CANADIAN HOUSING OBSERVER 2007

New Housing for a Changing World

Canada

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CANADIAN HOUSING OBSERVER 2007

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A Message from Karen Kinsley, President of Canada Mortgage and Housing Corporation

I am proud to present the 2007 edition of the *Canadian Housing Observer*. For the fifth year running, this edition of the *Observer* presents a detailed review of housing conditions and trends in Canada and the key factors behind them.

With climate change and our environment increasingly frequent topics of national discussion, the *Observer's* feature article this year discusses approaches, such as CMHC's EQuilibrium housing initiative, for improving the sustainability of housing, particularly through increased energy efficiency and reduced water consumption. Since 1946 it has been CMHC's mandate to make safe, adequate and affordable homes a reality for all Canadians. By designing attractive, affordable homes that are more efficient, Canadians can lessen the impact of housing on the environment and benefit from lower utility bills. Sustainable housing technology is already available and we expect it to become increasingly common over the next few years.

Also new this year is a discussion of housing conditions based on the annual Statistics Canada Survey of Labour and Income Dynamics (SLID). SLID is a longitudinal survey conducted annually in urban areas by Statistics Canada to collect information on the labour and income characteristics of Canadians. In 2002, a housing cost module with over 20 housing-related questions was added to SLID as a result of CMHC sponsorship. Until then, SLID had collected little data on housing characteristics. The addition of the housing cost module enables Canadians' housing conditions to be monitored between censuses – for the first time. Although the SLID sample of some 30,000 households is much smaller than the 2001 Census sample of some 2.3 million households, SLID-based estimates can provide useful, more timely insights into high-level trends in housing conditions.

The print publication of the *Observer* is complemented by a broad range of online housing market and housing conditions statistical information on the CMHC website. Visit CMHC's home page at **www.cmhc.ca** and follow the link to the *Canadian Housing Observer* 2007. This includes the Housing in Canada (HiCO) interactive tool that facilitates electronic data retrieval for building custom tables that can be used for analysis of national, regional and local housing conditions and core housing need. HiCO has now been expanded to include off-reserve Aboriginal housing data. CMHC will be updating the housing market and housing conditions statistical online information during the year. Watch for announcements in CMHC's free Housing Research electronic newsletter. Visit CMHC's website to subscribe.

The *Observer* is intended to be useful to a wide audience in the private, co-operative and government sectors: housing planners, researchers and policy makers; educators and students; home builders and renovators; and housing finance and real estate professionals.

For the first time, feedback from readers is being sought via a reader survey. I would encourage you to take a few minutes to fill it out - either the version enclosed with the printed copies or the online equivalent. Your views will assist us in improving the *Observer*.

We at CMHC are proud of the work and effort that go into our many research and information products. I trust you will find the 2007 *Canadian Housing Observer* useful and informative.

Karen Kinsley
President, CMHC

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New housing for a changing world

- The residential building sector is a major consumer of energy, land, water and raw materials, with the vast majority of consumption occurring during the operations phase of a house's lifecycle. The sector accounts for about 17 per cent of energy used by final consumers in Canada and 60 per cent of total water use.
- The products and emissions from resource usage and waste disposal can have a significant impact on the environment, contributing to degradation of land, water and air.
- Knowledge and techniques exist to minimize these impacts. The implementation rate of already proven technology, rather than further technological advances, determines actual resource efficiencies over the medium term, underlining the importance of promotion and demonstration.
- CMHC's EQuilibrium Housing Demonstration Initiative is designed to promote market acceptance and build industry capacity for healthy, affordable, sustainable and highly energy-efficient housing. The twelve winners chosen to build demonstration homes are highlighted in this *Observer*. The EQuilibrium initiative demonstrates that an advanced integrated design approach can reduce energy needs to the point where, using existing techniques, the house will strive to produce as much energy as it uses on an annual basis.
- Energy saving and generating techniques can include passive solar heating and cooling, wastewater heat recovery systems, ground-source heat pumps and photovoltaic panels. Connecting to the electricity grid system can facilitate net-zero energy use by drawing from the grid when needed and selling back to the grid when internally generated energy exceeds the home's needs.
- Making use of waste energy and water can further reduce other system capacity requirements. Ventilation systems can also be simplified if building materials that emit pollutants are avoided.
- Savings in residential water consumption can be achieved in a number of ways: low-flow fixtures and appliances (dishwasher, clothes washer), dual flush/ultra-low-flush toilets, rainwater harvesting for toilet flushing and exterior watering, and greywater (from dishwasher/shower) recycling and reuse.
- Developers in the Netherlands, Japan, Germany, the United Kingdom and the United States are already building and successfully selling homes targeting net-zero energy consumption measured on an annual basis. In some cases these involve not just one home but a community or development.
- As the knowledge of the sustainable housing design and construction practices exemplified by the EQuilibrium housing initiative become more widespread, it is expected that what is now an emerging market niche will become more the norm.

Demographic and socio-economic influences on housing demand

- Largely as a result of rising immigration, Canada's population grew at a slightly faster pace in recent years than in the late 1990s. In conjunction with this increase, net household formation rose to 174,900 annually from 2001 to 2006, after averaging about 150,000 in the previous decade.
- The composition of Canada's population continues to change. Senior, immigrant, and Aboriginal populations are growing more rapidly than the general population and will likely continue to do so.
- Although population growth is modest in Canada overall, regional and local growth patterns vary widely. From 2001 to 2006, the great majority (86 per cent) of population growth in Canada took place in metropolitan areas. Almost all of the fastest-growing metropolitan areas during this period were in Alberta, Ontario, or British Columbia. Despite growing concern about urban sprawl and interest in renewing existing neighbourhoods, most population growth within metropolitan areas continues to occur on the outskirts.
- Much of the variation in residential construction levels across local markets can be traced to differences in the underlying rate of household formation. On a per capita basis, the volume of residential construction is typically many times higher in cities with high rates of household formation than in those with low rates.
- Despite the recent rise in household formation in Canada, the net increase in households from 2001 to 2006 was less than the number of housing completions. One possible reason for an excess of housing construction over household formation is that households can own and occupy more than one dwelling. The number of households in Canada owning second homes, vacation homes, or cottages reached 1.1 million in 2005, about 200,000 more than in 1999.
- As has been the case for the best part of a decade, robust employment and income gains continue to support housing demand. The benefits of growth have not been shared equally however. From 1990 to 2004, high-income earners enjoyed much stronger income growth than those with low incomes. Growing disparity was evident as well in the divergent fortunes of homeowners and renters, with real after-tax incomes of owners rising and those of renters falling.
- From 1999 to 2005, the average net worth of households in Canada grew after inflation at an annual rate of better than four per cent, compared to only about two per cent from 1984 to 1999. Increased equity in real estate played a major role in the strong recent growth in net worth. With equity in the family home growing at a robust pace, disparities in the net worth of owner and renter households continued to widen, a development consistent with the increasing gap between their respective incomes.

Current market developments

- The housing market was strong again in 2006, led by high demand in the western provinces. Alberta markets showed the greatest increases in housing starts, and the highest price and rent increases.
- Housing-related spending in current dollars grew faster than the Canadian economy as a whole and as a result, the proportion of gross domestic product spent on housing increased from 18.9 per cent to 19.1 per cent from 2005 to 2006. Construction employment growth (including residential and non-residential building construction) also outpaced overall employment growth in 2006, with 50,200 new jobs, a 4.9 per cent increase compared to the all-industry increase of 1.9 per cent.
- Total housing starts in 2006, at 227,400 units, were at the second highest level since 1987. This was the fifth consecutive year that housing starts exceeded 200,000 units. The average new single-detached house price (from CMHC's Market Absorption Survey) increased by 11.9 per cent. This was a larger increase than the 9.75 per cent rise in the quality-adjusted New Housing Price Index because the new single-detached house price reflects homes which may be larger, have more features and/or be in more expensive locations.

- Multiple Listing Service® (MLS)® sales increased in seven out of ten provinces. Total sales, at 483,770, were almost equal to the record level of 483,800 in 2005. The average MLS® home price - driven by the strong seller's markets in the western provinces - increased by 11.1 per cent, the largest price increase since 1989.
- High levels of immigration and strong employment growth contributed to rental demand but were offset by strong demand for ownership and high condominium completions (both of these compete with rental accommodation) in some centres. As a result, the average rental apartment vacancy rate in Canada's 28 major centres was little changed, with a decline of 0.1 of a percentage point to 2.6 per cent in October 2006 compared to the previous October.
- The average estimated rent for two-bedroom apartments in existing structures rose in 27 out of 28 major centres between October, 2005 and October, 2006, resulting in an average increase of 3.2 per cent. The highest average monthly rents for two-bedroom apartments in new and existing structures were in Toronto ($1,067) and Vancouver ($1,045). The lowest average monthly rents were in Trois-Rivières ($488) and Saguenay ($485).
- Total spending on housing alterations, improvements, repair and maintenance continued the steady growth it has exhibited since 1999, reaching $43.9 billion in 2006, an increase of 9.0 per cent compared to 2005.

Housing finance

- Total mortgage credit outstanding in 2006 reached an annual average of $694 billion, up 10.7 per cent from the previous year. The key driver was increased property values which were also reflected in the 7.3 per cent increase in the average mortgage amount approved.
- Mortgage rates rose from a record low of 5.99 per cent in 2005, but, at an average posted rate of 6.66 per cent for a five-year term mortgage in 2006, were still low by historical standards. The spread between the (higher) fixed five-year mortgage rate and the (lower) open variable mortgage rate declined from 159 basis points (or 1.59 percentage points) to 96 basis points in 2006. This resulted in a considerable drop in the proportion of homeowners (including both those who obtained a new mortgage and those who renewed an existing mortgage) choosing variable-rate mortgages, to 22 per cent in 2006, from 36 per cent in 2005.
- The ratio of mortgage debt service costs (principal and interest payments) to household income also remains relatively low by historical standards, as low interest rates have partially offset the impact of rising house prices. In 2006, about one in 400 households fell three or more months behind in their mortgage payments, the lowest rate since 1990.
- Issuance of National Housing Act (NHA) Mortgage Backed Securities (MBS) and Canada Mortgage Bonds (CMB) rose 19 per cent in 2006 to $36 billion. Of this total, $25.1 billion were CMBs. The increase in CMB issuance in 2006 was attributable to increased interest of smaller financial institutions in the CMB program, as well as the increasing investor demand for high quality investments.
- CMHC's 2006 Mortgage Consumer Survey found that while the majority of mortgage consumers (84 per cent) were satisfied with the services they received when negotiating their current mortgage, 30 per cent found the experience to be a source of stress, while 26 per cent felt that they had to double-check the advice received and 21 per cent felt they had to fight for the best deal for their needs.
- About 70 per cent of mortgage consumers prefer to use a mortgage lender that is one of the major lending institutions and has an array of financial products and services. While most mortgage consumers stayed with their current mortgage lender when renewing or refinancing their mortgage, a larger share of mortgage consumers switched lenders in 2006 than in 2005, perhaps due in part to increased use of mortgage brokers, and the relationship with their financial institution.
- In 2006, as in 2005, only half of mortgage renewers accepted their lender's initial offer without any further negotiations - lower than the levels observed prior to 2005. Among the renewers who renegotiated, just over half sought a change in the mortgage rate, while close to one-sixth reduced their mortgage balance.

Transportation and sustainable, healthy communities

- Road transportation accounts for half of all households' greenhouse gas emissions. The location of a residence and neighbourhood design have been found to be key determinants of the amount of a household's driving. With fewer transportation alternatives, greater distances to work, services, recreation and other destinations, suburban residents choose to drive much more than those in the central areas for weekday urban trips.

- Automobile use could be reduced with concentration of development along public transportation corridors and closer to the urban centre, rather than at the urban fringe, through improved access to public transportation and greater convenience and safety for walking and bicycling. However, public transit generally requires minimum levels of population density to be economically feasible.

- Municipalities and developers are increasingly turning to Transit-Oriented Development which typically provides higher density residential and mixed-use development that is located a walkable 5 minutes distance (600 metres) to a transit station, commuter train station, or high frequency/volume bus route.

- CMHC's case studies identify key elements important to the success of Transit-Oriented Developments: including a mix of uses such as residential and small commercial; having buildings at a "human scale" at street level with appropriate transitions to surrounding areas; providing safe and comfortable pedestrian corridors; taking advantage of increased transit use to reduce parking requirements; and creating distinctive architectural designs that make a transit station an identifiable and accessible gateway to the community.

- A CMHC study found that proximity to transit and work were the most significant factors in people choosing to buy units in Transit-Oriented Developments. Since their move to a Transit-Oriented Development, residents reported using transit more often for their trips to work, and their transit usage is higher than that for their CMA as a whole. Except in one community where retail and other amenities had not yet been built, residents of Transit-Oriented Developments reported that they were walking more for local shopping and amenities.

- Infill developments that increase housing density have been found to be more effective at lowering transportation-related greenhouse gas emissions than even those greenfield developments specifically designed to reduce car dependency.

- In new developments at the urban fringe, conventional street patterns inhibit walking and impede the flow of traffic. The streets consume a large amount of land – up to 35 per cent of a district. An alternative street pattern that addresses these problems is the Fused Grid which has already been adopted in three municipalities and is being considered in others in partnership with CMHC. This uses a continuous grid of roads for district and regional connectivity and a discontinuous grid of streets for neighbourhood safety. The latter grid is supplemented by footpaths that connect all streets, turning a neighbourhood into a fully connected pedestrian realm. The Fused Grid lowers land usage for streets; provides more safety, tranquility and social interaction; reduces the area of impermeable surfaces and reduces infrastructure costs.

Recent trends in housing affordability and core housing need (2002-2004)

- Indicators of Canadian urban housing conditions and affordability for intercensal years are published here for the first time. Estimates are based on housing data from questions sponsored by CMHC from 2002 to 2004 in Statistics Canada's annual *Survey of Labour and Income Dynamics* (SLID) and CMHC's *Rental Market Survey*. Although Census and SLID data are not completely comparable, SLID-based estimates provide useful insights into high-level trends.

- Based on these new data, the estimated proportion of Canadian urban households in core housing need declined slightly from 13.9 per cent in 2002 to 13.6 per cent in 2004. This decline occurred during a period of increasing labour force participation and rising real incomes.

- Spending 30 per cent or more of household income on shelter costs remained by far the most common reason for being in core housing need. Less than one per cent of all urban households fell into core housing need because of failing to meet only the suitability and/or adequacy housing standards and also being unable to access alternative acceptable housing.
- Urban households in British Columbia and Ontario continued to experience a high level of core housing need over the 2002 to 2004 period. The incidence of urban core housing need in British Columbia declined from 17.5 per cent in 2002 to 15.7 per cent in 2004, while that in Ontario remained fairly steady at around 16 per cent.
- One-person households accounted for almost half (46.7 per cent) of Canadian urban households in core housing need in 2004, up from 43.7 per cent in 2002.
- The incidence of core housing need among senior-led urban households declined from 15.4 per cent in 2002 to 13.9 per cent in 2004. However, at some 38 per cent, seniors renting and living alone continued to experience very high levels of core housing need.
- The percentage of immigrant urban tenant households in core housing need increased from 34.4 per cent in 2002 to 36.3 per cent in 2004, compared to about 28 per cent for non-immigrant urban tenant households.
- The lowest income quintile (the 20 per cent of households having the lowest incomes) accounted for about 81 per cent of all urban households in core housing need in 2004, up from about 78 per cent in 2002. Shelter cost-to-income ratios (STIRs) for these low-income households increased from 40.5 per cent in 2002 to 41.2 per cent in 2004, while STIRs for households in the highest income quintile remained steady at around 11 per cent.

New Housing for a Changing World

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Canadian housing has evolved from a mix of early wood-frame and stone structures to large subdivisions of homes and sophisticated high-rise structures. This evolution has been shaped by market forces, regulatory regimes, consumer demand and advances in housing technology. As housing has changed, so too has its impact on the environment. This chapter examines the environmental impacts of housing and how Canadian housing may change in the years ahead to reflect environmental concerns.

Housing has a major impact on the environment

The residential building sector is a major consumer of energy, land, water and raw materials both directly and indirectly in its production, maintenance and operation, and eventual demolition or conversion of homes. Waste products and emissions from these processes can have a significant impact on the environment, contributing to degradation of land, water and air.

As such, the sector occupies a central place in any sustainable development strategy. Therefore, a major driver influencing the evolution of Canadian housing will be pressure for this sector to reduce its environmental impacts, energy utilization, and water utilization. All of these objectives will benefit the environment and ultimately make housing more affordable to Canadians.

These pressures, along with health concerns and the cost of operating a home, are expected to lead home buyers and renters to change their preferences in housing. Governments will face increasing pressure to develop regulations directed at reducing environmental impacts. Builders and developers will have to respond by changing the way they design and build housing. Concerns regarding the impact of housing on the global and local environment are leading to the development of regulatory regimes that will reduce environmental impact through improved energy efficiency requirements. Taken together, these pressures and concerns have already begun to change the nature of new housing construction and renovation of the existing stock.

Residential energy consumption accounts for 17 per cent of Canada's secondary energy use[1]

The 1,421 petajoules of secondary energy use in the residential sector in 2004 accounted for about 17 per cent of total national secondary energy use.

The associated energy-related expenditures represented 14 per cent of total household shelter costs.

The majority of this (57 per cent) was used in space heating, with water heating (24 per cent), operating appliances (13 per cent) and electronic equipment and lighting making up the balance (*see Figure 2-1*).

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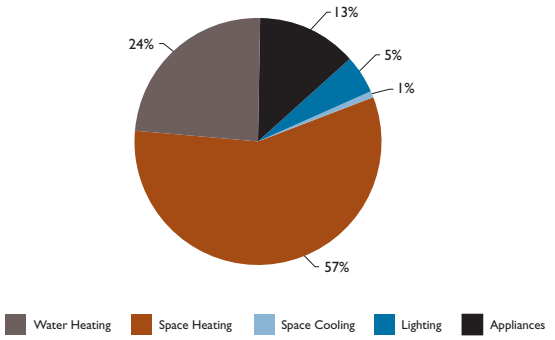
1 *Secondary energy use* is energy used by final consumers for residential, agricultural, commercial, industrial and transportation purposes. This differs from *primary energy use*, which is the total for all uses of energy. *Primary energy use* includes energy used by the final consumer and also intermediate uses of energy; energy used in transforming one energy form to another (e.g., coal to electricity), and energy used by suppliers in providing energy to the market (e.g., pipeline fuel) and non-energy uses (e.g., for production of petrochemicals).

FIGURE 2-1
RESIDENTIAL ENERGY USE BY PURPOSE, 2004



Source: Improving Energy Performance in Canada: Report to Parliament under the *Energy Efficiency Act* for the fiscal year 2005-2006, ©Natural Resources Canada [2006]

As a result of this energy use, the residential sector is responsible for 15.2 per cent (77 megatonnes) of greenhouse gas (GHG) emissions in Canada.

Improvements in residential energy performance have already been significant

Significant improvements in housing technology and practice have almost halved energy consumption in new houses compared to houses built before 1946 (*see Figure 2-2*).

The most significant savings have been achieved through improvements such as increasing insulation, a tighter building envelope, higher efficiency furnaces and improved windows.

Nonetheless, as the following sections will show, far greater improvements in residential energy use are both possible, and needed.

There is potential for considerably more savings in the years ahead

The National Energy Board in its publication "Canada's Energy Future: Scenarios for supply and demand"[2] presents two scenarios for the future. One – the Supply Pull scenario-represents "a world in which technology advances gradually and Canadians take limited action with respect to the environment". The other – the Techno Vert scenario-is "a world where technology advances rapidly and Canadians take broad action with respect to the environment and the accompanying preference for environmentally friendly products and cleaner burning fuels".

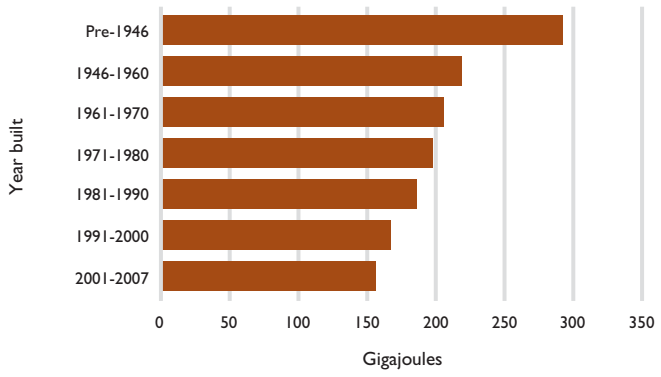
Under the Techno Vert scenario, energy usage per household is projected to decline by 18 per cent between 2000 and 2025 compared to a decline of nine per cent in the Supply Pull scenario.

However, even under the Techno Vert scenario, total residential energy demand increases by 9 per cent over the period due to increases in the number of households.

Implementation rate rather than technological advances determines energy saving

The National Energy Board points out in its report that "The most significant variable affecting household energy intensity…is not technology. Many energy saving technologies that are economic options are available today.

FIGURE 2-2
AVERAGE ENERGY CONSUMPTION PER HOUSEHOLD, PRE-1946 TO 2001 – 2007 CONSTRUCTION



Source: ©Natural Resources Canada [2007]

2 National Energy Board "Canada's Energy Future: Scenarios for supply and demand." Calgary, Alberta 2003 http://www.neb-one.gc.ca/

Thus the stimulus and rate at which action is taken to implement such technology or alter current household consumption behaviour are the deciding factors".

This underlines the importance of promotion and demonstration to disseminate information on environmental technologies, generate consumer demand, and encourage the development of capacity to deliver the technologies in the industry.

Energy savings will be limited unless improvements are made to the existing stock

Seventy-five per cent (12 million) of the 16 million-unit housing stock projected for 2025 is already in place.

Significant overall percentage reductions in total residential energy consumption can be achieved only if attention is paid to the existing housing stock.

The savings through more energy efficiency improvements to existing homes can be considerable. Among the more cost-effective measures are insulation upgrades, improvements in airtightness through caulking, high efficiency furnaces and other appliances, and window upgrades.

While incremental improvements in energy efficiency are relatively easy to obtain in existing housing, more radical improvements can be challenging due to limitations imposed by existing site, architectural, structural and other system conditions.

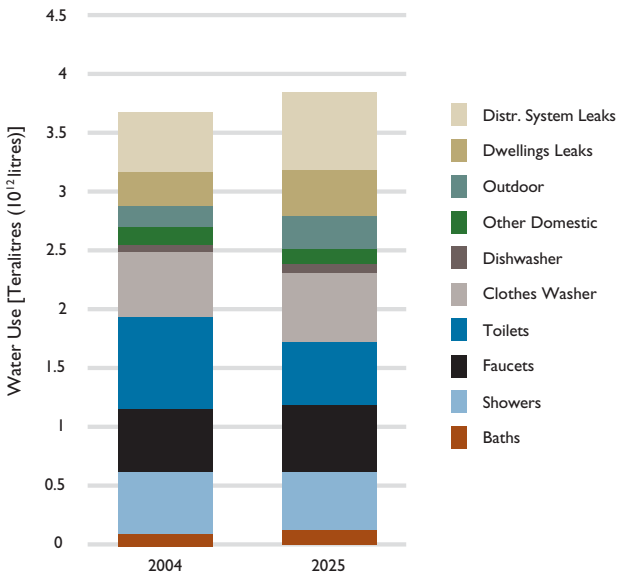
The residential sector accounts for 60 per cent of water use in Canada

The residential sector is the major consumer of water in Canada, with the 335 litres per day per person representing 60 per cent of all water use in the country.[3] The fact that this is double that of European countries including Germany, France, Austria and Denmark, and second only to the United States, suggests that there is considerable scope for water savings in Canadian homes.

Close to 80 per cent of residential water usage is accounted for by internal domestic purposes; i.e., bath, shower, faucets, toilets, clothes washer and dishwasher (*see Figure 2-3*). About 14 per cent of total water use is attributed to leaks that occur in the municipal water distribution system and on-site at the dwelling premises. Outdoor uses, such as watering the lawn, account for the remaining 6 per cent of total household use. A study by Marbek[4] estimates that water use associated with the operation of residential dwellings in 2025 will be about 13 per cent higher than current use due primarily to the additional demand for water services of new dwellings built in this period.

FIGURE 2-3

ANNUAL DWELLING OPERATING WATER USE AND LEAKAGE IN 2004 AND 2025



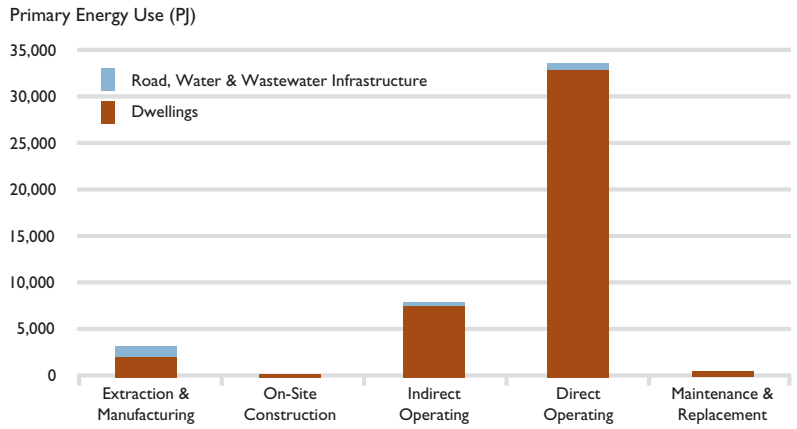
Source: Marbek Resource Consultants, 2007

3 Sources: Marbek (*see footnote 4*), and CMHC Newsroom, May 24, 2005: *Toronto Workshop First Step for Canada in Residential Water Re-Use.*

4 *Life-Cycle Environmental Impacts of the Canadian Residential Sector* Marbek Resource Consultants with Athena Sustainable Materials Institute and Jane Thompson, architect. (CMHC, forthcoming).

FIGURE 2-4

LIFECYCLE PRIMARY ENERGY USE OF CANADIAN HOUSING, 2004-2025



Note: A petajoule (PJ) is 10^{15} joules. Non-operating stages (i.e., Extraction & Manufacturing, On-Site Construction, and Maintenance & Replacement) were analysed only for new dwellings and neighbourhood infrastructure built since 2004, while the operating stage (direct and indirect) was analysed for all existing and new dwellings and neighbourhood infrastructure.

Source : Marbek Resource Consultants, 2007

The environmental impact of housing must be considered at all stages of its lifecycle

The Marbek study measured how all building activities, from design to demolition, directly and indirectly affect the residential sector's environmental performance. An accounting of the environmental impact of housing includes the following stages:

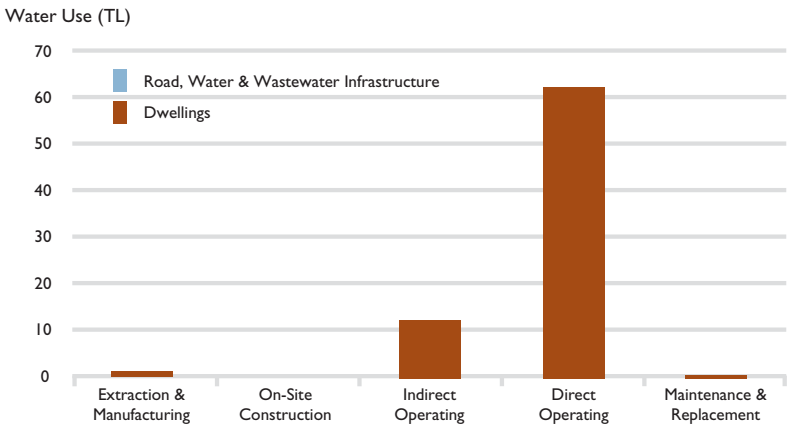
- Extraction and manufacturing of products, material and systems
- On-site construction
- Indirect operating impacts (e.g., delivery of energy, water treatment to and from the housing unit)
- Direct operating impacts (e.g., heating, hot water, lighting, water use, wastewater in the house)
- Maintenance and replacement.

Both resource use and environmental emissions should be considered over the complete housing lifecycle. Resource use can be defined in terms of *energy, water, land and materials* used for all of the lifecycle stages of housing. Emissions are typically defined in terms of *pollutants emitted to air, water and soil* that result in local, regional and global environmental impacts. These aspects should be considered if the cumulative impacts of housing-related activities are to be appreciated and accounted for in the design of mitigation measures for both new and existing housing.

For example, *Figures 2-4 and 2-5*, which depict the total lifecycle energy and water use of the Canadian housing stock between 2004 and 2025, show the relative importance of the "direct operating" phase of housing (i.e., daily household energy and water use) in comparison with other lifecycle phases. Based on this information, any effort to reduce the environmental impact of housing should concentrate first on reducing daily household energy and water use. Later efforts could concentrate on reducing energy and water use for the production of building materials and supplying energy, water and other services to dwellings.

FIGURE 2-5

LIFECYCLE WATER USE OF CANADIAN HOUSING, 2004-2025

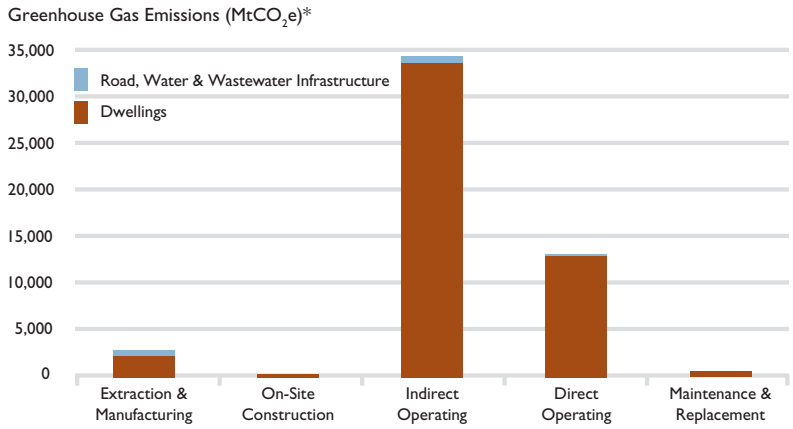


Note: A teralitre (TL) is 10^{12} litres. Non-operating stages (i.e., Extraction & Manufacturing, On-Site Construction, and Maintenance & Replacement) were analysed only for new dwellings and neighbourhood infrastructure built since 2004, while the operating stage (direct and indirect) was analysed for all existing and new dwellings and neighbourhood infrastructure.

Source : Marbek Resource Consultants, 2007

FIGURE 2-6

LIFECYCLE GREENHOUSE GAS EMISSIONS BY THE RESIDENTIAL SECTOR, 2004–2025



Note: Non-operating stages (i.e., Extraction & Manufacturing, On-Site Construction, and Maintenance & Replacement) were analysed only for new dwellings and neighbourhood infrastructure built since 2004, while the operating stage (direct and indirect) was analysed for all existing and new dwellings and neighbourhood infrastructure

* Mt CO_2e - million tonnes of carbon dioxide equivalent

Source : Marbek Resource Consultants, 2007

A total of 5,500 megatonnes of GHGs will be generated by the housing sector during 2004-2025

GHGs are produced from the combustion of fossil fuels. Over 95 per cent of the 5,500 megatonnes of GHGs emitted by the residential sector in the 2004 to 2025 period will be generated at the operating stage of the housing lifecycle. The balance is primarily from the extraction and manufacturing stage.

The largest component is GHG emissions from *indirect operation* of the dwelling (*see Figure 2-6*). This incorporates emissions from fuel burned during electricity and other energy generation.

The burning of fossil fuels for home heating, or indirectly for electricity generation for residential needs, as well as for residential transportation, also produces criteria air contaminant (CAC) emissions - pollutants that affect health and contribute to air pollution problems such as smog and acid rain. These include particulate matter, ammonia, carbon monoxide, sulphur oxide and volatile organic compounds (VOC).

Strategies already exist to minimize the impacts

While environmental impacts of the residential sector are projected to be significant over time, there are promising signs that the performance of housing can be improved to achieve greater sustainability and more economic operation. The result is expected to be a significant change in what will be viewed as "normal" housing over the next 20 years. While the extent of the changes required are significant, the capacity already exists in the housing sector both to build and to retrofit housing that is far more sustainable, while maintaining lifestyle and comfort.

This section will highlight promising strategies and technologies that are being deployed in the 12 winning designs from **CMHC's EQuilibrium Housing Demonstration Initiative**. This initiative is designed to promote market acceptance and build industry capacity for low impact healthy housing (see box on following page for more information on the initiative). It encourages the integration of a wide range of knowledge, available technologies, strategies, products and techniques to reduce a home's energy consumption and environmental impact to an absolute minimum while addressing healthy indoor environments and affordability.

The EQuilibrium initiative itself builds on CMHC's Healthy Housing™ initiative under which demonstration homes were built in Toronto and Vancouver. The cornerstone design objectives of Healthy Housing™ are to enhance occupant health, energy efficiency, and resource conservation; reduce environmental impact, and to make these homes affordable to the builders, owners and occupants. Features of the Toronto Healthy House™ include passive solar design, solar panels that capture solar energy to power the home, and cisterns to collect rainwater for non-potable uses such as flushing toilets and gardening.

CMHC's EQuilibrium Housing Demonstration Initiative

Reducing the environmental impact of housing

In May 2006, CMHC invited builders to submit ideas for healthy, affordable, sustainable and highly energy-efficient housing. Twelve out of the 72 teams who submitted proposals were chosen to build demonstration homes with technical, marketing and limited financial assistance from CMHC, in support of an integrated design approach, performance monitoring and reporting on the projects. CMHC is not subsidizing the construction of the housing which will be sold by the builders at market prices. Throughout 2007 and 2008, the twelve EQuilibrium housing projects will be built and open for public demonstration across Canada, prior to their sale. The initiative's goals are to:

1. Promote low environmental impact, net-zero[5] energy healthy housing;
2. Develop industry capacity to design and build EQuilibrium homes and communities;
3. Educate consumers on the benefits and achieve market acceptance of EQuilibrium housing;
4. Enhance Canada's domestic and international leadership in sustainable housing.

The ultimate goal is highly energy- and resource-efficient, low environmental impact housing, that produces as much energy as it consumes on an annual basis. While there is no one fixed model, EQuilibrium housing generally includes features such as:

- Climate- and site-specific design;
- Energy- and resource-efficient construction;
- Renewable energy systems such as photovoltaics, solar thermal and ground-source heat;
- Passive solar heating and cooling;
- Energy-efficient appliances and lighting;
- Natural daylighting;
- Water conservation and re-use;
- Land and natural habitat conservation; and
- Sustainable community design and green infrastructure practices.

Building on the legacy of CMHC's Healthy Housing™ initiative, EQuilibrium housing will make significant improvements in the performance of dwellings by the application, and integration, of two key strategies:

1. Advanced integrated design

Significant improvements in housing performance can be achieved through thoughtful, informed and iterative design that seeks and capitalizes on the synergies and interactions that exist between the many elements of design, construction and operation of houses. For example, by siting the house on the lot to capitalize on solar exposure, one can maximize solar energy gains for space heating and hot water production while minimizing electricity requirements for lighting. These are elements of "passive solar design". By heavily insulating the building envelope, one can reduce the size of the space heating system to the point where conventional systems may not be required. By making use of waste energy and water, one can further reduce other system capacity requirements.

Advanced integrated design also applies to other elements of Healthy Housing™. For example, ventilation systems can be simplified if building materials that emit pollutants are avoided. Resource consumption can be reduced through architectural designs that reduce the size of the house by making efficient use of what space is required.

The design of EQuilibrium housing relies heavily on advanced integrated design to reduce the energy, water and material/system needs of the house to an absolute

5 Net-zero energy is defined as a home that produces as much energy as it consumes.

minimum. Only then is the application of technologies to meet the remaining needs considered.

2. Advanced innovative technologies

Once the design of the EQuilibrium house has been optimized and needs reduced to an absolute minimum, technologies are applied to meet what needs remain. For example, the limited space heating requirements projected for EQuilibrium homes mean that it is possible to meet most of the space heating needs of the houses with solar energy. Reduced hot water requirements also make it possible to use both solar and wastewater heat recovery systems to meet those needs.

It also becomes technically and financially feasible to meet the reduced electricity needs of EQuilibrium homes with photovoltaic panels - something that would not otherwise be possible in conventional housing. Additionally, the design and operation of ventilation systems can often be handled by one ventilation appliance (e.g., heat recovery ventilator) as pollutant emissions and moisture sources have been minimized.

Thus EQuilibrium housing is not intended to be entirely dependent upon technologies to meet their performance expectations. Technologies are applied only after the design of the house has been optimized via advanced integrated design principles that make best use of the site, materials, products, systems and practices.

Environmentally friendly technologies

Many of the techniques and strategies that are used in EQuilibrium homes are not new. Rainwater harvesting, for example, is a revival of an ancient practice. Ground-source heat pumps were first introduced over 50 years ago. What is new is that now, advances in knowledge, design practices, and new materials, along with cost reductions for components such as photovoltaic systems, can enhance the effectiveness and economics of these approaches and enable them to be more easily integrated into a system that addresses all of the Healthy Housing™ principles.

Some of the many technologies deployed in the EQuilibrium housing projects are highlighted in this section.

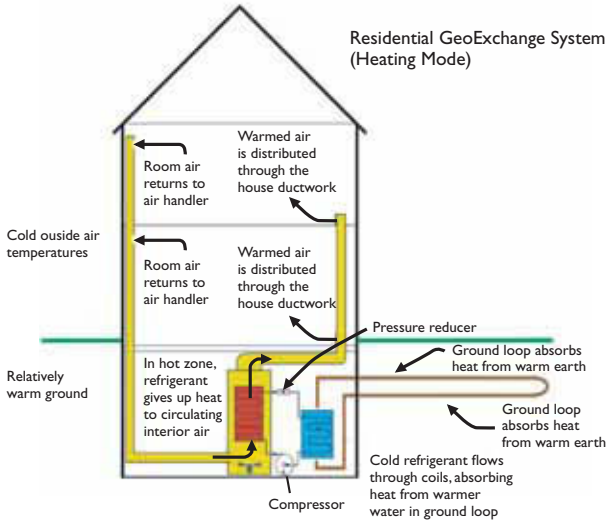
Ground-source heat pumps

By 2004, there were 1.1 million ground-source heat pumps installed across the world.[6] Around 600,000 of these were in the United States and 230,000 in Sweden. Canada had 36,000.

The ground-source heat pump extracts solar heat stored in the upper layers of the earth; the heat is then delivered to the building (*see Figure 2-7*). In summer, the process is reversed for cooling.

