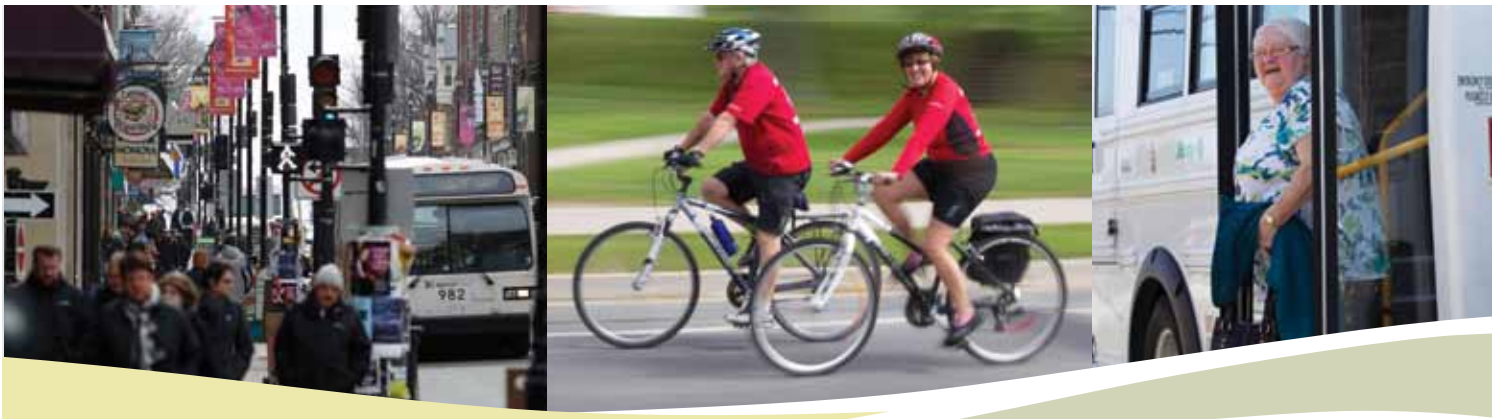


# Choose how you move

## Sustainable Transportation Strategy

NOVA SCOTIA

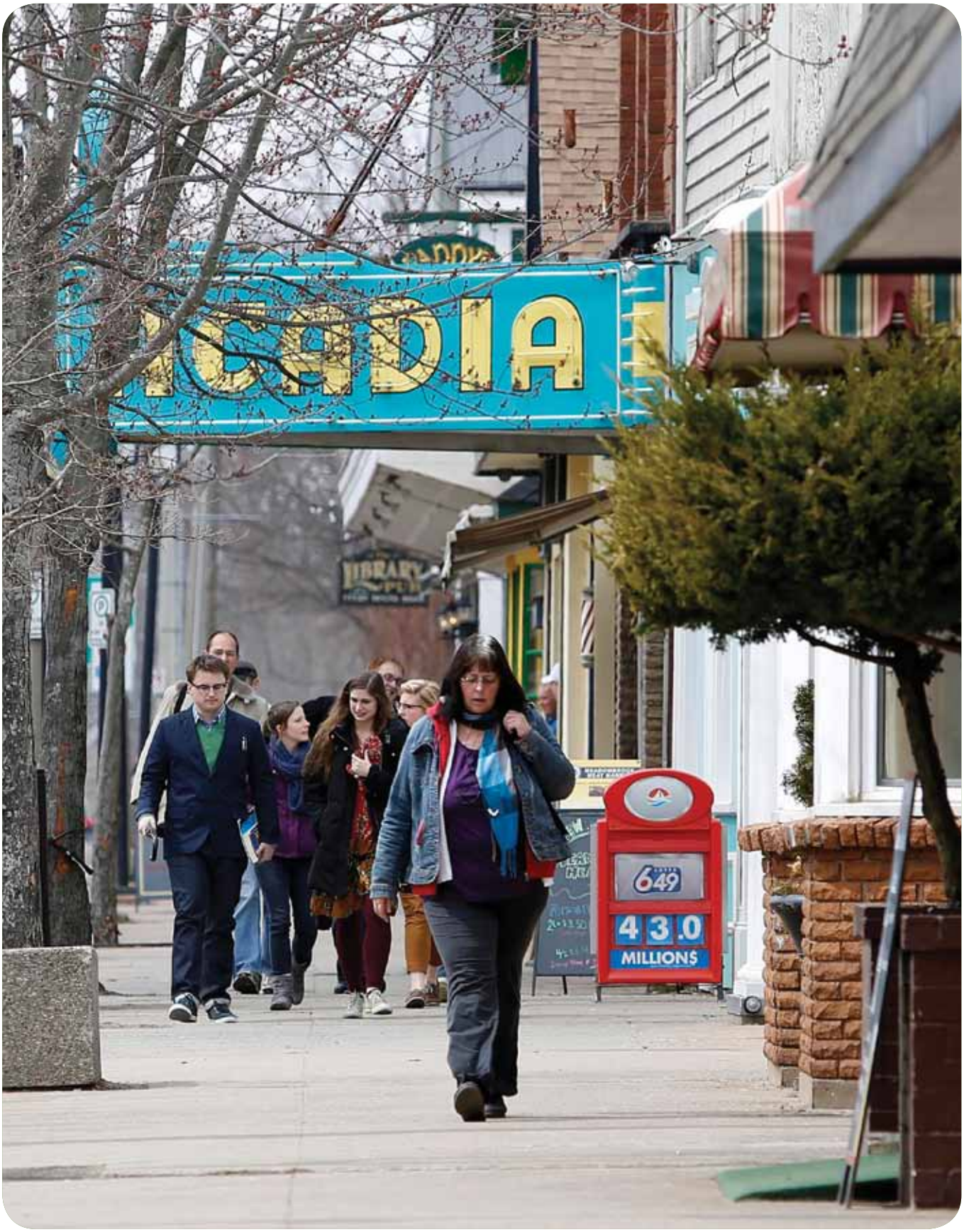
# Choose how you move

## Sustainable Transportation Strategy

April 2013



The Sustainable Transportation Strategy and its companion document *Exploring Sustainable Transportation in Nova Scotia* are both available online at *www.novascotia.ca/sustainabletransportation*


649
43.0
MILLIONS

# Contents

# Executive Summary

Transportation enables us to do the activities we *need* and *want* to do. It is essential to our quality of life, economic progress, and overall health. Over the last century, we have become increasingly dependent on cars and other personal vehicles as our main form of transportation. Cars have made our lives easier in many ways. However, our current patterns of transportation and land use development, which have been designed around the personal vehicle, need to change. Driving has become increasingly expensive as the price of gasoline has risen. Physical fitness has suffered, as people drive more and exercise less. Some people cannot own or drive a car, yet may live in areas with few or no other transport options. On a larger scale, the current transportation system is also producing too much waste greenhouse gases and air pollutants are harming our natural environment.

Nova Scotia's *Sustainable Transportation Strategy* is not about getting rid of the automobile. It's about providing Nova Scotians with choices. In essence, the aim of this strategy is to help everyone in Nova Scotia, urban and rural, to choose how they move.

Sustainable transportation includes

- walking, biking, public transit, and community transit
- community design
- cleaner vehicle technologies and cleaner renewable fuels
- energy conservation and efficiency options including carsharing, telecommuting, and carpooling

The approach to sustainable transportation consists of five main elements:

- *Guiding Principles* of the strategy: to drive less distance, move more efficiently and use cleaner energy, increase access to employment and essential services, and help communities to create locally-designed and regionally integrated solutions.
- *Provincial Leadership* to coordinate efforts across the province and within government, spearheaded by the Department of Energy. The province will dedicate $6 million in funding and support collaborative forums to advance sustainable transportation planning, research, and implementation. Sustainable transportation will be integrated into relevant government policies.

- *Supporting Local Engagement* by establishing a $3 million Sustainable Transportation Fund to support local initiatives that reflect the objectives of this strategy. The province will also support education and awareness initiatives to engage Nova Scotians in thinking about the impact of their transportation choices.
- *Sustainable Transportation Networks* will be specifically developed for active transportation, public and community transit, urban and land-use planning, and vehicles and fleets. "Network" refers to networks of people, knowledge, and action, as well as physical networks. Each network is supported by specific initiatives, but all the networks are closely connected and will function together to support a shift towards a more sustainable transportation system.
- *Tracking Progress* by establishing baseline data and tracking key indicators. A Sustainable Transportation Centre will be created to support this effort.

