



# CANADA'S COOLEST CITIES



# Calgary & CMA

## Cool Factor: imagineCALGARY

### Canada's Coolest Cities looked at the question: "What are Canada's large cities doing to encourage low-carbon choices for personal transportation?"

#### Calgary increases its cool through plans that engage citizens and encourage integrated solutions

In 2007, the City of Calgary finished imagineCALGARY, which engaged more than 18,000 Calgarians in a conversation about the future of the city — the largest visioning process ever undertaken by a city (see page 2). This process was followed by Plan It Calgary, the new integrated Municipal Development Plan and Calgary Transportation Plan. These two plans were developed by staff with extensive consultation with key industry members, community leaders and the public. The Municipal Development and Calgary Transportation Plans call for more compact and complete communities, plus better transportation and housing alternatives.

These city-wide processes will hopefully also be successful in the wider urban region. The processes have been mirrored by the Calgary Regional Partnership, which is establishing the Calgary Metropolitan Plan to coordinate regional planning and development.





#### Challenges remain

Most of the City of Calgary was developed after the Second World War, when private automobiles became increasingly available. This, combined with a significant amount of available land, has contributed to high growth in suburban areas ever since. Calgary is now facing the pressures of highly auto-dependent neighbourhoods and is making efforts to reverse this trend.

As in any city, it is often difficult to change existing development approaches. City of Calgary staff noted barriers exist inadvertently within their own processes — for example, it is faster for developers to get approval for projects in greenfield areas than in established neighbourhoods, even though the latter bring residents to areas with existing public transit and other services.

The region and provincial government also contribute to barriers. The municipal districts surrounding Calgary have not agreed to the new metropolitan plan, leaving uncertainty as to how regional planning will be done. While the province has recently increased funding to municipalities, Alberta has not been as active as other provinces on working with cities to shift to low-carbon transportation systems.

## RESULTS SUMMARY — CALGARY

-  The Calgary Census Metropolitan Area (CMA; see definition on page 6) showed a net decrease in the number of people living in neighbourhoods with high residential density between 2001 and 2006.
-  The Calgary CMA had the second lowest overall percentage of residents living in medium- and high-density neighbourhoods.
-  More than 75% of commuters in the city and the CMA commute by personal vehicle, with the significant majority carrying only a single occupant.
-  The City of Calgary has the second highest number of bike path kilometres per capita of the six cities studied.

## FOR MORE INFORMATION

[communities.pembina.org](http://communities.pembina.org)

Here you will find the complete Coolest Cities technical report, plus all six Case Studies:

- Vancouver
- Toronto
- Calgary
- Ottawa
- Edmonton
- Montreal



City Photo: Greg Powell, The Pembina Institute

# City of Calgary

## CITY STATS (2006 CENSUS)

**Population:** 988,193

**Land Area:** 726.50 km<sup>2</sup>

**Density:** 1,360.2 residents per km<sup>2</sup>

## City of Calgary's strategy for climate action and transportation

The City of Calgary is currently developing a strategy for reducing city-wide greenhouse gas emissions. In the meantime, the City has adopted and begun implementing the Calgary Transportation Plan and Municipal Development Plan. The strategies in these two plans will help reduce transportation-related greenhouse gas emissions.

These plans are based on 11 sustainability principles, which include creating walkable communities, providing a variety of transportation options, mixing land uses and supporting compact development. In addition, the key directions for the new plans include developing a primary transit network with at least a 10-minute service frequency 15 hours per day. The plans also formally link land use decisions to transit planning.

## City of Calgary's greenhouse gas reduction targets

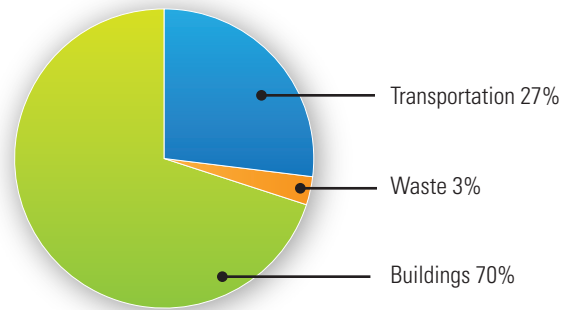
The City of Calgary has recognized the following targets, which were developed by community stakeholders as part of the imagineCALGARY process:

1. 6% reduction below 1990 levels by 2012.
2. 50% reduction below 1990 levels by 2036.