FIGURE 2-7

GROUND-SOURCE HEAT PUMP SYSTEM



Source: The Canadian GeoExchange Coalition

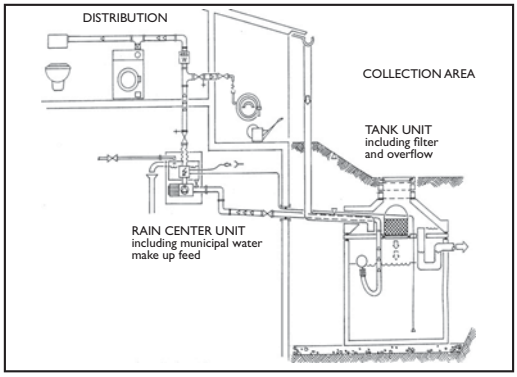
Rainwater harvesting

Rainwater harvesting is an above or below ground storage system that collects, stores and distributes run-off of rain or snowmelt from roofs. It is a feature in a number of EQuilibrium projects where the harvested rainwater may be used for flushing toilets, laundry and irrigation (*see Figure 2-8*).

6 Source: *Geothermal (Ground-Source) Heat Pumps: A World Overview*, Lund, Sanner, Rybach, Curtis and Hetlström (http://geoheat.oit.edu/bulletin/bull25-3/art1.pdf).

FIGURE 2-8

RAINWATER HARVESTING SYSTEM



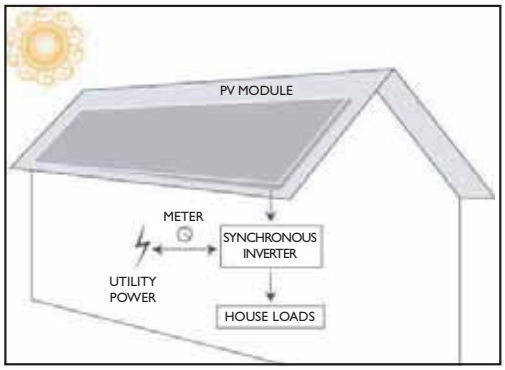
Source: www.klauswkoenig.com

Photovoltaic systems

Photovoltaic (PV) systems are devices used to convert sunlight into electricity. PV systems are a safe, reliable, low-maintenance source of solar electricity alone or in combination with other systems. They are made up of a variety of components (*see Figure 2-9*).

FIGURE 2-9

COMPONENTS OF A PHOTOVOLTAIC SYSTEM



Source: CMHC

Greywater recycling

Greywater recycling is the collection, storage, treatment and redistribution of laundry and bathing water for toilet flushing, irrigation, plant watering, janitorial cleaning, and cooling.

To the extent that the water can be recycled multiple times for various purposes, the net water demand from housing can be reduced substantially.

Greywater heat recovery

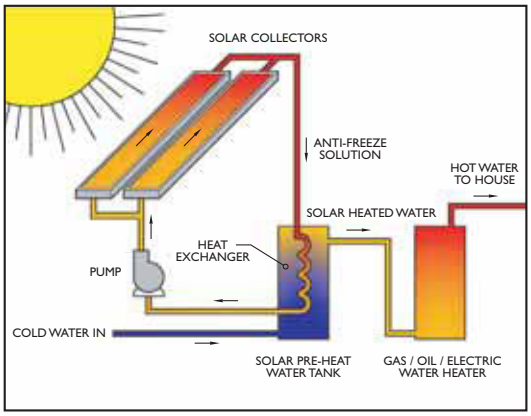
Greywater heat recovery typically involves a heat exchanger that recovers the heat from wastewater (greywater) to preheat incoming water supplied to a domestic hot water system.

Solar water heating

Water heating accounts for about one-quarter of residential energy use. A solar water heating system can significantly reduce the fossil fuel or electricity required to heat this water.

FIGURE 2-10

SOLAR DOMESTIC HOT WATER SYSTEM



Source: CMHC

A solar water heater typically uses collectors on the roof which are connected to a storage tank (*see Figure 2-10*).

Fluid is pumped to the collectors where it is warmed by the sun and returned to a heat exchanger where heat from the fluid is used to heat the water in a preheat storage tank. Supplementary heat can be added to the solar-heated hot water by a backup electric element immersed in the storage tank or an additional gas and/or electric hot water tank. A typical system will provide 50 per cent to 75 per cent of the water heating load.

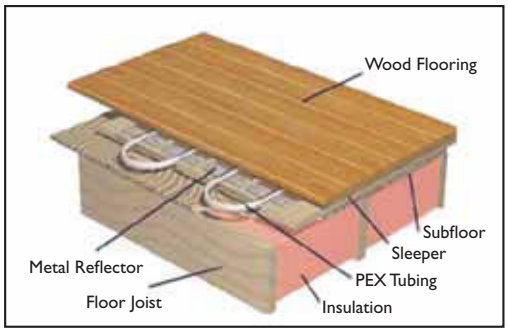
Solar hot water systems can also be used for space heating.

Hydronic radiant heating and cooling

Radiant floor heating is an energy-efficient method of distributing heat within a home by applying heat underneath or within the floor. It involves a system of plastic or metal tubes/pipes laid within a floor that carries hot water into specific rooms or "zones", dispersing the heat through the floor surface.

FIGURE 2-11

HYDRONIC RADIANT FLOOR HEATING
CROSS-SECTION



Source: CMHC, http://www.cmhc-schl.gc.ca/en/co/renoho/refash/refash_010.cfm

Hydronic radiant floor heating systems can readily take advantage of water heated by solar hot water systems to help meet space heating needs (*see Figure 2-11*).

Water-efficient technologies and strategies

Savings in residential water consumption can be achieved in a number of ways. The market continues to improve water-using fixtures and appliances and encourages water saving techniques. Examples from various EQuilibrium projects are:

- low-flow fixtures (showerheads, aerators)
- high efficiency appliances (dishwasher, clothes washer)
- dual flush/ultra-low-flush toilets
- rainwater harvesting for toilet flushing and exterior watering
- greywater (from dishwasher/shower) recycling and reuse
- limiting exterior water use for landscaping through the use of drought-tolerant plants, groundcover alternatives, and mulch.

FIGURE 2-12

EQUILIBRIUM PROJECT:
RIVERDALE NETZERO PROJECT
EDMONTON, ALBERTA

The Riverdale NetZero project is a semi-detached home in an urban area. It is estimated that the total renewable energy production will almost meet its annual energy needs.

The project is equipped with solar heating and solar electricity with a grid-connected photovoltaic system. It has greywater heat recovery and low pollution emitting construction materials with high recycled content.

FIGURE 2-13

EQUILIBRIUM PROJECT:
ÉCOTERRA
EASTMAN, QUEBEC

This EQuilibrium project is factory-built, providing efficient material use and minimum waste. It uses passive solar design and solar collectors to meet space heating and domestic hot water needs.

The home also features a grid-connected photovoltaic system. Rainwater harvesting is used for drip irrigation, and the house is constructed with low pollution emitting building materials. The flexible interior floor plans allow the home to change as the needs of the occupants evolve.

FIGURE 2-14

EQUILIBRIUM PROJECT:
ABONDANCE MONTRÉAL
MONTRÉAL, QUEBEC

Abondance Montréal is part of a 20-unit, multi-family infill development. The first phase of the development, an infill triplex, is an EQuilibrium housing project.

Space heating and cooling for the building is provided by a geothermal heat pump. Electrical energy for lighting and appliances will be offset by electricity provided by grid-connected PV panels.

Domestic hot water heating is provided by solar thermal collector panels aided by a greywater heat recovery system. Hot water production will be sold to the neighbouring building. The many other features include triple-glazed windows, and moisture and indoor air quality control.

Other initiatives

Other initiatives also exist in Canada to support more sustainable housing (*see box Green Residential Initiatives*).

Experience in other countries

Canada is not alone in the effort to encourage low impact and net-zero energy housing. Developers in the Netherlands, Japan, Germany, the United Kingdom, and the United States are already building and successfully selling homes targeting net-zero energy consumption measured on an annual basis. In some cases these involve not just one home but a community or development.

In 1999, the Papenkamp development in Hanover, Germany was constructed to demonstrate a new environmental model for low energy apartment buildings. The project features very high insulation levels, airtight construction, passive solar heating, solar domestic hot water heating and heat recovery ventilation. A central atrium connects the four apartment blocks and features prominently in the overall energy strategy. Overall, the project consumes seventy per cent less than what would otherwise be allowed by German energy efficiency regulations.

In 2002, a 21-unit, net-zero energy, row house project was constructed in Etten-Leur, Netherlands. The project features a highly insulated, well-sealed building envelope,

FIGURE 2-15

EQUILIBRIUM PROJECT:
THE NOW HOUSE™
TORONTO, ONTARIO

The Now House™ project is a renovation of a 60-year old house that will demonstrate how far the energy requirements of existing houses can be reduced towards net-zero annual energy consumption.

As well as improvements in insulation, windows, appliances and lighting, the upgrades will include a larger south facing window to increase solar gains, a solar domestic hot water heating system, a grid-connected PV solar system, a wastewater heat recovery system, a high efficiency natural gas furnace, solar radiant basement floor heating and a heat recovery ventilator.

Green Residential Initiatives

Green rating systems and initiatives have been developed to encourage the building industry to design and build in more environmentally sustainable ways. They are transforming the construction marketplace in Canada and the United States.

These voluntary tools help to focus the thinking of design and construction professionals on how to incorporate more eco-friendly practices. All consider the issues of energy use, and points are also awarded for measures such as integrated site planning, water conservation, and resource materials, pre-construction energy reduction, indoor air quality and construction waste management.

R-2000 is a federal government initiative by Natural Resources Canada to promote high energy efficiency for houses. Rather than a rating system, the program sets criteria that certified builders must meet in order to have a building certified. These standards include insulation levels, airtightness and Heating, Ventilation and Air Conditioning (HVAC) system performance. Indoor air quality and water conservation are also considered.

Web link: **r2000**.chba.ca

EnviroHome requires R-2000 certification, plus additional air quality and environmental features above R-2000 requirements. EnviroHome projects showcase new home building technology and products and promote innovative builders. The EnviroHome Initiative was established in 1994 by the Canadian Home Builders' Association (CHBA) and TD Canada Trust.

Web link: **envirohome**.chba.ca

LEED (Leadership in Energy and Environmental Design) was developed in the U.S. by the U.S. Green Building Council. A Canadian adaptation, LEED NC (New Construction) Canada version 1.0, is now being used across Canada for design of commercial buildings and multi-unit residential buildings. LEED has become a major influence in green building design, with several cities and building providers requiring LEED certification for their buildings.

Web link: www.**cagbc**.org

LEED for Homes is an offshoot of the LEED initiative that is being piloted in the U.S. and Canada. It is directed at low-rise residential developments, with particular focus on the needs of large developers, particularly site and development issues, durability and testing protocols. The program will be launched in November 2007 in the U.S. and June 2008 in Canada.

ecoENERGY for new and existing houses is Canada's labelling program directed at improving house energy performance. Natural Resources Canada offers grants to homeowners to retrofit existing homes to higher levels of energy performance. The retrofit work must be tested by a certified energy advisor. In new houses, an advisor analyses the home blueprints prior to construction and makes recommendations for energy upgrades.

Web link: www.ecoaction.gc.ca/**ecoenergy**-ecoenergie

ENERGY STAR for New Homes encourages energy upgrades that will allow a home to be 30 per cent better than the current minimum provincial building codes. To date, it is being used in Ontario and Saskatchewan. A qualified home is built by licensed ENERGY STAR builders. The builder incorporates energy efficient features into the home so that it can meet the ENERGY STAR for New Homes technical specifications. The energy-efficiency features are similar to those of R-2000.

Web link: www.oee.nrcan.gc.ca/**energystar**

BuiltGreen, developed by home builders, is a rating system now in use in British Columbia and Alberta. It applies to single-family and row homes and has three energy rating levels. Its stated goal is building durability and reduced maintenance. Points are also available for other environmental categories. The average ecoEnergy levels for these homes have been increasing annually.

Web link: www.**builtgreen**canada.ca

Green Globes, which originated in Canada, is a green management tool that includes an assessment protocol, rating system and design guide for integrating environmentally friendly design into commercial buildings, and multi-unit residential buildings.

Web link: www.energyefficiency.org/eecentre/eecentre.nsf

FIGURE 2-16

EQUILIBRIUM PROJECT:
ECHO HAVEN
CALGARY, ALBERTA

This EQuilibrium project is one of 25 planned homes in a neighbourhood with shared renewable energy generation.

One of the purposes of the project is to demonstrate EQuilibrium housing and low impact building technologies on a community scale. Solar thermal collectors are used for space and water heating. Photovoltaic solar systems will not be incorporated on individual homes, but there will be a grid-connected community PV array on-site, to offset electricity needs. Another unique feature of the project is the planned incorporation of small wind turbines to generate electricity. The project will also incorporate radiant floor heating and water conservation, including greywater recycling and rainwater harvesting.

An LCD monitor will be supplied to allow occupants to track energy consumption, both on-site renewable and grid supplied, and peak grid demand. The occupants can use this information to schedule energy consuming activities such as clothes washing to take advantage of those times when on-site PV/wind power is active or grid utility rates are low.

heat pumps coupled to a thermal storage aquifer below the project, low flow plumbing fixtures and a large photovoltaic array that spans the connected roofs of the row house units. The project's energy requirements are fifty per cent below those of conventional buildings. The large photovoltaic system was designed to provide sufficient electricity to offset the remaining fifty per cent of the energy requirements to achieve net-zero annual energy consumption.

Oak Meadows, Devon, England is the site of a 35-unit affordable housing development commissioned in 2004 incorporating a range of environmental features. Features of the units include high insulation levels, triple pane windows, solar domestic hot water, passive solar design, high efficiency boilers and rainwater collection for toilet flushing. It has been reported that energy costs are very low – up to eighty per cent less than conventional housing units – helping to make the project affordable for those in need.

FIGURE 2-17

EQUILIBRIUM PROJECT:
DISCOVERY 3
RED DEER, ALBERTA

Discovery 3 will incorporate a range of energy saving features including passive solar design, solar hot water heating, and a grid-connected photovoltaic system. Heat recovery ventilation and low pollutant emitting materials will enhance the indoor environment.

This EQuilibrium project has several features to reduce municipal water usage. These include low-flow fixtures and appliances, a rainwater harvesting system for toilet flushing and exterior watering, perennials instead of grass to reduce watering requirements and mulch wood waste for water retention on-site.

FIGURE 2-18

EQUILIBRIUM PROJECT:
TOP OF THE ANNEX TOWNHOMES
TORONTO, ONTARIO

This EQuilibrium housing project consists of three townhouses on a small urban infill site in Toronto. Net-zero annual energy consumption will be achieved through high insulation levels, ground-source heat pumps, solar domestic hot water systems, grid-connected photovoltaic systems and high efficiency lighting and appliances.

The project will be built using local, sustainable building materials and methods. Materials will be harvested, extracted or recovered and processed in Ontario (or within 500 miles) to minimise transportation impact on the community. Low emission materials are used, including natural organic paints. The project has a construction waste management plan to minimize waste and to encourage reuse and recycling.

A controlled (summer) experiment[7]

In the U.S., Florida Solar Energy Center conducted a controlled experiment in 1998 to compare the energy requirements for air conditioning for a zero-energy home, and a control home that merely conformed to local residential building practices. The zero-energy home had simple refinements like a wide roof overhang, reflective white roof tiles, exterior insulation, and windows that transmit the light from the visible portion of the spectrum but limit transmission in the infra-red and ultra-violet portions which cause overheating. In addition the home had a photovoltaic system mounted on the roof.

For the hottest day of the summer, the zero-energy home used 72 per cent less power for air conditioning than the control home. When the power produced by the photovoltaic system was taken into account, the zero-energy home required 93 per cent less utility-supplied power than the control home.

FIGURE 2-19

EQUILIBRIUM PROJECT:
YIPI!
PRINCE ALBERT, SASKATCHEWAN

The YIPI! Project will be factory-built and easily delivered to remote First Nations and other communities. The small, heavily insulated house makes use of energy-efficient design coupled with renewable energy and thermal storage to achieve near net-zero annual energy consumption.

Space heating is provided primarily by passive solar techniques and a solar hydronic forced air system. The unit includes a solar domestic hot water heating system and drain water heat recovery. A grid-tied PV system offsets electricity use. A solar air pre-heater will temper incoming ventilation air, reducing heating requirements and improving indoor air quality.

7 From "On the Path to Zero Energy Homes" U.S. Department of Energy. (www.nrel.gov/docs/fy01osti/29915.pdf)

FIGURE 2-20

EQUILIBRIUM PROJECT:
INSPIRATION: THE MINTO ECOHOME
OTTAWA, ONTARIO

This EQuilibrium project is located in a suburban development in Ottawa. It has a flexible design that can easily be adapted to different stages of a household's lifecycle. It has an airtight, highly-insulated building envelope with double wall construction to help reduce heat loss.

The home features both passive solar design and an active solar hot water system for space and domestic water heating. A grid-connected PV system will help offset electricity use. An "all-off" switch will allow power to be cut to selected equipment and appliances to limit standby electricity use.

A rainwater harvesting system will capture rainwater for landscape irrigation.

Conclusions

Canada's current stock of housing is placing a heavier than necessary demand on non-renewable resources, has a higher than necessary impact on the natural environment and is becoming more expensive to operate.

High energy costs, environmental concerns and an increasing awareness of the health impacts from housing-related emissions into air, water and soil on the part of housing occupants and for society as a whole are motivating greater consideration of housing that is more environmentally friendly, more energy-efficient, and healthier to live in.

As this chapter has illustrated, it is now possible, using available technology, to build homes that produce as much energy on an annual basis as they consume, have low environmental impacts, reduce resource consumption and promote healthier indoor environments. Such housing is being delivered in countries around the world.

The CMHC EQuilibrium housing initiative has been designed to demonstrate sustainable housing practices and technologies, to confirm the energy and water costs savings, to disseminate the knowledge, to develop industry capacity, and to generate increased market interest. The initiative is expected to demonstrate the extent to which the housing needs of Canadians can be balanced with those of the environment. In this way, CMHC plans to foster a vision within the housing sector that significant improvements in housing performance are possible and desirable.

FIGURE 2-21

EQUILIBRIUM PROJECT:
URBAN ECOLOGY
WINNIPEG, MANITOBA

The Urban Ecology project is a three-bedroom, energy-efficient, semi-detached house. It will have photovoltaic (PV) panels on the roof, solar thermal panels at the south wall and passive solar design strategies. It also has a geothermal heat pump as the primary source for heating. The PV system will generate a surplus of electricity that will be supplied back to Manitoba Hydro.

Among other features are occupancy sensors in key rooms to ensure lights are turned off when not required.

FIGURE 2-22

EQUILIBRIUM PROJECT:
THE LAEBON CHESS PROJECT
RED DEER, ALBERTA

This expandable starter home to be built in Red Deer is constructed with structural insulated panels. It features optimal solar exposure and large areas of thermal mass to store the heat during the day, as well as a grid-connected photovoltaic (PV) system. It has a high efficiency heat recovery ventilator. It will produce as much energy as it consumes on an annual basis.

It also incorporates rainwater harvesting for irrigation, and is built with low pollutant emitting building materials.

As the knowledge of the sustainable housing design and construction practices exemplified by the EQuilibrium housing initiative become more widespread, it is expected that what is now an emerging market niche will become the norm.

FIGURE 2-23

EQUILIBRIUM PROJECT:
THE ALSTONVALE NET-ZERO HOUSE
HUDSON, QUEBEC

This house is a new single-detached site-built house in a suburban development offering net-zero energy consumption. A large portion of the site will remain undisturbed and will act as a natural wildlife habitat.

The house is designed to optimize passive solar space heating, and features thermal surfaces to store energy, such as a main floor concrete slab and a large interior masonry wall facing the south windows.

A photovoltaic (PV) system will offset the electricity requirements of the building. An air-to-water heat pump will extract the heat from the PV panels and store it in a 4,000-litre water reservoir. The heated water in the reservoir will be distributed throughout the house through a radiant floor heating system. A solar hot water heating system will provide domestic hot water.

Rainwater harvesting will provide water to plants and reduces storm water runoff.

Demographic and Socio-economic Influences on Housing Demand

3

Population growth varies significantly across Canada. While Canada's population – which is generally aging – is growing slowly overall, growth is much faster in some parts of the country, particularly in metropolitan areas with strong labour markets. In many other locations, populations are growing little, if at all. By and large, the rate of homebuilding in different parts of Canada reflects the presence or absence of such underlying population pressures.

A strong labour market and rising household incomes and wealth continue to boost housing demand. Increased household formation in recent years is one sign of the strengthening of housing demand that has taken place since the mid-1990s.

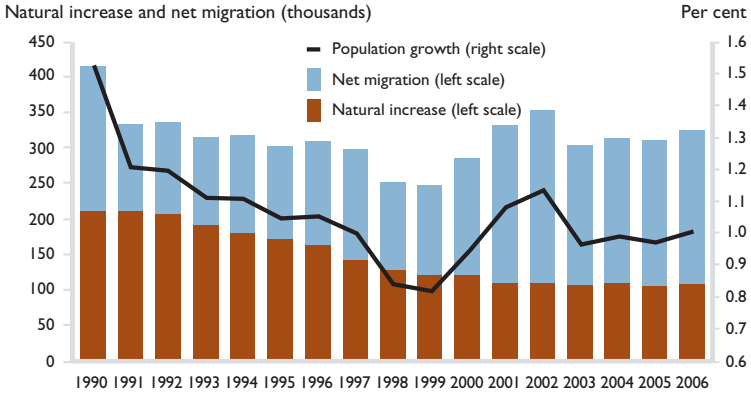
Rising immigration boosts population growth

Although fluctuating from year to year, population growth in Canada generally slowed from 1990 to 2006 *(see Figure 3-1)*. An aging population and persistently low fertility restricted growth.[1] Births fell and deaths rose as baby boomers moved into their middle years. Population growth became increasingly tied to immigration, to the point where the population gained through immigration now accounts for approximately two-thirds of total growth.

Though the long-term trend has been towards slower growth, Canada's population actually grew at a slightly faster pace in the five years ending June 30, 2006 than in the previous five years.[2] The annual rate of population growth rose to 1.0 per cent from 0.9 per cent.[3] The modest

FIGURE 3-1

COMPONENTS OF POPULATION GROWTH, CANADA, 1990-2006



Data are for a 12-month period ending on June 30 of stated year.
Net migration is the difference between population growth and natural increase.

Source: CMHC, adapted from Statistics Canada (CANSIM)

1 In recent years, the total fertility rate in Canada has stood at 1.5 births per woman, well below the 2.1 level required for each generation to replace itself.

2 Discussion of growth trends and immigration flows refers to the five-year periods from July 1, 2001 to June 30, 2006 and from July 1, 1996 to June 30, 2001.

3 Growth estimates are based on population counts that do not reflect findings from the 2006 Census. Statistics Canada intends to adjust population estimates for census findings in 2008 once census coverage studies are completed.

acceleration was largely attributable to rising immigration.[4] During the five years ending June 30, 2006, an average of about 240,000 newcomers landed in Canada each year, compared to about 210,000 each year in the previous five years.

Population composition continues to change

Despite the modest rate of growth of the population overall, the makeup of the Canadian population is changing significantly. Senior, immigrant and Aboriginal[5] populations are all growing rapidly.

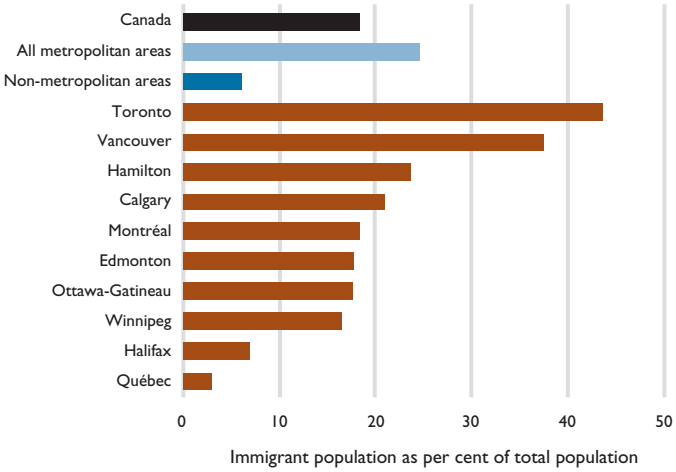
In the last 15 years, the population of seniors in Canada grew at over twice the rate of the Canadian population as a whole. In the next 25 years, as baby boomers reach and pass the age of 65, the number of seniors is expected to grow at better than five times the rate of the general population.[6] Seniors will more than double their numbers by 2031. Thereafter, growth will moderate but will continue to outpace that of the general population by a wide margin. Accordingly, the share of seniors in the total population is expected to continue to increase for at least the next 50 years.[7] The percentage of seniors in the population tends to be relatively high in slow-growing or declining communities, and in retirement destinations, such as Victoria.

The number of immigrants in Canada has also been growing at better than twice the rate of the general population. In 2001, immigrants made up 18 per cent of Canada's population, the highest share in 70 years.[8] Shares are much higher in some urban centres *(see Figure 3-2)* since most immigrants settle in large cities—more than 70 per cent of them in Toronto, Vancouver and Montréal. In 2001, immigrants comprised about a quarter of the population of metropolitan areas but just six per cent of non-metropolitan areas.

The Aboriginal population is another fast-growing group, increasing by 22 per cent between 1996 and 2001. The non-Aboriginal population increased by three per cent.[9] A youthful age profile and above-average fertility rate are factors behind this growth.[10] Another factor is increased awareness of Aboriginal roots and more complete

FIGURE 3-2

IMMIGRANT POPULATIONS, CANADA AND SELECTED URBAN CENTRES, 2001



Adapted from 2001 census data. Data for 2006 were unavailable at time of writing.
All metropolitan areas total includes six centres that qualified as Census Metropolitan Areas for the 2006 Census but which were classed as Census Agglomerations in 2001. Total population excludes institutional residents.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

4 A second, less significant, factor contributing to increased growth was a modest increase in births, which more than offset the continuing rise in deaths. As a result, natural increase—the difference between births and deaths—grew slightly from 2001 to 2006 after falling by almost half between 1990 and 2001.

5 Aboriginal identity includes people who identified as North American Indian (status Indian and non-status Indian), Métis or Inuit (see *2001 Census Housing Series Issue 6: (Revised) Aboriginal Households*), CMHC.

6 CMHC calculations based on projections in Alain Bélanger, Laurent Martel, and Éric Caron-Malenfant, *Population Projections for Canada, Provinces and Territories 2005-2031* Catalogue no. 91-520-XIE (Ottawa: Statistics Canada, 2005), p. 149. While seniors will more than double their numbers by 2031, the population as a whole will grow by only 20 per cent (scenario 3).

7 CMHC calculations based on Bélanger, Martel, and Caron-Malenfant, *Population Projections, for Canada, Province and Territories 2005-2031* p. 207.

8 Statistics Canada, *2001 Census: Analysis Series Canada's Ethnocultural Portrait: The Changing Mosaic* Statistics Canada Catalogue no. 96F0030XIE2001008 (Ottawa: Statistics Canada, 2003), p. 5. Data on immigrants from the 2006 Census were not available at the time of writing.

9 Statistics Canada, *Aboriginal Peoples of Canada: A Demographic Profile, 2001 Census* Statistics Canada Catalogue no. 96F0030XIE2001007 (Ottawa: Statistics Canada, 2003), p. 6.

10 In 2001, the median age of Aboriginal people was about 25, compared to 38 for non-Aboriginals. *Aboriginal Peoples of Canada: A Demographic Profile, 2001 Census* p. 7.

enumeration of reserves, which may account for as much as half the growth from 1996 to 2001. Growth in the future is expected to continue to be much faster than for the general population.[11]

Although Aboriginal people accounted for just over three per cent of the population of Canada, concentrations were considerably higher in Manitoba (14 per cent), Saskatchewan (14 per cent), Yukon (23 per cent), the Northwest Territories (50 per cent) and Nunavut (85 per cent).

Ontario had the largest number of Aboriginal people of any province or territory, despite a percentage share that was only about half the national average.

In 2001, about half of all Aboriginal people lived in urban areas, compared to 80 per cent of non-Aboriginal people.[12] Twenty-nine per cent of Aboriginal people lived on reserves.

Alberta, Ontario, and British Columbia grow the most

Although population growth in Canada as a whole is modest, there is wide-ranging local variation.

At one end of the range, the populations of Newfoundland and Labrador and of Saskatchewan have been declining for a number of years.

At the other end, the population of Alberta has grown at more than twice the national rate since 1971, doubling in the process. Alberta's population now accounts for a tenth of the national total and at current growth rates will double again in another 35 years or so. Ontario and British Columbia are the only other provinces to record growth rates since 1971 that have consistently exceeded the national average. In all other provinces, growth has been well below average.

FAST **Facts**

- With the exceptions of Moncton and Sherbrooke, all of the fastest-growing metropolitan areas in recent years were in Alberta, Ontario, or British Columbia.
- Metropolitan areas accounted for 86 per cent of population growth in Canada from 2001 to 2006. Almost two-thirds of metropolitan growth occurred on the periphery of metropolitan areas.
- On the strength of a modest increase in population growth, net household formation in Canada rose to 174,900 annually in the period from 2001 to 2006, after averaging about 150,000 in the previous decade.
- The number of households in Canada owning second homes, vacation homes, or cottages reached 1.1 million in 2005, about 200,000 more than in 1999.
- In 2006, the unemployment rate hit a 30-year low, and the employment rate reached a 30-year high.
- Increased equity in real estate accounted for almost half of the growth in the net worth of households from 1999 to 2005. During this period, the average net worth of households in Canada grew after inflation at an annual rate of better than 4 per cent, compared to only about 2 per cent from 1984 to 1999.

11 Statistics Canada, *Projections of the Aboriginal Populations, Canada, Provinces and Territories 2001 to 2017* Catalogue no. 91-547-XIE (Ottawa: Statistics Canada, 2005), p. 26.

12 The term "urban areas" in this context refers to Census Agglomerations and Census Metropolitan Areas, that is, to centres with urban core populations of at least 10,000.

Differences in provincial growth rates largely reflect the effects of migration. In recent years,[13] migration from other parts of Canada to Alberta strengthened markedly.[14] British Columbia was the only province other than Alberta that gained more population from elsewhere in Canada than it lost through out-migration to other parts of Canada. Even so, the net gain from interprovincial migration in British Columbia dropped by more than half in the last two years and was scarcely a fraction of the gain in Alberta. In the other eight provinces, population losses due to net out-migration increased.

Urban centres in rapidly growing regions tend to have labour markets that attract migrants from elsewhere in Canada. Some also draw in large numbers of immigrants.

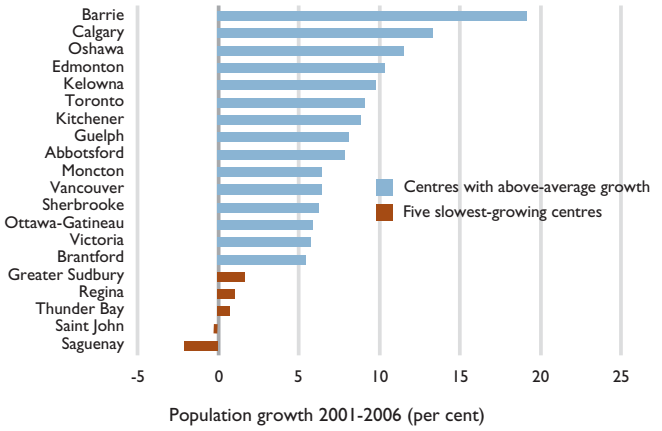
With the exceptions of Moncton and Sherbrooke, all of the fastest-growing metropolitan areas in recent years were in Alberta, Ontario or British Columbia *(see Figure 3-3)*.[15] Two of the top three—Barrie and Oshawa—are near Toronto, which itself is growing rapidly. Calgary ranked second and Edmonton fourth. At current rates of growth, Barrie's population will double in 20 years, Calgary's in less than 30.

From 2001 to 2006, growth in mid-sized centres varied even more than growth in metropolitan areas. Increasing at better than double the rate of Canada's population as a whole, many of the fastest-growing mid-sized urban centres were in Alberta.[16]

In other mid-sized centres, however, especially those with economies linked to natural resources—forestry in particular—populations declined. The biggest declines were in northern British Columbia.[17]

FIGURE 3-3

POPULATION GROWTH, SELECTED URBAN CENTRES, 2001-2006



Census Metropolitan Areas ranked by population growth.
Metropolitan growth determined using 2006 metropolitan area boundaries.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

Urban and Rural Definitions

This review of urban and rural growth patterns is based on various concepts derived from census definitions.

Metropolitan area (Census Metropolitan Area)— an urban area with a total population of at least 100,000 and an urban core population of at least 50,000.

Mid-sized centre (Census Agglomeration)—urban areas that are not metropolitan areas and have urban core populations of at least 10,000.

Small towns and rural areas—an area that is not part of a metropolitan area or a mid-sized centre.

Central municipality—the municipality for which a metropolitan area is named.

Periphery (of metropolitan area)—all parts of a metropolitan area except the central municipality.

13 The discussion of interprovincial migration is based on comparison of the period from July 1, 2005 through June 30, 2006 to the period from July 1, 2003 through June 30, 2004.

14 Discussion of provincial growth patterns is based on Statistics Canada's quarterly population estimates, not on census data.

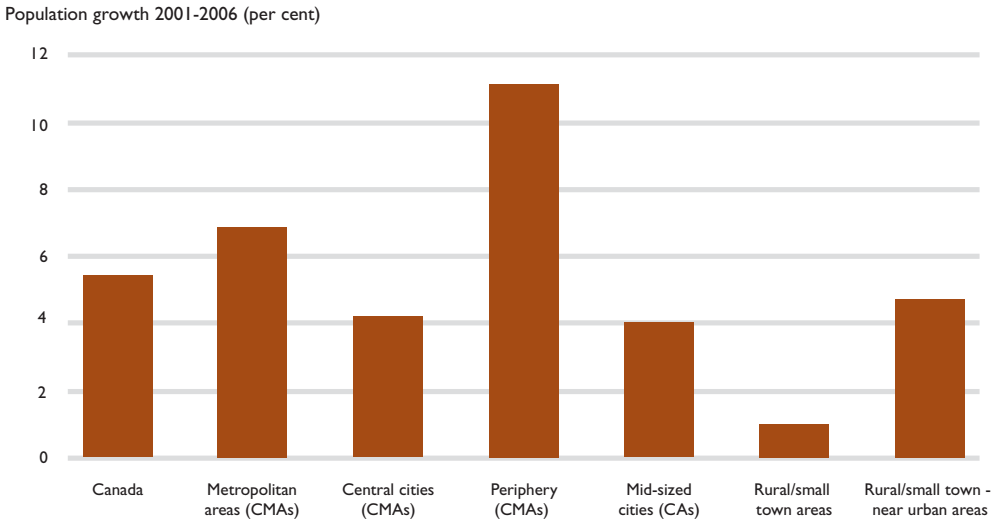
15 All growth figures for 2001–2006 are based on 2006 metropolitan area boundaries and include the six new Census Metropolitan Areas (CMAs)—Barrie, Brantford, Guelph, Kelowna, Moncton and Peterborough—added when the 2006 Census was conducted. Data on metropolitan growth are derived from census data since the new CMAs and updated metropolitan boundaries have not yet been incorporated in Statistics Canada's annual metropolitan population estimates.

16 The five fastest-growing mid-sized centres were Okotoks, Wood Buffalo, Grande Prairie, Red Deer and Yellowknife. Statistics Canada, *Portrait of the Canadian Population in 2006,* 2006 Census Statistics Canada Catalogue no. 97-550-XIE (Ottawa: Statistics Canada, 2007), p. 34.

17 The five centres with the largest percentage declines —Kitimat, Prince Rupert, Quesnel, Terrace and Williams Lake—were in British Columbia, *Portrait of the Canadian Population,* p. 35.

FIGURE 3-4

POPULATION GROWTH BY TYPE OF URBAN OR RURAL AREA, CANADA, 2001-2006



Growth rates are based on 2006 municipal, Census Metropolitan Area (CMA), and Census Agglomeration (CA) boundaries. Central cities are the municipalities for which Census Metropolitan Areas are named. Mid-sized cities are Census Agglomerations. Rural and small town areas are places that are not part of a CMA or CA.

Source: Statistics Canada (Census of Canada)

Most population growth is in metropolitan areas

Canada is increasingly urban. In 2006, 81 per cent of Canadians lived in urban centres with populations of 10,000 or more. The comparable figure for 2001 was 80 per cent. Small as this change was in percentage terms, it nonetheless meant that the urban centre population rose by 1.6 million over the five years.

In general, larger communities are growing faster than smaller communities. From 2001 to 2006, most population growth in Canada was in metropolitan areas, home to two-thirds of Canadians.

These large urban centres collectively accounted for 86 per cent of growth in Canada. The population living in metropolitan areas increased 6.9 per cent, well above the 5.4 per cent growth of the national population *(see Figure 3-4)*.[18]

Generally, smaller communities did not grow as rapidly—the number of people living in mid-sized urban centres increased by only 4.0 per cent.[19]

The population in small towns and rural areas grew still less—just 1.0 per cent.[20] Although modest, this increase more than made up for the 0.4 per cent decline between 1996 and 2001.

Suburbs still dominate urban growth

Despite growing concern about urban sprawl and interest in renewing existing neighbourhoods, most population growth within metropolitan areas continues to occur on the outskirts.

From 2001 to 2006, municipalities on the periphery of metropolitan areas grew at more than double the rate of central municipalities—11.1 per cent versus 4.2 per cent (*see Figure 3-4*).[21]

18 Based on census data, this national growth figure differs slightly from the growth estimate obtained from Statistics Canada's official population estimates (5.2 per cent).

19 *Portrait of the Canadian Population*, p. 36.

20 *Portrait of the Canadian Population*, p. 33.

21 *Portrait of the Canadian Population*, p. 31. Metropolitan growth figures are based on 2006 municipal boundaries.

In fact, the population of central municipalities grew more slowly than the Canadian population overall. The growth rate of these core communities was essentially unchanged from the previous five years.[22] Barrie, Guelph, Kelowna and Trois-Rivières were the only metropolitan areas in which core communities grew faster than the peripheral areas.

Population growth on the periphery of urban areas often extends into surrounding rural areas. Although there was little growth from 2001 to 2006 in small towns and rural areas overall, rural and small town populations living near metropolitan areas or mid-sized centres increased at close to the growth rate of Canada as a whole *(see Figure 3-4)*.[23] In contrast, there was essentially no change in the total population of remote small towns and rural areas.