Nova Scotia's *Sustainable Transportation Strategy* aims to enable governments, businesses, communities, and individuals to work together to find solutions that are creative and robust. Together, we can develop a transportation system that supports a healthier, more vibrant, connected, and equitable province.


Photo Credit: Halifax Cycling Coalition.

# Introduction

Transportation enables us to do the activities we *need* and *want* to do. Walking, biking, driving, and taking the bus help us get to work, to the market, to the doctor, and even out to the ocean to play. Transportation is essential to our quality of life, economic progress, and overall health.

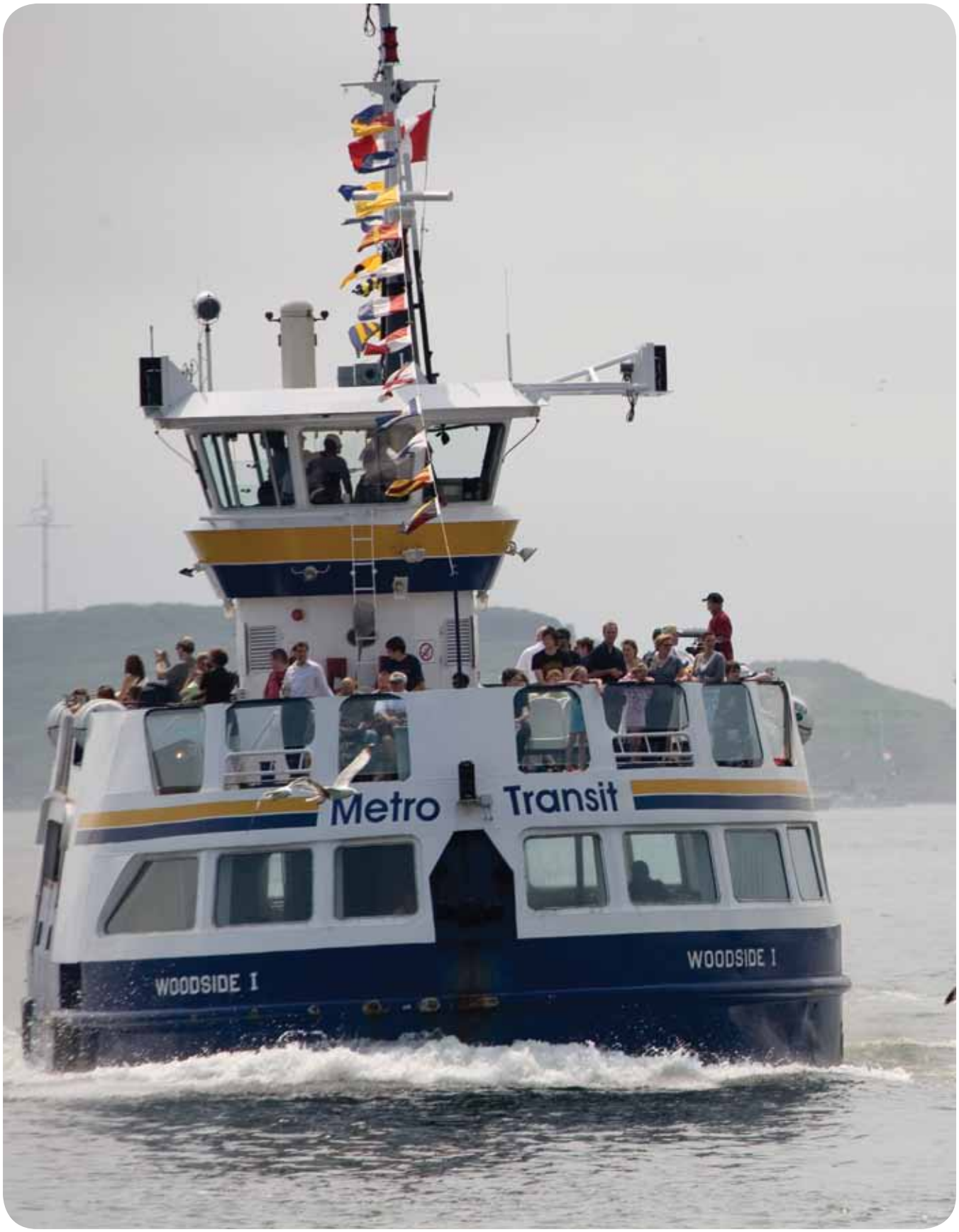
Over the last century, we have become increasingly dependent on one type of transportation: the automobile. The car has made our lives easier in many ways. It allows us to move quickly and travel much farther than was once possible. However, our current transportation system and patterns of land use development, which have been designed around the personal vehicle, need to change. The price of fossil fuels has risen, driving up gasoline prices and making driving more expensive. People are getting less healthy as they drive more and exercise less. Some people cannot own or drive a car, yet may live in areas with few or no other transport options. On a larger scale, the current transportation system is also producing too much waste greenhouse gases and air pollutants are harming our natural environment.

The province recognizes that these trends need to be reversed, and that our transportation system can be designed to support active lifestyles, vibrant, accessible, connected communities, and a clean environment. This strategy is our response. It represents a collaboration of many government departments,[1] and has been designed in consultation with municipalities, businesses, associations, and community groups across Nova Scotia.

This strategy is not about getting rid of the automobile. It is about providing Nova Scotians with more choices that are affordable, safe, and convenient. It's about parents feeling at ease when their kids walk to school, and the elderly being able to get to the doctor. It's about being able to get to work in a way that is pleasurable and inexpensive. It's about giving people options to increase their physical well-being and reduce their environmental footprint.

The aim of this strategy is to help all Nova Scotians, whether urban or rural, to *choose how they move*.

[1] Department of Health and Wellness, Department of Energy, Nova Scotia Environment, Transportation and Infrastructure Renewal, Service Nova Scotia and Municipal Relations, and Economic and Rural Development and Tourism


Metro Transit
WOODSIDE I
WOODSIDE I

# The Nova Scotia Context

The transportation system in Nova Scotia is an integral part of our lives. It provides convenient access to goods and services, links cities and towns, and connects people and communities throughout the province. The economic, social, and environmental impacts are far-reaching. Three examples illustrate the complexity and interconnectedness of the issues facing the transportation sector: energy costs, health issues, and climate change.

## Energy Costs


Our transportation system consumes a lot of energy. In fact, the transportation sector in Nova Scotia is the largest consumer of energy, even bigger than the electricity sector (Statistics Canada, 2011; see Figure 5 in the companion document). Nova Scotians also commute some of the longest distances in Canada, and mostly alone in a car (Statistics Canada, 2006; Figures 8 and 10 in the companion document). We rely mostly on motor gasoline and diesel fuel for our transportation needs (Natural Resources Canada, 2011; Figure 6 in the companion document). Although the prices of these fuels can fluctuate in the short-term, these fuels are getting increasingly expensive (Natural Resources Canada, 2012; see Figure 7 in the companion document for more information). With energy prices increasing and predicted to increase further in the coming decades, it is essential that we figure out ways to use less fossil fuel in the transportation sector.

*In July, 2008, gasoline prices reached as high as 140 ¢ per litre in Halifax. By the end of the year, prices had tumbled back to 72 ¢ per litre. This price swing was mostly due to the economic collapse in the real estate and financial sectors. Since 2008, gasoline prices have steadily increased. In the early part of 2012, gasoline prices had climbed back to 2008 levels, reaching 145 ¢ per litre (see Figure 7 in the companion document). The volatility in the price of such an essential fuel makes it hard to predict and plan how much we spend on transportation.*

## Health Issues

Transportation has profoundly affected our built environment and land use patterns. Our cities and towns have been shaped around the automobile. This makes it very difficult to access services without using a car and has led to troubling increases in both air pollution and physical inactivity over the last century.

Internal combustion engines produce significant amounts of air pollution that affect people and the environment. Carbon monoxide, nitrous oxide, volatile organic compounds, and particulate matter contribute to smog and health conditions including asthma, heart attack, and coronary artery disease, and increase the risk of death from respiratory and cardiac conditions (Health Canada, 2011). Asthma rates in Nova Scotia are among the highest in Canada (Statistics Canada, 2011).

Our car culture has also resulted in a situation where most people sit to move. Physical inactivity contributes to many health-related issues including obesity, heart disease, diabetes, and stroke (Public Health Agency of Canada, 2011). In 2009-10, over 90 per cent of surveyed grade 11 students in Nova Scotia did not meet daily physical activity guidelines and less than 20 per cent of all students walked or biked to school (Government of Nova Scotia, 2012A; Figure 12 in the companion document). These behaviors and activities will have serious consequences that cannot be overlooked.

