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Exploring Sustainable Transportation in Nova Scotia

A Companion Document to the Sustainable Transportation Strategy
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April 2013
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Spending

Figure 1.
Average Household Consumption in Nova Scotia, 2009

Nova Scotia households spend a lot on transportation, second only to shelter. About 20% of what we consume goes towards paying for transportation which is, on average, about $8,900 per year. For those with a car, this number is likely higher.
Greenhouse Gas Emissions

Figure 2.
Greenhouse Gas Inventory for Nova Scotia, 2010

Transportation is one of the largest contributors of greenhouse gas (GHG) emissions in Nova Scotia, second only to electricity production. Transportation accounts for approximately 26% or 5310 kt CO\textsubscript{2} eq\textsuperscript{1}. Nova Scotia already has stringent regulations for the electricity sector that are spurring emissions reductions. Transportation initiatives will play an important role in helping meet our obligation to reduce overall GHG emissions to 10% below 1990 levels by 2020.

\textsuperscript{1} Kilotonnes of carbon dioxide equivalent

(Environment Canada, 2012)
The transportation sector can be broken down into five segments: road transportation, civil aviation (domestic aviation), railways, navigation (domestic marine), and other (including off-road vehicles and pipelines). The road transportation segment is by far the largest source of GHG emissions, accounting for approximately 70% of the transportation sector’s emissions. Passenger vehicles and light trucks account for almost half of the sector’s total emissions.
Different modes of transportation contribute different amounts of GHG emissions. Across North America, consumer preferences show a trend towards larger vehicles, such as sport utility vehicles (SUVs), pick-up trucks, and minivans. Larger vehicles produce more GHG emissions than smaller vehicles. Busses produce fewer GHG emissions per passenger than most types of passenger vehicles. Walking and cycling produce no GHG emissions at all.

1 Emissions are for a typical vehicle in each category. Bus is assumed to have 10 passengers, light rail transit to have 23.6 passengers. Emission factors based on those from Transport Canada, Urban Transportation Emissions Calculator. Available at: http://wwwapps.tc.gc.ca/prog/2/UTEC-CETU/Menu.aspx?lang=eng

Note: Plug-in Hybrid vehicle emissions may vary depending on electricity fuel source.
Transportation is the largest energy consuming sector in Nova Scotia, accounting for 38% (62.4 Petajoules) of Nova Scotia’s total energy use. That’s more than the commercial and industrial sectors combined.
Not only is the transportation sector the largest energy consuming sector in Nova Scotia, but it is also completely dependent on refined petroleum products. In 2010, 87% of the fuel used in transportation was either motor gasoline or diesel fuel.

(Natural Resources Canada, 2012A)
The last eight years alone have seen significant fluctuation in the price of gasoline. With our transportation system’s high level of dependence on fuels, price volatility can severely impact Nova Scotians.
Nova Scotians commute some of the longest distances to work compared to other provinces. Only Ontario commuters travel further to get to work.
The types of cars we drive can significantly impact how much we pay for fuel and the amount of GHG emissions (as well as other air pollutants) we produce.

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2 Annual fuel cost based on $1.25 cents/litre, the average price of gasoline in Halifax in 2011.
In Nova Scotia, the vast majority (73%) of commuters drive to work by themselves in a car while 11% get a ride in a vehicle as a passenger. 15% take transit, walk or ride a bicycle to work. Commuters in Nova Scotia drive alone more than the national average (73% compared to 72%), used public transit less than the national average (6% compared to 11%), and either walked or bicycled slightly more than the national average (9% compared to 7%).
In 2009, passenger vehicles and light trucks in Nova Scotia drove on average 17,400 km, the most in Canada.
In Nova Scotia, physical activity levels have been on a downward trend. Less than 30 per cent of grade 7 students and 5 per cent of grade 11 students (and less than 1 per cent of grade 11 girls) now meet the minimum guidelines. The decline in activity from grades 3 to 7 appears to be growing, especially for girls. (Government of Nova Scotia, 2012B)
The rise in childhood obesity and preventable chronic disease is a global issue. In Nova Scotia today, one in three children and youth is overweight or obese, and rates of unhealthy eating, sedentary behaviour, and inactivity are much higher. Our rates of chronic disease are among the highest in the country. It is unclear whether rates of overweight and obesity may be leveling off in Nova Scotia, as seen in some other places. In any case, rates are unacceptably high. (Government of Nova Scotia, 2012B).
Overweight and obesity rates have increased over the 2005-2010 time periods in adults as well. Our transportation behaviours contribute to sedentary lifestyles and encourage living further from work, making people more dependent on vehicle travel. Sustainable transportation offers the opportunity to address this trend by encouraging less dependence on private automobiles and more physical activity.
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