Many of the fastest-growing small towns in Canada are located near Montréal, Toronto or Vancouver. Included among the fastest-growing small towns are a number in resort areas. With the exception of Yarmouth, Nova Scotia, most of the small towns and rural areas with the largest population declines from 2001 to 2006 were in remote areas.[24]

Household growth reflects population growth

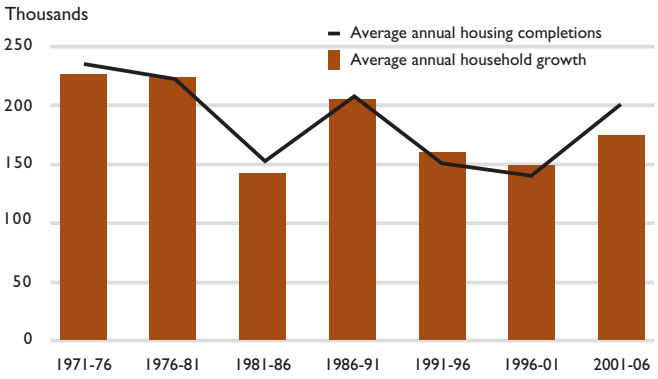
Population growth is transformed into housing demand through household formation. Households form, dissolve and change composition as people age and adjust their living arrangements.

Since Canada's population continues to grow—even slowly—the number of households in Canada is increasing.

Over time, the change in the number of households tends to parallel the number of new homes built, since the housing stock must expand to accommodate any increase in the number of households.[25] For households to form, appropriate housing must be available at prices that are affordable to those seeking to establish households.

FIGURE 3-5

HOUSEHOLD GROWTH AND HOUSING COMPLETIONS, CANADA, 1971-2006



Completions based on totals for 3rd quarter through 2nd quarter.

Source: CMHC (*Starts and Completions Survey*) and adapted from Statistics Canada (Census of Canada)

In the 1970s, when the postwar baby boom generation began leaving home, the number of households in Canada increased by well over 200,000 annually *(see Figure 3-5)*.[26] In the 1990s by contrast—when fewer young adults were entering the housing market—annual household growth averaged slightly over 150,000. Housing completions followed a similar, ultimately downward, trajectory.

From 2001 to 2006, however, annual growth in households averaged 174,900, up from 148,600 in the period from 1996 to 2001.[27] The increase in household formation was

22 Comparisons of growth rates of core municipalities in the two periods—2001–2006 and 1996–2001—are not exact given boundary changes and inclusion of six new CMAs in 2001-2006 figures.

23 *Portrait of the Canadian Population*, pp. 36-37.

24 *Portrait of the Canadian Population*, pp. 38-39.

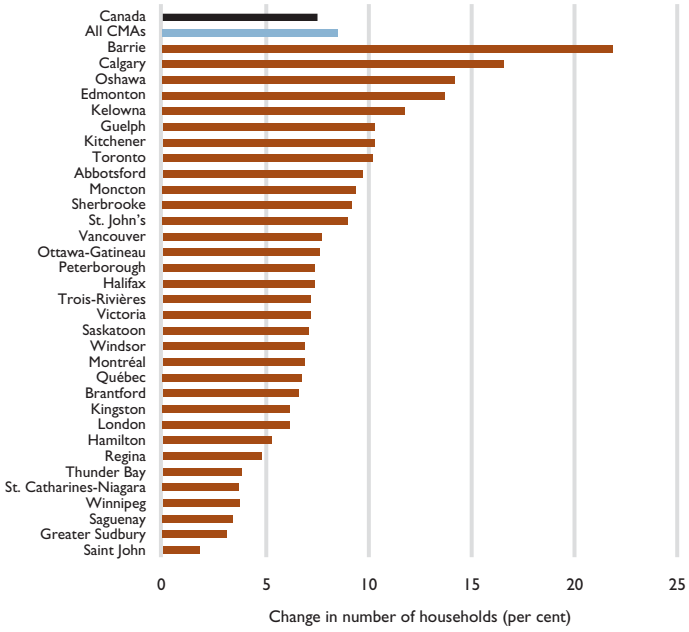
25 In the short-term, households can occupy previously vacant stock, but for household formation to continue over the long-term, the housing stock must grow.

26 The review of household growth presented here features data on dwellings occupied by usual residents, which were released by Statistics Canada on March 13, 2007. All metropolitan data come from this release. To facilitate analysis of household growth, metropolitan data for 2001 have been adjusted by Statistics Canada, where necessary, to match 2006 Census Metropolitan Area boundaries.

27 Growth figures refer to the five-year periods between census dates. Varying coverage levels across censuses can affect household growth estimates. Coverage studies indicate that the 2001 Census missed a somewhat higher proportion of the population than the 1996 Census. It seems likely, therefore, that census data understate household growth between 1996 and 2001. Coverage studies for the 2006 Census won't be completed until 2008.

FIGURE 3-6

HOUSEHOLD GROWTH, CANADA AND CENSUS METROPOLITAN AREAS (CMAs), 2001-2006



Cities ranked by rate of household growth.
Metropolitan growth determined using 2006 metropolitan area boundaries.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

consistent with the moderate rise in population growth during these five years *(see Figure 3-1)*.[28]

Despite the recent increase in household formation, the net increase in households from 2001 to 2006 was less than the number of new houses completed. From 1991 to 2001, the reverse was the case: net household formation was more than new houses completed.

There are many reasons why the number of new houses completed differs from the net increase in households. For one thing, new construction must make up for units lost from the housing stock through demolition or conversion to other uses.

In addition, some of the necessary increase in housing supply comes through sources other than construction of new homes, for example, factory-built mobile homes or conversions that either split existing homes into additional units or transform non-residential buildings into residences.[29]

One last complication is that households can occupy more than one dwelling. Growing numbers of households in Canada own vacation homes, second homes or cottages.

Household growth underlies diverse markets

The rate of household growth varies considerably from market to market. Net household formation in urban centres with strong labour markets and growing populations is much higher than in other cities. Led by Barrie and Calgary, most of the cities with high rates of household growth are located in Alberta, Ontario and British Columbia *(see Figure 3-6)*.

These high-growth centres account for a disproportionate share of homes built in Canada. In such centres, the per capita rate of homebuilding is significantly higher than in slow-growing markets *(see Figure 3-7)*. Because of wide variation in the growth rates of urban populations, the volume of residential construction can differ greatly in cities of roughly comparable size.

Despite shrinking populations in some urban centres and negligible growth in others *(see Figure 3-3)*, the number of households increased in all metropolitan areas between 2001 and 2006. In fact, household growth exceeded population growth in all these centres, an indication that the size of the average household continued to fall, as it has for decades.

Since population growth in Canada is expected to decline gradually over the next 50 years, household growth is likely to weaken as well and could even turn negative in some markets.[30]

This phenomenon is already occurring in a handful of shrinking, mid-sized communities, such as Prince Rupert and Kitimat, where there were fewer households in 2006 than in 2001. In such circumstances, demand for new housing is likely to be negligible: the bulk of residential

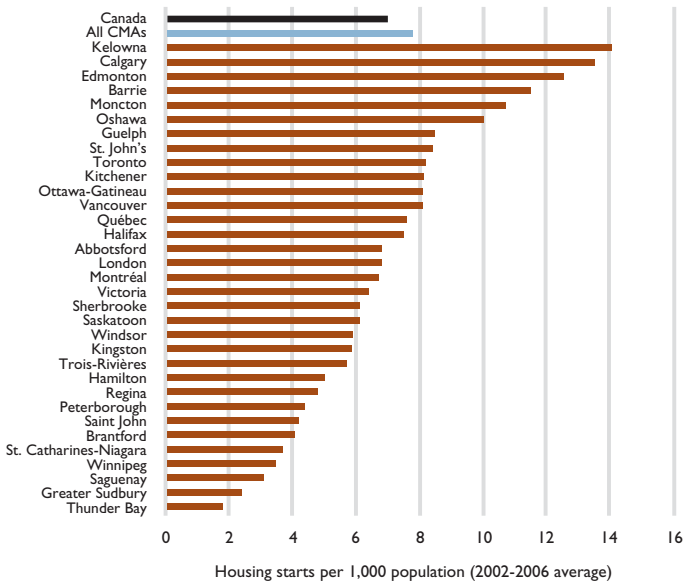
28 It is possible as well that the strong economy during the 2001–2006 period helped raise the level of household formation by giving individuals and families the financial means to live independently instead of sharing housing with others. Census data required to examine this possibility were not available at the time of writing.

29 Only mobile homes mounted on a permanent foundation are included in statistics on housing starts and completions.

30 Unless fertility, life expectancy, and especially immigration increase, Statistics Canada expects the growth of Canada's population to slow. Bélanger, Martel, and Caron-Malenfant, *Population Projections for Canada Provinces and Territories 2005-2031*, p. 39. Despite the date range in the title, the publication includes population projections for Canada as a whole through 2056.

FIGURE 3-7

HOUSING STARTS, CANADA AND CENSUS METROPOLITAN AREAS (CMAs) 2002-2006



Cities ranked by per capita housing starts.
Population data from 2006 Census of Canada. Housing starts based on 2002-2006 annual averages.

Source: CMHC (*Starts and Completions Survey*) and adapted from Statistics Canada (Census of Canada)

construction would be for maintaining and adapting the aging housing stock.

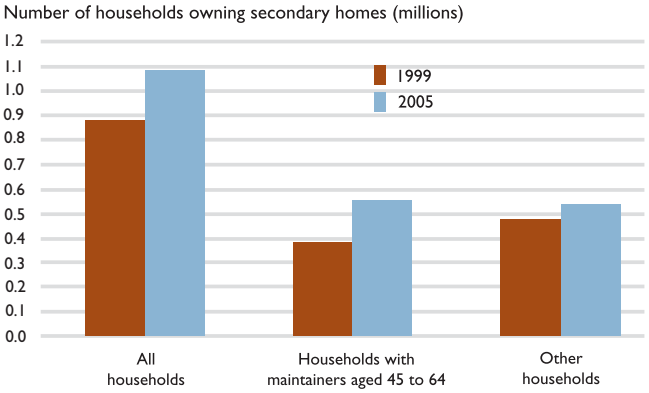
Baby boomers spur growth in second homes

One reason why the number of homes constructed can exceed the number of households formed is that households—those with the financial means at least—may opt to own and live in more than one dwelling. In 2005, about nine per cent of households in Canada owned second homes, vacation homes, or cottages—up from eight per cent in 1999.[31] Around 1.1 million households owned such homes in 2005, approximately 200,000 more than in 1999 *(see Figure 3-8)*.[32] Roughly three-quarters of these homes were located in Canada.[33] Even if all these additional secondary homes were not actually built during the period, the growth of this market segment nonetheless represented a boost to homebuilding.[34]

Baby boomers were responsible for much of the increase in the number of second homes, vacation homes and cottages. Households with maintainers aged 45 to 64 accounted for almost three-quarters of the total increase in households owning secondary homes.[35] Households with maintainers aged 30 to 44 accounted for most of the remainder of the increase. The 45 to 64 age range largely coincided with the ages of baby boomers at the time.[36] In 2005, half (51 per cent) of all owners of second homes,

FIGURE 3-8

OWNERSHIP OF SECONDARY HOMES BY AGE GROUP, CANADA, 1999 AND 2005



Secondary homes consist of second homes, vacation homes, and cottages.
The household maintainer is generally the household member with the highest income.

Source: CMHC, adapted from Statistics Canada (*Survey of Financial Security*)

31 Data on second homes, vacation homes, and cottages come from the 1999 and 2005 editions of Statistics Canada's *Survey of Financial Security.*

32 The number of second homes, vacation homes, and cottages would have been more than 1.1 million since some households would have owned more than one secondary residence.

33 This is approximate since the format of the data did not allow for a precise breakdown of the number of Canadian and foreign second homes, vacation homes and cottages. Small sample sizes also limit precision of estimates.

34 It is possible that some of the additional second homes, vacation homes, and cottages were not built during the period but rather were homes that shifted from full-time use to one of these secondary uses. If homes that might otherwise be occupied year-round are used instead as second homes, vacation homes or cottages, more homes must be built to meet demands for year-round accommodation.

35 In the context of the *Survey of Financial Security*, the household maintainer is usually the person in the household with the highest income.

36 In 2005, baby boomers would have ranged in age from about 40 to 60.

vacation homes and cottages were aged 45 to 64. Household incomes and net worth generally peak at this age before dropping during retirement.

The rise in ownership of secondary homes among households with maintainers aged 45 to 64 reflected both an increase in the number of households in this age segment and, to a lesser extent, an increase in the likelihood of households owning secondary residences.

From 1999 to 2005, the number of households with maintainers aged 45 to 64 rose by about a quarter as more and more baby boomers reached these ages. The percentage of households in this age group owning secondary homes was slightly higher in 2005 (12 per cent) than in 1999 (11 per cent).

Owners of secondary homes are generally well off. In 2005, 86 per cent of them owned their principal residence.[37] They were slightly older than other household maintainers (a median age of 50 versus 46 for other maintainers). The median household income of this group ($80,000) was about 70 per cent higher than that of other households in Canada. At $542,000, the median net worth of owners of secondary homes was three-and-a-half times higher than the net worth of other households.

Strong labour market boosts housing demand

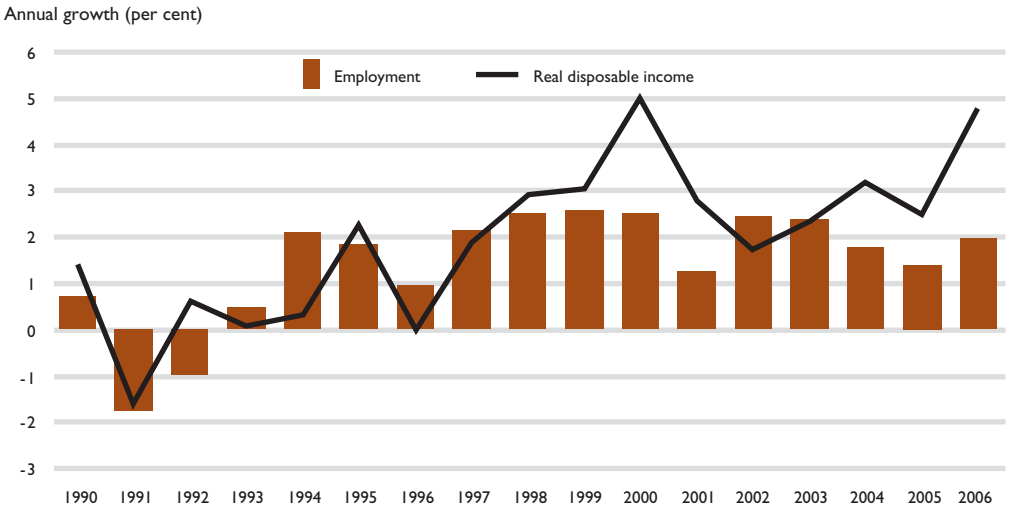
Steady job gains and growing disposable incomes have supported substantial increases in housing demand and residential construction over the past decade.[38]

Jobs generate the income and savings that individuals and families need to be able to act on their housing preferences. People with good employment prospects and the necessary financial resources can choose to move out of shared accommodation, to buy homes, and, for some, to buy second homes.

After dropping during the early 1990s, employment in Canada has increased in each of the past 14 years *(see Figure 3-9)*. Job creation slowed moderately in recent years but rebounded in 2006, reducing the unemployment rate to 6.3 per cent, a 30-year low. The employment rate—the percentage of the adult population with jobs—reached a

FIGURE 3-9

JOB CREATION AND REAL DISPOSABLE INCOME GROWTH, CANADA, 1990-2006



Employment growth calculated from average monthly employment during the year. Income growth based on quarterly average during the year.

Source: CMHC, adapted from Statistics Canada (CANSIM)

37 Statistics in this paragraph exclude owners of second homes, vacations homes or cottages who did not provide estimates of the value of these holdings when responding to the *Survey of Financial Security*.

38 Since the mid-1990s, housing starts have more than doubled in Canada.

FIGURE 3-10

EMPLOYMENT GROWTH, CANADA AND HIGH-GROWTH URBAN CENTRES, 2001-2006

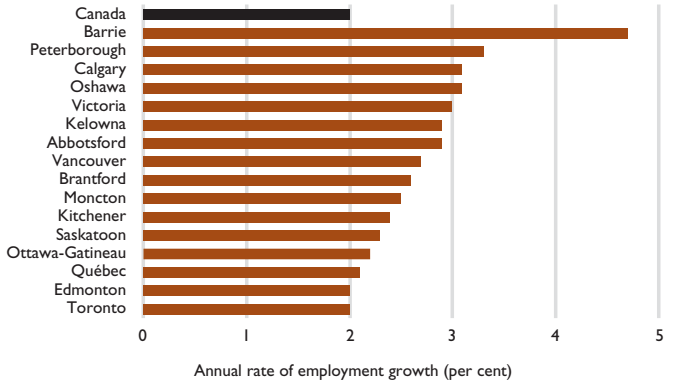


Figure displays Census Metropolitan Areas with employment growth equal to or greater than the national rate.

Source: CMHC, adapted from Statistics Canada (CANSIM)

30-year high. In the past three years, full-time positions accounted for almost all of the jobs created.

With job creation strengthening in the late 1990s, household incomes grew faster than shelter costs, a reversal of developments earlier in the decade.[39] Growth in aggregate real disposable income has remained robust, generally mirroring job creation *(see Figure 3-9)*.

Employment prospects vary a great deal across Canada. Major urban centres west of Ontario generally had unemployment rates lower than the Canadian average.[40] From 2001 to 2006, Alberta and British Columbia were the only two provinces in which employment growth exceeded the national average. Alberta led all provinces in job creation over the past decade, and large amounts of housing were constructed to accommodate those moving to the province. The improving labour market in British Columbia, which followed a number of lean years in the late 1990s, was accompanied by an upsurge in housing construction. In 2006, housing starts in British Columbia rose to 36,443 from 17,234 in 2001.

Employment growth and population growth typically go hand in hand. Cities with strong labour markets attract population as people move to take up jobs or to look for employment. As populations grow, the housing stock must expand to house increased numbers of households.

In the last five years, most of the cities with high rates of job creation were located in Ontario, Alberta, or British Columbia *(see Figure 3-10)*, the same provinces at the top of population growth and household growth rankings.

Modest income gains mask increasing income inequality

All households did not benefit equally from income gains.[41] High-income earners enjoyed much stronger growth than those with low incomes.

From 1990 to 2005, the average real income after taxes of the top fifth of households in Canada jumped 19.7 percent, while that of the bottom fifth fell 3.4 per cent *(see Figure 3-11)*. As a result, the ratio of the average after-tax income in the top fifth of households to that of the bottom fifth rose from 6.7 to 8.3.

Household incomes took the best part of a decade to make up for declines in the early 1990s. Real growth from 1990 to 2005 was modest overall. After adjustment for inflation, the typical, or median, Canadian household earned 5.3 per cent more after taxes in 2005 than in 1990.[42]

39 In 2001, households on average spent 21 per cent of their before-tax incomes on shelter, compared to 22 per cent in 1996 and 21 per cent in 1991. Shelter cost data exclude farm, band, and reserve households; households with incomes of zero or less; and households whose shelter costs equal or exceed their incomes. For renters, shelter costs include rent and any payments for electricity, fuel, water, and other municipal services. For owners, shelter costs include mortgage payments (principal and interest), property taxes, and any condominium fees, along with payments for electricity, fuel, water, and other municipal services. Incomes reported on the Census are for the previous calendar year; for example, the 2001 Census collected income data for the year 2000.

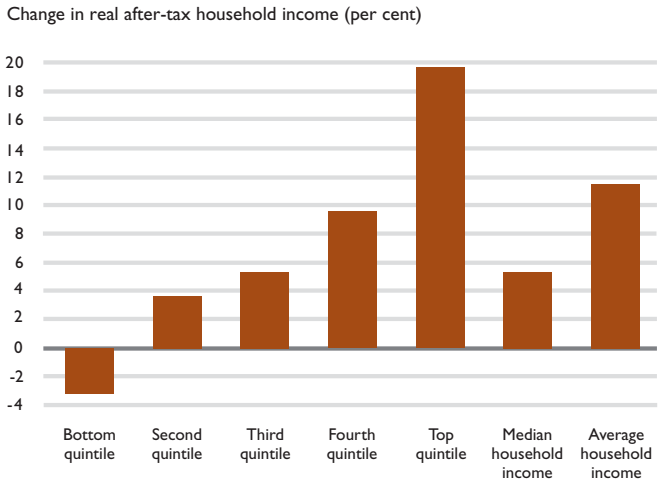
40 The statement is true of the urban areas qualifying as Census Metropolitan Areas (CMAs) in 2001.

41 All income data in the remainder of this section are from custom tabulations that combine data from the *Survey of Consumer Finances* (1990 through 1995) and the *Survey of Labour and Income Dynamics* (1996 and later years).

42 A median household is typical in the sense that half of households have incomes above the median and half below the median. Because of the strong growth of incomes in the top fifth, the average household income grew much more than the median—by 10.2 per cent.

FIGURE 3-11

GROWTH IN REAL AFTER-TAX HOUSEHOLD INCOME BY QUINTILE, CANADA, 1990-2004



Growth rates show the change in the average household income of each quintile. Median and average income bars show statistics for all households.

Source: CMHC, adapted from Statistics Canada (*Survey of Labour and Income Dynamics*)

Growing income disparity was evident in the divergent fortunes of owner and renter households. The median after-tax incomes of owners rose 6.3 per cent from 1990 to 2005. In contrast, renters saw their median after-tax incomes drop 2.0 per cent.

One factor that curbed growth in the real incomes of renters was the movement in the late 1990s of large numbers of households out of rental units into homeownership. The renters who bought homes typically had higher incomes than the households who continued to rent.[43]

Rising real estate values underpin wealth gains

Growth in the net worth, or wealth, of Canadian households has been robust in recent years. The average net worth of households in Canada increased in real terms (after inflation) at an annual rate of better than four per cent from 1999 to 2005. In contrast, growth from 1984 to 1999 averaged only about two per cent per year.[44]

Survey of Financial Security (SFS)

Data presented in this chapter on net worth and on second homes, vacation homes and cottages come from Statistics Canada's *Survey of Financial Security*. The SFS is an occasional survey that collects information on the assets and debts of families and individuals. Net worth is the difference between the value of all assets and all debts. All dollar figures presented have been rounded to the nearest $1,000.

The most recent *Survey of Financial Security* collected information for 2005. It was preceded by the 1999 *Survey of Financial Security* and the 1984 *Assets and Debts Survey*.

Because the sample size in 2005 was relatively small, estimates for 2005 are less detailed than estimates for 1999. For example, estimates of net worth by province are available for 1999 but not for 2005.

One thing that the 2005 and 1999 surveys share is estimates of the value of employer pension plans. By contrast, the 1984 *Assets and Debts Survey* did not collect information about such plans.

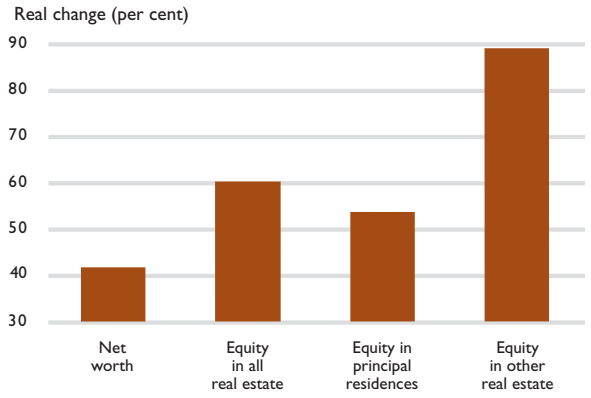
Consequently, data presented here concerning changes in net worth from 1984 to 1999 exclude the value of employer pension plans.

43 In 2002, homeowners who had moved from rental homes within the previous six years had median household incomes that were more than double the incomes of households who rented throughout the same six-year period (*Survey of Household Spending*).

44 Because of changes over time in the asset and debt categories covered by wealth surveys, estimated growth rates for net worth are not strictly comparable across the two periods. Growth estimates for 1999 to 2005 reflect the value of employer pension plans, whereas growth estimates for 1984–1999 do not.

FIGURE 3-12

REAL GROWTH OF NET WORTH AND SELECTED COMPONENTS, CANADA, 1999-2005



Data show changes in household aggregates, for example, the change in the net worth and real estate holdings of all households. As such, they reflect both the increase in the number of households from 1999 to 2005 and the change in net worth per household during that period.

Source: CMHC, adapted from Statistics Canada (*Survey of Financial Security*)

Net worth—the value of assets minus debts—represents resources households can tap to pay for housing and other necessities during unemployment spells, health problems or other interruptions to cash flow. These savings include assets such as employer pension plans, Registered Retirement Savings Plans (RRSPs) and Registered Retirement Income Funds (RRIFs) that can be used to pay shelter and maintenance costs during retirement.

Rising real estate values played a major role in the strong growth in net worth since 1999.[45] Increased equity in real estate accounted for almost half of the growth in the net worth of households from 1999 to 2005.[46] Supported by robust housing price increases, the total value of real estate equity held by households rose 60 per cent after the effects of inflation are taken into account, considerably more than the 42 per cent increase in the collective net worth of all households *(see Figure 3-12)*. As a result, the share of household net worth comprising equity in real estate increased from 32 to 37 per cent.

Growth of real estate holdings other than principal residences was particularly strong. The real value of equity in other real estate rose 89 per cent, while equity in principal residences increased 54 per cent.

Assets classed as other real estate include cottages, vacation homes and second homes as well as vacant lots and rental and commercial properties.[47] Equity in principal residences accounted for 29 per cent of household net worth in 2005, compared to 26 per cent in 1999. The share of net worth comprising equity in other real estate rose to eight per cent from six per cent.

Around one in six households owned other real estate in 2005, about the same proportion as in 1999.[48] For households with a stake in other real estate, the median equity in 2005 was $63,000. Average equity for households holding other real estate was much higher than the median—$184,000. The large difference between the average and the median indicates that some households had large holdings of other real estate. Households with maintainers aged 45 to 64—the age when household incomes and net worth are generally at a peak—represented almost half (46 per cent) of all households holding other real estate in 2005 and accounted for 39 per cent of the equity in such real estate.

45 After adjustment for inflation, average MLS® resale home prices increased at an annual rate of 5.4 per cent from 1999 to 2005 compared to 2.0 per cent from 1984 to 1999.

46 The increase in real estate equity amounted to 47 per cent of the total increase in household net worth. The increase in the market value of real estate holdings accounted for 51 per cent of the total increase in the value of household assets.

47 Equity in cottages, second homes, and vacation homes rose 58 per cent, somewhat faster than equity in principal residences.

48 This proportion excludes owners of other real estate who did not provide estimates of the value of these holdings when responding to the *Survey of Financial Security.*

Renters' net worth declines

From 1999 to 2005, a growing economy and a rebounding stock market, in addition to the strong real estate market, favoured wealth accumulation.[49] The real net worth of the average Canadian household increased 30 per cent, reaching $383,000 in 2005. Median net worth—the wealth of a typical household—grew more slowly (22 per cent) and was much lower ($166,000) than the average.

The considerable difference between average and median net worth reflects the unequal distribution of wealth in Canada. In 2005, the top fifth of families in Canada held almost 70 per cent of total net worth.[50]

The fact that median net worth grew more slowly than average net worth from 1999 to 2005 suggests that disparities in wealth became more pronounced during this period, a continuation of the pattern of the previous 15 years.[51]

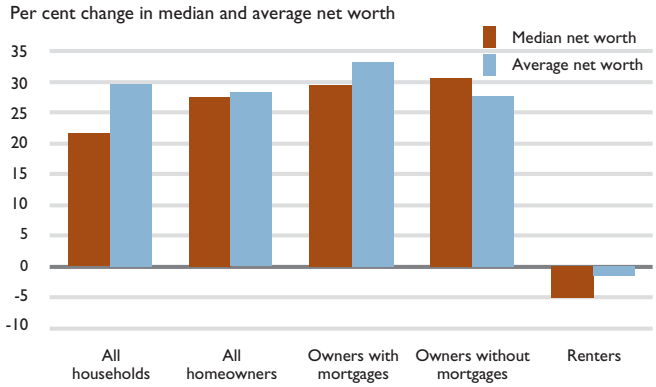
Differences in net worth by tenure are substantial and growing.[52] Homeowners are generally much wealthier than renters. The growing disparity in the net worth of owners and renters is consistent with the increasing gap between their respective incomes.

From 1999 to 2005, the real median net worth of renter households dropped five per cent while that of owners rose 27 per cent *(see Figure 3-13)*. In 2005, owner households had a median net worth of $327,000, renters just $14,000. The typical, or median, homeowner went from being 18 times wealthier than the typical renter household in 1999 to 24 times wealthier in 2005.[53]

The 55 per cent of homeowners who had mortgages on their homes had a median net worth that was less than half that of owners without mortgages—$219,000 compared to $525,000. Nearly 40 per cent of mortgage-free households were maintained by seniors.

FIGURE 3-13

REAL GROWTH IN HOUSEHOLD NET WORTH BY TENURE, CANADA, 1999-2005



Source: CMHC, adapted from Statistics Canada (*Survey of Financial Security*)

Equity in real estate made a substantial and growing contribution to the wealth of owner households, accounting for 39 per cent of their net worth in 2005 compared to 35 per cent in 1999. Most of this contribution came through the family home. The principal residence accounted for 31 per cent of the net worth of homeowners in 2005, compared to 29 per cent in 1999. The percentage contribution in 2005 of equity in the principal residence to net worth was similar for owners with and without mortgages: 32 per cent for owners with mortgages and 30 per cent for owners without mortgages.

Equity in other real estate accounted for nine per cent of the net worth of owners without mortgages but only six per cent of the net worth of owners with mortgages. Households without mortgages tend to be older than those with mortgages and consequently have had more time to acquire assets, including other real estate.

49 Statistics Canada, *The Wealth of Canadians: An Overview of the Results of the Survey of Financial Security 2005*. Statistics Canada Catalogue no. 13F0026M1E no. 001 (Ottawa: Statistics Canada, 2006) p. 9.

50 Statistics Canada, *The Wealth of Canadians*, p. 9.

51 From 1984 to 1999, average household net worth increased 36 per cent and median net worth just 11 per cent. Net worth estimates for this period do not include the value of employer pension plans and are not strictly comparable to estimates for the 1999–2005 period.

52 Excluding the value of employer pension plans, median net worth for homeowners rose about 20 per cent from 1984 to 1999, while that of renters fell over 40 per cent.

53 These ratios were calculated using unrounded estimates of the net worth of owner and renter households. All dollar estimates of net worth in this chapter are rounded to the nearest $1,000.

Current Market Developments

4

The Canadian housing market posted another healthy year in 2006. Housing starts edged higher to over 227,000 units, their second highest level in nearly two decades. Existing homes sales remained almost unchanged near their all-time record level of nearly 483,800 sales established in 2005. The elevated demand for housing in recent years has produced seller's market conditions, particularly in the western provinces. As a result, the average price of an existing home has increased by about 10 per cent per year since 2002. Renovation spending continued to trend upward and set a new record in 2006 of $43.9 billion. The solid performance of the housing market, strong employment and income growth, and low interest rates have contributed to the strength in renovation spending in recent years. The apartment vacancy rate in the rental market remained virtually unchanged at 2.6 per cent at the national level in October 2006 compared to the previous year.

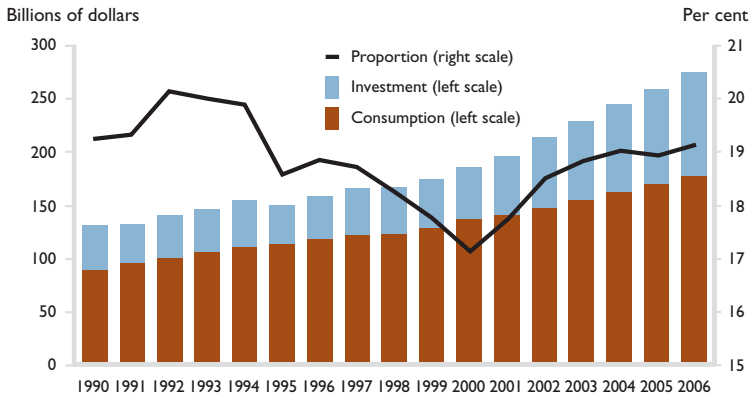
Housing and the economy

Housing-related spending contributed more than $275 billion to the Canadian economy in 2006 (*see Figure 4-1*). Housing-related spending grew at a rate of 6.1 per cent (not adjusted for inflation), faster than the rate of 4.7 per cent (not adjusted for inflation) in the rest of the Canadian economy. As a result, the proportion of gross domestic product spent on housing rose from 18.9 per cent in 2005 to 19.1 per cent in 2006. Construction employment[1] also grew faster than total employment and accounted for 50,200 new jobs, or 16 per cent of the increase in total employment. Employment in the construction industry increased by 4.9 per cent, while employment in all industries grew by 1.9 per cent in 2006.

As previously noted, housing-related spending in 2006 accounted for just under one-fifth of total economic activity in Canada. A portion of this spending can be categorized as ongoing consumption while some of this spending represents investment. Consumption expenditure includes spending on items such as rent, mortgage interest, property taxes, heating, electricity and water, insurance

FIGURE 4-1

HOUSING-RELATED SPENDING LEVEL AND PROPORTION OF GDP
CANADA, 1990-2006



Source: CMHC, adapted from Statistics Canada (*National Accounts*)

1 Includes residential and non-residential building construction.

and routine maintenance.[2] Spending in this category reached about $178 billion,[3] close to two-thirds of housing related spending in 2006. Consumption has been growing steadily and has doubled since 1990.

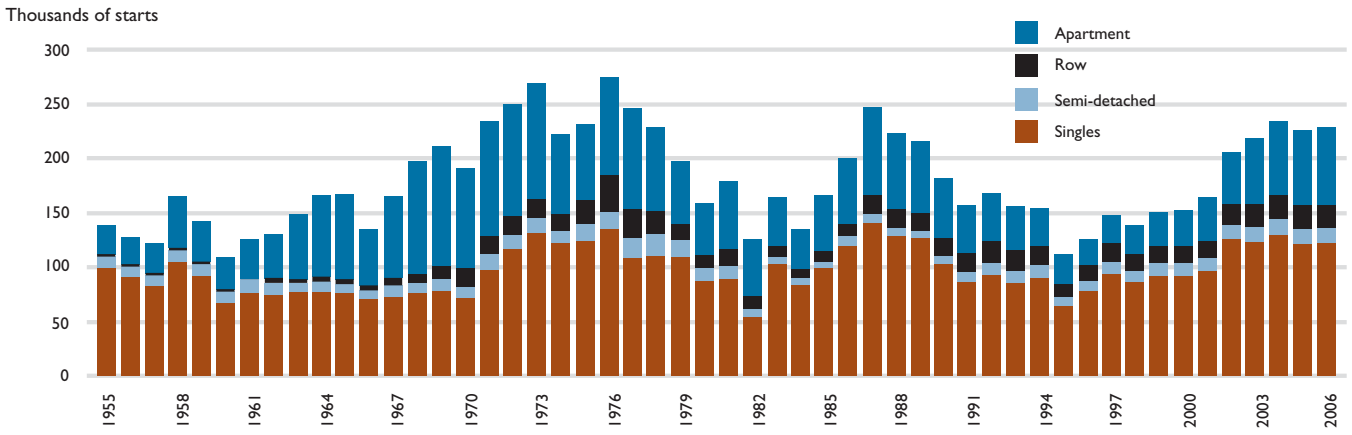
Residential investment, which represents spending on new construction[4], transfer costs or fees associated with the purchase of an existing home[5] and renovations that increase the value of the home, also called alterations and improvements, has increased by 130 per cent since 1999 and reached about $97 billion in 2006. New construction represented close to $48 billion or half of residential investment spending in 2006, while alterations and improvements accounted for a third and transfer costs made up the remainder.

Housing starts increased slightly and reached the second highest level since 1987

Housing starts in Canada grew by 0.8 per cent to 227,400 units in 2006, the second highest level since 1987 (*see Figure 4-2*). It was the fifth consecutive year that housing starts exceeded 200,000 units. Most of the gains in starts were registered in British Columbia and Alberta where housing starts were up by 5.1 per cent and 19.9 per cent, respectively (*see Figure 4-3*). These increases were almost offset by decreases in housing starts in Ontario and Quebec. Housing starts also moved lower in Newfoundland and Labrador and Prince Edward Island, while starts were up in Saskatchewan, Manitoba, New Brunswick and Nova Scotia.

Historically low mortgage rates, high employment levels, rising incomes, and healthy consumer confidence continued to support high levels of housing starts across the country in 2006. In Alberta, and to a lesser extent in British Columbia, strong employment markets continued to attract workers from other parts of the country. The resulting boost to the provincial population caused housing demand to increase in 2006. In the Ontario, Quebec and Atlantic regions, however, increased competition from the existing home market reduced the spillover of demand from the existing to the

FIGURE 4-2
HOUSING STARTS IN CANADA, 1955-2006



Source: CMHC (*Starts and Completions Survey*)

2 The housing-related spending of tenants is typically calculated by aggregating the rents paid. Calculating housing-related consumption spending for owner households is done in a similar way. Rather than calculating money spent by owners on mortgage interest, taxes, maintenance, etc, owners are treated as though they are paying an "imputed" rent to themselves. This rent is based on what they would be able to charge if they rented out their dwelling to someone else. Thus, owners without mortgages are treated in the same way as owners with mortgages, and the contribution of owner-occupied housing to overall economic activity is not underestimated.

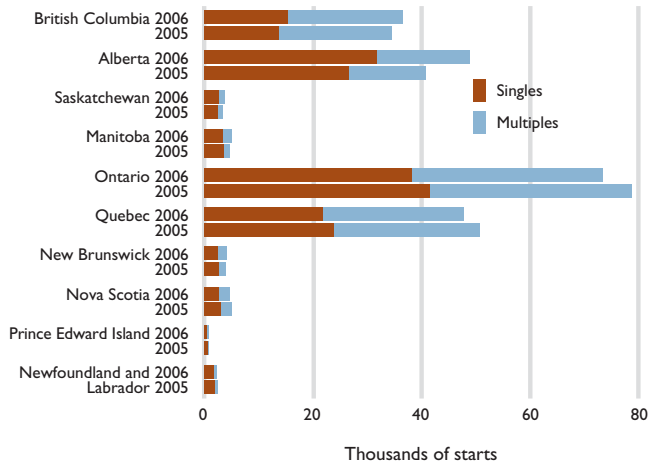
3 In 2006, rents paid by tenants reached more than $37 billion, while rent imputed to owners represented close to $110 billion.