## Climate Change

Climate change is a real and growing problem, both globally and locally. The province has a legislated target to reduce greenhouse gas emissions by 10 per cent below 1990 levels by 2020. The transportation sector in Nova Scotia produced 26 per cent of the province's greenhouse gas emissions in 2010, the most for any sector except electricity (Environment Canada, 2012). Curbing emissions from transportation is essential to meeting our targets. Furthermore, the impacts of climate change will affect Nova Scotians in a number of different ways that include more frequent extreme weather events, rising sea levels, and warmer average temperatures (IPCC, 2007; Climate Change Action Plan, 2009). This will put further strain on our current transportation system as more roads and other infrastructure are washed out by storms and floods.

We are already starting to see the impacts of climate change in Nova Scotia. Adaptation to climate change will be an important component of the provincial government's approach to all activities. Our transportation system will also have to be resilient to the impacts of climate change, which should be part of all our transportation-related decisions.

# The Role of Sustainable Transportation

One way of addressing these interconnected challenges is to integrate sustainable transportation into the way we approach our transportation systems, from provincial-level policy to individual choices.

Sustainable transportation is about driving less and moving more. It means providing more mobility options to more people, and greater connectivity between the places we need to go. By pursuing sustainable transportation solutions, we can make our communities better places to live, more affordable over the long-term, and less demanding of our natural resources. We need to create social and built environments that make active lifestyles and shared transit an easy and desirable choice for all, regardless of physical ability, age, socioeconomic status, or gender.

Sustainable transportation includes:

- walking, biking, public transit, and community transit
- community design
- cleaner vehicle technologies and cleaner/renewable fuels
- energy conservation and efficiency, including carsharing, telecommuting, and carpooling

Sustainable transportation is not a fixed destination, but an ongoing approach that creates many positive outcomes, such as increased social connectivity, physical well-being, and stronger local economies. Benefits of sustainable transportation include:

- reducing transportation costs as energy prices increase
- improving health and physical activity levels
- reducing traffic congestion
- improving access to services and employment opportunities
- supporting local economic development and competiveness
- adapting to climate change and reducing pollution
- improving road safety for all modes of transport
- improving overall quality of life

Although transportation includes the movement of both goods and people, the focus of this strategy is on the transportation of people. A lot of our energy and dollars go into moving people: around 24 per cent of the energy Nova Scotians consume is for passenger transportation (Natural Resources Canada, 2011; Statistics Canada 2011) and we spend an average of $8,900 per person on transportation each year (Statistics Canada, 2009; see Figure 1 in the companion document). The way we transport goods is also important and related, given that the transportation of people and goods share a lot of the same infrastructure, such as highways, ships, and railways. However, the priorities of this strategy are ensuring a transportation system that provides people with options and access to what they need, while at the same time protecting our environment and enhancing our economy.

Moving toward a more sustainable transportation system involves collectively shifting our individual transportation patterns. It doesn't matter how efficient our cars are if we use them to drive two blocks to the gym. The benefit of an energy efficient school diminishes if all the students have to sit on a bus to get there. Part of this strategy thus focuses on education and awareness initiatives that can help us examine our cultural attitudes toward different modes of transportation, and to better understand the impact of our transportation choices.

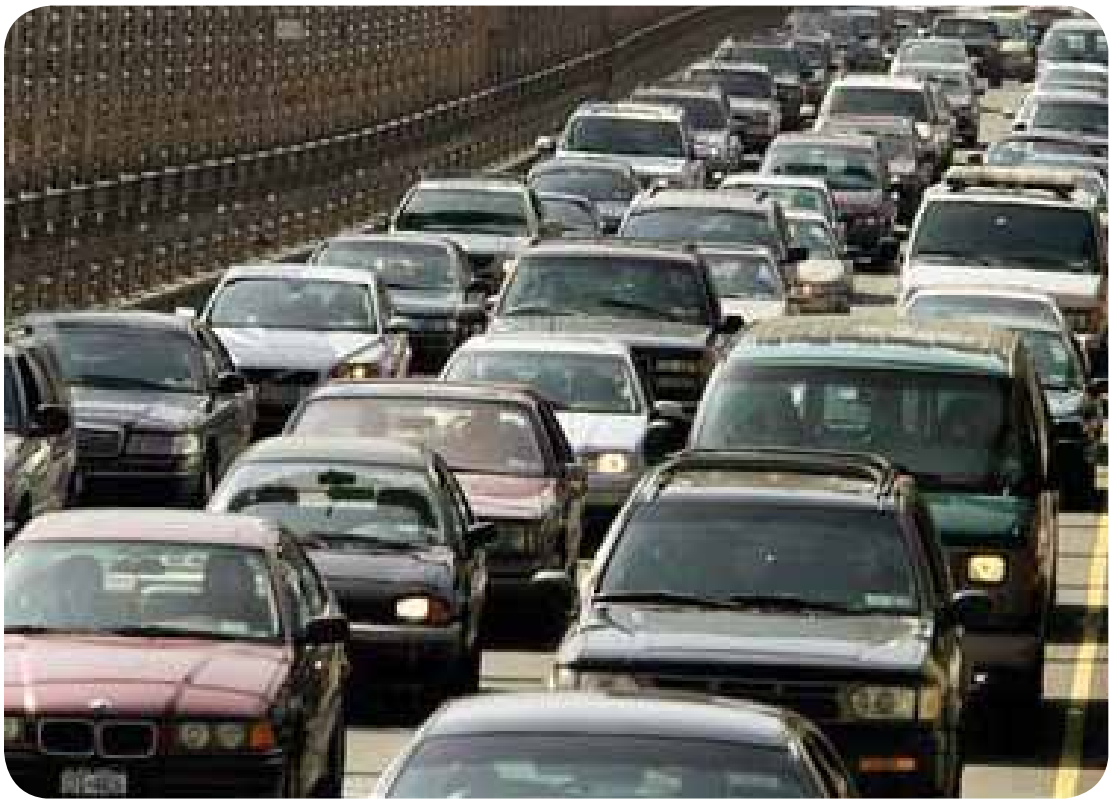
Provincial leadership will be decisive in determining whether we can begin to shift our transportation system. So will municipal leadership and community involvement. Communities need to be active partners in defining and creating transportation systems that work for them. This strategy includes a strong commitment to supporting partnerships and engagement with communities across Nova Scotia.

*The Sustainable Transportation Strategy builds on and supports a number of other government strategies:*

- *Energy Plan*
- *Thrive!*
- *jobsHere*
- *The Environmental Goals and Sustainable Prosperity Act*
- *Climate Change Action Plan*
- *Active Kids Healthy Kids Strategy*
- *Strategy for Positive Aging in Nova Scotia*
- *Road Safety Strategy*

# Diverse Challenges, Diverse Solutions

## Urban Life: Driving Me Crazy



Many people go to and from downtown Halifax every day, usually between eight and nine in the morning and four and five in the afternoon. Like many urban areas, Halifax faces the challenges of traffic congestion and a limited amount of parking, problems exacerbated by limited public transit choices. The fact that Halifax is situated on a peninsula compounds these challenges by limiting the number of entry points into the downtown area.

Congestion is becoming a problem in Halifax. If demand grows, traffic bottlenecks will only get worse. Approaches to the problem include the traditional strategy of increasing road capacity by, for example, adding lanes, or by decreasing the number of cars on the road, for example, by encouraging the use of mass transit. Experience elsewhere has shown that more roads and wider roads do not reduce congestion. When road capacity is increased, traffic increases until the road soon returns to the previous congestion levels (Litman, 2012).



The other problem is parking. Finding parking in downtown Halifax can be difficult. This is one reason that many people and businesses have chosen to locate outside of the city centre. Furthermore, large institutions and growing industries on the peninsula are struggling to provide parking on relatively scarce land. The solution is either to build more parking at considerable cost, or provide people with alternatives such as public transit, private shuttles, carsharing, active transportation infrastructure, and affordable housing.

The course we want to take is the one that produces more benefit at lower cost. It is cheaper and cleaner to get people to drive less than to build more parking lots and roads. If gasoline prices continue to increase, this argument will become even more compelling.

There is an opportunity to transform the transportation patterns and infrastructure in Halifax right now. Halifax is growing. The shipbuilding contract alone will bring thousands of jobs to the province, many of them in Halifax. We have an opportunity to be proactive and build sustainable transportation infrastructure now to meet the demands that future growth will put on the system. The alternative is to wait, which will likely prove to be expensive.