City of Calgary's greenhouse gas emissions grew by approximately 40% from 1990 to 2005.

## What are the City of Calgary's emissions?

In 2005, total greenhouse gas emissions in the City of Calgary were 16.8 million tonnes of CO<sub>2</sub> equivalent.



## COOL FACTOR: imagineCALGARY

The process resulted in a 100-year vision for Calgary as part of a long-range sustainability plan. The plan sets a wide range of sustainability targets for the next 10 to 30 years, including the following transportation targets:

- By 2036, we reduce the annual private vehicle kilometres travelled per capita by 20%.
- By 2016, we increase the residential population within walking distance (600 metres) of Light Rail Transit (LRT) stations and major transit nodes by 100%.
- By 2016, we increase the number of jobs within walking distance (600 metres) of LRT stations and major transit nodes by 35%.
- By 2036, there is a 50% reduction from 1990 levels in the pollution (greenhouse gases) associated with automobiles.

## CITY OF CALGARY SUCCESSES

- imagineCALGARY created a long-range sustainability plan for the City of Calgary.
- The City of Calgary has the second highest bike path kilometres per capita of the cities studied.
- The development of and approval of the Municipal Development Plan and the Calgary Transportation Plan, which formally link land use and transportation planning.

## CITY OF CALGARY CHALLENGES

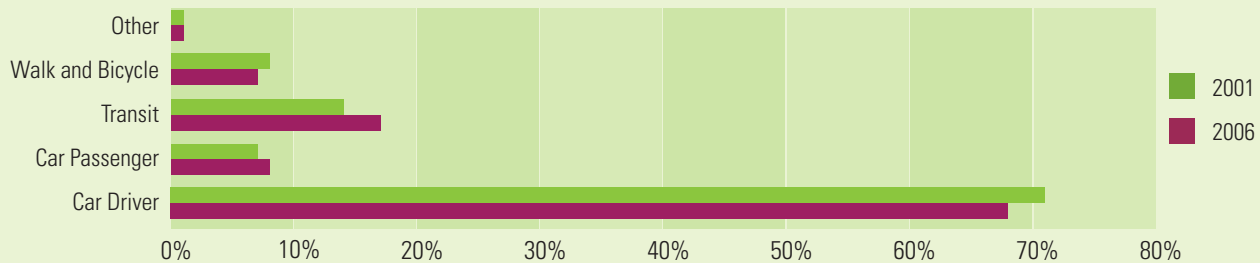
- Integrating land use and transportation planning.
- Integrating greenhouse gas considerations into planning decisions.
- Debate within council about specific approaches to sustainability within the City's planning.
- Developers indicate it currently takes longer to secure approvals for developments within established areas than for greenfield development.



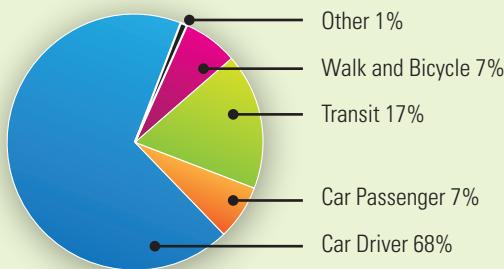
# City of Calgary

## How do Calgarians get to work?

Percent change in City of Calgary mode share, 2001–2006



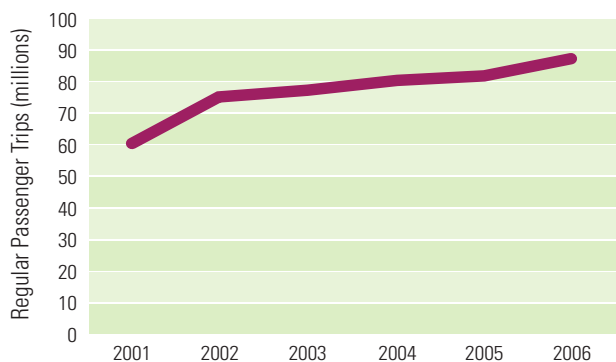
City of Calgary mode share, 2006



## City of Calgary's transportation choices

In 2006, 24% of City of Calgary commuters travelled by transit, walking or cycling, which is a slight increase over 2001.

## Regular passenger transit trips in City of Calgary



## City of Calgary transit services

Transit trips in the City of Calgary increased by 18% from 2002 to 2006, almost double the population growth of 10%. The City improved transit service at approximately the same rate as population growth — transit service hours and vehicle kilometres increased by 11%. (Note that 2002 was used as the base year for this indicator in Calgary, due to a transit strike in 2001 which may have affected that year's ridership figures.)