4 Includes acquisition costs such as land development charges, legal fees, permits, etc.

5 Includes real estate commissions, land transfer taxes, appraisals and legal fees, etc.

FIGURE 4-3

HOUSING STARTS BY PROVINCE, 2005-2006



Source: CMHC (*Starts and Completions Survey*)

new home market. Housing demand also slowed in these regions as mortgage carrying costs increased due to continued house price increases and slightly higher mortgage rates. Looking ahead, we expect that the pace of new home construction will ease, bringing starts gradually toward a level more in line with demographic fundamentals.

Both single-detached starts and multiple starts increased

Single-detached starts increased slightly by 0.7 per cent to 121,300 in 2006 due to strong demand in the booming economies of Western Canada. British Columbia, Alberta and Saskatchewan were the only provinces where single starts increased. Each of these provinces posted double digit growth in single starts; Alberta led the pack with 19.3 per cent. In Central and Eastern Canada, single starts continued the declining trend that began in 2005. Several factors underpinned the decrease of single starts in the central and eastern provinces: rising land and material costs drove the price of new homes higher, while more listings in the existing home markets increased choice for potential home buyers and thereby reduced the spillover of demand from the existing to the new home market. Moreover, as mortgage carrying costs rose, an increasing number of new home buyers considered less expensive multiple-family dwellings such as semi-detached and row homes and apartment units.

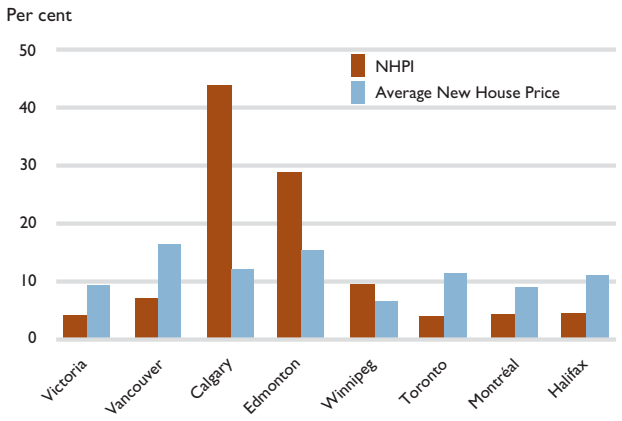
FAST **Facts**

- With a contribution of more than $275 billion to the Canadian economy in 2006, housing-related spending in 2006 accounted for just under one-fifth of total economic activity in Canada.
- Construction employment accounted for 50,200 new jobs, or 16 per cent of the total employment growth in Canada in 2006.
- Activity on the new home market remained strong with 227,400 housing starts registered in 2006, the second highest level since 1987. It was the fifth consecutive year that housing starts exceeded 200,000 units. Most of the gains in starts were registered in British Columbia and Alberta.
- The average new single-detached house price increased by 11.9 per cent in Canada in 2006.
- In 2006, existing home sales were on par with the record high number of 483,800 existing home sales established in 2005. Multiple Listing Service®[6] sales increased in seven out of ten provinces. The average MLS® home price increased by 11.1 per cent, the strongest price increase since 1989. This increase was a result of the strong seller's market that prevailed in the western provinces.
- Renovation spending reached a record $43.9 billion in 2006 following the strong performance of the housing and labour markets.
- The average rental apartment vacancy rate in Canada's 28 major centres decreased slightly by 0.1of a percentage point to 2.6 per cent in October 2006 compared to the previous October.
- The highest average monthly rents for two-bedroom apartments in new and existing structures were in Toronto ($1,067) and Vancouver ($1,045). The lowest average monthly rents were in Trois-Rivières ($488) and Saguenay ($485).

6 Multiple Listing Service® (MLS®) is a registered certification mark owned by the Canadian Real Estate Association.

FIGURE 4-4

CHANGE IN AVERAGE NEW HOUSE PRICES AND NEW HOUSING PRICE INDEX (NHPI), SELECTED URBAN CENTRES, 2006



The New Housing Price Index measures prices of new houses of constant quality. The average new house price measures actual sale prices of new houses. The difference between these two measures reflects changes e.g., the sizes, locations and features of new houses currently being sold.

Source: CMHC (*Market Absorption Survey*) and adapted from Statistics Canada (CANSIM)

Multiple-family housing starts continued to climb in 2006, increasing by 1.0 per cent to reach a 31-year high of 106,100 units. As a result, multiple starts increased as a share of total starts in 2006. Across the nation, the largest growth in multiple-family housing starts was in Alberta, Manitoba, New Brunswick, and Nova Scotia.

New housing price index rose sharply in 2006

The New Housing Price Index (NHPI) rose by 9.75 per cent in 2006, almost twice the increase recorded in 2005. The NHPI is a measure based on the prices of new homes of constant quality.[7] The increase is attributable mainly to rising house prices in Alberta. The largest increase in the NHPI occurred in Calgary (43.6 per cent, *see Figure 4-4*) and Edmonton (28.9 per cent), while Thunder Bay registered the smallest increase at 1.7 per cent and Windsor a small decline of 0.1 per cent. Excluding Calgary and Edmonton, the NHPI for Canada was up only 4.4 per cent in 2006.[8] High demand for new housing, higher building material and labour costs, as well as increasing land values all contributed to the increase in house prices.

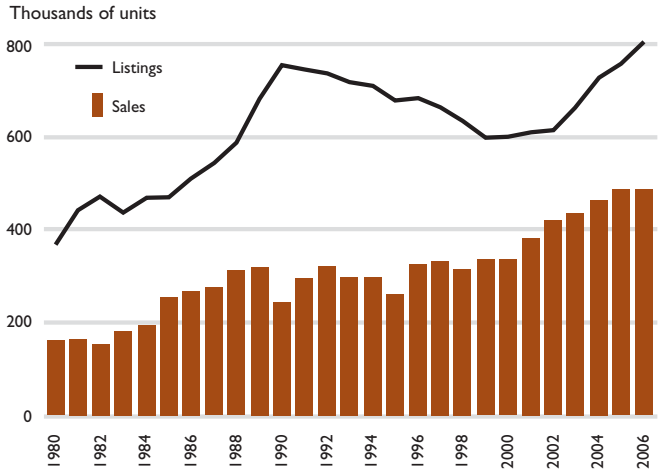
CMHC's *Market Absorption Survey* (MAS) is another source of information on new home prices, which measures actual sale prices of new houses. According to the MAS, in 2006, the average new single-detached house price rose by 11.9 per cent in Canada. This increase was about two percentage points higher than the increase in the NHPI. This gap provides an indication of how the rising quality of homes purchased contributed to the rising level of prices for new homes in 2006. More expensive locations, larger homes, and homes with more features resulted in the average price rising at a faster rate than the NHPI in 2006.

Existing home sales remained at record level in 2006

In 2006, existing home sales, as measured through the Multiple Listing Service® (MLS®), were 483,770, on par with the record high number of nearly 483,800 transactions in 2005 (*see Figure 4-5*). MLS® sales increased in seven out of ten provinces. The buoyant economic conditions in Alberta continued to fuel housing demand and MLS® sales posted a double digit increase for the third consecutive year. The number of transactions moderated in Nova Scotia, Ontario and British Columbia, but remained high from a historical perspective.

FIGURE 4-5

RESIDENTIAL MULTIPLE LISTING SERVICE® ACTIVITY IN CANADA, 1980-2006



Source: Canadian Real Estate Association

7 Constant quality is defined so that the specifications of a home such as location, lot size, house size, and features do not change over time.

8 Calculations made by Statistics Canada. The weights from Edmonton and Calgary have been proportionally redistributed over the other cities.

The strongest price growth was in Western Canada

The average MLS® home price reached $277,000 in 2006, an increase of 11.1 per cent compared to 2005 (*see Figure 4-6*). This was the strongest increase in the average MLS® price since 1989. This increase was a result of the strong seller's market that prevailed, particularly in the western provinces. British Columbia, Alberta and Manitoba recorded double digit growth in the average MLS® home price in 2006. Alberta had a record increase of 30.7 per cent in its MLS® average price. We classify existing home markets into seller's, balanced, and buyer's markets using the sales-to-new-listings ratio.[9] The sales-to-new-listings ratios in British Columbia and all three Prairie provinces were above the national average. The Canadian sales-to-new-listings ratio dipped slightly to below 60 per cent[10] in 2006, as growth in new listings, at 5.8 per cent, outpaced growth in MLS® sales. Nevertheless, Canada's sales-to-new-listings ratio remained in seller's market territory for an eighth consecutive year.

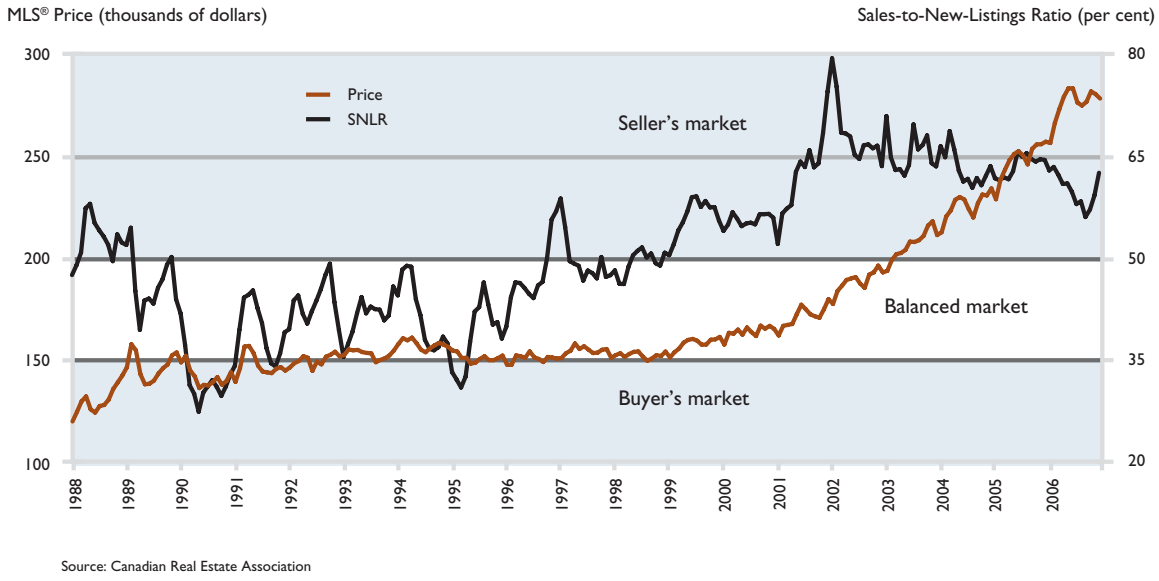
Rental vacancy rate decreased slightly to 2.6 per cent

The average rental apartment vacancy rate in Canada's 28 major centres[11] edged down by 0.1 of a percentage point to 2.6 per cent in October 2006, compared to the previous October (*see Figure 4-7*). In October 2006, the vacancy rate was lower in 14 of Canada's major centres, higher in 10, and unchanged in 4, compared to October 2005.

High levels of immigration were a key driver of rental demand in 2006, as was the increasing gap between the cost of home ownership and renting. These factors put downward pressure on vacancy rates during 2006.

FIGURE 4-6

SALES-TO-NEW-LISTINGS RATIO AND MULTIPLE LISTING SERVICE® PRICE IN CANADA, 1988–2006



Source: Canadian Real Estate Association

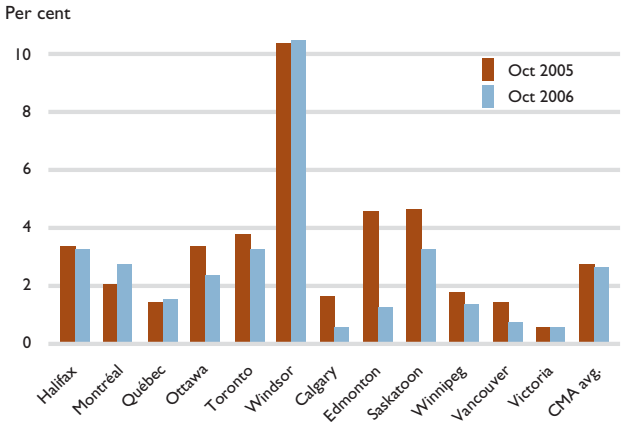
9 The sales-to-new-listings ratio is an indicator of the relative balance between demand and supply in the existing home market. New listings are a gauge of supply of existing homes, while MLS® sales are a proxy for demand. As new listings increase relative to sales, buyers can be more selective when making a purchase and typically have more bargaining power. For Canada as a whole, a ratio between 0.35 and 0.50 is associated with a balanced market and modest growth in prices, although these thresholds vary from centre to centre. Ratios above 0.50 are associated with more rapidly rising prices - a "seller's market".

10 This is the average for the year; Figure 4-6 shows the monthly averages.

11 Major centres are based on Statistics Canada Census Metropolitan Areas (CMAs) with the exception of the Ottawa-Gatineau CMA which is treated as two centres for CMHC Rental Market Survey purposes.

FIGURE 4-7

AVERAGE PRIVATE APARTMENT VACANCY RATES, SELECTED URBAN CENTRES, 2005–2006



Vacancy rates are for privately initiated apartment structures of three or more units. CMA average is the weighted average of the rates in 28 Census Metropolitan Areas.

Source: CMHC (*Rental Market Survey*)

Although solid job creation and healthy income gains helped to strengthen demand for both ownership and rental housing in 2006, strong home ownership demand continued to apply upward pressure on vacancy rates.[12] Furthermore, the high level of condominium completions in some centres created competition for the rental market and contributed to upward pressure on vacancy rates. Condominiums are a relatively inexpensive type of housing for renters switching to home ownership. Also, some condominium apartments are owned by investors who rent them out.

The centres with the highest vacancy rates in 2006 were Windsor (10.4 per cent), Saint John (NB) (6.8 per cent), and St. John's (NL) (5.1 per cent). The major urban centres with the lowest vacancy rates were Calgary (0.5 per cent), Victoria (0.5 per cent), and Vancouver (0.7 per cent).

Condominium completions remained high while rental completions were down

For the 12-month period from October 2005 to September 2006, condominium completions in all major centres remained high at 49,100 units, a slight increase of 0.8 per cent compared to the same period one year earlier (48,700 units). Rental completions continued to add to the supply of rental dwellings, although for the 12-month period ending in September 2006, rental completions (11,900 units) were down by 21.8 per cent compared to the year earlier period (15,200 units).

Rents increased moderately in most centres

The estimated average rent for a two-bedroom apartment in existing structures[13] went up in 27 out of the 28 major

Low Vacancy Rates for Rental Condominium Apartments

In 2006, CMHC's *Rental Market Survey* (RMS) broadened its coverage of the rental market to include apartment condominiums offered for rent in the following centres: Vancouver, Calgary, Edmonton, Toronto, Ottawa, Montréal and Québec. These vacancy rates for rental condominium apartments were below one per cent in five (Vancouver, Calgary, Edmonton, Toronto, and Ottawa) of the seven centres surveyed. Rental condominiums in Vancouver and Toronto had the lowest vacancy rate at 0.4 per cent. Québec and Montréal registered the highest vacancy rates for condominium apartments at 1.2 per cent and 2.8 per cent, respectively. Vacancy rates for rental condominium apartments in 2006 were lower than vacancy rates in the conventional rental market in all the centres surveyed, except Montréal.

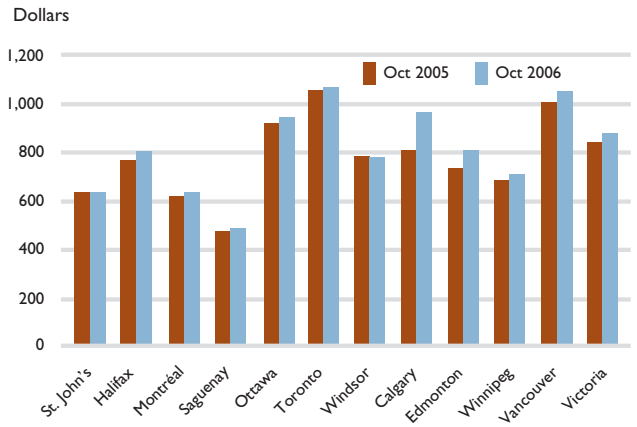
The highest average monthly rents for two-bedroom condominium apartments were in Toronto ($1,487), Vancouver ($1,273), and Calgary ($1,257). All centres surveyed posted average monthly rents for two-bedroom condominium apartments that were higher than those for similar units in the conventional rental market in 2006.

12 Homeownership rates have been trending upward in Canada, from 66 per cent in 1999 to over 68 per cent in 2005.

13 This measure estimates the rent level movement (not adjusted for inflation). The estimate is based on structures that were common to the CMHC survey sample for both the 2005 and 2006 Rental Market Survey. However, some composition effects remain e.g.,w rental units renovated/upgraded or changing tenants because the survey does not collect data to such level of detail.

FIGURE 4-8

AVERAGE RENT, TWO-BEDROOM APARTMENTS, SELECTED URBAN CENTRES, 2005-2006



Average rents are for privately initiated apartment structures of three or more units.

Source: CMHC (*Rental Market Survey*)

centres (*see Figure 4-8*). Windsor was the only centre where rent decreased (by 0.3 per cent). The greatest rent increases generally occurred in markets where vacancy rates were lowest. Rents in existing structures were up 19.5 per cent in Calgary, 9.9 per cent in Edmonton, 5.1 per cent in Greater Sudbury and 4.4 per cent in Vancouver. Overall, the average rent for two-bedroom apartments in existing structures across Canada's 28 major centres increased by 3.2 per cent between October 2005 and October 2006. However, only eight centres were above this national average. Excluding Calgary and Edmonton, the average rent for two-bedroom apartments in existing structures was up only 2.4 per cent in 2006 compared to 2005.

The highest average monthly rents for two-bedroom apartments in new and existing structures were in Toronto ($1,067) and Vancouver ($1,045), followed by Calgary ($960) and Ottawa ($941). The lowest average monthly rents for two-bedroom apartments in new and existing structures were in Trois-Rivières ($488) and Saguenay ($485).

The rental apartment availability rate decreased slightly in 2006

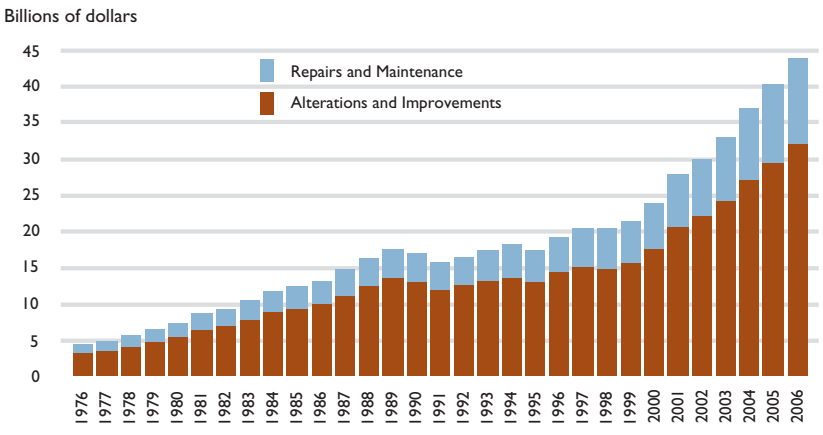
CMHC's Rental Market Survey found that the average rental apartment availability rate in Canada's 28 major centres decreased slightly by 0.3 percentage point (to 3.6 per cent) in October 2006, compared to October 2005. A rental unit is considered available if the unit is vacant (physically unoccupied and ready for immediate rental), or if the existing tenant has given or received notice to move and a new tenant has not signed a lease. Availability rates were highest in Windsor (12.0 per cent), Saint John (NB) (7.8 per cent), and Hamilton (7.0 per cent), while the lowest rates were in Vancouver (1.3 per cent), and Sherbrooke (1.4 per cent).

Renovation spending continued to grow

Renovation spending, which has progressed at a steady pace since 1999, continued its upward trend in 2006 (*see Figure 4-9*). The renovation market continued to benefit from the strong economic growth of recent years and the solid performance of the housing market. Record high employment levels translated into steady income gains which in turn boosted consumer confidence and provided greater financial means for households to upgrade their homes. Low mortgage rates, record sales of existing homes, and high levels of housing starts over the last five years also contributed to the pick-up in renovation activity.

FIGURE 4-9

RENOVATION ACTIVITY IN CANADA, 1976-2006



Source: Statistics Canada, CANSIM

Total renovations are a combination of alterations and improvements that raise the value of a home and repairs and maintenance, which maintain the home's value. Alterations and improvements grew by 8.7 per cent and reached about $32 billion in 2006, accounting for approximately three quarters of total renovation spending. Repairs and maintenance added another $11.9 billion, bringing the spending that maintained or improved the housing stock to $43.9 billion, an increase of 9.0 per cent compared to 2005.

Sales of existing homes are a leading indicator of renovation spending, since households generally undertake renovations within the first three years after buying a house. Thus, the high level of sales in the existing home market in recent years provided a solid foundation for renovation activity. Low mortgage rates also facilitated mortgage refinancing which is an attractive way to pay for renovations. Mortgage refinancing allows homeowners to access some of the equity from their homes without selling. Close to 40 per cent of the proceeds from refinancing were used for renovation-related activity,[14] adding further stimulus to this segment of the housing market.

14 2006 CMHC Mortgage Consumer Survey.

Housing Finance

5

Total mortgage credit outstanding in 2006 reached an annual average of $694 billion, up 10.7 per cent from the previous year (*see Figure 5-1*). The key driver of increased mortgage credit was higher property values, reflected in the 7.3 per cent increase in the average mortgage amount approved. High levels of housing starts and a near record year for existing home sales also contributed to the growth in mortgage market activity in 2006.

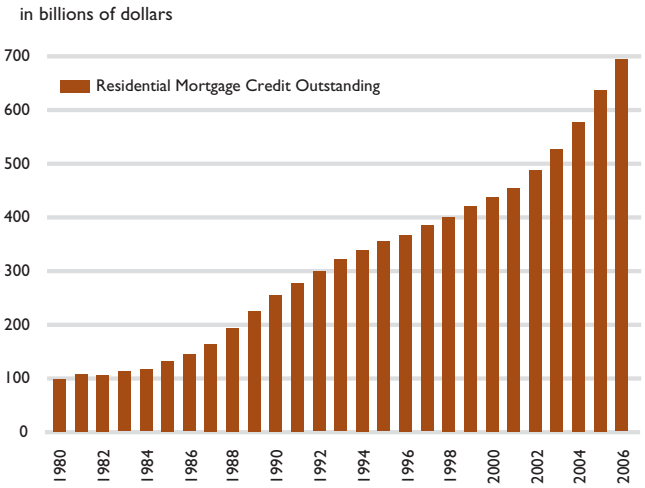
Mortgage rates continued to rise

The Canadian economy has benefited from a low interest rate environment in recent years. However, in September 2005, the Bank of Canada began to raise its target for the overnight lending rate in anticipation of increased inflationary pressures as the Canadian economy approached full-employment. This continued into the first half of 2006 as the Bank of Canada raised its target for the overnight rate by a total of 175 basis points.[1] From May 2006 to the end of 2006, the Bank of Canada held its target for the overnight rate at 4.25 per cent.

In general, mortgage rates follow market driven rates of bonds and Treasury bills but with less volatility and a tendency to lag behind. The five-year posted mortgage rate averaged 6.66 per cent in 2006, up from a record low of 5.99 per cent in 2005.

FIGURE 5-1

TOTAL RESIDENTIAL MORTGAGE CREDIT OUTSTANDING, CANADA, 1980-2006



Source: CMHC and adapted from Statistics Canada (CANSIM)

The spread between the five-year and one-year posted fixed mortgage rates has been shrinking since mid-2004 when the spread had been as wide as 200 basis points. By the end of 2006 the gap had fallen to 40 basis points. Similarly, the average spread between the fixed five-year rate and open variable mortgage rate decreased from 159 basis points in 2005 to 96 basis points in 2006. These spreads, along with expectations of future rate movements, can have an impact on term selection for mortgages.

1 100 basis points equal one percentage point.

Mortgage Consumers' Choices

CMHC's Mortgage Consumer Survey has tracked mortgage consumers' attitudes and behaviours since 1999. The 2006 survey analysis focused only on "active mortgage consumers" – those who acquired a home (first-time and repeat buyers), in the past twelve months or planned to do so in the next twelve months, those who renewed their mortgage in the past nine months or planned to do so in the next nine months, and those who refinanced their mortgage in the past twelve months. Key findings of the survey include the following:

Mortgage consumers are satisfied

The majority of mortgage consumers (84 per cent) were satisfied with the services they received when negotiating their current mortgage, including those who used either a lender or a broker.

More than half of respondents indicated that no improvements were needed in the service they received, while a minority of respondents suggested that more information/education for the clientele, or better customer service would have improved their mortgage experience.

Among the individuals who stated that they were satisfied with the service they received, first-time buyers were the most satisfied with their mortgage experience, with more than 90 per cent of these respondents stating that they were either rather satisfied or totally satisfied. Equal proportions of repeat purchasers and refinancers (87 per cent) were either rather satisfied or totally satisfied, while eight in ten renewers felt this way about their mortgage transaction.

Most mortgage consumers agreed that they made their decision with a good understanding of the options available to them (86 per cent) and that the person they dealt with listened to their needs (85 per cent) when negotiating their mortgage. On the other hand, 30 per cent of consumers found the entire experience to be a source of stress, while 26 per cent felt that they had to double-check the advice received and 21 per cent felt they had to fight for the best deal for their needs.

About 70 per cent of mortgage consumers prefer to use a mortgage lender that is one of the major lending institutions and has an array of financial products and services.

Mortgage consumers are cautious about debt

- Three-quarters of all respondents said they wanted to pay off their mortgage as soon as possible. Half of the respondents stated that when possible, they intend to use any extra money to pay down the principal on their mortgage. In both cases, first-time buyers had the highest proportion of respondents agreeing that they would do so.
- Mortgage consumers in Canada tend to be risk averse. About only one-quarter (26 per cent) of respondents felt that the potential advantages of putting as little money down as possible outweighed the disadvantages of doing so. Only thirty per cent of mortgage consumers would take a longer time to pay off their mortgage if it improved their monthly cash flow.
- There are many different reasons that a mortgage consumer decides to refinance their mortgage. Almost half of the mortgage consumers who were refinancing were interested in taking advantage of lower interest rates while also obtaining new funds. A quarter of respondents who refinanced did so to use their home's equity to attain new funds, while 13 per cent refinanced solely to lower their mortgage rate.

An increasing share of mortgage consumers switch lenders

In the end, most mortgage customers who were repeat buyers, mortgage renewers, or mortgage refinancers stayed with their current lender. They felt that establishing a personal relationship with their lender was

important when negotiating a mortgage. Despite this, a larger share of mortgage consumers switched lenders in 2006 than in 2005.

The proportion of mortgage consumers that stayed with their previous lender was highest for renewers at 81 per cent in 2006, down from 87 per cent in 2005. The proportion of repeat purchasers that stayed with their previous lender also fell in 2006 to 65 per cent from 80 per cent in 2005, while the proportion of refinancers that stayed with their previous lender fell to 66 per cent in 2006 compared to 83 per cent the previous year. This drop could in part be due to an increase in the use of mortgage brokers, and the relationship with their financial institution.

Mortgage consumers indicated that service outweighed interest rates as a reason to stay with their current lender.

The majority of purchasers and renewers shop around to research their options

Over the three year period from 2004 to 2006, there has been an increased tendency for renewers to seek changes in their lender's original offer. In 2006, as in 2005, only half of renewers accepted their lender's initial offer without any further negotiations, lower than the levels observed prior to 2005. The recent shift, to some extent, may be due to the competitive mortgage environment, higher uncertainty about future rates, and the larger number of options available.

Among the renewers who re-negotiated, just over half re-negotiated the interest rate, while close to one-sixth reduced their mortgage balance.

In 2006, the majority of recent purchasers and renewers actively explored alternatives to lenders' offers by either checking competitive mortgage rates, gathering information from another lender or shopping actively for other options.

Among all purchasers and renewers, 17 per cent said that they offered their current lender the opportunity to match the rate that they had been offered by a different lender. The lender did so in about half of these cases.

Since 1999 the CMHC Mortgage Consumer Survey has been conducted annually to provide insights into the changing attitudes and behaviours of Canadian mortgage consumers. The survey explores the dynamics of consumer choice, mortgage shopping behaviour, refinancing and lender loyalty. Consumer usage and attitudes towards mortgage brokers are also captured and analyzed.

The survey is based on a national sample of active mortgage consumers who have recently undertaken a mortgage transaction or are planning to do so. For the purpose of this study active mortgage consumers are defined as:

- **First-time purchasers:** Have purchased their first home in the last 12 months or are planning to buy in the next 12 months.
- **Repeat purchasers:** Previously owned a home and have purchased a home in the last 12 months or will buy in the next 12 months.
- **Mortgage renewers:** Will renew their mortgage in the next 9 months or have renewed in the last 9 months.
- **Mortgage refinancers:** Have refinanced their home in the last 12 months.

Consumer awareness of mortgage brokers on the rise

Most mortgage consumers (80 per cent) were aware of mortgage brokers and their services, up from 69 per cent in 2005. In 2006, the broker market share among all purchasers remained stable at about one quarter (27 per cent), the same as in 2005.

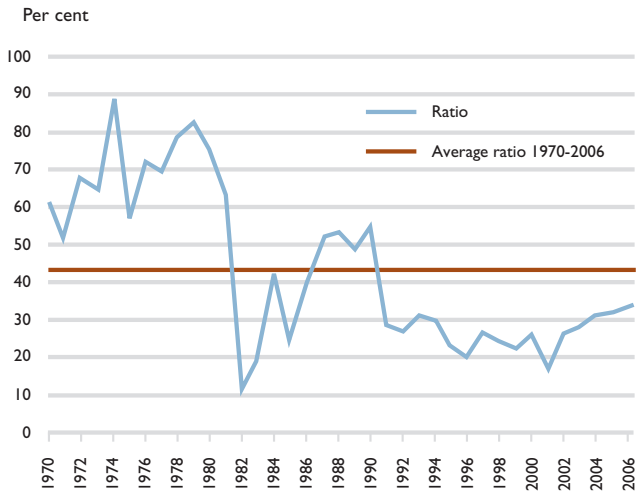
First-time buyers had a higher incidence of arranging their mortgage through a broker (30 per cent in 2006) than did repeat purchasers (23 per cent), refinancers (22 per cent) and renewers (13 per cent). The use of brokers by renewers and refinancers increased by five percentage points and six percentage points, respectively, in 2006 compared to 2005.

Mortgage Credit

The annual increase in mortgage credit outstanding is consistently less than the value of mortgages approved during that year because some loan approvals do not result in actual loans and all outstanding mortgages are either being amortized or discharged. Over the past 36 years (*see Figure 5-2*), the annual change in the value of outstanding mortgages has averaged about 40 per cent of the value of mortgage approvals in the same year. The ratio is an indicator of the balance between demand and supply within the mortgage market. The increase in the stock of mortgages outstanding reflects demand for additional mortgage debt by consumers, while approvals, an indicator of supply, indicates the amount of money lenders were prepared to lend. A decline in the ratio implies that the supply of mortgage credit increased more than demand for mortgage credit. Over the past decade, the ratio has remained relatively low suggesting that there is abundant supply of funds for mortgage lending.

FIGURE 5-2

RATIO OF CHANGE IN OUTSTANDING MORTGAGES TO MORTGAGE APPROVALS, CANADA, 1970-2006



Source: CMHC (MBS, NHA loan approval system and Conventional Lending Survey) and adapted from Statistics Canada (CANSIM)

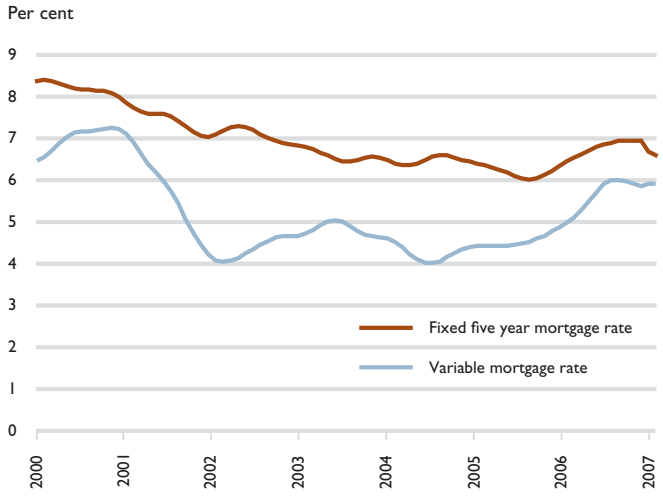
Popularity of variable-rate mortgages on the decline

Variable mortgage rates follow the chartered banks' prime rate very closely which itself is linked to the target for the overnight lending rate set by the Bank of Canada. When the prime rate and subsequently variable rates decline, demand for variable-rate mortgages rises.

Between 2001 and 2005, variable-rate mortgages increased in popularity mainly due to the low interest rate environment experienced throughout the first half of the decade. In 2005, 36 per cent of homeowners who obtained a new mortgage or renewed an existing one chose a variable-rate mortgage. But as variable mortgage rates climbed higher late in 2005 and into 2006, the demand for variable-rate mortgage products decreased. As variable mortgage rates climbed, the spread between fixed and variable-rates narrowed (*see Figure 5-3*), causing a considerable shift in demand away from variable-rate mortgages towards fixed-rate mortgages. Only 22 per cent of homeowners obtaining or renewing an existing mortgage chose a variable-rate mortgage in 2006, down substantially from 36 per cent in 2005.

FIGURE 5-3

POSTED MORTGAGE RATES, CANADA, 2000-2006



Note: Data adjusted for seasonality and irregularity

Source: CMHC, adapted from Statistics Canada (CANSIM) and CANNEX

Evolving Canadian Mortgage Market

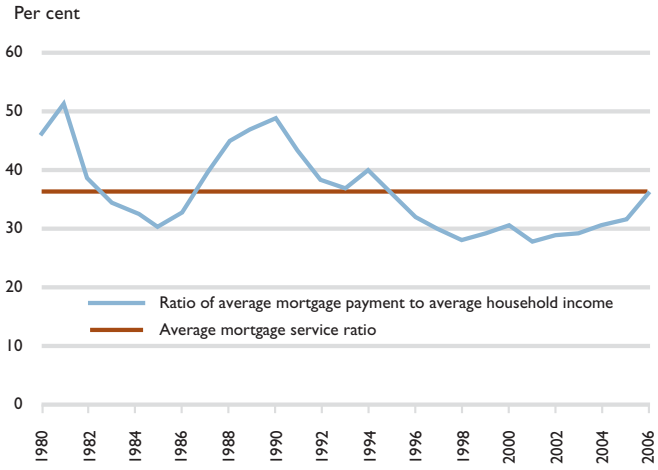
The Canadian mortgage market continues to evolve, with several new products being introduced over the last few years, including:

1. Insured mortgages up to 100 per cent of the value of the property for borrowers with a strong history of managing their credit.
2. More products specifically designed for the near-prime[2] and sub-prime[3] markets.
3. Longer amortizations – up to 40 years for insured high-ratio mortgages[4] – which lower the monthly principal and interest payment, but increase the total amount of interest paid by the borrower over the life of the loan.
4. The offering of hybrid products by some lenders such as fixed ceilings on the amount of credit granted, but with the choice of multiple combinations of individual mortgages and lines of credit with different possible terms, as well as fixed and variable rates.

Mortgage payments

Canadians continued to increase their debt load in 2006, when both total household debt and mortgage debt increased by 10.7 per cent. Mortgage debt made up 68.4 per cent of total household debt in 2006. The ratio of average mortgage debt to average after-tax income reached 83 per cent in 2006, up from 80 per cent the previous year; however, the ratio of mortgage debt service costs (principal and interest payments) to household income remains relatively low by historical standards. In 2006, the average price of an existing home was $276,959. If the mortgage payment on this house is calculated using the prevailing 5-year fixed mortgage rate of 6.7 per cent and assuming that the mortgage is amortized over 25 years with a down payment of 10 per cent, the resulting monthly mortgage payment would have been $1,694, and the ratio of mortgage payment to income would have been just over 35 per cent in 2006 (*see Figure 5-4*). This mortgage payment-to-income ratio in 2006 remains below the average over the 1980 to 2006 period. At current house prices and after-tax income levels, the five-year mortgage rate would have to climb to over 10 per cent, to push the mortgage payment-to-income ratio back up to above 40 per cent where it was in the late 1980s/early 1990s. Therefore, low mortgage rates have offset much of the impact of rising house prices on mortgage debt service costs. New mortgage products that allow homebuyers to amortize their mortgage beyond 25 years to as much as 40 years will also help reduce principal and interest payments relative to household after-tax income.

FIGURE 5-4
MORTGAGE SERVICE RATIO, CANADA, 1980-2006



Note: Average mortgage payment calculated using the average Multiple Listing Service® price, the fixed five-year mortgage rate and a ten per cent down payment

Source: CMHC, adapted from Statistics Canada (CANSIM, unpublished data) and CREA (MLS®)

2 Near-prime lending is offered to borrowers with good credit histories who don't meet traditional lending guidelines due largely to a lack of third party proof of income.

3 Sub-prime lending refers to programs that target borrowers with weakened credit histories typically due to payment delinquencies, previous charge-offs, judgements or bankruptcies. These programs may also target borrowers with questionable repayment capacity evidenced by low credit scores, or high debt burden ratios.

4 A high-ratio mortgage has a loan-to-value (LTV) ratio greater than 80 per cent and must be insured to conform to the requirements of the Bank Act. Mortgages with lower LTVs do not require insurance and are known as conventional mortgages.

Emergence of Near-Prime and Sub-Prime Mortgage Products

The near- and sub-prime mortgage market in the U.S. grew dramatically from 2001 to 2006, peaking at between 40 per cent and 45 per cent of all mortgages written in the U.S., but the percentage has begun to decrease, and default rates on this business are increasing significantly. A report by CIBC[5] suggests that "non-conforming loans" (which includes near- and sub-prime loans) represented only about 5 per cent to 8 per cent of all mortgages written in Canada in 2006, and that the market potential is a maximum of 10 per cent of mortgage originations.