## Rural Life: Strengthening our Communities

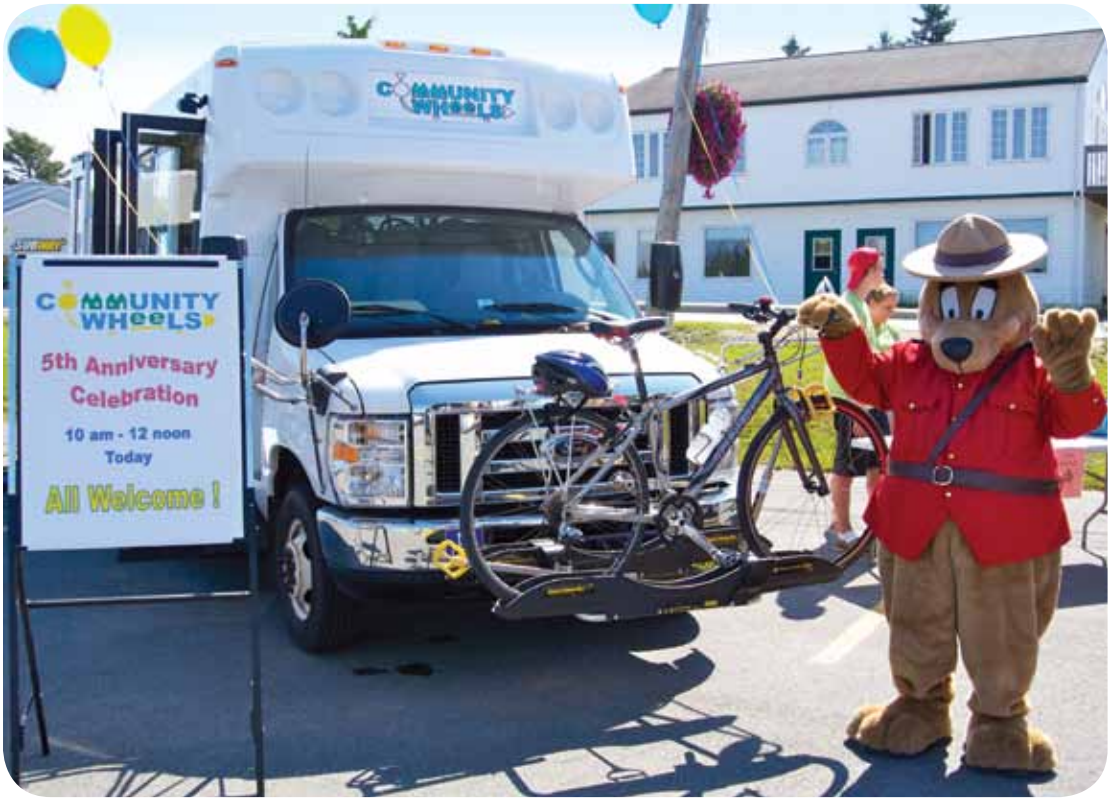



Photo Credit: Community Wheels

Rural communities are an integral part of Nova Scotia's culture and heritage. We are a rural province that has a rich bounty of natural resources, picturesque beauty, and strong social ties that must be preserved. To do this, we need to adapt our communities to better address current and future economic, social, and environmental circumstances. Two of the major challenges are aging demographics and increasing energy prices.

The average age of people in rural areas is increasing (Government of Nova Scotia, 2012B). At the same time, younger people are leaving for opportunities in larger towns and cities outside the province. In many rural areas the car is the only transportation option. This can be very isolating for older Nova Scotians who live far from essential services and can no longer drive, as well as for younger Nova Scotians who don't own a car. To help these communities flourish, viable options for those without cars will be needed.


Photo Credit: Transport de Clare

The increasing costs of energy and gasoline are big problems for rural communities, especially for residents living on a fixed income or those that have to drive long distances to get to work. New transportation solutions are needed. In the absence of new approaches, many rural residents will be forced to pay more to get around or, even worse, will not be able to get around at all.

This does not need to be a bad news story. Sustainable transportation solutions can help communities become better places to live for young and old. For rural areas, the answer may not be large buses. Municipalities are exploring smaller community transit systems and initiatives to create walkable and bike-friendly communities. Improving transport and access to services also has implications for town planning, service delivery, and infrastructure projects.

With sustainable transportation options, rural residents of all ages can choose to remain within their communities. Moreover, the lifestyle offered by these communities could attract more people in the future, especially in our digital age where some jobs can be done from home or away from large urban areas. Creative and innovative solutions will have to be developed by the communities that need them. The role of experts and government will be to support these processes with advice, research, policy development, education, and financial resources.

*See the companion document, Exploring Sustainable Transportation in Nova Scotia, for more details on the Nova Scotia context including charts, graphs, and data sources. Available at www.novascotia.ca/sustainabletransportation*

# The Approach

The *Sustainable Transportation Strategy* includes a mix of high-level strategic directions and short-term actions. The higher level principles will help guide us, and the immediate actions will help us to better understand and refine the principles, and make mid-course corrections if needed. We need to learn-by-doing, while also using available evidence and best practice. This way we can adapt to uncertainties regarding the future and take advantage of current opportunities that are within our control.

Our approach includes five key pillars.

**Sustainable Transportation Pillars**

- Guiding Principles
- Leadership
- Supporting Local Engagement
- Developing Sustainable Transportation Networks
- Tracking Progress

As part of these pillars, the government is committed to 28 sustainable transportation actions. These are described in the following sections.

# Guiding Principles

The aim of the *Sustainable Transportation Strategy* is to ensure that our transportation systems support healthy communities by helping us to drive less distance, move more efficiently, use cleaner energy, and provide access to essential services and employment. The strategy seeks to help realize these goals by engaging with our communities to create locally-designed solutions. "Healthy communities" includes a healthy economy, healthy population, and healthy environment.

## Drive less distance

Nova Scotians have some of the longest work commutes in the country, and most of us drive alone (Statistics Canada, 2006; see Figures 8 and 10 in the companion document). If commuting distances and overall trips in cars decrease, more time can be spent being active, or with family and friends. Decreased commuting expense also means less money spent on gas and other transportation costs. Driving less will require better land use planning within and between our communities, better access to a diversity of transportation options, and better choices for when and how we get to the places we go.

## Move more efficiently and use cleaner energy

There will always be a need to use a vehicle, at least for now, to make longer trips or to get work done. We need to ensure that our vehicles are efficient, that they use the cleanest energy sources available, and that we use them only when we have to. This means using the appropriate vehicle for the task, such as an efficient truck when hauling wood, or an efficient small-sized car when getting to work. It means ensuring our vehicles and fleets use the cleanest possible technologies and fuels for reducing fuel consumption, air emissions, and waste. It also means using the vehicles we do have more efficiently by adjusting our driving habits and finding other ways to share resources, such as carsharing and carpooling.

## Provide access to employment and essential services

Strong and healthy communities need transportation systems that allow all residents, regardless of socioeconomic status, age, gender or physical ability, access to employment and services. We need to develop age- and mobility-friendly communities. This concept, promoted by the Department of Seniors through municipal governments, challenges us to design our communities with youth and seniors in mind, as well as those with physical disabilities. Improving accessibility will ensure that all members of the community have mobility options and feel safe when using them. The design of a bike lane, for example, looks very different if it is designed for a child that has just learned to ride a bike, than for a seasoned commuter. An uneven shoulder can be a dangerous place for a senior to take a walk.

## Engage with our communities to create locally designed, regionally integrated solutions

Every community has different transportation needs based on its residents, its location, and its particular land use patterns. Communities are therefore essential partners in developing sustainable transportation systems that work in their local context, supported by a coordinated vision and leadership from municipal and provincial governments. There is no one-size-fits-all solution, but we can all gain by sharing what we learn. This principle of engagement applies at every level. The province needs to collaborate with municipalities, businesses, and community groups in setting high-level direction. Municipalities need to engage with each other and with their residents. Community groups, councilors, and businesses need to work together at the local level. Collaboration is essential at all levels to create transportation systems that work locally and connect regionally.

# Leadership

Building sustainable transportation systems will require provincial, municipal, and community planning that is coordinated and seamless, as each has an important role to play. The province builds roads, hospitals, schools, and parks. Municipalities build roads, public transit systems, sidewalks, and parks. Communities use these public facilities.

