

# **Moving to a Green Economy with Good Jobs: Investment in Transit and Passenger Rail**

## **Introduction**

A major medium- to long-term government investment in public transit would make a significant contribution to reduction of Canada's greenhouse gas emissions, and would also create literally tens of thousands of new jobs. Such an investment would also more than pay for itself in narrow economic terms.

Rising energy prices have already promoted greater use of public transit in Canada in recent years, with a 20% increase to 1.82 billion trips per year between 2003 and 2008.<sup>1</sup> However, Canada is one of very few advanced industrial countries which lacks a national transit strategy, and federal investments fall far short of what is needed to build an optimal transit infrastructure in major urban centres. On top of low investment, very heavy reliance on passenger fares to finance operating costs compared to other countries works against the optimal development of public transit.

## **Transit and Climate Change**

It is widely recognized that reducing excessive personal automobile use is key to a major reduction of greenhouse gas emissions. Personal transportation, overwhelmingly in automobiles, accounts for about one-quarter of Canada's total greenhouse gas emissions. Travel by transit is three to five times more energy efficient than personal travel in terms of energy consumed per passenger kilometre. Use of transit also reduces

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1 Canadian Urban Transit Association (CUTA), 2009 Budget Submission.

traffic congestion, travel time, and thus energy use by those who stay in their cars, and also energy consumed by trucks. Transit investments encourage higher density urban development in areas close to major transit hubs and routes, and some of the higher economic rents on land created by transit development can be used to further expand transit.<sup>2</sup>

The recent Pembina Institute/David Suzuki Foundation study, “Climate Leadership, Economic Prosperity,” put forward a comprehensive plan for reaching ambitious greenhouse gas reduction targets for Canada which would have only very small negative impacts on GDP and small positive impacts on employment. The study was undertaken by M.K Jaccard and Associates, financed by the TD Bank.

This comprehensive plan (see final report pp. 23-25 and attached table) incorporated an ambitious (\$7.7 billion per year) multi-year public investment in support of public transit infrastructure and intercity rail. The money — which would be raised from a major increase in carbon charges — was earmarked for specific transit projects in major urban centres, especially light rapid rail projects and gradual development of three high-speed intercity rail services (Windsor to Quebec City; Edmonton to Calgary; and Vancouver to Seattle) from 2010 to 2030. Together with higher vehicle fuel-efficiency standards, this was expected to reduce annual emissions in the personal transportation sector by 21 MT CO<sub>2</sub>e compared to a “Business-as-Usual” case. This estimate was based on an estimated increase in transit use in urban travel from 5.3% to 8.3% of all passenger kilometres travelled, an 80% increase in rail transit, and a modest 3% shift of intercity travel to high speed rail by 2020. The climate change

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2 See Federation of Canadian Municipalities Big City Mayors’ Caucus, “National Transit Strategy,” 2007.

impact assessment did not include the higher density urban development which would be made possible by new transit infrastructure and higher levels of service.

## **How Much Public Transit Investment Do We Need?**

A 2008 study by HDR Decision Economics for the Canadian Urban Transit Association quantified what expansion of transit would be needed in narrow economic terms to create an optimal balance between transit and auto use in urban areas. Underdevelopment of transit has high costs to households and the private sector in terms of excessively long travelling times and inefficient use of energy. They estimated an optimal scenario would be a 37% increase in annual transit use, and a 4% decrease in annual auto use. Seventy per cent of the benefits would come from reductions in traffic congestion and delays, reductions in vehicle operating costs and auto accidents, and 30% would come from improvements to personal mobility, mainly for lower income Canadians, and enhanced economic development.

They estimated that the cost of moving to an optimal system would be \$71.3 billion in capital expenditures over 30 years, plus an increase in annual operating costs, which would yield a 12.5% rate of return (the midpoint of a range from 8.2% to 16.6%). The capital costs in this study approximate to what CUTA has estimated to be a desirable expansion based on a “bottom up” addition of local plans for expansion, especially the development of rail transit. Much of the benefits of an optimal transit system would flow to the business sector in terms of reduced transportation time and costs.

Current levels of capital investment in transit fall well short of those proposed by the Pembina/Suzuki and HRD Decision

Economics studies. Before 2005, Canada was investing well under \$1 billion per year, representing a mix of municipal and provincial government financing. Federal support through the Gas Tax Fund and the Building Canada Fund has slowly increased, raising the level of new capital investment to \$2 billion in 2007, and even more today with the addition of the two-year, \$4-billion Infrastructure Stimulus Fund which is being used, in part, for transit projects.