Both Canada and the U.S had been experiencing historically low interest rates, but the exuberance of the U.S. near- and sub-prime marketplace was fueled by:

- The evolution of near- and sub-prime mortgages from niche products for very specific situations, to mainstream products to address affordability issues in over-heated housing markets.
- Unlike Canada, the majority of mortgages in the U.S. are not funded through deposits held by the lending institution, but through the secondary market – 55 per cent to 60 per cent of U.S. mortgages are routinely securitized. The excess liquidity caused by slow-growing equity markets and low-yielding government bonds through the first half of this decade made high-yielding near- and sub-prime loans attractive to the investment community in a housing market that was appreciating quickly. Securitization masked or at least postponed the consequences of risky lending decisions. The quest by investors for higher returns significantly boosted risk-taking.
- When the prime market became largely saturated, rather than maintain credit standards and accept a decline in loan volume, many lenders relaxed underwriting standards to approve loans that otherwise would not have been made. Instead, lenders relied on continually rising home prices to bail out borrowers once higher payment obligations kicked in (after a typical two-year "teaser" rate). As a result, the U.S. government-sponsored agencies which generally securitize or purchase only prime mortgages were increasingly by-passed for other private-sector funding which paid higher yields for a higher level of risk.

In Canada, where the majority of mortgages are provided by deposit-taking institutions under a more vertically integrated model, there is less incentive to underwrite increasingly risky loans in order to maintain volumes. Furthermore, while house prices continue to appreciate in Canada, the affordability issues driving the use of increasingly exotic mortgages in the U.S. have not been as prevalent in Canada. Most Canadian housing markets are supported by strong economic fundamentals.

Declines in mortgage rates from 2000 until 2005 have resulted in a decrease in the interest paid on mortgages, and have had a positive impact on arrears (*see Figure 5-5*). In 2006, about one in 400 households fell three or more months behind in their mortgage payments, the lowest rate since 1990. On average, it takes about two years after an increase in mortgage rates before the proportion of households in arrears begins to increase. Therefore, the impact of rising interest rates in 2006 has not yet been reflected in the proportion of households in arrears.

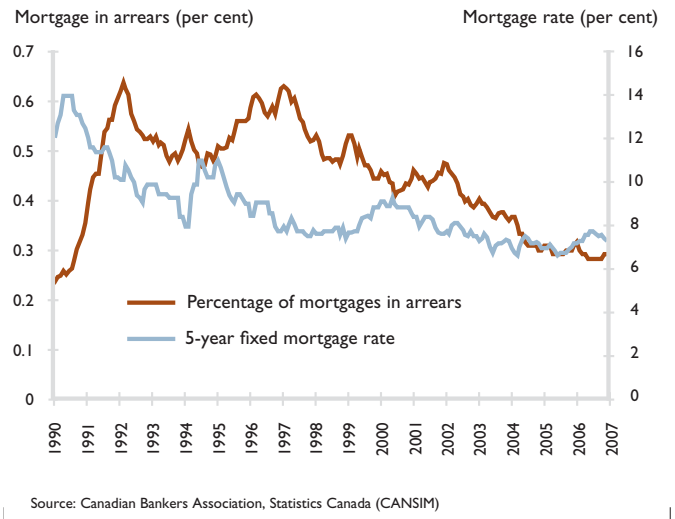
The evolving mortgage market

The *National Housing Act* Mortgage-Backed Securities Program (NHA MBS) (*see Mortgage Securitization in Canada*) helps give investors the opportunity to make a secure investment in insured Canadian residential mortgages. Since the program's inception in 1987, mortgage-backed securities have gained popularity, with issuance growing rapidly. Mortgage securitization provides a competitive secondary mortgage market system for housing finance, since MBS are an indirect way to fund

5 CIBC World Markets, *Consumer Watch Canada*, October 10, 2006.

FIGURE 5-5

MORTGAGE RATES, ARREARS, CANADA, 1990-2006



Source: Canadian Bankers Association, Statistics Canada (CANSIM)

mortgages and represent an undivided interest in a pool of residential mortgages. Thus, securitization increases the amount of funds available for mortgage lending and, in turn, puts downward pressure on mortgage rates. Investors receive monthly payments as borrowers pay back the principal and interest on the mortgages in a NHA MBS pool.

In June 2001, CMHC introduced Canada Mortgage Bonds (CMB) to attract investors who prefer a bond type of product. Canada Mortgage Bonds are semi-annual coupon, fixed-or-floating-rate bonds which pay principal at maturity, and like NHA MBS, they carry the full guarantee of the Government of Canada. Growth in the issuance of Canada Mortgage Bonds has been strong, with record volume registered in 2006 thanks to increased demand for low cost funding from lending institutions.

Issuance of both NHA MBS and Canada Mortgage Bonds totaled $36 billion in 2006, an increase of 19 per cent from 2005. Of this total, $25.1 billion reflected CMBs, while the remaining $10.9 billion was NHA MBS. The increase in CMB issuance in 2006 was attributable to the increased interest of smaller financial institutions in the CMB program, as well as the increasing investor demand for high quality investments. Another milestone in 2006 was the maturity of CMB Series #1, the first CMB bond maturity since the inception of the program.

Mortgage Securitization in Canada

In 1987, CMHC launched the NHA Mortgage-Backed Securities program to increase the availability of funds from financial institutions for housing finance, to encourage the return of longer-term mortgages, and to encourage more favourable interest rates on residential mortgages.

NHA Mortgage-Backed Securities are comprised of pools of amortized residential mortgages insured by Canada Mortgage and Housing Corporation (CMHC) under the National Housing Act (NHA) or approved private mortgage insurers. NHA MBS issuers are approved by CMHC and may be issued by regulated or unregulated institutions (entities).

There are four different categories of NHA MBS pools available to investors: “exclusive homeowner”; “multi-family”; “social housing” (such as co-ops and seniors residences) and “mixed” (a combination of any of the above).

Timely payment to the investor of principal and interest is guaranteed by CMHC. CMHC or a private mortgage insurer also insure the underlying mortgages. The automatic pass-through of the principal paid on the mortgages and interest (based on the coupon rate of the respective NHA MBS pool), is paid to investors on a monthly basis by the Central Payor and Transfer Agent.

A wide range of terms is available - ranging upwards from 6 months to 25 years. Five-year terms have been the most popular.

NHA MBS are RRSP and RRIF (Registered Retirement Savings Plans and Registered Retirement Income Funds) eligible.

NHA MBS are exempt from non-resident withholding tax — an important consideration for foreign investors and Canadian expatriates who would normally pay this tax.

More Competitors

As the Canadian housing market has remained buoyant while the housing market in the U.S. has slowed considerably, Canada has become an attractive target for U.S. mortgage insurance firms looking to expand their business internationally. In 2006, Genworth – CMHC's lone mortgage insurance competitor since 1995 - was joined by a new U.S.-based entrant, AIG United Guaranty, whose parent company, AIG, is the largest general insurance company in the United States. AIG United Guaranty is now actively writing mortgage insurance business in Canada. Two other U.S. based competitors, PMI and Triad, applied to enter the Canadian mortgage insurance marketplace in 2006, and in the spring of 2007, both received approval from the Office of the Superintendent of Financial Institutions to begin doing business in Canada. A fifth U.S. mortgage insurer, MGIC, has announced its intentions to enter Canada, and is expected to file an application by year-end 2007.

FAST **Facts**

- Value of mortgages approved was up 4.0 per cent to $189.4 billion. Average value of mortgages approved was $155,000, an increase of 7.3 per cent from 2005.
- Total of mortgage credit outstanding averaged $694 billion during 2006, up $67.1 billion from the average during 2005.
- Five-year fixed mortgage rate averaged 6.7 per cent. The spread between the five-year fixed and the open variable-rate narrowed to close to 1.0 percentage point by the end of the year.
- The popularity of variable-rate mortgages declined in 2006. Only 22 per cent of homeowners obtaining or renewing an existing mortgage chose a variable-rate mortgage in 2006, down substantially from 36 per cent in 2005.
- Consumers are becoming more aware of mortgage brokers. Most mortgage consumers (80 per cent) were aware of mortgage brokers and their services, up from 69 per cent in 2005. The use of brokers by renewers and refinancers increased by five percentage points and six percentage points, respectively, in 2006 compared to 2005.

Sustainable, Healthy Communities and Transportation

6

Both housing and community affect the environment and health

Sustainable communities recognize that social, environmental and economic concerns must be considered to ensure that long-term viability, competitiveness and quality of life are maintained while accommodating continuing growth and development.

Sustainability in housing is not just a matter of the design and operation of the house itself. The planning and design of urban areas including neighbourhoods can have far reaching implications to the surrounding environment and to the personal health and quality of life of the people who live and work there. As indicated in Chapter 2, the extent of a household's energy use, and hence the production of greenhouse gases (GHGs), is strongly influenced by the design, construction, maintenance and repair of its home. But the location of a home within an urban area and the neighbourhood design also have an impact.

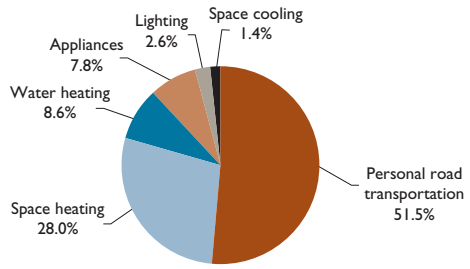
This chapter will examine the relationship between transportation and housing development, both in already built-up areas and in greenfield (previously undeveloped) areas, and how the location and design of a housing project can reduce the need to drive and promote a healthier, more sustainable lifestyle. It begins with a brief examination of the contribution of personal transportation to household GHG emissions and the community design factors which influence automobile usage. Next it examines several Canadian Transit-Oriented Development (TOD) case studies and the lessons they provide. Finally, the chapter looks at a new model of greenfield urban design (the "Fused Grid") developed by CMHC which is starting to be adopted by innovative communities and developers.

Contribution of transportation to household greenhouse gas emissions

Just over half of GHG emissions by households stemmed from road transportation in 2001 (*see Figure 6-1*). Transportation accounted for 26 per cent of total GHG emissions from all sectors in Canada in 2004, and 28 per cent of emissions growth since 1990[1]. Of the GHG emissions from transportation in 2004, 50 per cent came from light automobiles and light trucks (which includes SUVs).

FIGURE 6-1

CONTRIBUTION OF TRANSPORTATION TO HOUSEHOLD GREENHOUSE GAS EMISSIONS, 2005



Source: © Natural Resources Canada [2005]

1 *Human Activity and the Environment*, Statistics Canada, 2006, p. 15.

Location is a key determinant of kilometres driven

While the geographical distribution of employment within Canada's metropolitan areas continues to evolve, for many urban residents travelling to work means travelling to an employment destination in the urban core. For this reason, proximity to the urban core remains a key factor influencing the length of the daily commute and, often, the choice of transportation mode (e.g., walking/cycling, public transit, private automobile).

For suburban residents who travel to work in the urban core or in other suburbs, transportation choices are frequently more restricted, as suburban public transportation service levels are typically lower due to lower-density residential development and fewer people. With fewer transportation alternatives, the result is an increase in the average distance driven for weekday urban trips.

Ownership of vehicles per household – a key determinant of the number of automobile kilometres travelled by households on weekdays – also rises as you move outwards from the city centre to the suburbs.[2] This means that to reduce driving and GHG emissions, municipalities need to provide convenient alternative transportation modes that will encourage households to reduce the number of secondary vehicles. Municipalities must concentrate more development efforts along public transportation corridors as well as in areas closer to the urban centre (rather than greenfield developments at the urban fringe).

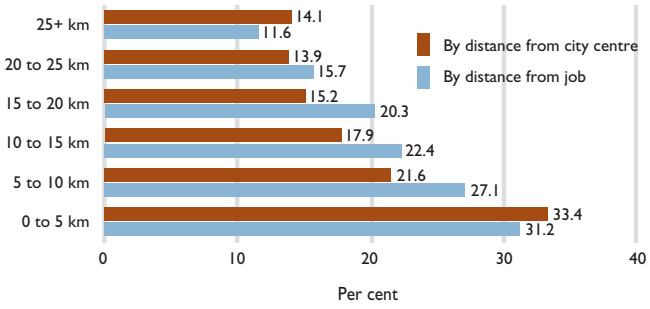
Proximity to daily destinations reduces automobile use

Although commuting to work may be the longest trip drivers make each day, it is not the only travel done by automobile. In the United States non-work travel accounts for about four of five household vehicle trips, and many of these trips occur in weekday peak periods.

A 2005 origin destination transportation survey in Ottawa found that trips to work or related trips made up only 19 per cent of trips in a 24 hour period. Non-work trips for shopping (10 per cent), leisure (10 per cent), school (7 per cent), pick up and drop off (6 per cent) and medical (2 per cent) account for 35 per cent of trips a day.[3]

FIGURE 6-2

PERCENTAGE USING PUBLIC TRANSPORTATION, BIKING OR WALKING TO COMMUTE, BY DISTANCE FROM CITY CENTRE AND JOB



Source: *Human Activity and the Environment*, Statistics Canada, 2006, p 12.

By bringing homes and non-work destinations closer together, there are opportunities to reduce automobile use for these non-work trips. Walking, cycling, and public transit are more feasible when these destinations are close to home and when routes for pedestrians and cyclists are pleasant and safe. As the distances from home to work and to the city centre decline, more people use public transit, walk or bicycle to those destinations (*see Figure 6-2*).

In suburban neighbourhoods where road and land-use patterns were designed assuming automobile use, the proximity to community amenities and jobs gradually decreases as you move out from the city centre. An analysis of Vancouver, for example, shows a noticeable difference in the proximity of schools, jobs, parks and transit in the central areas of Vancouver as compared to the outer suburbs — these services are much more accessible in the central area (*see Figure 6-3*). The central areas have more than twice as many schools, and seven times as many jobs within one kilometre of home, are ten times more likely to be within one kilometre of a rapid transit station, and are

2 Greenhouse Gas Emissions from Urban Travel: Tool for Evaluating Neighbourhood Sustainability, CMHC *Research Highlight*, Socio-Economic Series 50, February, 2000.

3 2005 Origin-Destination Survey, Summary of Results, Trans Committee, National Capital Region, prepared by iTrans Consulting Inc., December 2006.

less than two thirds the distance to a park. This pattern is found in other Canadian urban areas.[4]

As the amount of driving usually translates directly to the production of greenhouse gas emissions, it follows that households located in central area neighbourhoods produce fewer greenhouse gases, on average, from weekday urban trips than those in suburban neighbourhoods.

FIGURE 6-3

PROXIMITY OF FACILITIES BY NEIGHBOURHOOD, VANCOUVER, BRITISH COLUMBIA

	Central area, with mix of housing	Outer suburbs, with mix of housing
Schools* within 1 km	7	3
Jobs within 1 km	11,000	1,630
Homes within 1 km of rapid transit	70%	7%
Average distance to parks (m)	450	740

Note: Comparative statistics for Vancouver, Calgary, Toronto, Ottawa and Montréal can be found at www.cmhc.ca/en/co/buho/sune/index.cfm

*Elementary and secondary schools only

Sources: CanMapR Streetfiles V6.3 and the 2001 Census, Statistics Canada

Design of communities around the automobile has limited other choices and activities

With our growing dependence on the automobile as a result of development occurring primarily in the suburbs (*see sidebar on the historical impact of the automobile on urban development*), the costs of congestion and new road infrastructure are high and the need for replacement of existing roads is increasing. In cities, streets and parking lots can take up as much as 35 to 50 per cent of available land.[5]

The automobile has not only stimulated suburban development over inner city development, but has also influenced the design of streets and neighbourhoods, rather than these being determined only by the needs of pedestrians and cyclists.

Historical Impact of the Automobile on Urban Development

Since the advent of the automobile in the early 1900s, the design of our cities has focused on providing roads that accommodate the optimum flow and speed of cars and trucks. The automobile, by offering the maximum in flexibility and convenience in personal mobility, has allowed cities to grow beyond the limits of public transit.

Also during this same period, there were rising public health concerns about homes being located next to noxious industrial and commercial uses, which resulted in land use planning policies which favoured the segregation of these uses and the development of primarily residential communities at the edge of urban areas.

This pattern of development has continued to accelerate and the 2006 Canadian Census found that almost two-thirds of metropolitan population growth occurred on the periphery of metropolitan areas.

With the decentralization of growth and employment to these smaller satellite cities, the cycle of auto dependency is growing stronger. Employment in these suburbs is growing faster than employment in city cores. There is also more suburb to suburb commuting, traditionally not catered to by non-automobile travel options such as public transit which generally provides for suburb to core commuting.

4 www.cmhc.ca/en/co/buho/sune/index.cfm presents comparable statistics for Vancouver, Calgary, Toronto, Ottawa and Montréal.

5 *Human Activity and the Environment*, Statistics Canada, 2006, p. 15.

There is increased recognition that the design of roads and communities influences our behaviour and our transportation choices and that there are definite health impacts from those choices. In addition to the obvious air quality and respiratory health issues related to driving personal vehicles, the Heart and Stroke Foundation of Canada has documented that public health, particularly obesity, is associated with automobile dependency and a lack of opportunities for active transportation (walking, cycling, etc.).

Neighbourhood design can reduce automobile ownership and use

A CMHC study[6] found that there are several scenarios that, if implemented, can help reduce automobile ownership and use in a neighbourhood. These are as follows:

- Mixed residential and commercial land use and an increase in local job opportunities within a 5-km radius of a neighbourhood centre (great reduction of automobile use).
- Increased local transit vehicle service hours (reduces automobile ownership).
- Close access to a rapid transit station (slight reduction in automobile ownership and use).
- Increases in the number of housing units within 1 km of the centre of the neighbourhood (can moderately decrease automobile ownership and increase transit travel).
- The presence of bike lanes and recreational paths as well as local shopping opportunities (slightly decreases automobile use).
- An increase in the number of intersections per road-km in a neighbourhood (slightly reduces automobile travel, presumably because it improves connectivity for walking and cycling trips).

Infill Development

- Infill development involves building homes on parcels of land that are vacant or underutilized, usually located in existing residential areas. An example is building townhouses on a parcel of land that used to contain a single detached dwelling.
- Many opportunities for infill developments in Canadian cities involve brownfield and greyfield sites.

Brownfields

- Brownfields are sites that have been contaminated by industrial or commercial uses and that have the potential to be remediated. With remediation of the site, the redevelopment of brownfields for residential uses offers significant opportunities to revitalize older neighbourhoods, lower municipal infrastructure costs, and manage growth.

Greyfields

- Greyfields are vacant or underutilized older commercial centers (shopping malls, offices, retail plazas and light commercial buildings) which involve low or no site remediation costs.

Infill development is better than greenfield development in reducing GHG emissions

In addition to the specific design of the neighbourhood, the study found that the location of the development within the city can impact GHG emissions.

It also found that infill developments (*see types in box*) that increase housing density are more effective at lowering transportation–related GHG emissions than greenfield

6 Greenhouse Gas Emissions from Urban Travel: Tool for Evaluating Neighbourhood Sustainability, CMHC *Research Highlight*, Socio-Economic Series 50, February, 2000.

development, even greenfield development specifically designed to reduce car dependency.

However, greenfield neighbourhoods that include increased density, mixed use, improved pedestrian circulation and access to transit can significantly reduce car travel and GHG emissions, thereby improving the sustainability of outer regions of urban areas.

In summary, land use development that creates housing opportunities along public transportation corridors and closer to the city centre, in mixed-use compact developments, has the potential to create less GHG emissions. By expanding consumer choice and making other transportation alternatives more viable, sustainable planning practices can influence people's travel behaviour and reduce car use in favour of more walking, cycling and use of public transit.

Where there is limited availability of sites for infill development, greenfield communities that are compact, with a mix of land uses, well-connected streets and sidewalks can provide a supportive pedestrian environment and increase use of public transportation.

Reducing transportation impacts

Transit-Oriented Development

Transit-Oriented Development (TOD) is generally higher density residential and mixed-use development that is located within a walkable five-minute distance (600 metres) to a transit station, commuter train station, or high frequency/volume bus routes. The TODs are designed to encourage easy walking to transit and other community amenities (such as retail uses) to help make transit use convenient and thereby encourage ridership.

Why plan for land use around transit nodes?

There are many benefits of planning for the complementary use of land around transit stations and bus routes. Some of the transportation benefits identified by the City of Calgary[7] include:

- Encouraging transportation alternatives and increasing transit ridership
- Taking advantage of non-peak direction transit capacity
- Decreasing automobile dependency and exhaust emissions
- Providing increased neighbourhood and travel options for those not owning cars.

Other benefits to the urban fabric of the city include:

- Using serviced land efficiently to help create a more compact urban form

FIGURE 6-4

CMHC TOD CASE STUDY
TIME, NORTH VANCOUVER, BRITISH COLUMBIA
DENSITY TRANSITION

Time is an example of a transition from towers to townhouses and two-storey commercial uses which provides a human scale to the buildings.

It is a 265-unit, mixed-use project located within easy walking distance of the passenger ferry (SeaBus) terminal and associated market at Lonsdale Quay in North Vancouver.

The project was completed as part of the on-going re-development of a former industrial area that is now the region's highest density town centre. Complementing the two residential towers is a drug store, a grocery store and a community centre.

7 *Calgary Transit-Oriented Development Best Practices Handbook*, Calgary, Alberta, 2004.

- Making better connections between jobs and housing
- Creating opportunities for affordable housing
- Making identifiable and walkable neighbourhoods
- Creating more street activity and a safer station environment
- Using public transport investment as a strategic catalyst for private investment and development
- Increasing assessment values of vacant and underused land.

Different public transportation options require different minimum densities for viability

Planning of residential development and transit facilities need to go hand-in-hand to provide neighbourhood residents with transportation options to reduce their dependence on the private automobile.

In order for public transportation systems to operate at an optimal frequency of service that would be attractive to new users and influence travel behaviour, it is necessary for a certain minimum density of population to live within walking distance of the transit stops. This minimum residential density is 37 housing units per hectare (15 units per acre) for bus service.[8] However many of the outer areas of our cities are constructed at densities closer to 20 units per hectare. Even higher minimum densities are required to support light rail ridership - up to 64 housing units per hectare with a gradation of density as you move out from the transit station.

Key elements of Transit-Oriented Developments

CMHC commissioned 10 case studies of TODs,[9] and found the following key elements to be important to their success:

a) Land use–getting the right mix, type and density

b) Creating convenient, safe and comfortable pedestrian corridors

c) Managing parking by providing facilities that put transit first

FIGURE 6-5

CMHC TOD CASE STUDY
PORT CREDIT VILLAGE, ONTARIO
EFFECTIVE LAND USE

The redevelopment of the site as Port Credit Village linked the East and West Villages via a continuation of the commercial main street and once again made the waterfront accessible to all residents in the city. The development has a market area defined by public plazas, restaurants and other small-scale retail shops and office spaces.

d) Built form–on a human scale, making stations a destination.

Each of these elements is discussed below.

Land use – getting the right mix, type and density

Land use planning and regulation needs to ensure medium and higher density to support transit ridership, as discussed above. They must also incorporate transit-supportive uses (residential, retail, offices) that provide activity throughout the day and employment opportunities, as well as encourage a mix of uses so people can live closer to work (*see Figure 6-5*). Uses which serve the public, such as libraries and community centres, must be incorporated near residential areas. Finally, they need to discourage inappropriate uses that are low density or automobile-oriented and require large surface parking area.

8 Ontario Ministry of Transportation and Ministry of Municipal Affairs, *Transit-Supportive Land Use Planning Guidelines* (1992).

9 CMHC case studies are available at www.cmhc.ca/en/inpr/su/sucopl/sucopl_007.cfm.

FIGURE 6-6

PEDESTRIAN PATH LEADING FROM TIME DEVELOPMENT TO SEABUS

Create convenient, safe and comfortable pedestrian corridors

The walkways between major destinations should be as direct as possible, continuous and defined by built form or landscaping (*see Figure 6-6*). Streetscaping with benches, awnings, arcades, trees, and waste receptacles needs to be incorporated. It is also very important to locate activities generating land uses at ground level, to provide "eyes on the street", to provide sufficient public lighting to create a feeling of safety and to have minimal grade changes to ensure access for those with disabilities.

FIGURE 6-7

BIKE PARKING PROVIDED FOR VISITORS AT SHORT STREET, SAANICH, BRITISH COLUMBIA

Manage parking by providing facilities that put transit first

As vehicle ownership is reduced, parking requirements can also be reduced through strategies such as car-sharing, discounted transit passes, shared parking with commercial uses and increased bicycle parking (*see Figure 6-7*). This includes less surface parking area, and fewer parking structures in future developments which could have benefits by reducing the impacts from stormwater runoff.

Built form

Good urban design and streetscapes are attained by orienting buildings to the street with entrances to the sidewalk, having a human scale to the building at the street level and transitioning building heights from a transit node to the surrounding area (*see Figure 6-4*). Building

FIGURE 6-8

CMHC TOD CASE STUDY
VILLAGE DE LA GARE, MONT-SAINT-HILAIRE, QUEBEC
CREATING A COMMUNITY GATEWAY

The train station has distinctive architecture that references the rural and historic nature of the region and defines a gateway to the community.

The project is the result of a unique collaboration among the municipality, the metropolitan transit authority and a private developer. At its completion in 2012, it will include 1,000 residential units, approximately 2,300 square meters of commercial space, a primary school, public open space and landscaping, bicycle routes and pedestrian pathways, all within 750 metres of the train station. Nearly 15 per cent of the land area will be used for parks and public open space.

compact, dense buildings will maximise the use of land within the five- minute walk radius to the transit node. Each transit station can be made a destination and gateway to the community or neighbourhood by creating architecture that aids in finding the station *(see Figure 6-8)*.

Lessons learned

In addition to exploring the key elements of the physical success of the TODs, the case studies show how the developers of these projects have taken on the challenges of intensification and responded with innovative solutions. The developers worked co-operatively with residents and the municipal governments and found that their support was an important factor in the success of the projects, as were high quality design, great locations and strong markets.

The municipal planners found that the TOD projects met their goals of growth management/intensification around transit nodes and as a result provided some flexibility in the parking requirements and zoning (*see figures 6-9 and 6-10*). In some cases there were opportunities for cost sharing for public amenities and infrastructure.

FIGURE 6-9

CMHC TOD CASE STUDY
SHORT STREET, SAANICH, BRITISH COLUMBIA
STRATEGIES TO REDUCE THE NEED FOR A CAR

This innovative, mixed-use project features 72 residential units and three commercial retail units. It is close to several transit stops and a large commercial centre.

It features a number of strategies to increase public transit ridership and reduce parking. These include a co-op vehicle, free transit passes to residents for two years, shared parking with the commercial units and secure bicycle storage. These strategies enabled parking to be reduced by 21 per cent from the standard zoning requirements.

FIGURE 6-10

CMHC TOD CASE STUDY
THE METROPOLE, OTTAWA, ONTARIO
STRATEGIES TO ENCOURAGE TRANSIT USE

The development contains 153 apartments in the 32 storey tower and 68 townhouses. There is only one parking space per unit in the tower since it is less than 600 metres to a transit station, to which it is connected by a pedestrian path.

A total of 28 per cent of residents take transit to work compared to 18.5 per cent for CMA average, and 13 per cent walk more for shopping than in their previous residence.

FIGURE 6-11

DENSITIES OF CMHC TOD CASE STUDIES

TOD	Gross density (units/hectare)	Height (storeys)	Mixed uses (m^2)
Infill			
Time	322	15	Retail 300 Community centre 3,300
Short Street	157	5	Retail 630
Metropole	79	32 towns 3	none
Greenfield			
Port Credit Village	39	6 Avg 3	Office 1,400 Retail 3,700
Village de la Gare	30 (multiples) 20 (singles)	3	Not built yet

Density

Among the TODs examined, the three inner-city infill projects of Time, Short Street and Metropole achieved much higher densities than the more suburban commuter train developments of Port Credit Village and Village de la Gare, again showing the opportunities of inner city infill development. However Port Credit Village and Village de la Gare were also successful in that they achieved densities in the range of the 37 units per hectare that are needed to support public transit and that are higher than traditional suburban development (*see Figure 6-11*).

FIGURE 6-12

REASONS FOR CHOOSING TIME

Reason	Main reason (%)	Some influence (%)*
Proximity to transit	27	36
Proximity to work	18	30
Proximity to amenities (for example, shopping, parks, trails)	24	63
Price of unit	6	12
Size of unit	9	24
Architectural features (for example, layout, look of building)	3	30
Other or don't know	12	24

*More than one response allowed so total may not equal 100 per cent.

FIGURE 6-13

REASONS FOR CHOOSING VILLAGE DE LA GARE

Reason	Main reason (%)	Some influence (%)*
Proximity to transit	47	57
Proximity to work	10	17
Proximity to school	0	3
Proximity to amenities (for example, shopping, parks, trails)	0	10
Price of unit	3	17
Size of unit	3	7
Architectural features (for example, layout, look of building)	3	10
Proximity to nature	33	33
Other	0	33

*Total greater than 100 per cent because more than one response allowed.

Residents' motivations

A unique component of the research was to examine the motivations and behaviours of the new residents and the changes in their travel patterns once they lived closer to transit systems.

Proximity to transit was a significant factor in choosing to buy - and the main factor for Time and Village de la Gare, followed by proximity to work (*see Figures 6-12 and 6-13*).

Comparing TOD travel behaviour to average of other residents of the city

To understand if residents of TODs use cars less and other modes of transportation more, travel patterns were compared with the closest Census Metropolitan Area (CMA) (*see Figure 6-14*).

FIGURE 6-14

TRAVEL PATTERNS, TIME, VILLAGE DE LA GARE COMPARED TO THEIR CMAs AS A WHOLE

(per cent)

	Time	Vancouver CMA	Village de la Gare	Montréal CMA
Drive	50	72	44	66
Car pool	11	7	12	5
Public transit	31	12	44	22
Walk	8	7	0	6
Bike	0	2	0	1

Source: 2001 Census, Statistics Canada

Of the case studies completed to date, all but Time have slightly higher car ownership rates than the CMA average, likely because of higher incomes. However, residents reported much higher use of transit to travel to work than the average in the CMA.

TOD residents walk more

The case studies also looked at the change in residents travel patterns since their move to the TOD. Residents were usually taking transit to work more and walking more for local shopping and amenities except in the new community of Village de la Gare where retail and other amenities that would encourage walking have not been built yet (*see Figure 6-15*).

FIGURE 6-15

CHANGES IN TRAVEL PATTERNS FROM PREVIOUS RESIDENCE

	Time		Village de la Gare		Port Credit Village	
Change	**Work Trips (%)**	**To shop (%)**	**Work Trips (%)**	**To shop (%)**	**Work Trips (%)**	**To shop (%)**
Use transit more	21	3	10	0	9	3
Drive less	0	27	10	0	3	6
Walk more	3	60	0	0	0	31
Own one less car	3	3	3	0	0	0

TOD's goals were achieved

The Transit-Oriented Development case studies indicated a high level of satisfaction of developers for sales, residents for access to amenities and public transit, and cities for accomplishing intensification of land use and achievement of growth management objectives. In terms of changes in transportation behaviours, residents say they are using transit somewhat more and most of the TODs studied did have higher use of public transit for trips to work when compared to the CMAs. Residents of the TODs also reported that they were walking more. It can take time for new behaviours to be adopted, but all reductions in driving and increases in active transportation are positive for the environment and the health of residents.

Influencing travel behavior in greenfield developments in suburban areas

As the *Greenhouse Gas Emissions from Urban Travel* study indicated, developments close to the city centre are the more effective way to moderate GHG emissions because opportunities are greater to use modes of travel other than the personal automobile, fewer vehicles may be needed by the household, and distances are shorter for urban trips. The study also found that neighbourhood design (including street patterns) is a significant determinant of GHG emissions and can improve the sustainability of new suburban neighbourhoods.

Traditional suburban street patterns and GHG emissions

A problem with conventional subdivision loop and curl street patterns is that they inhibit walking and are disorienting and confusing to pedestrians as well as to drivers. They provide tranquility, safety and security at the expense of connectivity. They control traffic well but often create bottlenecks at peak times in predictable spots.

Conventional suburban street patterns negatively affect the environment and neighbourhood quality of life. They impact the environment in that the street patterns consume land (up to 35 per cent of a district) and resources for their construction and ongoing maintenance. Local streets represent the bulk of the entire road network mileage of a region (over 70 per cent). They add to the impermeable surface area with a negative impact on water quality and contribute to urban heat that affects energy demand for cooling. Street patterns can impede or enable walking and bicycling thereby influencing energy use for transport. They can restrict or accommodate the flow of traffic thereby affecting GHG generation.

"Smart Growth" and neo-traditional community design

By the 1990s the problems of suburban sprawl were becoming evident and a new movement called "Smart Growth" evolved to promote the design of communities that are more compact, with a mix of land uses, well-connected streets and sidewalks, and public transit that would encourage a change in travel behaviour so that the residents would walk and bicycle more and drive less.

In the search for more sustainable approaches, older neighbourhoods of cities - that were developed before the influence of cars - were identified as potential models of the mixed-use, walkable neighbourhoods to emulate. This approach, which borrows from the past to address a contemporary planning challenge, has come to be referred to as neo-traditional community design and is often based upon a grid street pattern.

Unfortunately, the neighbourhood street grid pattern - the inheritance of a pedestrian era - provides connectivity at the expense of tranquility and safety. In response, this grid pattern ushered in the era of traffic calming through use of

speed bumps, traffic circles and stop signs which together impede traffic flow, increase automobile emissions and noise, reduce air quality and often lead to driver frustration. These grid street patterns are the most land consuming and consequently the least environmentally sustainable. CMHC-sponsored research identified that neither the grid street pattern nor the looping suburban street pattern were the optimum solution, and suggested a new hybrid of the two approaches, called the Fused Grid[10] (*see Figure 6-16*).

The Fused Grid: A contemporary street pattern that addresses environmental and quality of life issues

Each of the existing street patterns (grids and loops) has positive attributes yet neither satisfies the entire set of environmental and quality of life criteria. An answer lies in their combination which is embodied in the Fused Grid. This uses a continuous grid of roads for district and regional connectivity and a discontinuous grid of streets for neighbourhood safety. The latter (neighbourhood) grid is supplemented by footpaths that connect all streets, turning a neighbourhood into a fully connected pedestrian realm (*see Figures 6-16 and 6-17*).

The combination of continuous and discontinuous street grids:

- Optimizes the use of land for streets
- Secures tranquil and safe neighbourhoods
- Increases the potential for social interaction
- Reduces the amount of impermeable surfaces
- Optimizes infrastructure
- Assists district and regional traffic flow
- Encourages walking while positively discouraging short-distance driving
- Provides opportunities for rainwater management.

FIGURE 6-16
FUSED GRID STREET PATTERN MODEL

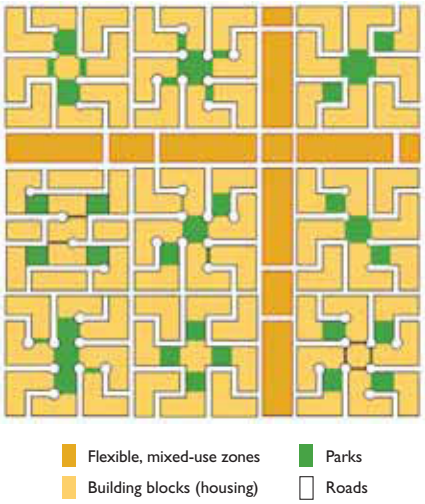
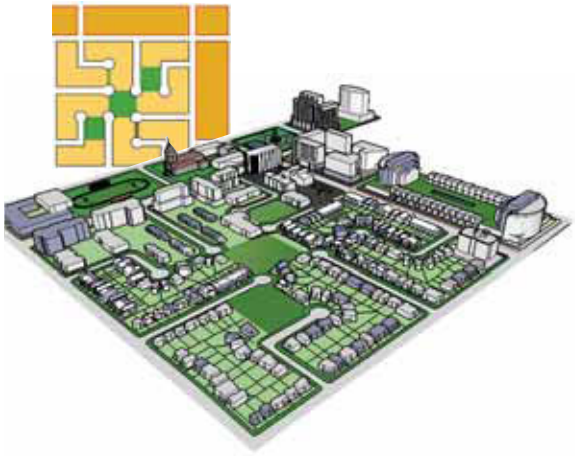


FIGURE 6-17
SECTION OF GRID



Flexible mixed-use zones frame the neighbourhoods.
The perimeter of each neighbourhood has increased medium density blocks.
Single-family homes are found towards the centre.
All common amenities are within a five-minute walking distance.

10 *Residential Street Pattern Design*, CMHC Research Highlight, Socio-Economic Series 75, July, 2002, p. 6.

FIGURE 6-18

SUBDIVISION PLAN
FOR A CALGARY SUBURB

Source: Genesis Land Development Corporation

In addition, the Fused Grid anticipates and channels land intensification and mixed-uses by creating a zone between residential districts that is flexible in possible land uses - which can include schools, parks and commercial. This zone can also accommodate adaptations to future traffic demand by allowing for road redesign and expansion within the existing road allowance.

The Fused Grid is a model for laying out neighbourhoods and districts. It combines the geometries of inner city grids and the cul-de-sac of the conventional suburbs. The objective is to retain the best characteristics of each and none of their disadvantages while raising the quality of the neighbourhood environment.

Applications of the Fused Grid

The Fused Grid can be applied as a neighbourhood or district model. Three area (large district) development plans have been approved by municipalities (Stratford, Ontario in 2003;[11] Regina, Saskatchewan in 2006; and Fort McMurray, Alberta in 2007). In Calgary, Saddleton, a 64 hectare subdivision development plan, closely based on the Fused Grid (*see Figure 6-18*), has been submitted by the developer for approval by the city. This suburb design has open space to serve as:

- a space for recreation
- a pedestrian connector to all parts of the neighbourhoods
- a stormwater management system
- an opportunity for developers to increase density slightly.

A number of other municipalities are considering the application of the Fused Grid in partnership with CMHC.

The opportunity

Adopting street patterns that respond to current environmental concerns and the desire for improved quality of life offers a unique opportunity for the development industry to take the lead with a land use solution that is financially and environmentally sound.