At the provincial level, the mandate for sustainable transportation is currently shared by many departments. For example, the Department of Energy is responsible for renewable and sustainable energy use. Nova Scotia Environment is responsible for addressing climate change and air pollution. The Department of Transportation and Infrastructure Renewal builds roads, schools, hospitals, and other infrastructure. The Department of Health and Wellness is responsible for active transportation and addressing health issues like physical inactivity and preventable chronic diseases. Service Nova Scotia and Municipal Relations is responsible for working with municipalities on issues of mutual importance and overlap.

A lead department is essential for creating accountability and advancing the provincial effort on sustainable transportation in a way that is consistent, strategic, and ongoing. A lead department is also needed to coordinate the collaboration between the federal, provincial, and municipal governments, non-governmental institutions, businesses, and community organizations.

Leadership requires the exploration of new and innovative ways of doing things. Nova Scotia is small and nimble, and therefore able to experiment. We have many university and college institutions that are ready to conduct research and test new approaches, technologies, and ideas.

## Leadership

**ACTION #1:**

The province will assign a clear mandate for sustainable transportation to the Department of Energy, with the responsibility of overseeing the development of the sustainable transportation networks identified in this strategy. The Minister and Deputy Minister of the Department of Energy will be assigned to lead this new initiative and work with key departments, organizations, institutions, and businesses.

**ACTION #2:**

The province has dedicated $6 million to advance sustainable transportation in Nova Scotia. These resources are in addition to $1 million in annual funding for community transit through Service Nova Scotia and Municipal Relations (see Action #16). Distributing these funds will take place through the appropriate institutions, with an emphasis on five broad categories: active transportation, public and community transit, land-use planning, vehicle and fleet efficiency, and community engagement. See also Action #9 below.

**ACTION #3:**

The province will undertake a comprehensive examination of current transportation legislation and regulation, and propose changes to support the development of and remove impediments to sustainable transportation.

## Collaboration

**ACTION #4:**

The province will create an interdepartmental sustainable transportation team led by the Department of Energy, responsible for implementing sustainable transportation networks as defined in this strategy (see below for further discussion). The team will report directly to the Deputy Ministers of Energy, Environment, Transportation and Infrastructure Renewal, Health and Wellness, Service Nova Scotia and Municipal Relations, Education, and Policy and Priorities.

**ACTION #5:**

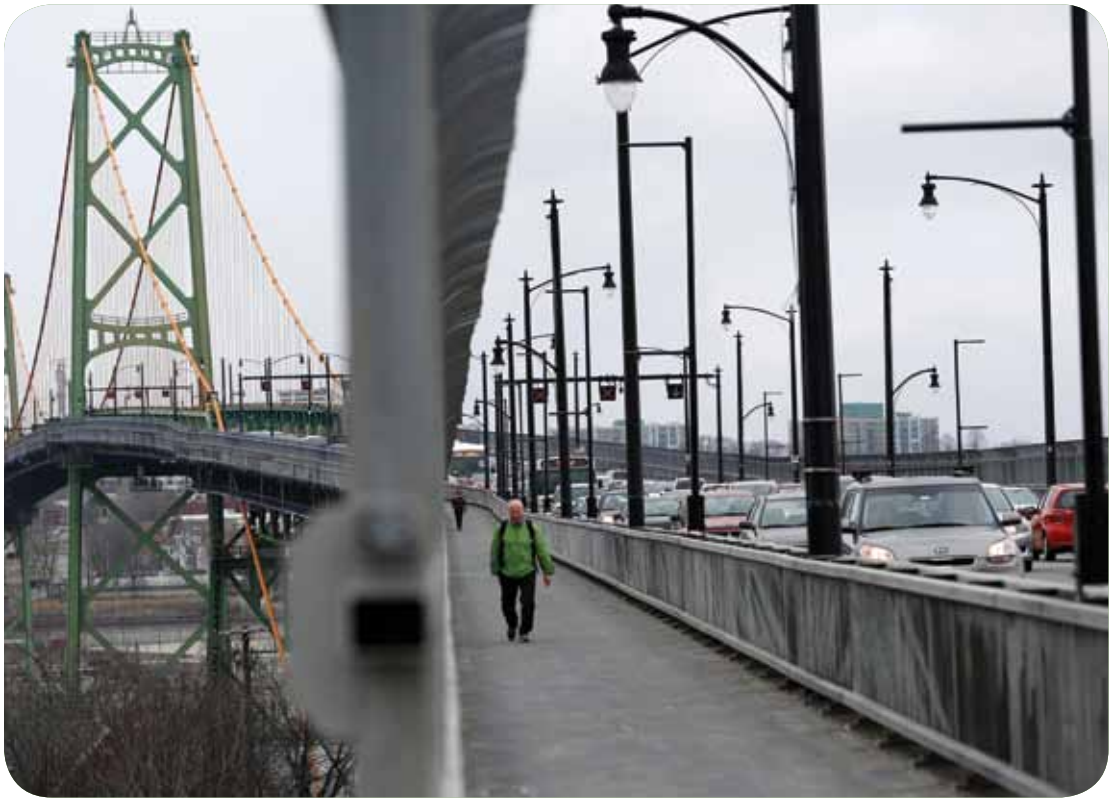
The province will create a Sustainable Transportation Advisory Group with representation from municipalities, non-governmental organizations, universities, businesses, and community groups across Nova Scotia. With the support of the province, the Advisory Group will:

- provide advice on the implementation of current policies and the development of future policies.
- develop a Sustainable Transportation Research and Development Network to facilitate the development of research priorities related to sustainable transportation. The objective of the Network will be to build research capacity in Nova Scotia through government, academic, and business partnerships and grant opportunities.
- develop a Sustainable Transportation Centre linking a number of post-secondary institutions that will collect, track, and disseminate transportation data, trends, and behaviour at the national, provincial, municipal, and community levels.

## Collaboration *(continued)*

**ACTION #6:**

The province will support the creation of an Urban Transportation Commission in Halifax. The commission will include representatives from organizations, such as Halifax Regional Municipality, Metro Transit, the Halifax Bridge Commission, private companies, large institutions including hospitals and universities, property developers, the provincial government, and others as appropriate. The commission will explore approaches to traffic demand management, infrastructure development, land-use planning, and other initiatives that will promote an active, transit-friendly urban environment. If the model proves to be successful, the province will also support its adoption in other urban areas of the province.



## Leading by Example

**ACTION #7:**

The province will require all provincial infrastructure initiatives, including roads, buildings, schools, and sports facilities, to be planned, located, and designed in a way that supports the core goals of sustainable transportation.[2] This stipulation will also apply to any infrastructure projects seeking provincial partnership as a requirement for funding.

**ACTION #8:**

Through the government's internal sustainability initiative, *ReThink: Greener Choices at Work,* the province will:

- promote active transportation facilities, such as showers and bike racks, at all appropriate government-owned or leased buildings.
- encourage the use of active and public/community transit for civil servants.
- support good fleet management by right-sizing and purchasing best-in-class vehicles in terms of fuel efficiency and emissions, and by exploring use of shared resources between departments.

[2] This action includes active transportation specifications laid out in *Thrive! A Plan for a Healthier Nova Scotia*, released in 2012.

# Supporting Local Engagement

Photo Credit: M. Austin

One of the tenets of the *Sustainable Transportation Strategy* is that successful local transportation solutions will be best designed by the communities that need them. Many communities have already made considerable progress and put into action detailed plans for new trails, bike lanes, transit services, and more. Other communities know something needs to be done, but haven't been able to start.

The province can and must take a leadership role in promoting a provincial vision for sustainable transportation and, along with municipalities, can support work at the community level. The province can also encourage knowledge-sharing and new partnerships across traditional boundaries, and facilitate the integration of systems throughout the province. Much of this can be done through actions described in other sections of this strategy, such as those that seek to improve legislative and policy support, establish new forums for collaboration, and provide new support to municipalities. To complement these actions, the province is also offering financial support for local initiatives.

Changes in transportation patterns ultimately come down to changes in individual choice. Moving from a culture heavily reliant on personal vehicles to one where

public and community transit, walking, and biking are part of normal daily life is a major shift. Sustained and widespread engagement and communication around the impacts of our transportation choices are therefore important elements of the province's overall approach to promoting sustainable transportation.

**ACTION #9:**

The province will create a dedicated $3 million Sustainable Transportation Fund that will run for three years and focus on supporting community solutions and engagement around active transportation, public/community transit, land use planning, and vehicle and fleet efficiency. The Fund will support initiatives developed by communities across the province.

**ACTION #10:**

The province will explore and support various approaches to social marketing and education to promote adoption and acceptance of different modes of transportation in Nova Scotia.

