

## Coollest Cities Results Summary

### About Coolest Cities

Canada's six largest urban areas provide homes and jobs for almost 15 million people, nearly half of our population. Transporting these citizens to and from work, school, health care, shopping and other destinations consumes energy, which in turn contributes to our environmental challenges, in particular climate change. Municipal and other local governments are well positioned to take action on reducing greenhouse gas emissions, especially those from transportation in their boundaries.

The amount of energy consumed for personal transportation in cities depends on urban design — the locations of homes, jobs and services, plus the options for travelling among these locations. Urban design and transportation policies can help decrease energy consumption, save money, limit environmental impacts and make communities more livable.

### Recommendations

Priority initiatives for municipal governments are:

1. Track progress toward meeting greenhouse gas reduction targets from transportation and land-use policies.
2. Reward development of compact communities to limit sprawl in large urban areas. Implement these policies jointly with neighbouring communities to ensure the policies are effective for the region.
3. Invest in low-carbon transportation choices (transit, walking and biking infrastructure).
4. Develop policies to encourage people to live close to work and services, encouraging low-carbon transportation options and reducing time spent behind the wheel.

Provincial and federal governments also have a strong role to play in supporting municipalities by providing direction and funding for developing compact communities and low-carbon transportation choices.

### What is a CMA?

Canada's Coolest Cities focuses on Canada's six largest Census Metropolitan Areas (CMAs) and the core city within each CMA. CMA is a Statistics Canada definition for the metropolitan region that covers multiple municipalities. CMAs are similar to, but not exactly the same as the other designations for the urban areas such as MetroVancouver and the Greater Toronto Area. We use the CMA definitions because they are clearly defined by Statistics Canada, the main source of data for this project. Because the CMAs cover much larger areas than individual cities, the data for a CMA captures more of the region's transportation behaviour.

## City of Edmonton and Edmonton CMA

### Greenhouse gas reduction target

Reduce emissions six per cent below 1990 levels by 2010 and 20 per cent below 1990 levels by 2020.

### Progress

Between 1990 and 2007, emissions grew by 36 per cent.

### About the Edmonton CMA

The Edmonton CMA was home to about one million residents in 2006 with more than 700,000 people living in the City of Edmonton. The CMA includes 35 other municipalities, including St. Albert, Sherwood Park, Spruce Grove, Leduc and Fort Saskatchewan, as well as the counties of Sturgeon, Parkland, Strathcona and Leduc.

### CMA has lowest population density in study

- The Edmonton CMA has the lowest percentage (28%) of its population living in neighbourhoods with at least medium residential density (e.g. Central McDougall) of any CMA in the study. Edmonton CMA covers a very large land area (60 per cent larger than the Toronto CMA, which was second largest in area).
- The Edmonton CMA saw the largest per cent increase (25 per cent) in residents living in high-density areas, but this accounts for less than one per cent of the overall population in the CMA.

### Highest percentage of drivers of all cities in study

- The City of Edmonton and the Edmonton CMA have the lowest percentage of commuters using transit, walking or cycling, however the percentage of people using transit, walking or cycling increased between 2001 and 2006.
- Almost 80 per cent of commuters travel by personal vehicles in the city and more than 80 per cent in the region, with the significant majority of vehicles having only a single occupant.
- Edmonton has the highest number of bike paths per capita of the major cities in this study.

### Troubling trends

- Greenhouse gas emissions continue to increase despite targets established eight years ago to reduce emissions.
- Transportation Master Plan and Municipal Development Plan did not focus on greenhouse gas reductions.

### Positive steps

- Edmonton is planning a major expansion of its LRT system.
- The Edmonton region has a new regional planning process for coordinated planning involving all of the municipalities and counties in the area.
- A neighbourhood-based initiative, called the LocalMotion Challenge, helped reduce car traffic by up to 34 per cent in Parkallen.

Download the six-page Edmonton Case Study: <http://www.pembina.org/pub/2020>

# City of Calgary and Calgary CMA

## Greenhouse gas reduction target

Six per cent below 1990 levels by 2012 and 50 per cent below 1990 levels by 2036.

## Progress

Between 1990 and 2005, emissions grew by 40 per cent.

## About the Calgary CMA

The Calgary CMA was home to 1.1 million residents in 2006, with about one million people living in the City of Calgary. The CMA also includes the City of Airdrie; the towns of Cochrane, Chestermere and Crossfield; the villages of Beiseker and Irricana; the Regional Municipality of Rocky View; and the Tsuu T'ina Nation.

## Most population growth occurring in low-density areas

- Most of the population growth in the Calgary CMA is occurring in low-density neighbourhoods that tend to have fewer low-carbon travel options.
- The Calgary CMA has the second lowest percentage of residents (35%) living in at least medium-density areas. An example of a medium-density area in Calgary is Coral Springs.
- With just one per cent of the population in the Calgary CMA living in high-density areas (e.g. Connaught), it lags far behind Montreal, Toronto and Vancouver (at 16, 11 and 8 per cent respectively).