The Fused Grid provides safe and healthy communities

The Fused Grid can influence the safety and health of communities in a number of ways. Street patterns can reduce or increase the risk of fatal accidents or injuries to people, particularly to children and seniors. Studies have shown that collisions are three times less likely to occur on streets designed with cul-de-sac and T intersections *(see Figure 6-19)* which are key elements in the Fused Grid road designs.[12]

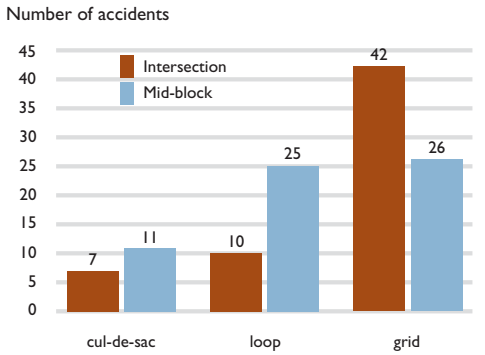
The Fused Grid street pattern can also help increase the level of tranquility in a neighbourhood and support social networking, which in turn reinforces a sense of security. It can reduce noise intrusion and improve local air quality by managing traffic. It can make walking and biking pleasant thus favoring an active healthy lifestyle. Finally, it can support the viability of amenities required for daily routines.

11 Applying Fused-Grid Planning in Stratford, Ontario, CMHC *Research Highlight,* Socio-Economic Series 04-038, November, 2004.

12 Source: Macro-level collision prediction models for neighbourhood traffic safety, Gordon Lovegrove and Tarek Sayed, *Canadian Journal of Civil Engineering,* Volume 33, 2006.

FIGURE 6-19

NUMBER OF ACCIDENTS BY LOCATION



Source: Ezra Ben-Joseph, Institute of Transportation Studies, University of California, Berkeley, 1995

In summary, the Fused Grid balances the needs of the pedestrian and the motorist. It responds to the quest for economic efficiency and the need for environmental stewardship. It promotes active transportation which improves health and reduces vehicular travel and GHG emissions.

Reducing transportation GHG emissions in smaller communities

Smaller communities may not have sufficient population and housing density to support urban transit systems. However by providing sidewalks, bike paths or lanes, carpool locations or a local bus or taxi-bus service, other modes of transportation can be encouraged which would reduce GHG emissions. New development could be encouraged to use land efficiently with more density and mixed use and be located near existing community services. In Dieppe, New Brunswick, a part of the greater Moncton area which is facing development pressure at the rural fringe, an approach called Sustainable Conservation Design (SCD) is being proposed as an alternative to conventional subdivision design. SCD seeks to protect environmentally sensitive land by increasing the density of the potential development areas and providing a more sustainable development.

Moving toward more sustainable transportation and communities

As pointed out at the outset of this chapter, road transportation accounts for half of all households' GHG emissions. Further, location of residence and neighbourhood design are key determinants of the amount of household driving.

Intensification of residential development can reduce car usage, and is increasingly occurring, through infill, greyfield and brownfield redevelopments that are along or closer to transit systems and nearer the city centre. As demonstrated in the Transit-Oriented Development (TOD) case studies, municipalities and developers are finding creative solutions to provide housing and mixed-use developments that are satisfying a rising demand and providing neighbourhood amenities.

These TODs also offer their residents the ability to increase their use of public transit, while reducing their greenhouse gas emissions and to walk or cycle more, thereby improving their health.

Planning models like the Fused Grid, when applied in Smart Growth communities, offer solutions to reduce the car travel that takes place in new greenfield neighbourhoods and provide for a safe environment which can encourage pedestrian and cycling travel and discourage short distance car travel.

For almost a century, land use and transportation planning have given vehicles priority. This has resulted in the wider streets, higher traffic speeds, increased traffic volumes and larger parking lots which, together, have negatively impacted cycling, walking and transit use, and people's health.

This chapter has shown that it is possible to create communities for which alternatives to automobile transport are both feasible and convenient, which result in less driving and consequently the production of fewer greenhouse gas emissions.

Recent Trends in Housing Affordability and Core Housing Need (2002–2004)

7

Up until now in Canada, published indicators of housing affordability and housing conditions generally have been based on Census data and have therefore been available only every five years. In order to improve the timeliness of these indicators, CMHC began an undertaking in 1999 aimed at developing a module of housing questions for inclusion in Statistics Canada's annual Survey of Labour and Income Dynamics – SLID *(see SLID text box)*. At that time, SLID asked only a few questions regarding housing such as dwelling type, tenure, number of bedrooms and presence of mortgage on the property. Starting in 2002, over 20 housing-related questions were added to the SLID questionnaire in order to trace trends in Canadian housing conditions and changes in core housing need *(see Acceptable Housing and Core Housing Need text box)* between censuses.

This chapter is the first publication of SLID-based indicators of acceptable housing and core housing need and hence the first update on trends in housing conditions since the release of housing indicators in 2003 based on the 2001 Census.[1] Since the SLID sample of about 30,000 households is much smaller than the 2001 Census sample of some 2.3 million households, SLID-based estimates would have less precision than estimates based on census data. Census and SLID data are not completely comparable. Nonetheless, SLID-based estimates can provide useful insights into high-level trends in housing indicators.

The Survey of Labour and Income Dynamics (SLID)

The Survey of Labour and Income Dynamics (SLID) is a survey conducted annually by Statistics Canada to collect information on the labour and income characteristics of Canadians. SLID covers the ten Canadian provinces but excludes those Canadians living in the territories, in institutions or collective dwellings, in military barracks and on Indian reserves. According to Statistics Canada, these exclusions amount to less than three per cent of the Canadian population. SLID also excludes the homeless. The SLID sample comprises some 30,000 households who are interviewed for a period of six consecutive years. In contrast, the 2001 Census gathered detailed housing condition data from some 2.3 million households.

In 2002, a housing cost module was added to SLID as a result of CMHC sponsorship. Until then, SLID had collected only a few housing characteristics. As part of the housing cost module, over 20 housing-related questions were added to SLID. The addition of the housing cost module enables the monitoring of Canadians' housing conditions between censuses.

1 Census 2001 housing condition data (urban and rural) are available in Housing in Canada Online (HiCO) (http://www.cmhc.ca/en/corp/about/cahoob/cahoob_002.cfm) and analyses using these data in the 2001 Census Housing Series of Research Highlights – see Socio-economic Series (http://www.cmhc.ca/en/inpr/rehi/index.cfm).

Acceptable Housing and Core Housing Need

The term **acceptable housing** refers to housing that is adequate in condition, suitable in size, and affordable.

- **Adequate** dwellings are those reported by their residents as not requiring any major repairs.
- **Suitable** dwellings have enough bedrooms for the size and make-up of resident households, according to National Occupancy Standard (NOS) requirements. Enough bedrooms based on NOS requirements means one bedroom for each cohabiting adult couple; unattached household member 18 years of age and over; same-sex pair of children under age 18; and additional boy or girl in the family, unless there are two opposite sex siblings under 5 years of age, in which case they are expected to share a bedroom. A household of one individual can occupy a bachelor unit (i.e. a unit with no bedroom).
- **Affordable** dwellings cost less than 30 per cent of before-tax household income.

Households which occupy housing that falls below any of the dwelling adequacy, suitability or affordability standards, and which would have to spend 30 per cent or more of their before-tax income to pay for the median rent of alternative local market housing that meets all three standards, are said to be in **core housing need**.

This chapter examines the housing conditions of households living in cities with a core population over 10,000; that is, Census Metropolitan Areas (CMAs) and Census Agglomerations (CAs) as defined by Statistics Canada[2], but it excludes CAs in the territories as these are not part of the SLID sample. These cities, comprising almost all of urban Canada, housed 23.8 million people or nearly 80 per cent of the national population in 2001. SLID data have been used to assess housing adequacy, suitability and affordability (*see definitions in Acceptable Housing and Core Housing Need text box*), and CMHC's rental market survey data have been used to determine the income levels required to access acceptable rental housing in these cities.

The number of urban households accessing acceptable housing is growing

The number of households[3] living in urban Canada that were able to find acceptable housing *(see Acceptable Housing and Core Housing Need text box)* grew from almost 6.6 million in 2002 to almost 6.8 million households in 2004. In 2004, virtually seven in ten urban Canadian households were able to find acceptable housing and another 16.5 per cent of households could have obtained acceptable housing in their cities at a cost of less than 30 per cent of before-tax household income. In total, 86.4 per cent of urban Canadian households either lived in, or had sufficient income to access, acceptable housing in 2004. The remaining 13.6 per cent of Canada's urban households were in core housing need in 2004, slightly down from the 13.9 per cent in 2002 *(see Figure 7-1)*.

The apparent downward trend in the level of urban core housing need has been largely associated with the healthy Canadian economy of the early 2000s. Labour force participation increased since 2001 and the larger labour force has been accompanied by a growth in real incomes *(see Figure 7-2)*. The 2003-2004 growth in average household incomes outpaced the 2003-2004 growth of average shelter costs by 1.2 percentage points and further supported the small decline in the level of core housing need.

2 At the time of writing this chapter, SLID still uses the Census 2001 geography. CMAs and CAs are formed by one or more adjacent municipalities centred on a large urban core. The census population count of the urban core is at least 10,000 for a CA and at least 100,000 for a CMA. To be included in a CMA or CA, other adjacent municipalities must have a high degree of integration with the urban core, as measured by commuting flows derived from census place-of-work data.

3 The universe of households reviewed in this chapter includes only private non-farm, non-band, non-reserve households with incomes greater than zero and shelter-cost-to-income ratios (STIRs) less than 100 per cent.

FIGURE 7-1

HOUSING CONDITIONS IN CENSUS METROPOLITAN AREAS AND CENSUS AGGLOMERATIONS CANADA, (1991, 1996, 2001, 2002-2004)

			All households*		Living in acceptable housing*		Living in housing below one or more standards*			
							Able to access acceptable housing		Unable to access acceptable housing - in core housing need	
Geography	Source	Year	Total (thousands)	Per cent	Total (thousands)	Per cent	Total (thousands)	Per cent	Total (thousands)	Per cent
CMA/CA**	SLID	2004	9,643	100	6,747	69.9	1,587	16.5	1,309	13.6
		2003	9,532	100	6,654	69.8	1,556	16.3	1,322	13.9
		2002	9,429	100	6,567	69.7	1,549	16.4	1,312	13.9
CMA/CA**	Census	2001	8,736	100	6,033	69.1	1,456	16.7	1,247	14.3
		1996	7,994	100	5,331	66.7	1,365	17.1	1,299	16.3
		1991	7,466	100	5,137	68.8	1,283	17.2	1,046	14.0
Canada	Census	2001	10,806	100	7,557	69.9	1,764	16.3	1,485	13.7
		1996	10,028	100	6,799	67.8	1,662	16.6	1,567	15.6
		1991	9,372	100	6,533	69.7	1,569	16.7	1,270	13.6

*Includes only private non-farm, non-band, non-reserve households with incomes greater than zero and shelter-cost-to-income ratios (STIRs) less than 100 per cent.

**Household counts do not include Whitehorse, YK and Yellowknife, NWT.

The numbers shown for households based on the Census and on SLID are not comparable. SLID reflects Statistics Canada's estimates of the total number of households in Canada which are higher than the numbers of households enumerated by the Census, since inevitably not every household is counted by the Census.

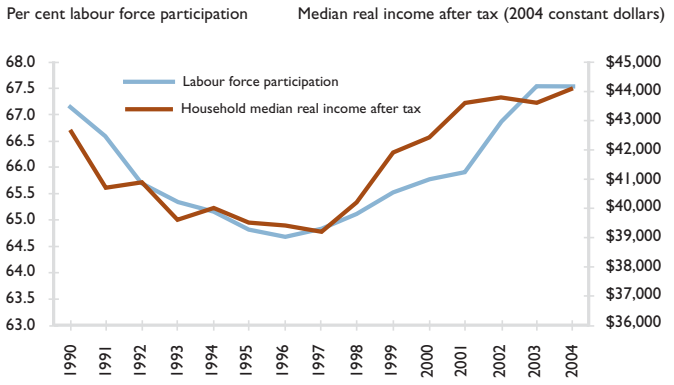
Source: CMHC (Census- and SLID-based Housing Indicators and Data)

Spending 30 per cent or more of household income on shelter cost still the most common reason to fall below housing standards and into core housing need

As in previous years, failing to meet the housing affordability standard was the most common situation among those urban households falling below housing standards in the period 2002-2004. In 2004, 20.1 per cent of all Canadian urban households lived in housing that failed to meet only the affordability standard. Another some 3 per cent of all urban households failed to meet the housing affordability and other standard(s).[4] In total, about 23 per cent of all urban households spent 30 per cent or more of their income on shelter costs. Approximately 13 per cent[5] of all urban households failed to meet the housing affordability standard and also fell into core housing need. The other some 10 per cent[6] who were below

FIGURE 7-2

LABOUR FORCE PARTICIPATION AND HOUSEHOLD MEDIAN REAL INCOME AFTER TAX (1990-2004)



Source: *Survey of Consumer Finances* (1990-1995), *Survey of Labour and Income Dynamics* (1996-2004)

4 1.2 per cent plus 1.5 per cent plus 0.1 per cent (*see "Below Multiple Housing Standards" in Figure 7-3).*

5 10.9 per cent plus 0.9 per cent plus 0.9 per cent plus 0.1 per cent (*See Figure 7-3*).

6 9.2 per cent plus 0.3 per cent plus 0.6 per cent plus 0.0 per cent (*See Figure 7-3*).

FIGURE 7-3

PERCENTAGE OF URBAN HOUSEHOLDS BELOW HOUSING STANDARDS, 2002-2004

	Living in Housing below standards								
	Total			Able to access acceptable housing			Unable to access acceptable housing - in core housing need		
	2002	2003	2004	2002	2003	2004	2002	2003	2004
Below one housing standard only	27.3%	26.9%	27.1%	15.5%	15.1%	15.4%	11.8%	11.8%	11.7%
Affordability	19.6%	19.4%	20.1%	8.7%	8.7%	9.2%	10.9%	10.7%	10.9%
Suitability	3.9%	3.6%	3.2%	3.3%	2.9%	2.8%	0.6%	0.7%	0.4%
Adequacy	3.8%	3.9%	3.8%	3.4%	3.5%	3.4%	0.3%	0.4%	0.4%
Below multiple housing standards	3.0%	3.3%	2.9%	1.0%	1.2%	1.0%	2.1%	2.1%	1.9%
Affordability and suitability	1.2%	1.2%	1.2%	0.2%	0.2%	0.3%	1.0%	1.0%	0.9%
Affordability and adequacy	1.4%	1.8%	1.5%	0.6%	0.8%	0.6%	0.8%	1.0%	0.9%
Suitability and adequacy	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.1%	0.0%	0.1%
Affordability, suitability and adequacy	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%

Percentages may not add to totals because of rounding.

Source: CMHC (SLID-based Housing Indicators and Data)

the affordability standard had sufficient income to access acceptable local rental housing, and therefore were not in core housing need *(see Figure 7-3)*.

Less than 1 per cent of all urban households fell into core housing need by failing to meet only the suitability and/or adequacy housing standards.

Ontario and British Columbia had largest share of urban households in core housing need

Urban households in core housing need living in Ontario and British Columbia accounted on average for about 63 per cent of all Canadian urban households in this housing condition during 2002-2004 *(see Figure 7-4)*. Ontario's share of urban Canadian households in core housing need was on average 46.0 per cent while accounting for just above 40 per cent of all urban households in Canada between 2002 and 2004. Ontario's share experienced an upward trend increasing from 44.9 per cent in 2002 to 45.6 per cent in 2003, and to 47.5 per cent in 2004. Urban households in core housing need living in British Columbia accounted on average for over 17 per cent of all Canadian urban households in core housing need while amounting on average to just above 14 per cent of all urban households in Canada during 2002-2004. British Columbia's share of core housing need was fairly stable during this period.

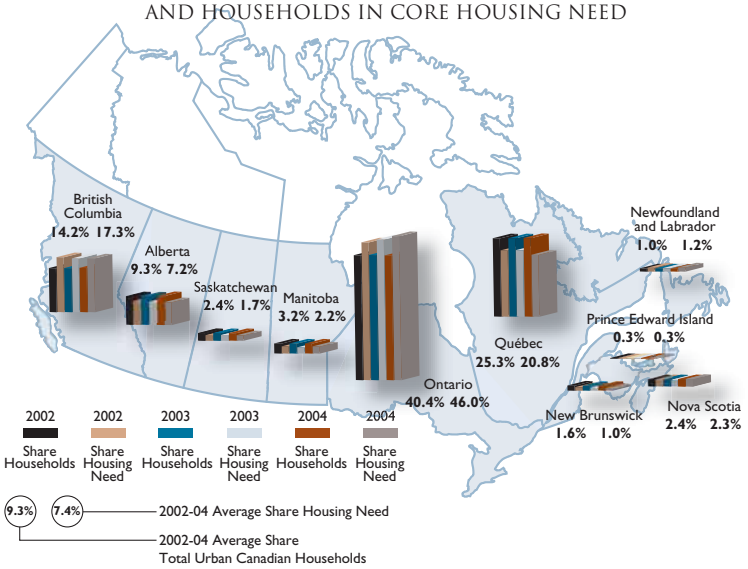
Urban households in British Columbia, Ontario and Newfoundland and Labrador experienced highest incidences of core housing need

Since 2001, urban households in British Columbia and Ontario continued experiencing high incidences of core housing need. On average, 16.8 per cent of urban households in British Columbia and 15.7 per cent of households in Ontario lived in core housing need between 2002 and 2004. However, these two provinces experienced somewhat opposite trends during this period of time. British Columbia's incidence of urban core housing need decreased from 17.5 per cent in 2002, to 17.1 per cent in 2003, and to 15.7 in 2004, while Ontario's incidence remained fairly steady, at some 16 per cent *(see Figure 7-5)*.

The four Atlantic Provinces – Newfoundland and Labrador, Nova Scotia, New Brunswick, and Prince Edward Island – had only about 5 per cent of Canadian urban households in core housing need during 2002-2004 *(see Figure 7-4)*. In these four provinces, slightly above 13 per cent of urban households were in core housing need between 2002 and 2004, just below the national average of

FIGURE 7-4

PROVINCIAL SHARES OF TOTAL URBAN HOUSEHOLDS AND HOUSEHOLDS IN CORE HOUSING NEED



Urban Canada includes Census Metropolitan Areas and Census Agglomerations which accounted for almost 80 per cent of the Canadian population in 2001.

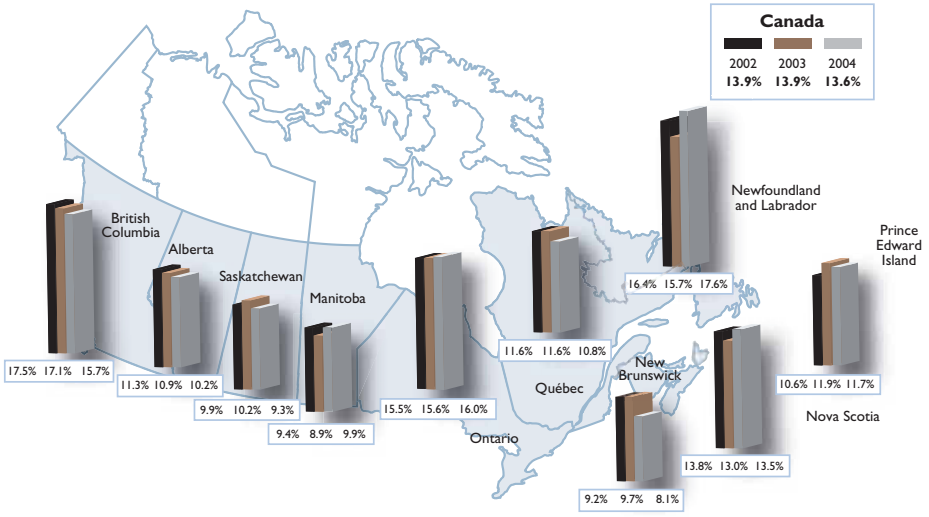
Source: CMHC (SLID-based Indicators and Housing Data)

13.8 per cent. Nonetheless, there was an important variation within the Atlantic region. New Brunswick and Prince Edward Island, at 9.0 per cent and 11.4 per cent respectively, experienced core housing need incidences well below the national average, while Newfoundland and Labrador,[7] at an average 16.6 per cent, was well above it. Nova Scotia's average incidence of core housing need, at 13.7 per cent, was about the same as the national average.

Between 2002 and 2004, Quebec, at an average of 11.3 per cent, experienced urban core housing need well below the national average of 13.8 per cent. The Prairie Provinces, at an average of 10.3 per cent, maintained the lowest incidences of urban core housing need of any region. Manitoba and Saskatchewan, at an average of 9.4 per cent and 10.0 per cent respectively, had fairly steady low rates. Despite large increases in its shelter costs, Alberta

FIGURE 7-5

INCIDENCE OF URBAN CORE HOUSING NEED BY PROVINCE, 2002-2004



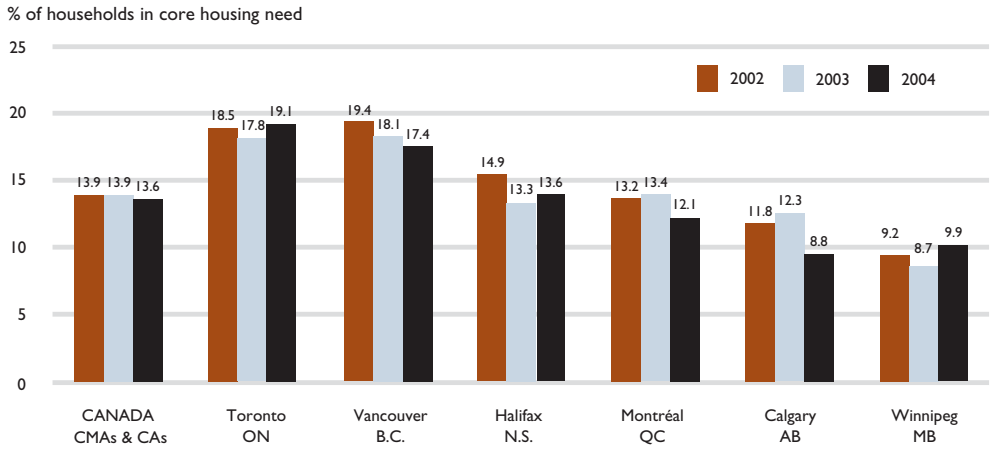
Urban Canada includes Census Metropolitan Areas and Census Agglomerations which accounted for almost 80 per cent of the Canadian population in 2001.

Source: CMHC (SLID-based Indicators and Housing Data)

7 Estimates for Newfoundland and Labrador are based on a small sample in SLID.

FIGURE 7-6

INCIDENCE OF CORE HOUSING NEED (2002-2004)
SELECTED CENSUS METROPOLITAN AREAS



Source: CMHC (SLID-based Housing Indicators and Data)

continued to experience low rates of urban households in core housing need; the trend in Alberta was toward lower rates of urban core housing need, decreasing from 11.3 per cent in 2002, to 10.9 per cent in 2003, and to 10.2 per cent in 2004, with an average of 10.8 per cent.

Urban core housing need incidence remained the highest in Toronto and Vancouver

Toronto and Vancouver, on average at 18.5 per cent and 18.3 per cent respectively, had the highest incidences of urban core housing need between 2002 and 2004 *(see Figure 7-6)*. These two cities also had the highest shelter-cost-to-income ratios (STIRs) of any CMA, reaching average levels of some 25 per cent in 2003 and 2004 *(see Figure 7-7)*. In both cities, growth in shelter costs outpaced the rise in household incomes by some two percentage points between 2002 and 2004, therefore increasing the propensity of falling in core housing need for many households.

In Halifax, 13.9 per cent of urban households on average were in core housing need between 2002 and 2004, just above the national average of 13.8 per cent. Even though increases in household income outpaced the growth of shelter costs by almost five percentage points, households in Halifax were still unable to significantly reduce their STIRs as they spent on average over 22 per cent of their income on shelter costs *(see Figure 7-7)*, just about the national average. Above-average STIRs left many households still exposed to potential core housing need.

Winnipeg and Calgary are examples of Prairie cities where large proportions of households lived in, or were able to access, acceptable housing. Both cities had core housing need incidences well below the national average. Winnipeg experienced fairly steady low incidences of core housing need, averaging 9.3 per cent between 2002 and 2004. The dynamic of household incomes and shelter costs was favourable for housing affordability in this city. The growth in the average household income in Winnipeg outpaced the increase of shelter costs by almost three percentage points between 2002 and 2004.

Although having shelter costs over 30 per cent higher than in Winnipeg, Calgary's rates of core housing need, at an average of 11.0 per cent, remained below the national average between 2002 and 2004. With average income levels also about 30 per cent higher than Winnipeg, households in Calgary remained for the most part capable of accessing acceptable housing. Even though the average shelter cost growth outpaced the increase in average household income by over 2 percentage points between 2002 and 2004, Calgary's significant increase in the average household income of almost 11 per cent —almost twice the average for all CMAs of around 6 per cent — still allowed most households to find acceptable housing.

FIGURE 7-7

AVERAGE HOUSEHOLD INCOME, SHELTER COST AND STIR (2002-2004)
SELECTED CENSUS METROPOLITAN AREAS

	Average income			Average shelter cost			Average STIR*		
CMA	**2002**	**2003**	**2004**	**2002**	**2003**	**2004**	**2002**	**2003**	**2004**
Toronto	$80,337	$83,235	$86,805	$12,636	$13,547	$13,898	23.2	24.4	25.0
Calgary	$74,813	$76,814	$82,937	$10,912	$12,118	$12,367	20.2	23.1	20.9
Vancouver	$67,748	$68,559	$69,400	$11,791	$12,533	$12,441	24.9	25.7	24.7
Montréal	$59,782	$60,892	$63,207	$8,638	$9,042	$9,353	22.1	22.2	22.2
Winnipeg	$57,149	$59,191	$62,609	$8,472	$8,823	$9,033	20.8	20.2	19.8
Halifax	$57,088	$60,242	$61,418	$9,458	$9,128	$9,633	23.6	20.8	22.1
CANADA	$64,871	$66,461	$69,017	$9,986	$10,493	$10,766	22.1	22.5	22.5

*STIR Shelter-cost-to-income Ratio

Source: CMHC (SLID-based Housing Indicators and Data)

Half of all urban households in core housing need live in three CMAs

Toronto (24 per cent), Montréal (14 per cent) and Vancouver (11 per cent) accounted for 49 per cent of all Canadian urban households in core housing need.

Access to acceptable housing is declining among urban one-person households

About 77 per cent of urban households in core housing need between 2002 and 2004 were one-person households, married or common-law couples with children and female lone-parent families *(see Figure 7-8)*.

Accounting for over 600,000 of the total, one-person urban households were the largest component of urban households in core housing need each year. One-person households increased their share of those in core housing need from just under 45 per cent in 2002 to 46 per cent in 2003, and to some 47 per cent in 2004. The number of one-person households in Canada has been increasing disproportionately compared to other types of households.[8] During 2002-2004, one-person households represented over a quarter of all urban households. As more one-person households are looking for shelter, they are also more exposed to the challenges of finding acceptable housing.

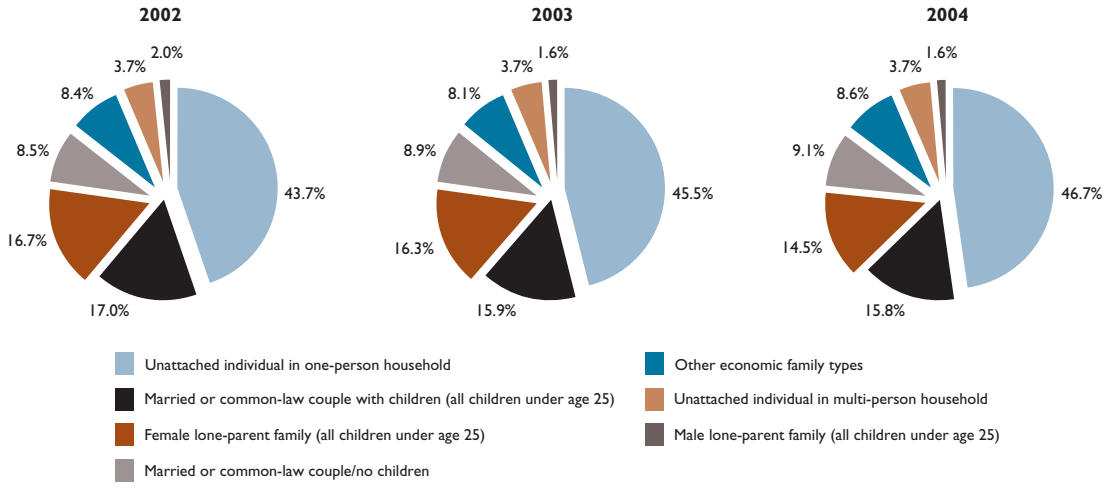
One-person households are usually characterized by much lower income levels than traditional families (e.g., couples with children). The lower income level of one-person households is not only a consequence of having only one wage earner but also of that wage earner having a low average income. Per capita wages for both male and female one-person households are lower, on average, than those with two wage earners, even when age cohort is taken into account.[9] Almost 40 per cent of one-person urban households were in the bottom income quintile between 2002 and 2004. Among one-person urban households, those renting were the most affected by housing affordability issues. While the percentage of one-person owners in core housing need remained steady between 2002 and 2004 at about 13 per cent, one-person renters had increasingly higher incidences ranging from some 34 per cent in 2002 to 35 per cent in 2003, and to 37 per cent in 2004 *(see Figure 7-9)*.

8 In 1971, 14.4 per cent of all Canadians households were one-person households. In 2001, they accounted for 25.7 per cent.

9 Bunting, T., R.A. Walks, P. Filion (2004) "The Uneven Geography of Housing Affordability Stress in Canadian Metropolitan Areas". *Housing Studies*, Vol. 19, No. 3, 361-393, May.

FIGURE 7-8

URBAN HOUSEHOLDS IN CORE HOUSING NEED BY TYPE, 2002-2004



Source: CMHC (SLID-based Housing Indicators and Data)

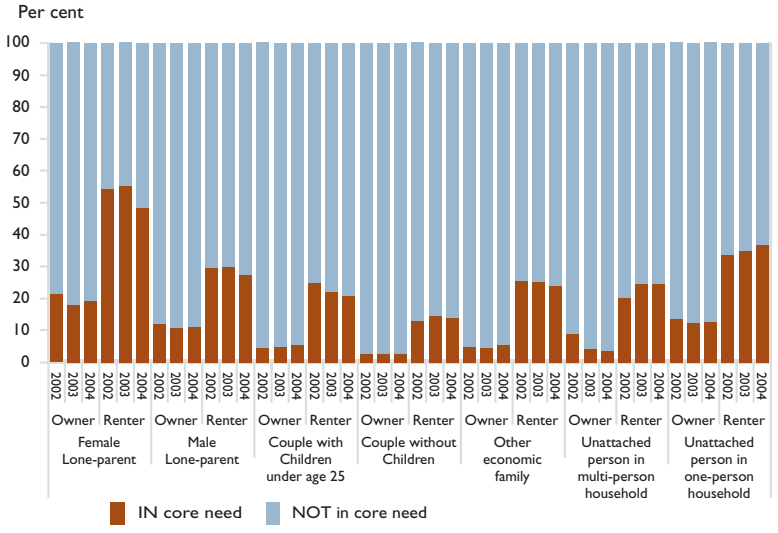
Many children in couple families still live in core housing need

Married or common-law couples with children were the second-largest component of households in core housing need in 2002 and 2004 *(see Figure 7-8)*. Although having a substantially lower incidence of core housing need than other family types, they accounted for over 15 per cent of households experiencing core housing need as they represent a large proportion –over a quarter– of all urban Canadian households. The share of couples with children among urban households in core housing need decreased from 17.0 per cent in 2002 to 15.9 per cent in 2003, and to 15.8 per cent in 2004 as a result of a decrease in their incidence of core housing need from 8.4 per cent in 2002 to 8.0 per cent in 2003, and to 7.9 per cent in 2004. The reduction was due largely to a declining incidence among renter couples with children *(see Figure 7-9)*.

Nonetheless, as most children live in one-family households with two parents,[10] the large share of couples with children among those in core housing need meant that a significant number of children were not able to live in acceptable housing. During 2002-2004, urban couple households contained over 70 per cent of all children under 25. Of over 800,000 children in core housing need between 2002

FIGURE 7-9

2002-2004 INCIDENCE OF CORE HOUSING NEED BY FAMILY COMPOSITION AND TENURE



Source: CMHC (SLID-based Housing Indicators and Data)

10 CMHC (2000) "Special Studies on 1996 Census Data: Housing Canada's Children" *Research Highlights*, Socio-economic Series, Issue 55-4.

and 2004, close to 50 per cent lived in households of couple families while some 45 per cent lived in lone-parent households.

Fewer female lone-parent households in urban core housing need

Female lone-parent households were the third-largest component of urban households in core housing need between 2002 and 2004 *(see Figure 7-8)*. Indeed, female lone-parent households face higher housing overhead costs than one-person households, while their heads have earnings lower than their male counterparts. However, there is a trend for female lone-parent households to comprise a smaller share of those in core housing need.[11] Their share in the group of urban households in core housing need decreased from 16.7 per cent in 2002 to 16.3 per cent in 2003, and to 14.5 per cent in 2004. This decreasing share was a consequence of a drop in their incidence of core housing need, from 42.6 per cent in 2002 to 41.5 per cent in 2003, and to 37.4 per cent in 2004. This trend is consistent with improvements in income experienced by lone-parents (most of whom are female) over the last few years as a result of having better market incomes as well as an increase in government transfers.[12] The incidence of lone-parents below Statistics Canada Low Income Cut-off (LICO) lines was under 50 per cent in 2001 for the first time in the last couple of decades. Nonetheless, the disadvantaged conditions of lone-parents are far from being resolved. There are still many lone-parents unable to access acceptable housing. Nearly 50 per cent of female lone-parent households who were renters, who accounted for 85 per cent of all lone-parents, were still in core housing need between 2002 and 2004, the highest incidence of core housing need of any family type *(see Figure 7-9)*.

Incidence of urban core housing need among seniors is decreasing

Although many seniors (aged 65 and over) are no longer part of the labour force and therefore would not necessarily benefit from improvements in the economy, core housing need estimates suggest they are becoming somewhat more capable of accessing acceptable housing. The incidence of core housing need among senior-led households, which are dramatically increasing their share among all Canadian households, decreased from 15.4 per cent in 2002 to 14.8 per cent in 2003, and to 13.9 per cent in 2004. Consequently, senior-led

FAST **Facts**

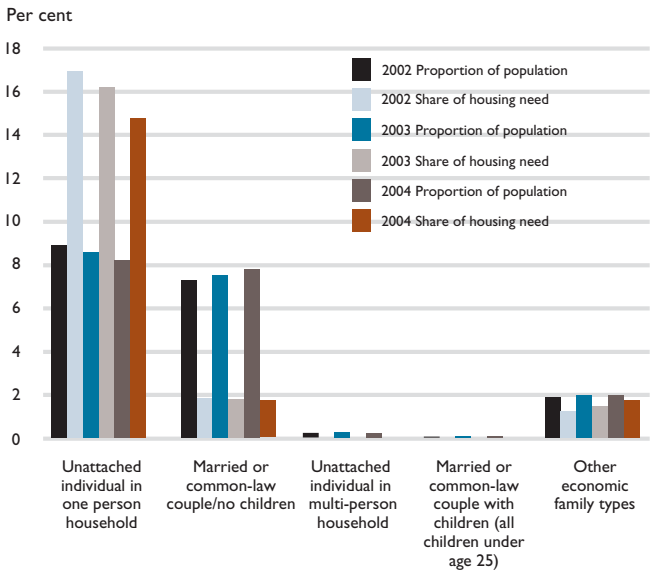
- Between 2002 and 2004, the number of urban households in Canada living in acceptable housing grew at a slightly faster pace (2.7 per cent) than the number of all Canadian urban households (2.3 per cent).
- In 2004, 86.4 per cent of Canadian urban households either lived in, or had sufficient income to access, acceptable housing.
- Between 2002 and 2004, the incidence of core housing need appears to have trended slightly lower, from 13.9 percent to 13.6 per cent.
- Failing to meet the housing affordability standard remained the most common reason for falling into core housing need.
- During 2002-2004, cities in Ontario and British Columbia accounted for shares of urban households living in core housing need higher, (at 46.0 per cent and 17.3 per cent, respectively) than their shares of Canadian urban households (40 per cent and 14 per cent, respectively).
- Toronto and Vancouver, on average at 18.5 per cent and 18.3 per cent respectively, presented the highest incidences of urban core housing need between 2002 and 2004.

11 CMHC (2004) "Housing Affordability". Canadian Housing Observer pp. 45-53.

12 Canadian Council on Social Development (2003) http://www.ccsd.ca/pr/2003/censusincome.htm, accessed May 7, 2007.

FIGURE 7-10

SENIOR SHARE OF TOTAL URBAN HOUSEHOLDS COMPARED WITH SENIOR SHARE OF URBAN HOUSEHOLDS IN CORE HOUSING NEED BY FAMILY TYPE, 2002-2004



Source: CMHC (SLID-based Housing Indicators and Data)

households reduced their share among households in core housing need by almost 1.5 percentage points between 2002 and 2004. Despite this overall declining trend among senior-led households, there were still specific segments facing incidences of core housing need above the national average, in particular seniors living alone *(see Figure 7-10)* who accounted for about 85 per cent of all senior-led households in core housing need. Moreover, seniors living alone who rented had very high incidences of core housing need, averaging over 38 per cent, while senior couples with no children experienced levels of core housing need at around 11 per cent when renting and at 2 per cent when owning their dwellings.

Immigrants continue to face challenges finding acceptable housing upon their arrival

While immigrants are increasingly fuelling most of Canada's population and labour force growth and ethnically diversifying Canadian housing needs and consumption, an important number of them are still facing difficulties in accessing acceptable housing. The general incidence of core housing need in immigrant households, regardless of their time of arrival in Canada, remained over 18 per cent, a level higher than the 2002-2004 average for all Canadians of 13.8 per cent. Immigrants living in Canada for 10 years or less traditionally face exacerbated problems in accessing acceptable housing.[13] Between 2002 and 2004, their incidence of core housing need was on average 10 percentage points higher than immigrants in general. Furthermore, immigrants renting had core housing need rates well above 30 per cent and were at least three times more likely to be in core housing need than immigrants owning their homes *(see Figure 7-11)*.

Uneven access to acceptable housing across the household income spectrum

As mentioned above, healthy Canadian economic conditions in the early 2000s helped to slightly reduce the levels of core housing need. However, income growth was not equally distributed among all households.[14] To

FIGURE 7-11

INCIDENCE OF URBAN CORE HOUSING NEED BY IMMIGRANT STATUS AND TENURE, 2002-2004

	2002		2003		2004	
	Owners	Renters	Owners	Renters	Owners	Renters
All households	6.2%	29.2%	5.9%	30.1%	6.2%	29.3%
Non-immigrants	5.2%	27.9%	4.9%	28.2%	5.0%	28.2%
Immigrants	9.6%	34.4%	9.4%	37.4%	10.9%	36.3%

Source: CMHC (SLID-based Housing Indicators and Data)

13 For example, CMHC (2004) "2001 Census Housing Series Issue 7 Revised: Immigrant Households", *Research Highlights*, Socio-economic Series, December.