# Developing Sustainable Transportation Networks

Sustainable transportation includes four key networks: active transportation, public and community transit, urban and rural planning, and vehicles and fleets. The term "network" refers to networks of people, knowledge, and action, as well as physical networks. Moving forward with all four networks and ensuring that they are interconnected is essential to designing a well-functioning sustainable transportation system.

## Active Transportation

Active transportation refers primarily to walking and cycling, although it can include many other modes of self-propelled transport, and is one of the best ways to increase physical activity on a daily basis and improve health for all age groups. The goal of an active transportation network is to improve accessibility and mobility regardless of age, ability, gender, or socio-economic status. Active transportation is also an important part of the province's strategy *Thrive! A Plan for a Healthier Nova Scotia*.[3] The *Sustainable Transportation Strategy* aligns and complements the *Thrive!* strategy.

Active transportation has many benefits. It improves physical fitness, provides stress relief, connects people with their natural environment, and reduces sedentary time. Increased physical activity helps address rising rates of obesity and chronic illnesses like heart disease and Type 2 diabetes (see Figure 14 in the companion document). When used in place of motorized vehicles, active transportation decreases air pollution, reduces traffic congestion, and enhances road safety. It increases independence and mobility for children, youth, seniors, low-income families, and persons with disabilities, who can all be excluded when cars are required to get around. Active transportation can enhance neighborhoods in ways that attract families, businesses, and workers, contributing to economic and tourism development.

The province supports the vision of an integrated network of active transportation infrastructure across Nova Scotia that connects people within and between communities. Advocates of active transportation, including Bicycle Nova Scotia, have been working hard to gain support for this vision under the name Blue Route. The Blue Route would build on local initiatives such as the North-South bike lane connector in Halifax, signage projects like those being pursued in the Annapolis Valley, and trail networks like those developed through the rails-to-trails program. The framework of a provincial bicycle network would provide a larger context and impetus to help local active transportation projects move forward.

[3] For information and updates on *Thrive! A Plan for a Healthier Nova Scotia*, visit http://thrive.novascotia.ca

Photo Credit: Halifax Cycling Coalition

**ACTION #11:**
The province will work with municipalities and community organizations to develop and implement the concept of a provincial active transportation network, currently known as the Blue Route.

**ACTION #12:**
The province will develop an Active Transportation Policy and Plan. The Plan will include a process for the province and municipalities to work together on priorities, design, planning, and funding for active transportation infrastructure.

**ACTION #13:**
The province will develop a policy that will require active transportation to be included in all provincially funded building infrastructure projects including schools, arenas, and hospitals. Siting and closure processes for provincial buildings will align with the provincial Active Transportation Policy and Plan.

**ACTION #14:**
The province will continue to encourage the development of municipal active transportation plans and policies, and will provide support to municipalities to implement their plans through a sustainable transportation fund. See Action #9 above.

## Public and Community Transit

For the purposes of this strategy, we define transit as public and community transit that provides various mobility services to the general public in shared vehicles. It ranges in scale (large urban, medium exurban, small rural), mode (bus, rail, van, car, and ferry), and community participation. Transit engages citizens by connecting them to their destination, and to the development and ownership of their communities' transit solutions. Typically, public transit often refers to services provided in urban centres, such as large buses and passenger rail, while community transit refers to smaller scale services in more rural areas.

The Public and Community Transit Network has two primary objectives. First, it will enhance the coordination and capacity of community transit systems in rural areas, and between transit systems in rural and urban areas. Second, it will help direct municipal planning objectives and new development within municipalities towards initiatives that support sustainable transportation.

The move to enhance the coordination and capacity of community transit in Nova Scotia is a direct response to requests from the organizations that manage and operate these systems. The province also recognizes that mobility in rural areas is limited and that there is a growing demand for these types of services. The objective of promoting public transit-friendly development within municipalities is seen as a means, over time, to make the incremental changes necessary for public transit to operate efficiently within urbanized areas. The next section will discuss additional actions related to urban and rural planning that also connect to these objectives.

The major benefits of public and community transit include reduced dependence on personal vehicles, reduced energy use and greenhouse gas emissions, improved accessibility to services and employment for all Nova Scotians, and increased physical activity. Overall, transit helps create more livable communities.

Photo Credit: Transport de Clare

**ACTION #15:**
Through the Urban Transportation Commission (see Action #6), the province will work with municipalities to coordinate efforts to upgrade public transit and transit-oriented development in urban areas. This is a high priority area as urban traffic is the least efficient use of the private automobile, and has high indirect costs in terms of the need for downtown parking, street widening, and traffic control.

**ACTION #16:**
The province will increase funding for community transit systems in rural areas. This will be done either through the Community Transportation Assistance Program (CTAP) or the Accessible Transportation Assistance Program (ATAP), programs currently administered through Service Nova Scotia and Municipal Relations.

**ACTION #17:**
The province will support the development of an online information system that helps coordinate all public and private transit systems in Nova Scotia.

## Urban and Rural Planning

Land use planning that supports active transportation and community and public transit is a very important element of overall community design. Low density, dispersed subdivisions discourage active travel and public transit. In contrast, higher density development enables homes, stores, and restaurants to be situated along public transit and active transportation routes. Mixed-use development allows people to do several errands at once in places that are serviceable by public and community transit systems, bike lanes, walking paths, and sidewalks. These features allow transit to be efficient, affordable, and convenient.

Municipalities have direct control over development within their jurisdictions, and so are able to establish land use control policies and regulations that support both public/community transit and active transportation, if there is a desire to do so on the part of residents and municipal council.

There are many examples of land use policies and regulations that will contribute to these kinds of planning objectives. A municipal planning strategy enables a municipal council to establish policies that clearly articulate the goals of the community with respect to sustainable transportation. A land use bylaw allows council to develop regulations that are specifically designed to direct development in ways that support public and active transportation. Some of the many examples are building density requirements, site planning for pedestrian safety, public green spaces, and interconnected sidewalks.

The common elements of sustainable transportation planning are widely recognized by planning professionals and have been well-documented. Many European cities, towns, and smaller communities are planned this way, and public transit and active transportation, such as walking and biking, are far more prevalent in these places than in most urbanized regions of North America.

The main objective for the Urban and Rural Planning Network is to provide support to municipalities that want to prepare formal land use planning documents that take into consideration transit-oriented development and walkable communities. Another objective of this network is to identify key transportation nodes across Nova Scotia and integrate public and community transit, active transportation, and supportive land uses within and between each node.

**ACTION #18:**
The province will work with municipalities to develop a Statement of Provincial Interest on healthy communities and sustainable transportation. One of the primary goals of the Statement will be to promote development within municipalities that supports active transportation, public and community transit, and healthy, walkable communities. This aligns with the government's plans for a Statement of Provincial Interest to support building healthier communities as detailed in *Thrive! A Plan for a Healthier Nova Scotia*.[4]

**ACTION #19:**
The province will increase human resources dedicated to municipal planning within the Department of Service Nova Scotia and Municipal Relations to work with municipalities to develop supportive land use policies and processes.

**ACTION #20:**
The province will work in cooperation with municipalities and other departments to ensure that all municipalities have a municipal planning strategy and land use bylaw that reflect the goals and objectives expressed in the Statement of Provincial Interest.



[4] See p. 51, http://thrive.novascotia.ca/about-thrive

## Vehicles and Fleets


Competitiveness in a global market place can be enhanced by adding value to a product or service, or by lowering costs. Sustainable transportation can help achieve both objectives.

Companies that are greener can have a stronger brand that makes them stand out from competitors. A good example is Purolator, which recently switched to hybrid electric vehicles. Transportation can also be a significant cost to companies that have large fleets or transportation needs. Lowering these costs by purchasing more efficient vehicles or designing more effective logistical processes can significantly increase profit margins. Given that new technologies usually have higher capital costs and uncertainty and risk, programs can be designed to help test and gain familiarity with new vehicle and fuel technologies.

The province has been working closely with QUEST (Quality Urban Energy Systems of Tomorrow)[5] to explore, test, and learn about alternative fuels and vehicles that are applicable to Nova Scotia. QUEST is a national organization that aims to develop integrated community energy systems. Recently, a QUEST NS caucus was formed that includes representatives from provincial government, municipal government, academic institutions, non-government organizations, private sector, utilities, and others.

We can also improve the efficiency of our vehicles and fleets by reducing the number of cars on the road, through approaches such as telecommuting, carsharing, and carpooling.

**ACTION #21:**
The Province will continue collaborating with QUEST to advance sustainable transportation solutions.

[5] See http://www.questcanada.org/ for more information.