## Calgarians have second longest commutes in the country

- More than 75 per cent of people commute via personal vehicle, with the significant majority of vehicles having only a single occupant.
- Between 2001 and 2006, commutes in the Calgary CMA increased by six per cent, the largest increase of any city in the study. Residents of the Calgary area now have the second longest commutes in the country (8.2 km), behind Toronto.
- The percentage of people using transit, walking or cycling in 2006 (23%) is less than most other CMAs, but it is increasing.
- Calgary has the second largest number of bike paths per capita of the major cities in this study.

## Troubling trends

- City of Calgary staff noted it is faster for developers to get approval for projects in greenfield areas than in established neighbourhoods, even though the latter have existing public transit and services.
- Council and the public are largely supportive of high-level objectives and principles of more sustainable development. However, there is a lot of debate about the details.

## Positive steps

- imagineCalgary engaged more than 18,000 citizens in the largest visioning process ever undertaken by a city.
- This process was followed by Plan It Calgary, a combined municipal development and transportation plan, which calls for more compact and complete communities, as well as better transportation alternatives.

Download the six-page Calgary case study: <http://www.pembina.org/pub/2022>

# City of Montreal and Montreal CMA

## Greenhouse gas reduction target

30 per cent below 1990 levels by 2020.

## Progress

Between 2002 and 2003, emissions in Greater Montreal grew by 4.4 per cent.

## About the Montreal CMA

The Montreal CMA is Canada's second most populous CMA, with a 2006 population of 3.6 million. The CMA consists of over 80 cities and towns, with the City of Montreal representing 45% of the total CMA population.

## Highest percentage of residents living in high-density areas

- In the Montreal CMA almost 60 per cent of residents live in neighbourhoods with at least medium residential density (e.g. Saint Henri).
- The Montreal CMA is second only to Toronto CMA in having the highest proportion of residents living in areas with at least medium density. The Montreal CMA has the highest percentage (16%) of residents living in high-density areas (e.g. District d'Hochelaga) of all the major Canadian cities.
- The Montreal CMA is growing in the wrong direction, with a smaller proportion of people living in neighbourhoods with at least medium density in 2006 than in 2001.

## Highest percentage of commuters traveling by foot, bike or transit

- In 2006, 46 per cent of commuters in the City of Montreal and 28 per cent of commuters in the CMA travelled by foot, bike or transit.
- Both the City of Montreal and the CMA have the highest percentage of commuters walking, biking or taking transit.
- Montreal had the lowest increase in the percentage of commuters choosing to walk, cycle or take transit between 2001 and 2006.

## Troubling trends

- To take action on reducing greenhouse gas emissions, the city and CMA will have to reverse the negative density trends
- Large infrastructure projects have been proposed in the CMA that will increase car capacity to downtown Montreal and that do not integrate transit options.

## Positive steps

The City of Montreal introduced Canada's first self-service bike rental network, BIXI, in 2009. Bike stations are located throughout the city and riders can take a bike from one station and return it to any other station — making BIXI ideal for city trips. In the first season, more than one million trips were taken with BIXI bikes in Montreal. The city also plans to double its network of bike lanes in seven years.

Download the six-page Montreal case study: <http://www.pembina.org/pub/2026>

# City of Ottawa and Ottawa-Gatineau CMA

## Greenhouse gas reduction target

The City of Ottawa is updating its greenhouse gas reduction targets.

## Progress

Recent estimate of greenhouse gas emissions were not available from City of Ottawa.

## About the Ottawa-Gatineau CMA

The Ottawa-Gatineau CMA, located in both Ontario and Quebec, is the only CMA to cross provincial boundaries. This CMA is home to approximately 1.1 million people living in 11 cities or towns. The City of Ottawa has the highest population (812,129 in 2006), representing 72% of the total CMA population.

## CMA scores highly for low-carbon commuting

- 28% of commuters in the Ottawa-Gatineau CMA chose to walk, bike or take public transit to work, amongst the highest of the major Canadian urban areas.
- The fraction of commuters walking, biking or taking transit increased from 2001 to 2006. Though this increase is small, the CMA seems to be avoiding some of barriers experienced by Toronto and Montreal.
- The City of Ottawa has a relatively low number of kilometres of bike paths per capita; however, the City plans to extensively expand the total number of kilometres.

## Relatively low percentage of population in medium-density neighbourhoods

- The Ottawa-Gatineau CMA has a relatively low percentage (40%) of the population living in neighbourhoods with at least medium density (e.g. Byward Market), similar to Calgary and Edmonton CMAs.
- Data indicate that the percentage of residents living in medium-density neighbourhoods dropped from 44 per cent in 2001 to 40 per cent in 2006.

## Troubling trends

- While Ottawa has set out specific plans to increase walking, biking and the use of transit, the targets are not very ambitious.
- Land-use and transportation departments do not explicitly incorporate greenhouse gas emissions.

