



## TRANSPORTATION FACTS – Automobiles

### Automobiles

#### *Economics of Driving*

- Researchers who have analyzed case studies in the United States and Canada suggest that at least 20 percent of commuters who now drive alone would choose to carpool or use public transit if employers required them to pay market rates for parking they now receive free. (*Source: National Transportation Library. "Managing Employee Parking in a Changing Market"*)
- In Canada, parking can add an estimated \$746 per year to the cost of a house, and \$743 to the cost of an apartment. (*Source: Litman, Todd. Transportation Cost Analysis: Techniques, Estimates and Implications. Victoria, B.C.: Victoria Transport Policy Institute; cited in Alvord, Katie. "Divorce Your Car! Ending the Love Affair with the Automobile." Gabriola Island: New Society Publishers, 2000.*)
- For every \$100 of retail spending in 2000, Canadian consumers spent \$36 on motor vehicles, gasoline, parts and services. (*Source: Vancouver Sun*)
- In Canada, the average amount of money needed annually to own and operate a car: over \$9000 (approx. 20% of average household income) (*Source: Canadian Automobile Association*)
- Private motor vehicles were subsidized by about \$2.7 billion in the Lower Mainland in 1991. Public motorized transport was subsidized by about \$360 million. (*Source: GVRD. 1993. "The Cost of Transporting People in the British Columbia Lower Mainland".*)
- Cars' direct internal costs consume about 15 to 20 percent of household budgets in Canada and the U.S. (*Source: Litman, Todd. Transportation Cost Analysis: Techniques, Estimates and Implications. Victoria, B.C.: Victoria Transport Policy Institute; cited in Alvord, Katie. "Divorce Your Car! Ending the Love Affair with the Automobile." Gabriola Island: New Society Publishers, 2000.*)
- Since the 1930s, car dependency has helped to at least triple the proportion of personal expenditure going to transportation. (*Source: U.S. Bureau of Transportation Statistics, "Pocket Guide to Transportation", Washington, D.C.: U.S. Dept. of Transportation, 1998, 19; cited in Alvord, Katie. "Divorce Your Car! Ending the Love Affair with the Automobile." Gabriola Island: New Society Publishers, 2000.*)

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### *Inefficiency of Driving*

- The contemporary automobile is embarrassingly inefficient. Of the energy in fuel that it consumes, at least 80 percent is lost, so that at most only 20 percent is actually used to turn the wheels. (Source: Hawken, Paul. *Natural Capitalism*.)
- Transportation of all types accounts for more than 25% of the world's commercial energy use, and motor vehicles account for nearly 80% of that. (Source: World Resources Institute. *1998-1999 World Resources: A Guide to the Global Environment*. New York: Oxford University Press, 1998.)
- Daimler Chrysler is devoting \$1.5 billion to fuel cell development, and plans to produce and sell 100 000 fuel cell cars by 2004. (Source: French, Hilary and Mastny, Lisa. *State of the World 2001*, Oxon Hill: World Watch Institute, 2001.)

### *Traffic and Congestion*

- Between 1996 and 1999, rush-hour traffic on main roads and bridges in the GVRD increased by eight per cent - twice the rate of the region's population growth. (Source: TransLink, July 2002.)
- Congestion has caused transit speeds to slow by seven per cent during the past decade. In the rush hour, one 40-foot bus can take the place of 21 cars, which can occupy as much as 1,700 feet of a moving traffic lane. (Source: TransLink, July 2002.)
- As of January of 2000, there were 1,172,866 licensed vehicles in the Greater Vancouver Area. By contrast, there are 872 buses and 136 Skytrain cars serving the public at rush hour. (Source: GVRD)
- There were 1.2 million registered motor vehicles on Greater Vancouver roads as of 1999 and that number is expected to increase by 60% in the next 20 years. (Source: Environment Canada. 2001. *Pacific and Yukon Region Environmental Indicators*. "Smog over the Lower Fraser Valley of British Columbia." [http://ecoinfo.org/env\\_ind/region/smog/smog.htm](http://ecoinfo.org/env_ind/region/smog/smog.htm))
- At times in the past decade, we have added almost 3 cars per hour to the region's road system. (Source: Transportation Plan Discussion Paper. 13 September 1999. p. 8)
- According to 1999 survey results, the total number of vehicles on Lower Mainland roads during the a.m. peak period is 363,946; the total number of vehicle passengers (not including driver) is 135,443; and the average occupancy per 100 vehicles is 137. (Source: Greater Vancouver Transportation Authority. 1999. *Regional Trip Diary Survey*.)
- 50% of Lower Mainlanders commute every day, mostly in autos by themselves. (Source: GVRD. 1995. *A Comprehensive Overview of Transportation Demand Management Public Opinion Research*.)

- The average car makes 2000 trips of 3 kilometres or less a year. Over 1/3 of work trips in the GVRD are less than 5 kilometres. Many of these trips could easily be replaced by walking or cycling. *(Source: TransLink Regional Bicycle Plan. Urban Systems, May 2000.)*

### *Pollution*

- While air quality has improved in some areas - due to less industry and better pollution controls on cars - the growing rate of vehicle purchases and kilometres driven are leading to declining air quality in large cities in Canada and across the world. *(Source: Health and Air Quality 2002, BC Lung Association study.)*
- Transportation is the single largest source of GHG emissions in Canada, accounting for about 25% of Canada's total emissions in 1997. The sector also accounted for the largest share of the growth of emissions between 1990 and 1997. *(Source: Government of Canada. Climate Change 2000 Backgrounder. February 2000; "Vision and Balance: Report of the Canada Transportation Act Review." June 2001. Minister of Public Works and Government Services Canada.)*
- In his latest report on air quality, the Chief Medical Health Officer for Vancouver and Richmond says 15-150 people die every year in the Lower Mainland from air pollution. *(Source: CBC British Columbia News Online. 23 February 2001.)*
- Studies show that improving air quality in the GVRD is expected to:
  - Save 2,800 lives
  - Prevent 33,000 hospital emergency room visits
  - Prevent \$74 million in crop damage
  - Result in a \$1.6 billion benefit to the provincial economy, between 1985 and 2020.*(Source: Province of British Columbia, Ministry of Environment, Lands and Parks. 1995. "Clean Vehicles and Fuels for British Columbia: A Policy Paper.")*
- Automobiles are one of the USA's largest sources of toxic mercury emissions. The bulk of mercury releases occur when contaminated steel, recovered from scrap automobiles, is melted in electric arc furnaces (EAFs). It is estimated that these EAFs emit 15.6 metric tons of mercury each year, which is more than all manufacturing sources combined. *(Source: Lazaroff, Cat. "Automobiles drive toxic mercury into environment." Environmental News Service. 22 January 2001. Citing report "Toxics in Vehicles: Mercury," a collaboration of the Ecology Center in Ann Arbor, Michigan, Great Lakes United, and the University of Tennessee Center for Clean Products and Clean Technologies.)*