**ACTION #22:**
The province will support a Commuter and Large Vehicle Fleet Efficiency Awareness Program, an educational program aimed at Nova Scotia drivers to help improve vehicle fuel efficiency and influence modal shifts to alternative and more sustainable forms of transportation within the province.

## Alternative vehicles and fleets

**ACTION #23:**
The province will help fund innovative projects to encourage the use of electric vehicles through a $100,000 grant to Efficiency Nova Scotia Corporation.

**ACTION #24:**
The province will research options for public recharging infrastructure and off-peak charging for electric vehicles, and conduct an assessment of the viability of integrating electric vehicles into the electricity grid.

**ACTION #25:**
The province will work with the marine sector to look at ways to improve the efficiency of fishing vessel fleets.

## Alternative fuels

**ACTION #26:**
The province will continue to support and expand on efforts to examine alternative motive fuel options for Nova Scotia, such as compressed natural gas and biofuels.

# Tracking Progress

Tracking progress and making adjustments based on our learning are essential components to any strategy. Sustainable transportation has many benefits that are hard to quantify directly, and will take time to emerge. Nonetheless, there are some indicators that will let us know we're headed in a positive direction.

The first task is to define a set of indicators that will serve as a baseline and that can be feasibly tracked over time. We need to identify simple indicators that can be tracked at the local level, guided by the sustainable transportation advisory body and the data centre (see Action #5). This work can build on existing national data, previous innovative work by Genuine Progress Index (GPI) Atlantic, university research and local community initiatives. The data centre will help develop, interpret, and analyze data generated across the province.

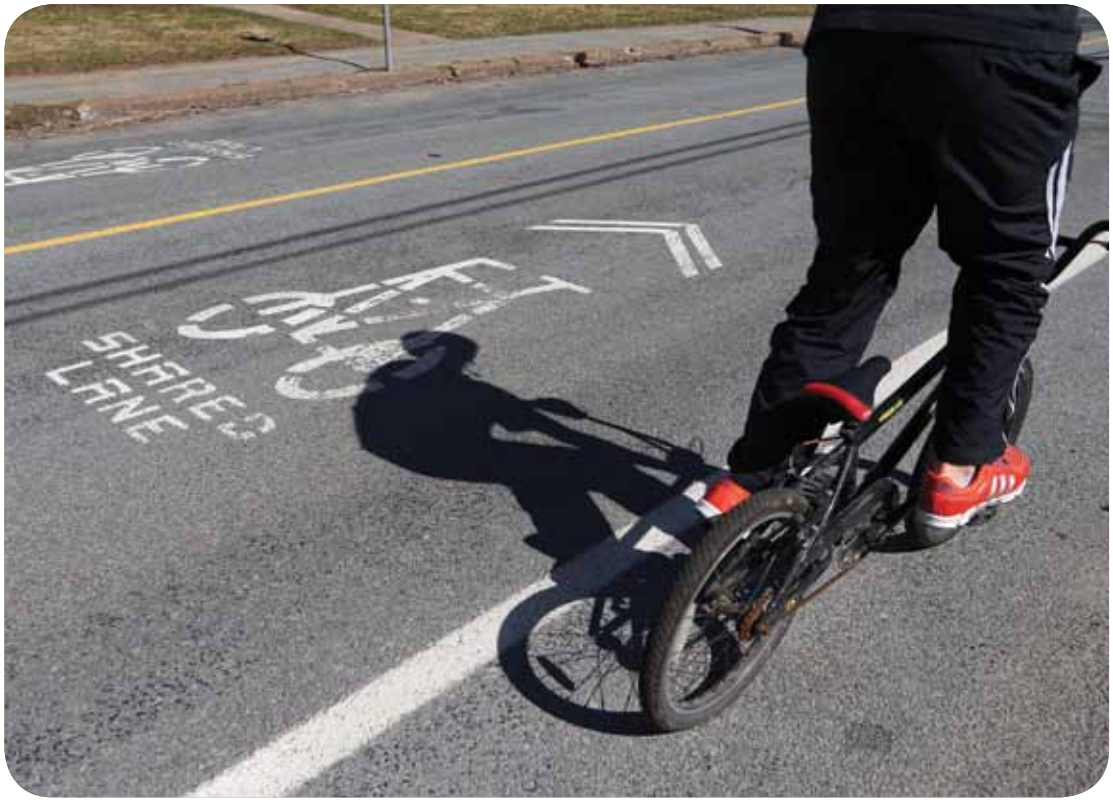
Examples of the types of indicators we need to consider include:

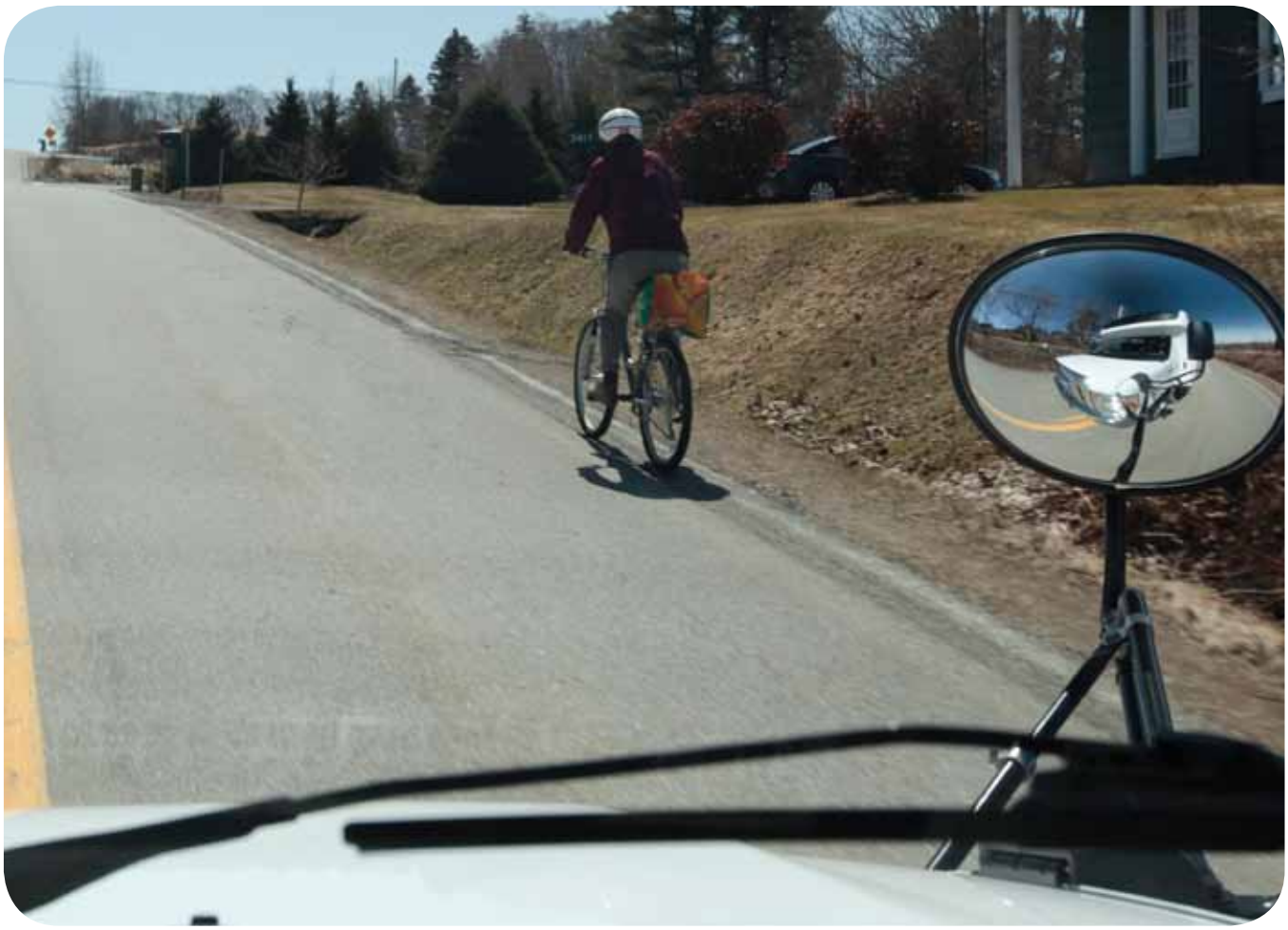
- transport-related indicators, such as modal shifts, vehicle kilometers travelled, trip rates and lengths, and usage frequency of sustainable transportation options.
- levels of energy use, greenhouse gas emissions, and air pollution from the transportation sector.
- land use indicators, such as employment density and proximity to transit stops.
- indirect health and economic benefits linked to increased use of sustainable transportation options.