## City of Calgary lessons learned (from interviews)

Senior transportation planning staff were interviewed; some key points that they brought forward include:

- Plan It Calgary brought planners from the transportation and land use departments together to create a new Municipal Development Plan and a new Calgary Transportation Plan. The plans have been approved, but the two departments will need to continue to work together on initiatives such as encouraging and measuring the proximity of residences and jobs to transit.
- The cost of providing infrastructure is a major incentive to create more compact communities with greater use of walking, cycling and transit.
- Council and the public are largely supportive of high-level objectives and principles of more sustainable development. After considerable debate at council, the Municipal Development Plan was approved unanimously and the Calgary Transportation Plan was predominantly supported.
- The biggest concerns regarding Plan It Calgary came from the development industry as it is a change to their current business model, which focuses on greenfield development.
- Staff noted that the City has barriers to increased density — approvals can take longer for projects within the city than for those in greenfield areas.

## Calgary bicycle paths

On-street: 350 km

Off-street: 707 km

Total: 1,057 km

Bike path kilometres per 1,000 people: 0.99

Calgary has the second highest bike path kilometres per capita of the six cities included in this study.

Photo: Greg Powell, The Pembina Institute





# Calgary CMA

## CMA STATS (2006 CENSUS)

**Population:** 1,079,310

**Land Area:** 5,107.43 km<sup>2</sup>

**Density:** 211.3 residents per km<sup>2</sup>

## Description of the Calgary Census Metropolitan Area (CMA)

The Calgary CMA has approximately 1.1 million residents with about one million people living within 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.

## CALGARY CMA POPULATION IN MEDIUM- AND HIGH-DENSITY AREAS

	2001		2006		Change	% Change
	Population	% of Total Population	Population	% of Total Population		
Living in medium-density <sup>1</sup> areas	376,000	40%	374,000	35%	-2,000	-1%
Living in high-density <sup>2,3</sup> areas	7,000	1%	7,000	1%	—	0%

<sup>1</sup> Medium density is a threshold defined as 30 residents per hectare.

<sup>2</sup> High density is a subset of medium-density areas with a threshold of 100 residents per hectare.

<sup>3</sup> Entire population resides in one census tract area in the southwest bounded by 12 Ave., 17 Ave., 8 St., and 14 St.

Photo: Dominic Ali / www.domali.com



## Where are residents of the Calgary CMA choosing to live?

Between 2001 and 2006, the total number of people living in neighbourhoods with at least medium residential density (30 residents per hectare) decreased despite the population of the CMA growing by 13% over this time. This result highlights a large challenge for the Calgary CMA; most of the population growth is occurring in neighbourhoods with low residential density, which tend to have fewer options for travel by low-carbon options (walking, biking and public transit). Reducing

expansion of the urban area into greenfields (i.e. avoiding growth of new neighbourhoods with low density) will lead to cost savings on infrastructure, according to a study commissioned by Plan It Calgary that estimates future infrastructure costs for different growth scenarios.

The Calgary CMA also has a very low percentage of people living in high-density areas. At approximately 1% of the population, it is far lower than Montreal, Toronto or Vancouver (at 16%, 11% and 8% respectively).

## CMA SUCCESSES

- The Calgary CMA experienced the second highest increase in the percentage of residents taking transit, walking or cycling.
- Regional planning processes are underway.

## CMA CHALLENGES

- People remain relatively spread out and are commuting further.
- Communities in the region are currently re-engaging in regional planning. This process will take some time before it is effective.



# Calgary CMA

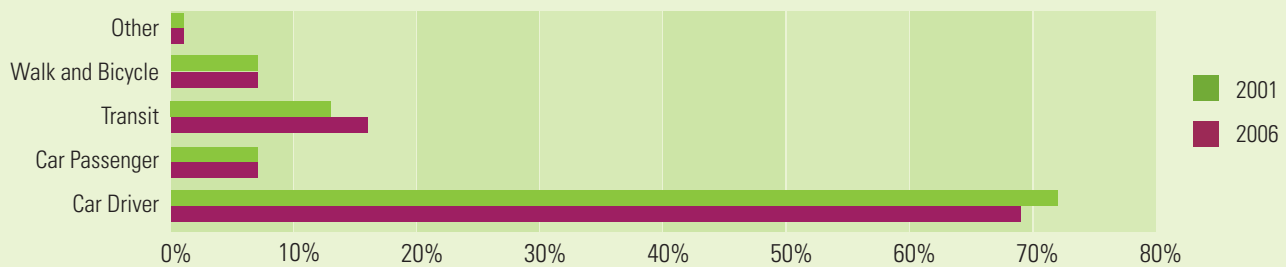
## How do people in the Calgary CMA get to work?

