing of Roads*, Technical Paper No. 409, World Bank, Washington, 1998.