14 Heisz, Andrew (2007) "Income Inequality and Redistribution in Canada: 1976 to 2004". Statistics Canada, May 2007, catalogue 11F0019 No.298.

Canadian Urban Households by Income Group

Households were ranked by their before-tax income and divided into five equally-sized groups (quintiles). Income groups for 2002-2004 were constructed using data from the Survey of Labour and Income Dynamics (SLID) and nominal income – not adjusted by inflation – for urban households. For descriptive purposes, these groups are referred to as follows: low income, moderate income, middle income, upper income and high income *(see Figure 7-12)*.

FIGURE 7-12

URBAN HOUSEHOLD INCOME* GROUPS (QUINTILES), CANADA, 2002-2004

	2002			2003			2004		
Group	Range	Average income	Core housing need incidence	Range	Average income	Core housing need incidence	Range	Average income	Core housing need incidence
High income	$91,898 and up	$149,988	0.0%	$94,659 and up	$149,448	0.0%	$98,190 and up	$156,585	0.0%
Upper income	$62,265 to $91,897	$75,818	0.0%	$64,501 to $94,658	$77,998	0.0%	$66,153 to $98,189	$80,718	0.0%
Middle income	$42,000 to $62,264	$51,723	2.2%	$43,174 to $64,500	$53,503	1.5%	$44,433 to $63,152	$54,925	1.2%
Moderate income	$24,949 to $41,999	$33,333	13.8%	$25,702 to $43,173	$34,358	12.9%	$26,629 to $44,432	$35,334	12.3%
Low Income	up to $24,948	$16,445	56.0%	up to $25,701	$16,985	57.2%	up to $26,628	$17,504	56.1%

* Nominal dollars, not adjusted by inflation

Source: CMHC (SLID-based Housing Indicators and Data)

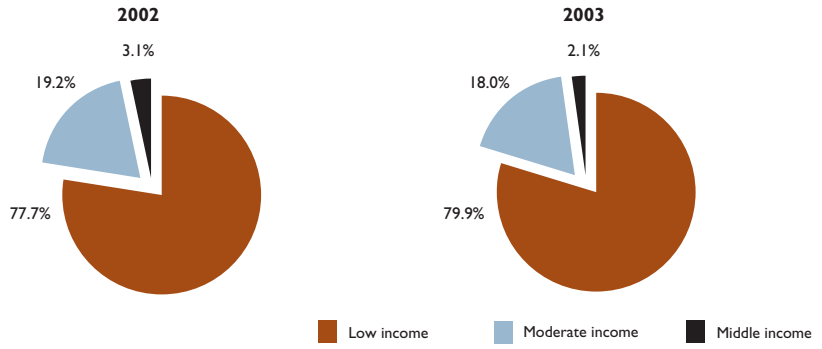
analyze housing conditions according to income, households have been divided into five equally-sized groups or "quintiles" *(see text box)*, on the basis of their before-tax household income. Between 2002 and 2004, the 20 per cent of Canadian households with the lowest incomes–in the low–income quintile–were still facing serious difficulties in finding acceptable housing. While the incidences of core housing need decreased among households in the moderate-and middle-income quintiles by about 1 percentage point, the incidence of core housing need among low income households remained steadily high with at least 56 per cent of these households unable to access acceptable housing *(see Figure 7-12)*. Accordingly, low-income households increased their share among those households in core housing need, from 77.7 per cent in 2002 to 79.9 per cent in 2003, and to 80.6 per cent in 2004 *(see Figure 7-13)*.

The dynamic of incomes and shelter costs in the early 2000s has hampered low-income households, placing them in a more disadvantaged position when it comes to finding acceptable housing. Between 2002 and 2004, households in the bottom income quintile paid about 12 per cent of total Canadian shelter costs while earning only about 5 per cent of total household income *(see Figure 7-14)*. In the early 2000s, STIRs for low income households[15] increased steadily from 40.5 per cent in 2002 to 41.2 per cent in

15 At about 33 per cent, STIRs for low income households were much lower in the mid-1980s.

FIGURE 7-13

SHARE OF HOUSEHOLDS IN URBAN CORE HOUSING NEED BY INCOME QUINTILE*



*There are no households in core housing need in the upper and high income quintiles

Source: CMHC (SLID-based Housing Indicators and Data)

2004 while the STIRs for households in the top income quintile remained fairly steady at around 11 per cent.

Access to acceptable housing still a challenge for many Canadian households

SLID data point to the incidence of core housing need in urban Canada as levelling off, if not declining slightly, in the early 2000s. Of course, caution needs to be used when interpreting the SLID data, which are based on a very small sample when compared to housing data from the census. The next CMHC custom housing data derived from the 2006 Census is expected to be released beginning in 2008 and 2009.

Specific groups who are usually more prone to core housing need, such as lone-parent and senior-led households showed some signs of improvement in their housing conditions between 2002 and 2004. On the other hand, one-person households and recent immigrant households continued to have significant difficulties in accessing acceptable housing.

Low-income households remained highly susceptible to being in core housing need. As a result, there were still over 1.3 million urban households in core housing need between 2002 and 2004. Apparently, the benefits of a healthy economy did not filter down to all Canadian households. The steady growth in the average household income in the early 2000s was unevenly distributed across income groups. While high income segments increased their income levels, low-income segments experienced little or no growth in theirs.

FIGURE 7-14

PERCENTAGE DISTRIBUTION OF URBAN HOUSEHOLD INCOME, SHELTER COSTS AND AVERAGE STIR BY INCOME QUINTILE, 2002-2004

Income Quintiles	Low income	Moderate income	Middle income	Upper income	High income
Shares of aggregate total Income - before tax (%)					
2002	5.1	10.3	15.9	23.4	45.3
2003	5.1	10.3	16.1	23.5	45.0
2004	5.1	10.2	15.9	23.4	45.4
Shares of aggregate total cost on shelter (%)					
2002	12.6	16.1	19.6	23.6	28.2
2003	12.4	16.2	19.1	23.8	28.5
2004	12.6	16.3	19.3	23.9	27.9
Average STIR					
2002	40.5	24.5	19.1	15.6	10.9
2003	40.9	25.0	19.0	16.1	11.3
2004	41.2	25.0	19.1	16.1	11.0

Source: CMHC (SLID-based Housing Indicators and Data)

Appendix

Key Housing Statistics

List of Tables

TABLE 1

Housing Market Indicators, Canada, 1997–2006

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Construction										
Starts, total	147,040	137,439	149,968	151,653	162,733	205,034	218,426	233,431	225,481	227,395
Starts, single	93,186	86,431	92,190	92,184	96,026	125,374	123,227	129,171	120,463	121,313
Starts, multiple	53,854	51,008	57,778	59,469	66,707	79,660	95,199	104,260	105,018	106,082
Semi-detached	11,385	10,043	11,096	11,530	11,883	13,584	13,644	14,297	13,477	14,358
Row	17,256	15,287	14,895	15,247	15,166	18,482	20,343	22,067	22,134	20,963
Apartment	25,213	25,678	31,787	32,692	39,658	47,594	61,212	67,896	69,407	70,761
Starts by Intended Market:[1]										
Homeownership	88,009	82,892	89,189	92,283	95,125	123,106	121,890	124,678	114,008	113,743
Rental	7,559	6,531	9,276	10,155	14,681	18,841	19,939	20,343	17,210	18,518
Condo	27,471	27,351	28,434	28,319	31,986	36,798	49,212	58,852	60,251	61,817
Other	182	19	204	295	488	379	870	516	2,002	946
Total	123,221	116,793	127,103	131,052	142,280	179,124	191,911	204,389	193,471	195,024
Completions, total	143,386	133,941	140,986	145,873	151,936	185,626	199,244	215,621	211,242	215,947
Resale Market										
MLS® sales (units)[2]	331,092	314,569	335,490	334,375	381,484	419,242	435,070	460,790	483,789	483,770
MLS® sales/new listings (per cent)[2]	49.9	49.6	56.3	55.9	62.7	68.5	65.7	63.5	63.9	60.3
Available Supply										
Newly completed and unabsorbed homes[3]	13,738	15,079	14,230	13,587	10,509	10,251	11,392	14,392	13,654	15,430
Single and semi-detached	6,443	6,877	6,304	6,319	5,291	4,755	5,092	5,797	5,064	5,820
Row and apartment	7,295	8,202	7,926	7,268	5,218	5,496	6,300	8,595	8,590	9,610
Rental vacancy rate (per cent)[4]	4.5	4.0	3.2	2.2	1.7	2.1	2.6	2.9	2.8	2.7
Availability rate[4]	NA	NA	NA	NA	NA	NA	NA	3.9	4.0	3.7
Housing Costs										
MLS® average price ($)[2]	154,606	152,365	158,145	163,992	171,743	188,754	207,111	226,337	249,201	276,959
New Housing Price Index (per cent change)[6]	0.8	0.9	0.9	2.2	2.7	4.1	4.8	5.5	5.0	9.7
Consumer Price Index (per cent change)[6]	1.6	1.0	1.7	2.7	2.5	2.2	2.8	1.8	2.2	2.0
Construction materials cost index (per cent change)	0.7	-0.3	4.5	-0.5	0.4	1.9	1.3	6.7	0.0	1.0
Construction union wage rate index (per cent change)[6]	NA	0.6	2.5	3.8	2.2	1.0	2.4	1.4	1.8	4.0
Owned accommodation costs (per cent change)[6]	-1.0	0.1	1.1	2.6	2.9	1.7	3.0	2.8	3.1	4.1
Rental accommodation costs (per cent change)[6]	1.2	1.1	1.0	1.1	1.6	2.0	1.5	1.1	0.8	1.0
Average rent ($):[4]										
Bachelor	420	432	448	469	490	504	516	523	529	547
One-bedroom	527	544	560	582	607	627	638	646	659	676
Two-bedroom	597	616	628	648	672	694	704	720	732	755
3+ bedroom	662	680	697	720	752	775	788	807	816	853
Demand Influences										
Population on July 1 (thousands)[5]	29,907	30,157	30,404	30,689	31,021	31,373	31,676	31,989	32,299	32,623
Labour force participation rate (per cent)[5]	64.8	65.1	65.5	65.8	65.9	66.9	67.5	67.5	67.2	67.2
Employment (per cent change)[6]	2.1	2.5	2.6	2.5	1.2	2.4	2.4	1.8	1.4	1.9
Unemployment rate (per cent)[5]	9.1	8.3	7.6	6.8	7.2	7.7	7.6	7.2	6.8	6.3
Real disposable income (per cent change)[6]	1.8	2.9	3.0	5.0	2.8	1.7	2.3	3.2	2.5	4.8
1-year mortgage rate (per cent)	5.54	6.50	6.80	7.85	6.14	5.17	4.84	4.59	5.06	6.28
3-year mortgage rate (per cent)	6.56	6.77	7.37	8.17	6.88	6.28	5.82	5.65	5.59	6.45
5-year mortgage rate (per cent)	7.07	6.93	7.56	8.35	7.40	7.02	6.39	6.23	5.99	6.66
Net migration[5]	165,616	131,768	135,427	174,769	232,741	243,675	196,872	205,707	204,897	215,391
Housing in GDP ($ millions)[5]										
Rent imputed to owners	74,080	76,751	79,346	82,586	86,014	90,313	94,459	99,112	103,713	109,644
Rent paid by tenants	26,425	27,223	28,173	29,059	30,092	31,491	32,829	34,133	35,422	37,100
Total consumption-related spending (including repairs)	121,535	124,150	129,025	135,618	141,225	147,315	155,443	162,192	170,325	178,237
New construction (including acquisition costs)	21,503	21,106	22,321	23,676	25,931	33,242	37,047	42,508	44,145	47,841
Alterations and improvements	15,009	14,904	15,661	17,549	20,632	22,089	24,209	27,099	29,431	32,002
Transfer costs	7,253	6,722	7,375	7,617	8,797	10,595	11,821	13,689	15,852	17,425
Total residential investment	43,765	42,732	45,357	48,842	55,360	65,926	73,077	83,296	89,428	97,268
Total housing-related spending in GDP	165,300	166,882	174,382	184,460	196,585	213,241	228,520	245,488	259,753	275,505

1 Housing units in centres 10,000+.
2 MLS® is a registered trademark of the Canadian Real Estate Association.
3 Housing units in centres 50,000+ for which construction has been completed but which have not been rented or sold.
4 In privately initiated apartment structures with at least three units.
5 Statistics Canada (CANSIM).
6 CMHC, adapted from Statistics Canada (CANSIM).

Source: CMHC (*Starts and Completions Survey*, *Market Absorption Survey*, *Rental Market Survey*); CREA (MLS®); Bank of Canada (mortgage rates); Statistics Canada (CANSIM and custom tabulation of construction materials cost index).

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 2

Total Housing Starts, Canada, Provinces and Metropolitan Areas, 1997–2006 (units)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada	147,040	137,439	149,968	151,653	162,733	205,034	218,426	233,431	225,481	227,395
Provinces										
Newfoundland and Labrador	1,696	1,450	1,371	1,459	1,788	2,419	2,692	2,870	2,498	2,234
Prince Edward Island	470	524	616	710	675	775	814	919	862	738
Nova Scotia	3,813	3,137	4,250	4,432	4,092	4,970	5,096	4,717	4,775	4,896
New Brunswick	2,702	2,447	2,776	3,079	3,462	3,862	4,489	3,947	3,959	4,085
Quebec	25,896	23,138	25,742	24,695	27,682	42,452	50,289	58,448	50,910	47,877
Ontario	54,072	53,830	67,235	71,521	73,282	83,597	85,180	85,114	78,795	73,417
Manitoba	2,612	2,895	3,133	2,560	2,963	3,617	4,206	4,440	4,731	5,028
Saskatchewan	2,757	2,965	3,089	2,513	2,381	2,963	3,315	3,781	3,437	3,715
Alberta	23,671	27,122	25,447	26,266	29,174	38,754	36,171	36,270	40,847	48,962
British Columbia	29,351	19,931	16,309	14,418	17,234	21,625	26,174	32,925	34,667	36,443
Metropolitan Areas										
St. John's	932	741	807	935	1,029	1,350	1,604	1,834	1,534	1,275
Halifax	2,065	1,739	2,356	2,661	2,340	3,310	3,066	2,627	2,451	2,511
Saint John	234	278	296	346	374	397	580	516	501	565
Saguenay	500	502	305	296	336	596	435	347	464	485
Québec	2,233	1,845	1,814	2,275	2,555	4,282	5,599	6,186	5,835	5,176
Sherbrooke	756	590	645	515	589	857	1,070	1,355	1,076	1,305
Trois-Rivières	520	599	380	337	324	619	635	874	919	1,017
Montréal	10,508	10,293	12,366	12,766	13,300	20,554	24,321	28,673	25,317	22,813
Gatineau	1,262	1,244	1,185	1,224	1,659	2,553	2,801	3,227	2,123	2,933
Ottawa	3,485	3,615	4,447	5,786	6,251	7,796	6,381	7,243	4,982	5,875
Kingston	559	486	656	659	707	810	1,131	872	683	968
Oshawa	2,064	1,759	2,463	2,874	2,561	3,490	3,907	3,153	2,934	2,995
Toronto	25,574	25,910	34,904	38,982	41,017	43,805	45,475	42,115	41,596	37,080
Hamilton	3,698	3,627	3,923	3,108	3,365	3,803	3,260	4,093	3,145	3,043
St. Catharines - Niagara	1,462	1,319	1,485	1,230	1,134	1,317	1,444	1,781	1,412	1,294
Kitchener	2,171	2,549	2,821	3,509	3,537	4,130	3,955	3,912	3,763	2,599
London	1,807	2,027	1,773	1,713	1,607	2,604	3,027	3,078	3,067	3,674
Windsor	2,102	1,938	2,387	2,382	2,157	2,490	2,237	2,287	1,496	1,045
Greater Sudbury	281	165	199	173	191	298	306	388	400	477
Thunder Bay	266	224	232	154	211	197	211	287	227	165
Winnipeg	1,518	1,575	1,772	1,317	1,473	1,821	2,430	2,489	2,586	2,777
Regina	516	537	573	615	626	651	889	1,242	888	986
Saskatoon	1,187	1,137	1,273	968	900	1,489	1,455	1,578	1,062	1,496
Calgary	11,215	12,495	10,600	11,093	11,349	14,339	13,642	14,008	13,667	17,046
Edmonton	4,962	5,947	6,655	6,228	7,855	12,581	12,380	11,488	13,294	14,970
Abbotsford	871	536	566	405	418	1,038	1,056	1,083	1,012	1,207
Vancouver	15,950	11,878	8,677	8,203	10,862	13,197	15,626	19,430	18,914	18,705
Victoria	1,311	964	1,340	872	1,264	1,344	2,008	2,363	2,058	2,739

Source: CMHC (*Starts and Completions Survey*)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 3

MLS® Total Residential Sales, Canada, Provinces and Metropolitan Areas, 1997–2006 (units)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada	331,092	314,569	335,490	334,375	381,484	419,242	435,070	460,790	483,789	483,770
Provinces										
Newfoundland and Labrador	2,170	2,288	2,437	2,593	2,808	3,014	3,238	3,265	3,211	3,537
Prince Edward Island	806	1,125	1,184	1,206	1,234	1,306	1,404	1,500	1,449	1,492
Nova Scotia	7,567	8,052	8,827	8,577	9,441	10,243	9,221	8,887	10,943	10,577
New Brunswick	3,941	3,908	4,376	4,524	4,779	5,089	5,489	5,979	6,836	7,125
Quebec	43,463	45,192	49,792	54,160	62,351	68,161	67,130	69,296	70,649	72,520
Ontario	141,435	138,479	148,659	147,158	162,318	178,058	184,457	197,353	197,007	194,793
Manitoba	11,180	10,762	10,867	10,612	11,440	11,108	11,523	12,098	12,761	13,018
Saskatchewan	8,346	8,068	8,053	7,552	7,971	7,933	7,698	8,172	8,312	9,140
Alberta	43,693	43,383	42,684	43,311	48,989	51,042	51,334	57,460	65,866	74,350
British Columbia	68,182	52,910	58,084	54,179	69,554	82,737	93,095	96,385	106,310	96,671
Metropolitan Areas										
St. John's	2,170	2,288	2,437	2,593	2,808	3,014	3,238	3,265	3,211	3,537
Halifax	5,072	5,129	5,853	5,610	6,212	6,687	5,813	5,516	6,698	6,462
Saint John	1,274	1,353	1,530	1,484	1,510	1,505	1,636	1,612	1,901	1,852
Saguenay	1,009	933	1,043	1,219	1,362	1,436	1,557	1,617	1,572	1,922
Québec	6,427	6,363	6,570	7,311	8,204	8,771	7,965	8,065	8,906	9,073
Sherbrooke	1,663	1,628	1,764	1,971	1,951	2,178	2,304	2,586	2,598	2,627
Trois-Rivières	956	1,035	1,213	1,279	1,363	1,532	1,492	1,588	1,554	1,677
Montréal	30,167	31,468	35,325	37,269	43,486	47,913	47,436	48,564	49,506	50,106
Gatineau	2,071	2,306	2,708	3,582	4,549	4,518	4,600	4,634	4,733	4,788
Ottawa	9,431	9,552	11,334	12,692	12,240	12,894	12,877	13,457	13,300	14,003
Kingston	2,400	2,500	2,728	2,838	3,274	3,646	3,651	3,764	3,464	3,517
Oshawa	7,274	7,073	7,370	7,282	8,085	8,520	9,025	9,816	9,232	9,354
Toronto	58,841	55,360	58,957	58,349	67,612	74,759	79,366	84,854	85,672	84,842
Hamilton	9,972	10,017	10,543	10,347	11,334	12,482	12,807	13,176	13,565	13,059
St. Catharines - Niagara	5,509	5,794	5,863	5,207	5,488	5,951	6,174	6,722	6,698	6,410
Kitchener	4,307	4,365	4,695	4,569	4,816	5,253	5,310	5,931	6,147	6,115
London	6,454	6,562	6,864	6,616	7,503	8,290	8,412	9,238	9,133	9,234
Windsor	4,807	4,676	4,692	4,616	4,741	4,938	5,381	5,832	5,661	5,047
Greater Sudbury	1,901	1,693	1,744	1,825	1,937	2,031	2,191	2,500	2,593	2,615
Thunder Bay	1,431	1,311	1,301	1,279	1,354	1,599	1,662	1,447	1,358	1,750
Winnipeg	10,042	9,748	9,770	9,465	10,215	9,881	10,201	10,797	NA	NA
Regina	2,926	2,886	2,781	2,612	2,792	2,817	2,640	2,785	2,730	2,953
Saskatoon	3,153	3,010	3,039	2,758	2,987	2,941	2,848	2,999	3,246	3,430
Calgary	21,559	20,554	20,197	19,828	22,512	24,706	24,359	26,511	31,569	33,027
Edmonton	13,017	13,727	13,594	14,189	16,079	15,923	16,277	17,652	18,634	21,984
Abbotsford	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vancouver	26,946	19,612	22,944	21,244	28,732	34,909	39,022	37,972	42,222	36,479
Victoria	5,845	4,981	5,063	4,863	6,410	7,069	7,581	7,685	7,970	7,500

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The geographic definitions used by CREA differ from those used by Statistics Canada.

Source: CREA (MLS®)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 4

MLS® Average Residential Price, Canada, Provinces and Metropolitan Areas, 1997–2006 (dollars)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada	154,606	152,365	158,145	163,992	171,743	188,754	207,111	226,337	249,201	276,959
Provinces										
Newfoundland and Labrador	92,226	91,514	94,359	99,525	104,376	113,081	119,822	131,499	141,167	139,542
Prince Edward Island	86,403	79,577	82,138	82,884	87,696	94,964	101,745	110,815	117,238	125,430
Nova Scotia	96,693	97,015	102,628	109,839	115,485	126,669	136,292	146,033	159,247	169,237
New Brunswick	87,204	85,948	88,072	91,624	95,947	100,129	105,858	112,933	120,641	126,864
Quebec	101,715	103,947	107,501	111,296	115,820	130,403	151,881	171,099	184,583	194,024
Ontario	164,301	167,112	174,049	183,841	193,357	210,901	226,824	245,230	263,042	278,455
Manitoba	85,404	86,419	86,423	87,884	93,192	96,531	106,788	119,245	133,854	150,229
Saskatchewan	83,978	87,577	91,396	94,047	98,310	101,297	104,995	110,824	122,765	132,078
Alberta	124,865	132,905	139,621	146,258	153,737	170,253	182,845	194,769	218,266	285,383
British Columbia	220,512	212,046	215,283	221,371	222,822	238,877	259,968	289,107	332,224	390,963
Metropolitan Areas										
St. John's	92,226	91,514	94,359	99,525	104,376	113,081	119,822	131,499	141,167	139,542
Halifax	109,827	114,025	118,522	128,003	134,106	148,737	162,486	175,132	189,196	203,178
Saint John	86,171	87,087	88,731	93,697	97,348	103,544	106,473	116,836	119,718	128,202
Saguenay	71,554	72,619	75,803	77,166	80,213	83,982	87,870	93,243	100,891	109,561
Québec	84,051	85,883	88,091	90,079	93,354	102,627	117,586	129,149	141,485	148,657
Sherbrooke	85,711	87,369	89,258	93,269	98,167	105,938	118,348	138,473	152,886	163,586
Trois-Rivières	69,554	69,384	68,698	69,571	70,144	75,363	81,960	90,728	99,010	104,673
Montréal	109,720	112,516	116,218	121,544	125,744	142,603	166,930	189,050	203,720	215,659
Gatineau	90,275	90,353	90,989	92,338	99,990	112,971	130,526	150,264	156,591	163,539
Ottawa	143,866	143,914	149,626	159,511	175,972	200,711	219,713	238,152	248,358	257,481
Kingston	124,123	124,787	126,803	129,639	132,048	144,413	159,694	175,821	195,757	212,157
Oshawa	158,376	163,369	169,568	179,241	186,448	204,103	219,341	237,084	252,606	258,362
Toronto	210,453	216,795	228,372	243,249	251,508	275,887	293,308	315,266	336,176	352,388
Hamilton	151,538	153,628	158,162	164,168	172,567	183,442	197,744	215,922	229,753	248,754
St. Catharines - Niagara	117,778	121,981	126,155	129,390	133,715	144,720	154,559	170,452	182,443	194,671
Kitchener	141,387	143,104	146,495	157,317	164,548	177,559	188,905	205,639	220,511	237,913
London	131,382	131,299	131,254	135,857	137,717	142,745	153,637	167,344	178,910	190,521
Windsor	125,714	132,328	135,839	137,453	140,206	149,656	151,524	159,597	163,001	164,123
Greater Sudbury	108,521	109,622	105,093	109,262	107,774	110,826	117,359	122,866	134,440	150,341
Thunder Bay	111,608	110,099	112,315	109,811	110,532	109,930	111,927	112,404	121,183	122,064
Winnipeg	86,040	86,838	86,614	88,553	94,214	98,054	108,812	121,925	NA	NA
Regina	82,643	85,425	90,181	94,518	96,943	100,751	104,419	111,869	123,600	131,851
Saskatoon	98,270	104,776	109,822	112,567	116,472	118,999	125,191	132,549	144,787	160,577
Calgary	143,305	157,353	166,110	176,305	182,090	198,350	211,155	222,860	250,832	346,675
Edmonton	111,587	114,527	118,871	124,203	133,441	150,165	165,541	179,610	193,934	250,915
Abbotsford	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vancouver	287,094	278,659	281,163	295,978	285,910	301,473	329,447	373,877	425,745	509,876
Victoria	218,398	217,886	221,126	225,731	225,727	242,503	280,625	325,412	380,897	427,154

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The geographic definitions used by CREA differ from those used by Statistics Canada.

Source: CREA (MLS®)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 5

Residential Mortgage Credit by Lending Institutions, Canada, 1997–2006 (billions of dollars)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Chartered Banks	213.5	232.2	241.0	262.3	279.3	306.7	329.7	352.6	378.3	406.0
Trust & Mortgage Loans Co.	31.5	22.4	19.9	6.1	5.2	5.5	6.0	6.8	7.9	7.8
Life Insurance Co. Policy Loans	21.4	20.0	18.1	17.8	17.2	16.8	15.8	15.4	15.0	15.1
Finance Companies, Non-Depository Credit Intermediaries and Other Institutions	29.8	29.2	27.5	25.7	24.4	23.8	24.3	25.3	26.5	28.0
Pension Funds	8.0	7.8	7.9	8.7	9.3	9.0	9.1	9.6	10.6	11.6
NHA Mortgage-backed Securities	14.5	17.9	23.5	30.8	34.6	39.3	49.8	68.5	87.0	109.6
Credit Unions & Caisse Populaires	50.8	52.2	53.3	55.4	58.0	63.3	69.1	76.6	84.5	93.6
Special Purpose Corporations (Securitization)	4.7	11.0	18.7	22.5	18.1	15.0	14.9	15.0	17.7	22.6
Total Outstanding Balances	374.2	392.7	409.9	429.3	446.1	479.4	518.8	569.7	627.5	694.3

Annual estimates have been calculated by averaging monthly residential mortgage credit data and therefore will differ from end-of-year estimates.

Components may not add up to total due to rounding.

Source: CMHC (MBS), Statistics Canada (CANSIM)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 6

NHA and Conventional Residential Mortgage Loans Approved by Lending Institutions, New and Existing, by Type of Lender, Canada, 1997–2006 (millions of dollars)[1]

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Chartered Banks										
New	9,515.0	10,072.6	11,195.3	10,619.5	13,082.2	17,880.6	18,865.2	20,237.0	21,118.0	20,013.3
Existing	47,731.9	45,054.0	49,033.3	43,597.4	64,504.6	79,646.6	95,498.4	113,957.8	124,718.7	132,465.6
Total	57,246.9	55,126.6	60,228.6	54,216.9	77,586.8	97,527.2	114,363.6	134,194.8	145,836.7	152,478.9
Trust Companies										
New	835.4	746.2	846.8	909.9	816.4	643.1	442.0	723.1	875.0	828.6
Existing	6,466.6	5,135.4	3,815.0	3,183.6	3,274.9	3,196.6	3,641.4	5,207.1	6,850.8	5,836.3
Total	7,302.0	5,881.6	4,661.8	4,093.6	4,091.3	3,839.7	4,083.4	5,930.2	7,725.8	6,664.9
Life Insurance & Other Companies										
New	1,149.6	1,245.5	1,439.1	2,107.4	2,706.9	4,197.1	3,398.5	4,050.5	5,130.0	5,451.3
Existing	9,621.7	9,461.8	11,991.8	14,507.4	10,796.6	14,748.5	16,043.0	19,991.5	23,464.0	24,773.8
Total	10,771.4	10,707.3	13,430.8	16,614.7	13,503.5	18,945.6	19,441.5	24,042.0	28,594.0	30,225.1
Total										
New	11,500.1	12,064.3	13,481.2	13,636.8	16,605.5	22,720.8	22,705.7	25,010.6	27,123.0	26,293.2
Existing	63,820.2	59,651.2	64,840.0	61,288.4	78,576.1	97,591.7	115,182.8	139,156.4	155,033.5	163,075.7
Total	75,320.2	71,715.5	78,321.2	74,925.2	95,181.6	120,312.5	137,888.5	164,167.0	182,156.5	189,368.9

1 Mortgage approval data are gross and may not fully capture lending activities of credit unions, caisses populaires, other smaller institutions and privately-insured loans.

Components may not add up to totals due to rounding.

Source: CMHC (NHA loan approval system and *Conventional Lending Survey*)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 7

NHA and Conventional Residential Mortgage Loans Approved by Lending Institutions, New and Existing, by Type of Lender and Type of Dwelling, Canada, Provinces and Territories, 2006 (millions of dollars)[1]

	Chartered Banks			Trust Companies			Life Insurance and Other Companies			Total		
	New	Existing	Total	New	Existing	Total	New	Existing	Total	New	Existing	Total
Canada												
Single-detached	13,006.4	103,671.5	116,677.9	284.2	4,378.1	4,662.3	2,509.8	15,715.3	18,225.1	15,800.4	123,764.9	139,565.3
Multiple Dwellings	7,006.9	28,794.2	35,801.1	544.2	1,458.2	2,002.4	2,939.9	9,058.5	11,998.4	10,491.0	39,310.9	49,801.9
Total	20,013.3	132,465.7	152,479.0	828.4	5,836.3	6,664.7	5,449.7	24,773.8	30,223.5	26,291.4	163,075.8	189,367.2
Newfoundland and Labrador												
Single-detached	175.5	1,285.8	1,461.3	9.3	68.6	77.9	30.4	184.1	214.5	215.2	1,538.5	1,753.7
Multiple Dwellings	9.7	81.5	91.2	0.8	3.4	4.2	3.4	23.1	26.5	13.9	108.0	121.9
Total	185.2	1,367.3	1,552.5	10.1	72.0	82.1	33.8	207.2	241.0	229.1	1,646.5	1,875.6
Prince Edward Island												
Single-detached	40.2	278.1	318.3	6.7	26.9	33.6	4.9	46.3	51.2	51.8	351.3	403.1
Multiple Dwellings	6.2	32.3	38.5	**	1.7	1.7	1.0	5.2	6.2	7.2	39.2	46.4
Total	46.4	310.4	356.8	6.7	28.6	35.3	5.9	51.5	57.4	59.0	390.5	449.5
Nova Scotia												
Single-detached	298.9	2,665.4	2,964.3	5.8	129.9	135.7	51.8	433.8	485.6	356.5	3,229.1	3,585.6
Multiple Dwellings	114.0	434.8	548.8	13.2	62.6	75.8	99.0	169.0	268.0	226.2	666.4	892.6
Total	412.9	3,100.2	3,513.1	19.0	192.5	211.5	150.8	602.8	753.6	582.7	3,895.5	4,478.2
New Brunswick												
Single-detached	171.8	1,500.1	1,671.9	1.7	103.1	104.8	53.7	461.1	514.8	227.2	2,064.3	2,291.5
Multiple Dwellings	43.4	176.4	219.8	1.5	8.3	9.8	19.0	55.2	74.2	63.9	239.9	303.8
Total	215.2	1,676.5	1,891.7	3.2	111.4	114.6	72.7	516.3	589.0	291.1	2,304.2	2,595.3
Quebec												
Single-detached	1,321.5	10,436.1	11,757.6	31.5	607.7	639.2	583.4	3,122.6	3,706.0	1,936.4	14,166.4	16,102.8
Multiple Dwellings	782.9	5,129.0	5,911.9	116.2	202.5	318.7	830.7	2,726.1	3,556.8	1,729.8	8,057.6	9,787.4
Total	2,104.4	15,565.1	17,669.5	147.7	810.2	957.9	1,414.1	5,848.7	7,262.8	3,666.2	22,224.0	25,890.2
Ontario												
Single-detached	5,322.3	46,399.9	51,722.2	83.2	1,614.0	1,697.2	654.1	5,826.5	6,480.6	6,059.6	53,840.4	59,900.0
Multiple Dwellings	3,041.0	11,545.8	14,586.8	75.6	576.3	651.9	570.4	3,133.5	3,703.9	3,687.0	15,255.6	18,942.6
Total	8,363.3	57,945.7	66,309.0	158.8	2,190.3	2,349.1	1,224.5	8,960.0	10,184.5	9,746.6	69,096.0	78,842.6
Manitoba												
Single-detached	297.5	2,353.9	2,651.4	19.9	328.4	348.3	159.2	795.4	954.6	476.6	3,477.7	3,954.3
Multiple Dwellings	24.1	192.0	216.1	1.2	11.2	12.4	13.2	75.4	88.6	38.5	278.6	317.1
Total	321.6	2,545.9	2,867.5	21.1	339.6	360.7	172.4	870.8	1,043.2	515.1	3,756.3	4,271.4
Saskatchewan												
Single-detached	237.1	1,874.6	2,111.7	23.3	251.8	275.1	88.2	383.5	471.7	348.6	2,509.9	2,858.5
Multiple Dwellings	38.7	212.5	251.2	2.4	24.0	26.4	14.7	40.7	55.4	55.8	277.2	333.0
Total	275.8	2,087.1	2,362.9	25.7	275.8	301.5	102.9	424.2	527.1	404.4	2,787.1	3,191.5
Alberta												
Single-detached	3,673.3	17,913.5	21,586.8	87.7	797.1	884.8	709.9	2,711.2	3,421.1	4,470.9	21,421.8	25,892.7
Multiple Dwellings	1,311.1	4,523.7	5,834.8	67.7	334.7	402.4	616.7	1,341.1	1,957.8	1,995.5	6,199.5	8,195.0
Total	4,984.4	22,437.2	27,421.6	155.4	1,131.8	1,287.2	1,326.6	4,052.3	5,378.9	6,466.4	27,621.3	34,087.7
British Columbia												
Single-detached	1,441.1	18,682.2	20,123.3	15.1	432.7	447.8	174.2	1,739.3	1,913.5	1,630.4	20,854.2	22,484.6
Multiple Dwellings	1,623.7	6,353.6	7,977.3	265.6	228.9	494.5	771.8	1,485.7	2,257.5	2,661.1	8,068.2	10,729.3
Total	3,064.8	25,035.8	28,100.6	280.7	661.6	942.3	946.0	3,225.0	4,171.0	4,291.5	28,922.4	33,213.9
Yukon, N.W.T. and Nunavut												
Single-detached	27.2	281.9	309.1	0.0	17.9	17.9	**	11.5	11.5	27.2	311.3	338.5
Multiple Dwellings	12.1	112.6	124.7	0.0	4.6	4.6	**	3.5	3.5	12.1	120.7	132.8
Total	39.3	394.5	433.8	0.0	22.5	22.5	**	15.0	15.0	39.3	432.0	471.3

1 Mortgage approval data are gross and may not fully capture lending activities of credit unions, caisses populaires, other smaller institutions and privately-insured loans.

Components may not add up to totals due to rounding.