The Canadian Urban Transit Association (CUTA), the Federation of Canadian Municipalities (FCM), and its Big City Mayors' Caucus have all called for a national transit strategy in which the federal government would provide significant, ongoing, long-term support for new transit infrastructure. They have called for the federal government to pay a 50% share of \$4 billion in annual investment, divided between renewal and replacement expenditures and expansion.

CUTA argues that “provincial and federal infrastructure initiatives provide important and welcome assistance. However, they do not provide long-term financial security. New transit infrastructure can take over a decade to plan and to build — making effective long-term transit planning impossible without a stable, predictable, and long-term revenue stream. Canada’s transit systems need stronger leadership from the federal government to make it happen.”<sup>3</sup>

With respect to high speed passenger rail, a 2008 study for Alberta Infrastructure and Transportation, “Economic Benefits for Development of High Speed Rail Service in the Calgary-Edmonton Corridor,” estimated very large benefits in terms of reduced transportation costs, economic development, and job creation

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3 CUTA Issue Paper #22, “A National Transit Strategy for Canada,” 2007.

which would appear to justify major investments. The Ontario and Quebec governments are currently conducting a new feasibility study of high speed passenger rail in the Quebec City to Windsor corridor. In both cases, we need cost — benefit studies of specific plans to provide a service. The U.S. side of a proposed Seattle-to-Vancouver high speed service is well underway.

## **Public Transit and Jobs**

The Pembina/Suzuki study included no estimates of job creation attributable to the public investment part of the overall program. However, an Informetrica Ltd. study for the Federation of Canadian Municipalities calculates that a \$1-billion per year investment in transportation infrastructure generates 11,900 jobs in Year 1, falling to 7,700 in Year 5. Of those jobs, about half in the first year (5,600) would be in construction, falling to 5,200 in Year 5. Scaled up to a \$7.7-billion per year program, job creation would be almost 100,000 in Year 1, with about 50,000 jobs in construction, falling gradually as the program continued.

A Sierra Club/Greenpeace/Alberta Federation of Labour study, “Green Jobs: It’s Time to Build Alberta’s Future,” cites Alberta government multiplier figures indicating that investment in passenger transportation generates 20,000 person years of direct and indirect employment per \$1 billion invested (p36). Transit investment is a mix of relatively labour-intensive construction activities, purchase of machinery and equipment, and services from manufacturers and other business, and increased employment in operations of new and improved systems.

The HRD Decision Economics study found that on top of the construction and manufacturing jobs created while an optimal

system was being built, operating an optimal system would create 65,000 permanent full-time jobs in the transit sector.

The positive job impacts from higher levels of investment in transit could be increased by Made-in-Canada procurement policies. While the import content of construction and transit systems operation is low, Canada imports significant quantities of transit equipment. In 2007, we imported \$694 million worth of “buses and other public transport passenger vehicles.”<sup>4</sup> We continue to import transit vehicles from the U.S., even though we have significant domestic manufacturing expertise and capacity, and despite the fact that the U.S. has Buy-American policies in this sector. Indeed, Canadian companies have been obliged to establish production facilities in the U.S. to access that market.

Bombardier, with manufacturing operations in Ontario and Quebec, is a major global supplier of a wide range of transit vehicles. New Flyer of Winnipeg is a major producer of heavy-duty transit buses, and Nova Bus (Volvo) and Orion (Daimler Buses North America) are also very successful domestic manufacturers of transit vehicles. The Canadian Urban Transit Association<sup>5</sup> cites many examples of Canadian expertise in transit system design, software development, and manufacturing of specialized technical equipment.

As a very rough rule of thumb based on total manufacturing shipments (not value added) divided by total employment, \$300,000 of shipments is associated with every direct manufacturing job. Displacing these imports through domestic production would thus create about 2,000 new manufacturing

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4 HS Code 8702.

5 Issue Paper #31, “Canada’s Transit Suppliers.”

jobs, even before any significant increase in current capital investments.

There has recently been an active campaign in favour of greater domestic content in public transit vehicle purchases, with the City of Toronto decision to buy buses from a plant in Thunder Bay leading the way. Ontario currently gives preference to Canadian bidders on public transit contracts.