## Positive steps

- The City of Ottawa has added 177 hybrid diesel-electric buses to its fleet, accounting for almost 20 per cent of its full-sized buses. Each hybrid bus is estimated to reduce greenhouse gas emissions by 38 per cent compared to a conventional diesel bus.
- The city also introduced a bike share pilot program in 2009. The limited-scale pilot project consisted of 50 bikes and four stations and generated more than 5,000 trips in its three-month trial period.

Download the six-page Ottawa case study: <http://www.pembina.org/pub/2025>

# City of Toronto and Toronto CMA

## Greenhouse gas reduction target

30 per cent below 1990 levels by 2020.

## Progress

Estimate of greenhouse gas emissions from 1990 were not available from City of Toronto. Emissions in 2004 were 24.4 million tonnes of CO<sub>2</sub> equivalent.

## About the Toronto CMA

The Toronto CMA is Canada's most populous CMA, with a population of 5.1 million in 2006. The Toronto CMA and the Greater Toronto Area (GTA) have similar, but not exactly the same, geographic boundaries; some municipalities that are considered part of the GTA are not within the Toronto CMA. The Toronto CMA has about 500,000 people fewer than the GTA. The Toronto CMA contains 21 separate cities or towns, two townships, and one Indian reserve.

## Toronto top scorer on urban density

- In 2006, the Toronto CMA had the highest percentage of residents (64%) living in medium-density neighbourhoods (e.g. Kingsway South) of the urban areas studied, but this proportion decreased between 2001 and 2006.
- More than 160,000 residents live downtown, with a very high proportion of them walking and biking.
- There is a growing trend toward sprawl in the CMA.

## Commuting patterns

- In 2006, the City of Toronto and the Toronto CMA were second only to Montreal in terms of what portion of commuters travelled by bike, transit or foot, with 43 and 28 per cent respectively.
- The portion of City of Toronto commuters choosing to walk, cycle or take transit is increasing.
- In 2006, commuters in the Toronto CMA travelled further than those in any other major urban area.
- The City of Toronto has the fewest bike lanes per capita, but 600 km of new lanes are planned.

## Troubling trends

- CMA growing ten times faster than the City of Toronto.
- Ambitious transit, land-use and transportation plans are in place, but success is jeopardized by lack of funding from the provincial and federal governments. The city may have to resort to unpopular rate hikes, while sprawl infrastructure receives greater funding and car commuters do not face similar cost hikes.

## Positive steps

The Toronto area contains the highest concentration of high-rise buildings in Canada (the second-highest in North America). Many of these are on the outskirts of the city, historically isolated, but the City's bold *Transit City* plan aims to connect dense residential clusters with seven new LRT lines, while these neighbourhoods will be renewed with mixed-use development through the city's Tower Renewal program. The success of these initiatives requires restored commitment of provincial funding.

Download the six-page Toronto case study: <http://www.pembina.org/pub/2024>

# City of Vancouver and Vancouver CMA

## Greenhouse gas reduction target

Six per cent below 1990 levels by 2012.

## Progress

As of 2008, greenhouse gas emissions have returned to 1990 levels, while population grew by 27 per cent. Vancouver is the only city in the study to show progress on this indicator.

## About the Vancouver CMA

The Vancouver CMA is comprised of 21 municipal governments and one unincorporated area. The largest fraction of the population (27%) lives in the City of Vancouver, but Surrey experienced the highest growth in population, adding 47,000 new residents between 2001 and 2006.

## Decreasing percentage of population living in medium-density neighbourhoods

- Vancouver CMA trails both Montreal and Toronto in terms of percentage of the population living in neighbourhoods with at least medium density, such as Oakridge.
- Between 2001 and 2006, the percentage of population living in neighbourhoods with at least medium density has decreased.
- Vancouver CMA was one of only two CMAs to increase the fraction of people living in high-density neighbourhoods, such as Fairview.

## Vancouver leads country in walking and cycling

- A smaller percentage of people in Vancouver use public transit than in Toronto or Montreal, but overall a similar fraction of people walk, bike or take transit.
- In 2006, 16 per cent of City of Vancouver commuters walked or biked to work, the largest percentage of the six cities we studied.
- In the Vancouver CMA in 2006, 25 per cent of workers chose to walk, bike or take transit, falling fourth behind Montreal, Toronto and Ottawa-Gatineau.
- City of Vancouver and Vancouver CMA showed largest improvement in commuters walking, cycling or taking transit.
- The Vancouver CMA was the only CMA to see a decrease in average commute distance.
- City of Vancouver has stated it will not increase capacity of Vancouver's roads for personal vehicles.

## Troubling trends

- Population of the CMA is growing more quickly than the population of the City of Vancouver.

## Positive steps

In 2009, Vancouver announced its goal to be the Greenest City in the World. It has a comprehensive greenest city action plan, which includes ten specific goals for 2020 ranging from green jobs and greenhouse gas emissions to transportation and water conservation.

Download the six-page Vancouver case study: <http://www.pembina.org/pub/2023>