To track these indicators will require new and more sophisticated data collection tools and techniques. Currently, data on sustainable transportation are collected by a number of institutions. However, very little of the available data is specific to Nova Scotia, provides detail within the various modes of transportation, or can be broken down at the community level.

**ACTION #27:**
The province will publish baseline data on sustainable transportation, develop and monitor key indicators over time, and report annually to the public.

**ACTION #28:**
A Sustainable Transportation Centre will be created (see Action #5). The Centre will collect, track, analyze, and make available transportation data, trends, and behaviour at the national, provincial, municipal, and community level.





# Conclusion

Nova Scotia is one of the best places in the world to live, work, and play. Sustainable transportation is essential to this quality of life and in helping to keep our communities healthy. Promoting it will require leadership from all levels of government and participation from all communities across Nova Scotia. It is the responsibility of the province to ensure that the four key networks—active transportation, public/community transit, urban and rural planning, and vehicles and fleets—are well-connected to each other in all regions of Nova Scotia. Municipalities plan and develop supportive infrastructure and policies within our cities and towns. Communities make choices about settlement patterns and the modes of transportation that are used. All these levels are interconnected parts of the same system. We need to work together to develop policies, programs, and behaviours that support the adoption of sustainable transportation options in our communities. This strategy outlines a process for moving forward. It's up to all of us to ensure that it is successful.

# Appendix 1: Related Policies and Initiatives

The *Sustainable Transportation Strategy* builds on the work of several other government strategies and initiatives, as well as the work of community groups and municipalities. These are described below.

## Energy Plan

Nova Scotia's energy plan is clearly focused on a future that has more diverse energy that is local, reliable, green, tax-free and efficient. It is an Atlantic Canadian solution that ensures a stable energy future at the lowest, fairest cost to Nova Scotians. The plan presents a new approach to how we generate and use energy. It means embracing new sustainable practices and cleaner sources of energy.

## Thrive!

In 2012, the Province released *Thrive! A Plan for a Healthier Nova Scotia*, a policy and environmental approach to healthy eating and physical activity that was formulated to address the rise in childhood obesity and preventable chronic disease. *Thrive!* has two simple tenets: eat better and be more active. These two goals have strong overlap with sustainable transportation. It is good for our health to walk to the bus. It's good for our children to learn to safely enjoy walking or biking to school. The way our cities, towns, communities, and transportation systems are designed affects our health. Good public transit, and efficient walking and cycling networks make it easier for people of all ages to be healthier. *Thrive!* includes actions to develop a provincial active transportation policy and plan, as well as commitments to work with municipalities on land use policy, support physical activity and healthy eating, and increase access to places to be active.

## jobsHere

In 2010, the Department of Economic and Rural Development and Tourism released *jobsHere: The Plan to Grow our Economy*. jobsHere outlines the Province's vision for creating good jobs and growing a stronger economy. Sustainable transportation supports this vision. Having access to more transportation options will enhance Nova Scotia's attractiveness as a place to live, work, and travel. It increases Nova Scotia's competitiveness by connecting communities, not only to each other, but also to the world. It also increases Nova Scotia's productivity with fewer visits to the hospital, living longer and healthier lives, and spending less time sitting in traffic or looking for a parking spot.

In 2012, The Department of Economic and Rural Development also produced a five-year *Strategic Framework for Building the Tourism Economy*. A key part of the framework is to improve access to and within the province that is both convenient and sustainable. The aim is to make it easier to travel within the province to see and experience Nova Scotia.

## Environmental Goals and Sustainable Prosperity Act

In 2007, the province adopted the *Environmental Goals and Sustainable Prosperity Act* (EGSPA), which envisioned that the environment, the economy, and ultimately society are inextricably linked. Nothing could be truer to the vision than sustainable transportation. It is not an economic, environmental, or social problem. Rather, it is a combination of all of them. EGSPA was amended in November 2012 through the Green Economy Act and now includes an explicit commitment to support and enable sustainable transportation as a contributing factor to sustainable prosperity.

## Other Actions

Other government departments are also addressing sustainable transportation issues. In 2011, the Minister of Health and Wellness committed to the formation of an active transportation interdepartmental committee tasked with the development of an Active Transportation Policy and Strategy. In 2011, an amendment to the *Motor Vehicle Act* introduced the requirement that cars provide one metre of distance when passing bicycles. In 2009, the Department of Environment released the *Climate Change Action Plan*, which put the province on the path to reducing emissions 10 per cent below 1990 levels by 2020 and addressing the impacts of climate change. In 2005, the Department of Seniors produced the *Strategy for Positive Aging in Nova Scotia*, which addresses a number of issues affecting seniors and includes the goal to provide affordable, safe, and accessible transportation options.

At the federal level, under the Canada-Nova Scotia Gas Tax Agreement, municipalities are required to produce Integrated Community Sustainability Plans, which broadly outline current and future sustainable development needs including transportation. The federal government has introduced vehicle efficiency standards and fuel standards.

Many municipalities and organizations have advanced active transportation with active transportation plans, active transportation committees, and funding from gas tax revenue for active transportation projects. Municipalities and community organizations have also created and advocated for innovative public and community transit options across the province.

Non-government organizations have been developing and implementing behavior change programs concerning sustainable transportation, such as Drivewiser/ Fleetwiser, green mobility grants, and the Active and Safe Routes to School program.

# References


Environment Canada (2012) National inventory report: greenhouse gas sources and sinks in Canada 1990-2009.
Retrieved from *http://www.ec.gc.ca/Publications/default.asp?lang=En&xml=A07097EF-8EE1-4FF0-9AFB-6C392078D1A9*

Government of Nova Scotia (2012A) Keeping Pace: Physical activity and healthy eating among children and youth, key findings from the 2009-10 study.
Retrieved from *http://www.gov.ns.ca/hpp/pasr/KeepingPaceReport.pdf*

Government of Nova Scotia (2012B). Department of Finance Economics and Statistics: Population – Demographics.
Retrieved from *http://www.gov.ns.ca/finance/statistics/stats/default.asp?id=1&sid=3&sid2=*

Government of Nova Scotia (2009) Towards a greener future: Nova Scotia's climate change action plan.
Retrieved from *http://climatechange.gov.ns.ca/*

Health Canada (2011) Road traffic and air pollution.
Retrieved from *http://www.hc-sc.gc.ca/hl-vs/iyh-vsv/environ/traf-eng.php*

Intergovernmental Panel on Climate Change (IPCC) (2007). Fourth Assessment Report: Climate Change.
Available Online at: *http://www.ipcc.ch/publications_and_data/publications_and_data_reports.shtml*.

Litman, T. (2012) Generated traffic and induced travel: implications for transport planning. Victoria Transport Policy Institute.
Retrieved from *http://www.vtpi.org/gentraf.pdf*

Natural Resources Canada (2011) Comprehensive energy use database.
Retrieved from *http://oee.nrcan.gc.ca/corporate/statistics/neud/dpa/trends_tran_ns.cfm?attr=0*

Natural Resources Canada (2012) Fuel Focus.
Retrieved from *http://www.nrcan.gc.ca/energy/1374*

Public Health Agency of Canada (2011) Physical Activity.
Retrieved from *http://www.phac-aspc.gc.ca/hp-ps/hl-mvs/pa-ap/index-eng.php*

Statistics Canada (2006B) 2006 Census of population- topic based tabulations, mode of transportation- Nova Scotia.
Retrieved from *http://www12.statcan.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?TABID=0&LANG=E&A=R&APATH=3&DETAIL=0&DIM=1&FL=A&FREE=0&GC=01&GID=855643&GK=1&GRP=1&O=D&PID=95839&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=76&VID=13608&VNAMEE=&VNAMEF=&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0*

Statistics Canada (2009) Spending patterns in Canada.
Retrieved from *http://www5.statcan.gc.ca/access_acces/alternative_alternatif.action?l=eng&loc=http://www.statcan.gc.ca/pub/62-202-x/62-202-x2008000-eng.pdf&t=Spending%20Patterns%20in%20Canada*

Statistics Canada (2011) Report on energy supply and demand in Canada.
Retrieved from *http://www.statcan.gc.ca/pub/57-003-x/57-003-x2009000-eng.pdf*

Statistics Canada (2012) Asthma, by sex, provinces and territories.
Retrieved from *http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/health50a-eng.htm*

Front cover middle photo credit: Halifax Cycling Coalition.