## **Conclusion**

Investing almost \$8 billion per year in transit and intercity rail as called for by the Pembina/Suzuki plan to reach Canada's climate change objectives would mark a major step forward to a more sustainable economy, and would be a huge creator of jobs. While this requires more study, such a program would create some 100,000 jobs per year, about half in construction, and with many other actual and potentially more jobs being created in the manufacturing sector and among private sector suppliers of specialized services. Operating expanded transit systems would also be a major source of new jobs. Available studies suggest that the purely economic returns of such an investment would far outweigh the costs.

With Canada entering into what promises to be a very fragile economic recovery, and with government borrowing costs at historically low levels, the moment to launch a major expansion of public transit and passenger rail has definitively arrived.

**Table 20: Transit infrastructure project by city, including cost estimates**

<b>Summary</b>		
Total by 2020: \$51.4B intracity plus \$7.8 to 25.7B for high speed intercity = \$59.2-77.1B		
Montreal \$3.52B; Toronto \$17.5B; British Columbia \$11.1B; Ottawa \$3B; Edmonton and Calgary \$0.3B each for existing, \$5B each for expansion; \$5.7B for smaller centres; Windsor to Quebec City high speed \$4-20B; Edmonton to Calgary high speed \$1.8-3.7B; Vancouver to Seattle high speed ~\$2B on the Canadian side		
<b>Greater Toronto Area and Hamilton</b>	<b>Estimated Cost by 2020</b>	<b>Date Announced</b>
Metrolinx Regional Transportation Plan (RTP) (includes <i>MoveOntario 2020</i> )	\$50B over 25 years (\$2.5B/year by 2015)	
MoveOntario 2020 – 52 priority transit investments from the RTP, including rail link from Union to Pearson, subway extensions, GO transit expansions	\$17.5B (\$11.5B Ontario gov't, \$6B federal gov't)	\$6B (35%) requested from federal gov't, Ontario \$11.5B (65%)
Sheppard East Light Rail Transit (LRT) project	\$1B	May 2009 funding commitment
Regional transit projects, including the Finch West LRT, Scarborough RT upgrade and extension, Eglinton Crosstown LRT (to Pearson), York Viva BRT, and feasibility study for rapid transit in Hamilton	\$8.6B	2009 funding commitment
New Toronto Streetcars (204)	\$1.2B	June 2009 funding commitment
<b>Montreal</b>		
	\$6.7B over 20 years, \$1.76B over the first five years	\$250M/year requested from federal government
Construction of new LRT lines	\$1B	2007 proposed
Rail link with airport	\$0.5-\$0.8B	Fall 2009 final details expected
<b>Ottawa</b>		
LRT construction, BRT expansion	\$3B	2008 proposed
<b>Vancouver</b>		
Evergreen Sky Train Line	\$1.4B	2008 proposed
UBC/Millennium Sky Train Lines	\$2.8B	2008 proposed
Expo Sky Train Line	\$3.1B	2008 proposed
RapidBus BC – 9 new routes	\$1.2B	2008 proposed
1,500 Clean Energy buses and maintenance infrastructure	\$1.6B	2008 proposed
<b>Edmonton</b>		
LRT Expansion	\$0.3B	April 2009 funding commitment
New LRT lines to city boundaries	\$9B	2009 proposed
<b>Calgary</b>		
C-Train platform and travel time improvements	\$0.3B	May 2009 funding commitment
<b>High Speed Intercity Trains</b>		
Windsor to Quebec City (Feasibility study stage)	\$4-\$20B, depending on route, land costs, and # of stations, tunnels and bridges requires	Estimate does not include costs of local feeder transit systems <sup>14</sup>
Edmonton to Calgary	\$1.8-\$3.7B	No proposals selected yet
Vancouver to Seattle (Detailed estimates available only for doubling volume of the current one train per day, and safeguarding existing slow speed infrastructure ~\$130M)		

<sup>14</sup> Kennedy, C., B. Karney, E. Miller, and M. Hatzopoulou. 2009. Infrastructure and the Economy: Future directions for Ontario. Martin Prosperity Institute: Toronto, ON.

Exploration of two Canadian Greenhouse gas emissions targets:  
25% below 1990 and 20% below 2006 levels by 2020