Personal vehicles continue to be the dominant means of commuting in the Calgary CMA, with more than 75% of commuters selecting this mode (over 60% with a single occupant). The Calgary CMA did see the second largest decrease in the fraction of commuter car drivers from 2001 to 2006 (after Vancouver CMA). However, transit strikes in both CMAs in 2001 could have affected that year's ridership figures.

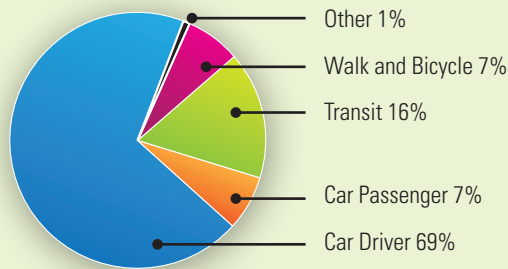
The percentage of people using transit, walking or cycling in 2006 (23%) is below the percentage using these modes in the CMAs of Ontario and Quebec, but it is increasing and it is higher than the Edmonton CMA.

The mode share for the Calgary CMA closely mirrors the mode share for the City of Calgary.

Percent change in Calgary CMA mode share, 2001–2006



Calgary CMA mode share, 2006



## How far are residents of the Calgary CMA commuting?

Between 2001 and 2006 the Calgary CMA saw the average commute distance increase by 6% from 7.7 km to 8.2 km. This is the largest increase of any CMA within the study. Residents of the Calgary CMA now have the second longest commute (behind the Toronto CMA).

Average commute distance in Calgary CMA

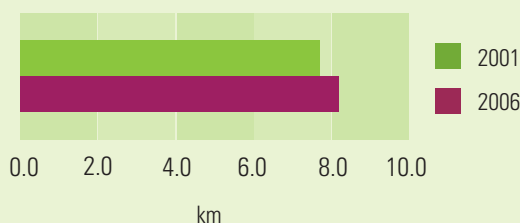


Photo: Geoff Ghitler

# CANADA'S COOLEST CITIES



## RECOMMENDATIONS

Our analysis highlights five key actions for successful progress: Measure, Estimate, Implement, Share and Evaluate. These actions have been undertaken to some degree already by cities in each urban area. Now governments must co-ordinate these actions to reduce greenhouse gas emissions across the whole urban area.

<b>MEASURE</b>	Develop systems for consistent, frequent estimates of greenhouse gas emissions from urban personal transportation and ensure results are readily available to City departments and to the public.
<b>ESTIMATE</b>	Provide estimates of future greenhouse gas emissions for any significant infrastructure or policy development.
<b>IMPLEMENT</b>	Ensure land use and transportation plans are implemented and develop additional initiatives to meet greenhouse gas reduction targets.
<b>SHARE</b>	Increase participation of multiple departments and across municipalities in planning and information sharing.
<b>EVALUATE</b>	Track progress toward meeting greenhouse gas reduction targets and estimate the impact of infrastructure.

The key actions will require initiatives and resources from all levels of government. Priority initiatives for municipal governments to support these actions 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 leadership and funding for developing compact communities and low-carbon transportation choices.

See the Technical Report for additional initiatives for each of the key actions.

## About the project

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 environmental problems, in particular climate change. Municipal and other local governments have the opportunity and responsibility 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.

The information in this case study was developed by analyzing numeric data from both the core city and the wider census metropolitan area (CMA), and by interviewing staff at the core city. The numeric data provide a picture of current transportation and urban design choices, as influenced by past policies and decisions. The interviews allowed us to explore potential future directions based on current policies.

## 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. A 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 informal designations for the urban areas such as MetroVancouver and the Greater Toronto Area. The CMA definitions are used 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 transportation behaviour.

The study consists of six case studies, one for each of Canada's largest urban areas (Toronto, Montreal, Vancouver, Ottawa, Edmonton and Calgary), and a technical report. The technical report covers the research approach, findings across the different urban areas and recommendations. The other case studies and the technical report are available at <http://communities.pembina.org>.