Source: CMHC (NHA loan approval system and *Conventional Lending Survey*)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 8

Ownership Rates, Canada, Provinces, Territories and Metropolitan Areas, 1971–2001 (per cent)[1]

	1971	1976	1981	1986	1991	1996	2001
Canada	60.3	61.8	62.1	62.1	62.6	63.6	65.8
Provinces and Territories							
Newfoundland and Labrador	80.0	80.6	80.6	80.1	78.6	77.1	78.2
Prince Edward Island	74.3	76.6	75.7	74.0	73.6	72.1	73.1
Nova Scotia	71.2	72.4	71.5	71.6	70.6	70.4	70.8
New Brunswick	69.4	71.8	73.4	74.2	74.1	73.8	74.5
Quebec	47.4	50.4	53.3	54.7	55.5	56.5	57.9
Ontario	62.9	63.6	63.3	63.6	63.7	64.3	67.8
Manitoba	66.1	66.4	65.8	65.5	65.8	66.4	67.8
Saskatchewan	72.7	75.5	72.9	70.1	69.9	68.8	70.8
Alberta	63.9	64.8	63.1	61.7	63.9	67.8	70.4
British Columbia	63.3	65.3	64.4	62.2	63.8	65.2	66.3
Yukon	50.2	49.3	52.7	55.7	57.6	58.5	63.0
Northwest Territories[2]	24.7	25.0	22.6	27.6	31.5	38.6	53.1
Nunavut[2]	NA	NA	NA	NA	NA	NA	24.2
Metropolitan Areas							
St. John's	66.6	68.9	69.5	68.3	67.1	67.5	69.5
Halifax	53.2	55.7	55.6	58.3	58.0	59.9	61.7
Saint John	52.0	56.8	59.6	61.6	63.4	65.6	67.4
Saguenay	55.5	60.3	62.0	61.5	60.9	60.8	62.3
Québec	43.8	46.6	50.9	52.9	53.6	54.9	55.5
Sherbrooke	43.9	48.0	49.4	50.1	49.2	50.2	51.9
Trois-Rivières	50.3	53.0	55.6	55.4	54.5	55.5	57.3
Montréal	35.5	38.4	41.9	44.7	46.7	48.5	50.2
Gatineau	58.6	59.7	59.1	59.2	59.8	61.5	62.4
Ottawa	50.1	50.1	51.4	50.0	54.4	58.2	61.4
Kingston	55.1	57.7	59.3	59.7	59.4	61.2	63.9
Oshawa	69.0	70.0	68.8	70.2	70.1	71.4	75.6
Toronto	55.4	56.7	57.3	58.3	57.9	58.4	63.2
Hamilton	63.9	63.8	63.4	64.6	64.6	65.2	68.3
St. Catharines - Niagara	72.2	72.9	71.6	72.0	71.4	70.7	73.2
Kitchener	60.8	60.4	60.8	61.9	61.5	62.4	66.7
London	60.1	59.5	58.0	57.8	57.6	60.0	62.8
Windsor	70.4	69.9	68.0	67.2	68.4	68.6	71.8
Greater Sudbury	57.6	62.2	64.3	64.4	63.8	62.6	65.8
Thunder Bay	73.6	72.0	69.4	69.0	68.4	69.7	71.9
Winnipeg	59.6	59.2	59.1	60.8	62.0	63.9	65.5
Regina	60.9	66.2	65.4	65.7	66.2	66.0	68.2
Saskatoon	61.3	65.7	61.8	59.9	61.0	61.4	65.0
Calgary	56.5	59.2	58.4	57.9	60.6	65.5	70.6
Edmonton	57.1	58.1	57.9	57.1	59.2	64.4	66.3
Abbotsford	74.7	75.5	72.2	70.4	72.6	71.5	71.1
Vancouver	58.8	59.4	58.5	56.3	57.5	59.4	61.0
Victoria	61.5	61.2	59.8	59.2	61.1	62.1	63.1

1 Ownership rates are computed as owners divided by total of all tenure types. Census Metropolitan Area data for 1971–1986 are based on 1986 CMA boundaries. All other data for Census Metropolitan Areas have not been adjusted for boundary changes.
2 In 1996 and prior years, the Northwest Territories included Nunavut.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 9

Rental Vacancy Rate, Canada, Provinces and Metropolitan Areas, 1997–2006 (per cent)[1]

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada	4.5	4.0	3.2	2.2	1.7	2.1	2.6	2.9	2.8	2.7
Provinces										
Newfoundland and Labrador	15.4	14.9	10.8	5.7	3.2	3.0	3.3	4.1	4.6	4.1
Prince Edward Island	4.9	7.0	5.4	3.3	2.7	2.8	3.7	4.2	4.4	5.3
Nova Scotia	8.3	5.9	4.2	4.2	3.3	3.0	2.6	3.0	3.4	3.3
New Brunswick	6.6	6.1	4.3	3.1	4.1	4.2	4.3	5.3	5.0	6.0
Quebec	6.3	5.3	3.8	2.2	1.3	1.2	1.3	1.7	2.0	2.5
Ontario	2.8	2.6	2.1	1.6	1.7	2.7	3.5	4.1	3.8	3.4
Manitoba	5.5	3.9	3.2	2.2	1.4	1.4	1.6	1.4	1.9	1.6
Saskatchewan	1.6	1.6	1.7	2.2	3.5	3.9	4.1	5.3	4.5	3.3
Alberta	2.7	1.4	2.4	1.3	1.1	2.3	3.7	4.6	3.1	0.9
British Columbia	3.4	5.0	5.0	3.6	2.6	3.1	3.1	2.4	1.9	1.2
Metropolitan Area										
St. John's	16.6	15.4	9.2	3.8	2.5	2.7	2.0	3.1	4.5	5.1
Halifax	7.7	5.5	3.6	3.6	2.8	2.7	2.3	2.9	3.3	3.2
Saint John	8.2	7.3	5.2	3.4	5.6	6.3	5.2	5.8	5.7	6.8
Saguenay	4.1	4.8	4.9	4.4	4.4	4.9	5.2	5.3	4.5	4.1
Québec	6.6	5.2	3.3	1.6	0.8	0.3	0.5	1.1	1.4	1.5
Sherbrooke	7.5	7.3	7.6	4.7	2.3	1.8	0.7	0.9	1.2	1.2
Trois-Rivières	8.6	8.5	7.9	6.8	4.7	3.0	1.5	1.2	1.5	1.0
Montréal	5.9	4.7	3.0	1.5	0.6	0.7	1.0	1.5	2.0	2.7
Gatineau	9.4	6.7	4.4	1.4	0.6	0.5	1.2	2.1	3.1	4.2
Ottawa	4.2	2.1	0.7	0.2	0.8	1.9	2.9	3.9	3.3	2.3
Kingston	5.3	5.4	3.4	1.8	1.5	0.9	1.9	2.4	2.4	2.1
Oshawa	2.4	2.0	1.7	1.7	1.3	2.3	2.9	3.4	3.3	4.1
Toronto	0.8	0.8	0.9	0.6	0.9	2.5	3.8	4.3	3.7	3.2
Hamilton	3.1	3.2	1.9	1.7	1.3	1.6	3.0	3.4	4.3	4.3
St. Catharines - Niagara	5.4	4.6	3.2	2.6	1.9	2.4	2.7	2.6	2.7	4.3
Kitchener	1.9	1.5	1.0	0.7	0.9	2.3	3.2	3.5	3.3	3.3
London	5.1	4.5	3.5	2.2	1.6	2.0	2.1	3.7	4.2	3.6
Windsor	4.5	4.3	2.7	1.9	2.9	3.9	4.3	8.8	10.3	10.4
Greater Sudbury	7.2	9.4	11.1	7.7	5.7	5.1	3.6	2.6	1.6	1.2
Thunder Bay	7.7	9.3	7.5	5.8	5.8	4.7	3.3	5.0	4.6	4.9
Winnipeg	5.9	4.0	3.0	2.0	1.4	1.2	1.3	1.1	1.7	1.3
Regina	1.5	1.7	1.4	1.4	2.1	1.9	2.1	2.7	3.2	3.3
Saskatoon	0.9	0.8	0.9	1.7	2.9	3.7	4.5	6.3	4.6	3.2
Calgary	0.5	0.6	2.8	1.3	1.2	2.9	4.4	4.3	1.6	0.5
Edmonton	4.6	1.9	2.2	1.4	0.9	1.7	3.4	5.3	4.5	1.2
Abbotsford	5.1	7.4	6.7	3.7	2.4	2.0	2.5	2.8	3.8	2.0
Vancouver	1.7	2.7	2.7	1.4	1.0	1.4	2.0	1.3	1.4	0.7
Victoria	3.5	3.8	3.6	1.8	0.5	1.5	1.1	0.6	0.5	0.5
Average of Metropolitan Areas[2]	4.1	3.4	2.6	1.6	1.1	1.7	2.2	2.7	2.7	2.6

1 In privately initiated apartment structures with at least three units.
2 Prior to 2002, Kingston and Abbotsford are not included in the average of metropolitan areas.

Source: CMHC (*Rental Market Survey*)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 10

Average Rent for Two-Bedroom Apartments, Canada, Provinces and Metropolitan Areas, 1997–2006 (dollars)[1]

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Canada	597	616	628	648	672	694	704	720	732	755
Provinces										
Newfoundland and Labrador	524	490	489	510	530	538	563	571	578	585
Prince Edward Island	527	529	531	538	561	566	585	603	612	631
Nova Scotia	589	603	609	621	645	669	684	711	726	760
New Brunswick	499	503	510	515	530	543	556	576	586	609
Quebec	479	486	491	495	513	531	553	572	591	607
Ontario	726	761	785	829	863	883	886	898	903	919
Manitoba	561	566	574	581	596	612	633	650	669	692
Saskatchewan	494	507	522	529	546	554	564	572	577	596
Alberta	565	607	633	651	701	734	745	754	765	866
British Columbia	739	746	742	753	772	795	806	821	844	885
Metropolitan Area										
St. John's	567	513	517	552	575	589	607	618	634	635
Halifax	616	631	637	648	673	704	720	747	762	799
Saint John	449	452	457	460	483	492	504	520	526	556
Saguenay	425	428	428	438	439	440	457	459	472	485
Québec	513	513	511	518	538	550	567	596	621	637
Sherbrooke	426	433	434	437	446	456	471	495	505	515
Trois-Rivières	406	411	403	413	419	431	436	457	474	488
Montréal	491	499	506	509	529	552	575	594	616	636
Gatineau	530	529	534	544	573	599	639	663	660	667
Ottawa	729	754	783	877	914	930	932	940	920	941
Kingston	643	653	658	679	709	727	768	785	807	841
Oshawa	691	726	745	778	799	819	845	852	855	861
Toronto	821	881	916	979	1,027	1,047	1,040	1,052	1,052	1,067
Hamilton	636	662	698	719	740	765	778	789	791	796
St. Catharines - Niagara	613	617	634	653	680	695	704	722	736	752
Kitchener	630	641	660	697	722	750	754	765	811	824
London	636	637	639	657	683	705	736	758	775	790
Windsor	680	680	696	736	738	769	776	776	780	774
Greater Sudbury	619	623	612	619	620	647	651	655	668	706
Thunder Bay	666	647	647	654	657	657	672	679	689	696
Winnipeg	568	574	582	588	605	622	645	664	683	709
Regina	512	525	547	549	568	581	589	602	607	619
Saskatoon	500	516	529	541	558	567	576	580	584	608
Calgary	635	707	739	740	783	804	804	806	808	960
Edmonton	525	551	576	601	654	709	722	730	732	808
Abbotsford	628	633	630	632	645	650	672	684	704	719
Vancouver	852	870	864	890	919	954	965	984	1,004	1,045
Victoria	724	722	728	731	751	771	789	799	837	874

1 In privately initiated apartment structures with at least three units.
2 Only includes provincial data.

Source: CMHC (*Rental Market Survey*)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 11

Occupied Housing Stock by Structure Type and Tenure, Canada, 1991–2001 (dwelling units)

	1991				1996				2001			
	Owned	**Rented**	**Band**	**Total**	**Owned**	**Rented**	**Band**	**Total**	**Owned**	**Rented**	**Band**	**Total**
Total	6,273,030	3,718,520	26,715	10,018,270	6,877,780	3,905,145	37,125	10,820,050	7,610,390	3,907,170	45,415	11,562,975
Single-detached house	5,094,150	583,265	25,500	5,702,915	5,488,620	597,480	34,280	6,120,380	5,972,985	620,950	41,135	6,635,065
Semi-detached house	299,305	168,835	240	468,380	337,005	164,580	505	502,090	395,460	169,585	800	565,850
Row house	185,455	272,720	240	458,415	259,690	278,125	545	538,365	340,870	276,140	995	618,010
Apartment detached duplex	132,555	243,200	35	375,785	164,720	286,620	155	451,495	154,385	258,210	165	412,760
Apartment building that has five or more storeys	125,250	784,760	10	910,020	157,395	822,075	-	979,470	213,205	836,440	10	1,049,655
Apartment building that has fewer than five storeys	260,350	1,613,745	105	1,874,200	318,645	1,709,375	305	2,028,325	386,165	1,696,730	510	2,083,410
Other single-attached house	21,035	26,925	40	48,005	17,525	22,005	25	39,555	16,850	24,945	50	41,845
Movable dwelling	154,930	25,075	545	180,555	134,175	24,885	1,310	160,370	130,470	24,165	1,750	156,385

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 12

Dwelling Condition by Tenure and Period of Construction, Canada, 2001

Tenure and Period of Construction	Total Occupied Dwellings	Dwelling Condition					
		In Need of Regular Maintenance Only		In Need of Minor Repairs		In Need of Major Repairs	
		Number	Per Cent	Number	Per Cent	Number	Per Cent
Total	11,562,975	7,554,135	65.3	3,060,605	26.5	948,235	8.2
1945 or before	1,661,635	806,080	48.5	582,315	35.0	273,240	16.4
1946-1960	1,819,730	1,033,505	56.8	586,510	32.2	199,715	11.0
1961-1970	1,833,290	1,136,880	62.0	534,300	29.1	162,110	8.8
1971-1980	2,460,455	1,573,350	63.9	707,510	28.8	179,595	7.3
1981-1985	1,001,665	680,515	67.9	268,115	26.8	53,035	5.3
1986-1990	1,079,075	817,490	75.8	221,485	20.5	40,100	3.7
1991-1995	887,255	747,375	84.2	112,740	12.7	27,140	3.1
1996-2001	819,865	758,940	92.6	47,630	5.8	13,295	1.6
Owned	7,610,385	4,961,405	65.2	2,082,950	27.4	566,035	7.4
1945 or before	1,083,600	512,130	47.3	397,515	36.7	173,950	16.1
1946-1960	1,149,140	650,885	56.6	385,095	33.5	113,155	9.8
1961-1970	992,295	604,260	60.9	309,220	31.2	78,815	7.9
1971-1980	1,587,135	973,690	61.3	500,165	31.5	113,275	7.1
1981-1985	655,055	424,055	64.7	198,050	30.2	32,950	5.0
1986-1990	798,775	597,825	74.8	174,410	21.8	26,535	3.3
1991-1995	662,930	562,215	84.8	82,720	12.5	18,000	2.7
1996-2001	681,460	636,345	93.4	35,765	5.2	9,355	1.4
Rented	3,907,170	2,580,170	66.0	962,630	24.6	364,370	9.3
1945 or before	577,815	293,930	50.9	184,740	32.0	99,140	17.2
1946-1960	669,685	382,500	57.1	201,170	30.0	86,015	12.8
1961-1970	838,125	532,245	63.5	224,410	26.8	81,465	9.7
1971-1980	865,675	598,605	69.1	205,270	23.7	61,800	7.1
1981-1985	338,655	255,030	75.3	67,465	19.9	16,165	4.8
1986-1990	272,145	217,980	80.1	43,800	16.1	10,365	3.8
1991-1995	215,200	182,325	84.7	26,340	12.2	6,535	3.0
1996-2001	129,870	117,555	90.5	9,425	7.3	2,890	2.2
Band	45,420	12,560	27.7	15,025	33.1	17,825	39.2
1945 or before	225	25	11.1	55	24.4	150	66.7
1946-1960	905	120	13.3	240	26.5	545	60.2
1961-1970	2,875	375	13.0	670	23.3	1,825	63.5
1971-1980	7,650	1,055	13.8	2,075	27.1	4,520	59.1
1981-1985	7,955	1,430	18.0	2,595	32.6	3,925	49.3
1986-1990	8,150	1,685	20.7	3,265	40.1	3,200	39.3
1991-1995	9,125	2,840	31.1	3,675	40.3	2,610	28.6
1996-2001	8,530	5,040	59.1	2,445	28.7	1,050	12.3

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 13

Household Growth, Canada, Provinces, Territories and Metropolitan Areas, 2001–2006

	2001	2006	Growth (per cent)	Avg. Annual Growth
Canada	11,562,975	12,437,470	7.6	174,899
Provinces				
Newfoundland and Labrador	189,045	197,185	4.3	1,628
Prince Edward Island	50,795	53,135	4.6	468
Nova Scotia	360,025	376,845	4.7	3,364
New Brunswick	283,820	295,960	4.3	2,428
Quebec	2,978,110	3,189,345	7.1	42,247
Ontario	4,219,410	4,555,025	8.0	67,123
Manitoba	432,550	448,780	3.8	3,246
Saskatchewan	379,675	387,145	2.0	1,494
Alberta	1,104,100	1,256,200	13.8	30,420
British Columbia	1,534,335	1,643,150	7.1	21,763
Yukon	11,365	12,610	11.0	249
Northwest Territories	12,565	14,235	13.3	334
Nunavut	7,175	7,855	9.5	136
Metropolitan Areas				
St. John's	64,831	70,663	9.0	1,166
Halifax	144,435	155,138	7.4	2,141
Moncton	47,180	51,593	9.4	883
Saint John	48,262	49,107	1.8	169
Saguenay	62,197	64,315	3.4	424
Québec	296,490	316,533	6.8	4,009
Sherbrooke	75,800	82,747	9.2	1,389
Trois-Rivières	59,580	63,893	7.2	863
Montréal	1,426,582	1,525,629	6.9	19,809
Ottawa-Gatineau	417,385	449,031	7.6	6,329
Kingston	58,334	61,978	6.2	729
Peterborough	43,471	46,667	7.4	639
Oshawa	104,203	119,028	14.2	2,965
Toronto	1,634,755	1,801,071	10.2	33,263
Hamilton	253,083	266,377	5.3	2,659
St. Catharines-Niagara	150,874	156,386	3.7	1,102
Kitchener	153,277	169,063	10.3	3,157
Brantford	44,904	47,847	6.6	589
Guelph	44,219	48,775	10.3	911
London	174,085	184,946	6.2	2,172
Windsor	117,712	125,848	6.9	1,627
Barrie	52,404	63,877	21.9	2,295
Greater Sudbury	63,143	65,076	3.1	387
Thunder Bay	49,545	51,426	3.8	376
Winnipeg	271,639	281,745	3.7	2,021
Regina	76,653	80,323	4.8	734
Saskatoon	88,944	95,257	7.1	1,263
Calgary	356,407	415,592	16.6	11,837
Edmonton	356,517	405,311	13.7	9,759
Kelowna	59,877	66,925	11.8	1,410
Abbotsford	51,022	55,948	9.7	985
Vancouver	758,713	817,033	7.7	11,664
Victoria	135,601	145,388	7.2	1,957

Data for 2001 are based on 2006 Census Metropolitan Area boundaries. Between 2001 and 2006, CMA boundaries changed in Moncton, Québec, Sherbrooke, Montréal, Ottawa-Gatineau, Peterborough, Brantford, London, Winnipeg, and Calgary.

Metropolitan data are census-based estimates of dwellings occupied by usual residents, which were released by Statistics Canada on March 13, 2007. National, provincial, and territorial data are census-based household counts.

Components may not add up to totals due to rounding.

Source: CMHC, adapted from Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 14

Households by Type and Tenure, Canada, 1971–2001

	1971	1976	1981	1986	1991	1996	2001
Total Households							
All household types	6,034,505	7,166,095	8,281,535	8,991,670	10,018,265	10,820,050	11,562,975
Family households	4,928,130	5,633,945	6,231,485	6,634,995	7,235,230	7,685,470	8,155,560
One-family households	4,807,010	5,542,295	6,140,330	6,537,880	7,118,660	7,540,625	7,951,960
Couples with children	3,028,315	3,266,655	3,523,205	3,604,045	3,729,800	3,853,800	3,857,620
Couples without children	1,354,970	1,759,510	1,948,700	2,130,935	2,485,115	2,608,435	2,910,180
Lone-parents	423,725	516,125	668,425	802,905	903,745	1,078,385	1,184,165
Multiple-family households	121,120	91,655	91,160	97,115	116,575	144,845	203,600
Non-family households	1,106,375	1,532,150	2,050,045	2,356,675	2,783,035	3,134,580	3,407,415
One person only	810,395	1,205,340	1,681,130	1,934,710	2,297,060	2,622,180	2,976,880
Two or more persons	295,980	326,810	368,915	421,965	485,975	512,400	430,535
Owners							
All household types	3,636,925	4,431,230	5,141,935	5,580,875	6,273,030	6,877,780	7,610,385
Family households	3,220,840	3,918,915	4,465,250	4,755,765	5,240,405	5,626,670	6,145,835
One-family households	3,124,275	3,842,355	4,390,265	4,677,435	5,145,490	5,511,500	5,985,695
Couples with children	2,095,895	2,488,795	2,807,650	2,868,915	2,975,720	3,083,980	3,148,020
Couples without children	820,960	1,106,650	1,267,930	1,445,650	1,765,205	1,954,540	2,239,700
Lone-parents	207,420	246,910	314,685	362,870	404,565	472,980	597,970
Multiple-family households	96,560	76,560	74,985	78,330	94,910	115,170	160,140
Non-family households	416,085	512,320	676,690	825,110	1,032,630	1,251,110	1,464,555
One person only	299,805	391,475	539,200	668,270	848,310	1,050,520	1,307,170
Two or more persons	116,285	120,850	137,490	156,845	184,325	200,595	157,380
Renters							
All household types	2,397,580	2,734,860	3,139,595	3,368,485	3,718,525	3,905,145	3,907,170
Family households	1,707,290	1,715,035	1,766,240	1,845,340	1,972,740	2,028,420	1,972,310
One-family households	1,682,735	1,699,940	1,750,065	1,828,435	1,952,400	2,000,890	1,933,895
Couples with children	932,420	777,860	715,555	715,655	740,235	752,150	690,815
Couples without children	534,015	652,860	680,770	679,600	717,520	650,285	666,775
Lone-parents	216,310	269,220	353,745	433,180	494,645	598,450	576,290
Multiple-family households	24,555	15,095	16,170	16,900	20,340	27,530	38,415
Non-family households	690,290	1,019,825	1,373,355	1,523,145	1,745,785	1,876,725	1,934,860
One person only	510,595	813,865	1,141,935	1,260,065	1,445,450	1,566,635	1,662,845
Two or more persons	179,695	205,960	231,425	263,085	300,330	310,095	272,015

Total household counts for 1986-2001 include households in on-reserve (1986) or band housing (1991, 1996, 2001) and are therefore larger than the sum of owners and renters.

Because of changes to the definition of census family, household-type data for 2001— except for one-person households — is not strictly comparable to data from earlier censuses.

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 15

Households by Age of Maintainer and Tenure, Canada, 1971–2001

	1971	1976	1981	1986	1991	1996	2001
Total Households							
15-24	413,570	584,270	674,825	535,945	466,225	437,460	447,165
25-34	1,262,315	1,678,965	2,036,370	2,124,040	2,219,995	2,045,210	1,792,025
35-44	1,250,530	1,339,425	1,589,410	1,971,475	2,363,020	2,630,170	2,747,615
45-54	1,172,285	1,305,650	1,370,800	1,412,515	1,666,415	2,102,365	2,509,625
55-64	955,825	1,079,005	1,215,890	1,327,005	1,379,945	1,434,725	1,659,775
65-74	627,395	763,350	905,740	1,021,305	1,168,255	1,280,605	1,324,885
75+	352,590	415,430	488,490	599,385	754,405	889,510	1,081,880
Total	6,034,505	7,166,095	8,281,535	8,991,670	10,018,265	10,820,050	11,562,975
Owners							
15-24	57,750	111,125	127,180	88,815	64,625	61,670	70,990
25-34	541,240	866,895	1,064,390	1,029,220	1,043,470	936,020	837,010
35-44	838,995	949,750	1,142,890	1,374,245	1,606,665	1,741,120	1,844,450
45-54	851,190	970,265	1,037,395	1,062,030	1,246,970	1,555,580	1,868,280
55-64	682,985	775,350	894,035	989,245	1,041,660	1,093,570	1,276,610
65-74	432,440	504,665	595,650	695,155	824,185	936,610	997,030
75+	232,330	253,190	280,405	342,175	445,450	553,210	716,015
Total	3,636,925	4,431,230	5,141,935	5,580,875	6,273,030	6,877,780	7,610,390
Renters							
15-24	355,820	473,150	547,645	443,735	399,360	372,805	373,060
25-34	721,070	812,075	971,985	1,083,920	1,168,780	1,098,795	943,670
35-44	411,535	389,670	446,520	588,310	750,085	879,555	890,540
45-54	321,095	335,390	333,405	343,705	415,175	540,525	633,160
55-64	272,845	303,655	321,860	332,095	335,185	337,020	378,015
65-74	194,955	258,685	310,095	321,750	342,100	341,440	324,590
75+	120,260	162,240	208,080	254,975	307,840	335,010	364,135
Total	2,397,580	2,734,860	3,139,595	3,368,485	3,718,525	3,905,145	3,907,170
Avg. Household Size	3.5	3.1	2.9	2.8	2.7	2.6	2.6

Total household counts for 1986-2001 include households in on-reserve (1986) or band housing (1991, 1996, 2001) and are therefore larger than the sum of owners and renters.

Components may not add up to totals due to rounding.

Source: Statistics Canada (Census of Canada)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 16

Real Median Household Income After-Tax, Canada, Provinces and Metropolitan Areas, 1997–2005 (2005 constant dollars)

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Canada	40,100	41,100	42,800	43,300	44,600	44,800	44,500	44,900	45,900
Provinces									
Newfoundland and Labrador	34,800	34,200	35,000	35,500	36,200	36,400	36,700	36,700	37,200
Prince Edward Island	35,600	35,600	35,100	35,900	36,300	37,800	39,100	39,400	40,700
Nova Scotia	34,800	35,600	37,800	38,000	39,200	38,200	37,700	39,500	39,800
New Brunswick	36,000	36,700	38,900	38,600	39,200	38,500	38,200	38,100	38,300
Quebec	34,900	35,200	37,100	37,500	38,300	39,000	39,200	39,000	39,200
Ontario	44,400	46,400	49,300	50,100	50,600	51,100	51,000	50,700	51,500
Manitoba	37,200	39,000	39,600	39,500	40,800	40,400	41,000	41,400	42,500
Saskatchewan	36,000	35,800	37,700	38,200	40,600	39,600	40,100	39,900	41,300
Alberta	44,700	45,800	47,200	48,400	52,100	51,700	50,800	54,000	55,200
British Columbia	41,800	42,800	42,700	42,100	43,100	43,300	43,400	45,000	46,500
Metropolitan Area									
St. John's	40,600	40,900	40,700	43,300	45,000	39,800	40,500	41,200	42,000
Halifax	40,800	44,700	41,800	41,800	43,800	41,800	40,600	43,200	42,900
Saint John	43,200	42,200	39,900	40,800	42,700	41,800	41,600	42,300	40,400
Saguenay	37,000	35,200	38,200	40,000	38,600	37,400	35,300	36,300	37,300
Québec	36,600	37,600	41,000	40,300	39,700	44,400	42,600	43,100	42,000
Sherbrooke	25,500	26,300	27,200	30,600	30,100	35,300	37,900	38,500	36,500
Trois-Rivières	37,500	35,900	34,500	35,100	35,300	37,100	33,900	36,200	32,200
Montréal	34,400	35,200	36,800	37,800	39,800	40,800	41,800	41,600	40,700
Ottawa-Gatineau	42,700	44,700	48,400	52,200	51,100	53,900	53,500	56,400	53,000
Kingston	49,100	51,300	48,400	50,600	50,900	46,900	49,500	50,700	43,200
Oshawa	48,800	51,000	53,700	54,900	55,700	55,900	59,900	57,400	58,000
Toronto	48,800	51,500	54,800	56,000	57,900	55,800	56,600	55,100	55,400
Hamilton	50,000	50,500	55,400	56,100	56,800	56,800	55,700	54,900	52,300
St. Catharines-Niagara	43,400	44,100	47,000	47,100	50,400	51,900	52,800	51,500	47,100
Kitchener	47,900	48,100	48,600	48,600	51,900	49,600	50,100	50,700	49,200
London	40,100	43,800	45,300	46,100	47,000	45,400	44,600	45,000	49,900
Windsor	47,800	50,900	49,400	52,900	51,000	51,700	51,700	51,300	50,800
Greater Sudbury	38,100	39,400	43,100	45,900	43,900	42,900	41,400	41,900	45,500
Thunder Bay	49,500	52,700	49,700	48,900	52,700	46,600	48,100	49,400	49,100
Winnipeg	40,400	42,100	41,800	41,500	43,500	43,300	44,300	45,700	44,900
Regina	45,900	44,600	44,700	47,700	49,800	49,300	47,100	46,200	49,900
Saskatoon	38,000	37,800	39,000	39,400	41,700	42,600	44,800	43,400	42,000
Calgary	47,700	49,800	48,900	52,500	57,200	57,200	53,300	58,200	56,600
Edmonton	44,600	45,800	48,500	49,300	54,100	50,900	54,000	54,400	55,400
Abbotsford	43,200	42,600	44,400	40,400	43,700	42,100	40,500	42,300	50,600
Vancouver	42,900	46,500	44,800	46,100	46,400	46,500	48,100	47,900	49,200
Victoria	40,800	40,000	38,600	38,300	42,000	43,700	41,900	43,700	44,600

All data are rounded to the nearest $100.

NA - Not available. Data too unreliable to be published.

Source: Statistics Canada (Survey of Consumer Finances - 1990-1995; Survey of Labour and Income Dynamics - 1996-2005)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 17

Home Equity and Net Worth by Tenure and Age Group, Canada, 1999 and 2005 (2005 constant dollars)

	Renters[1]		Owned with a Mortgage		Owned without a Mortgage		All Owners		All Households	
Age Group[2]	Median	Average	Median	Average	Median	Average	Median	Average	Median	Average
Equity in Principal Residence[3]										
2005										
All ages	0	0	84,000	120,000	175,000	228,000	121,000	169,000	58,000	110,000
Less than 65	0	0	81,000	119,000	180,000	232,000	110,000	158,000	48,000	101,000
65 years or over	0	0	NA	NA	168,000	222,000	160,000	212,000	100,000	149,000
1999										
All ages	0	0	58,000	83,000	138,000	173,000	92,000	125,000	37,000	78,000
Less than 65	0	0	58,000	82,000	144,000	183,000	82,000	117,000	30,000	72,000
65 years or over	0	0	78,000	101,000	136,000	159,000	127,000	153,000	81,000	104,000
Net Worth[4]										
2005										
All ages	14,000	69,000	219,000	378,000	525,000	764,000	327,000	552,000	166,000	383,000
Less than 65	11,000	54,000*	216,000	377,000	561,000	826,000	289,000	530,000	141,000	359,000
65 years or over	40,000*	147,000	355,000	404,000	491,000	670,000	462,000	638,000	309,000	491,000
1999										
All ages	14,000	71,000	169,000	284,000	402,000	599,000	257,000	430,000	136,000	296,000
Less than 65	12,000	58,000	166,000	279,000	439,000	659,000	229,000	412,000	114,000	276,000
65 years or over	43,000	132,000	278,000	407,000	355,000	511,000	349,000	501,000	245,000	382,000

All dollar figures are rounded to the nearest $1,000.

1 Includes households occupying their homes rent free.

2 Age of the highest income earner in the household. Where owners and renters are both present, refers to the owner with the highest income.

3 Home equity is the value of the principal residence less any outstanding mortgages.

4 Includes the value of employer pension plan benefits. Net worth is the difference between a household's assets and its liabilities.

NA - Not available. Suppressed by Statistics Canada to meet the confidentiality requirements of the Statistics Act.

* Use with caution.

Source: CMHC, adapted from Statistics Canada (Survey of Financial Security)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 18

Households in Core Housing Need, Canada, Provinces, Territories and Metropolitan Areas, 1991–2001

	1991		1996		2001	
	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)
Canada[1]	1,270.0	13.6	1,567.2	15.6	1,485.3	13.7
Newfoundland and Labrador	24.6	14.5	26.3	14.8	26.6	14.6
Prince Edward Island	5.6	13.4	6.1	13.4	6.2	12.9
Nova Scotia	42.1	13.6	48.1	14.9	51.6	15.2
New Brunswick	39.4	16.2	34.7	13.6	30.0	11.2
Quebec[1]	360.0	14.5	426.7	16.3	352.4	12.5
Ontario	408.0	11.9	594.3	16.1	599.7	15.1
Manitoba	50.5	13.9	55.0	14.7	45.4	11.6
Saskatchewan	45.4	14.9	39.7	12.6	37.2	11.5
Alberta	105.8	12.8	100.8	11.3	106.3	10.5
British Columbia	182.5	15.6	229.0	17.4	223.7	15.8
Yukon	1.5	16.3	2.0	19.2	1.6	15.8
Northwest Territories	4.5	28.9	4.7	25.4	2.1	17.4
Nunavut	NA	NA	NA	NA	2.7	38.8
Census Metropolitan Areas[2]	852.6	14.4	1,063.3	16.7	1,033.4	14.7
St. John's	7.6	14.2	8.6	15.0	8.4	13.5
Halifax	16.4	14.4	20.1	16.6	22.4	16.3
Saint John	6.1	14.0	6.4	14.3	5.2	11.2
Saguenay	5.7	10.6	7.4	13.3	6.6	11.2
Québec	32.9	13.6	40.0	15.3	34.6	12.3
Sherbrooke	8.0	15.2	9.2	16.2	7.6	12.0
Trois-Rivières	7.7	15.0	8.8	16.3	7.3	12.9
Montréal	200.3	17.1	238.3	19.0	189.0	14.1
Ottawa-Gatineau	37.8	11.3	54.9	15.0	54.5	13.7
Gatineau	8.8	11.0	12.7	14.3	10.9	11.0
Ottawa	29.0	11.4	42.2	15.2	43.6	14.5
Kingston[3]	5.5	11.2	8.0	15.5	8.3	15.0
Oshawa	8.6	10.8	11.8	13.1	12.0	12.0
Toronto	176.3	13.5	269.7	19.3	295.5	19.1
Hamilton	22.9	10.8	33.6	15.0	33.0	13.7
St. Catharines-Niagara	14.0	10.8	19.8	14.5	18.5	12.9
Kitchener	12.7	10.3	18.2	13.5	17.2	11.6
London	16.5	11.9	23.1	15.7	21.6	13.2
Windsor	11.2	12.1	13.9	13.9	14.4	12.8
Greater Sudbury	6.5	11.8	9.0	15.2	7.4	12.4
Thunder Bay	4.9	10.9	6.2	13.2	5.6	11.9
Winnipeg	35.4	14.6	38.0	15.3	28.1	10.8
Regina	10.1	14.8	8.6	12.2	7.4	10.1
Saskatoon	13.3	17.7	10.6	13.4	9.0	10.7
Calgary	32.0	12.1	32.3	11.1	38.3	11.2
Edmonton	36.5	12.6	33.3	11.0	36.7	10.9
Abbotsford[3]	4.0	10.9	6.2	14.3	5.5	11.5
Vancouver	111.1	19.1	122.4	19.0	122.3	17.3
Victoria	18.1	15.9	19.2	15.7	17.1	13.4

1 Estimates of core housing need in the Nunavik region of Quebec have been updated based on revised information on housing costs and core need income thresholds in this non-market area. As a result, small adjustments have been made to the 2001 estimates of core housing need presented for Quebec and Canada in this table.

2 A Census Metropolitan Area (CMA) is an area consisting of one or more adjacent municipalities situated around a major urban core with a population of at least 100,000. The CMA total represents all the CMAs in Canada at the time of each census. Note that it is adjusted neither for changes in CMA boundaries nor for changes in the number of CMAs between census years.

3 Kingston and Abbotsford were not CMAs in 1991 and 1996 and therefore their data are not included in the CMA total for these years.

These data, from the Census of Canada, apply to all non-farm, non-band, non-reserve private households reporting positive incomes and shelter cost-to-income ratios less than 100 per cent.

Income data collected by the Census of Canada refer to the calendar year preceding the census, while shelter cost data give expenses for the current year. Shelter-cost-to-income ratios are computed directly from these data, that is, by comparing current shelter costs to incomes from the previous year.

Acceptable housing is defined as adequate and suitable shelter that can be obtained without spending 30 per cent or more of before-tax household income. Adequate shelter is housing that is not in need of major repair. Suitable shelter is housing that is not crowded, meaning that it has sufficient bedrooms for the size and make-up of the occupying household. The subset of households classified as unable to access acceptable housing is considered to be in core housing need.

Components may not add up to totals due to rounding.

Source: CMHC (census-based housing indicators and data)

For additional data, please refer to the CMHC website: www.cmhc.ca

TABLE 19

Characteristics of Households in Core Housing Need, Canada, 2001

	All Households		Renters		Owners	
	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)	Households in Core Housing Need (000's)	Incidence of Core Housing Need (%)
All Households	1,485.3	13.7	1,011.5	28.3	473.8	6.6
Components:						
Below Affordability Standard Only	*1,069.4*	*9.9*	*731.7*	*20.5*	*337.7*	*4.7*
Below Suitability Standard Only	*73.6*	*0.7*	*58.3*	*1.6*	*15.3*	*0.2*
Below Adequacy Standard Only	*74.5*	*0.7*	*25.2*	*0.7*	*49.3*	*0.7*
Below Multiple Housing Standards	*267.8*	*2.5*	*196.4*	*5.5*	*71.5*	*1.0*
Household Type						
Senior-led	393.2	16.9	243.9	36.2	149.3	9.0
Family	78.1	6.1	33.7	17.0	44.4	4.1
Non-Family	315.1	29.8	210.1	44.2	105.0	18.0
Individuals Living Alone	310.1	30.7	207.3	45.0	102.8	18.7
Female	248.6	32.9	166.9	47.4	81.6	20.3
Male	61.5	24.0	40.4	37.1	21.2	14.4
Non-Senior-led	1,092.1	12.9	767.6	26.4	324.5	5.8
Family	676.4	10.5	437.7	26.7	238.7	5.0
Couples with Children	257.1	7.4	140.7	22.5	116.3	4.1
Couples without Children	110.2	6.0	64.4	13.0	45.8	3.4
Lone-Parent Families	294.3	31.8	224.7	46.3	69.6	15.8
Female	264.2	35.0	205.0	49.1	59.2	17.6
Male	30.2	17.6	19.7	29.2	10.5	10.0
Non-Family	415.7	20.3	329.9	26.1	85.8	11.0
Individuals Living Alone	368.5	21.7	291.8	28.3	76.7	11.5
Female	187.3	23.9	145.5	30.7	41.8	13.5
Male	181.1	19.9	146.3	26.3	34.9	9.8
Individuals Sharing with Others	47.2	13.4	38.1	16.2	9.1	7.8
Aboriginal Status						
Non-Aboriginal Household	1,414.1	13.5	955.3	27.9	458.8	6.5
Aboriginal Household	71.3	24.0	56.2	37.7	15.1	10.2
Status Indian	35.7	28.0	29.6	40.8	6.1	11.1
Non-Status Indian	13.6	23.7	10.5	36.7	3.1	10.7
Métis	24.7	19.2	18.1	33.3	6.6	8.9
Inuit	4.7	35.8	3.8	43.3	0.9	20.3
Period of Immigration						
Non-immigrants	1,045.7	12.4	726.3	26.1	319.4	5.6
Immigrants	425.6	18.3	272.6	36.0	153.0	9.8
Prior to 1976	162.2	13.3	84.2	33.3	78.0	8.0
1976 - 1985	59.3	16.5	37.6	32.5	21.7	8.9
1986 - 1990	52.3	21.5	36.1	35.4	16.2	11.4
1991 - 1995	70.7	26.2	48.9	36.6	21.8	16.0
1996 - 2001	81.1	36.0	65.8	43.1	15.3	21.2

Estimates of core housing need in the Nunavik region of Quebec have been updated based on revised information on housing costs and core need income thresholds in this non-market area. As a result, small adjustments have been made to the 2001 estimates of core housing need presented for Canada in this table.

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Components may not add up to totals due to rounding.

Source: CMHC (census-based housing indicators and data)

For additional data, please refer to the CMHC website: www.cmhc.ca

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CANADIAN HOUSING OBSERVER SURVEY

The *Canadian Housing Observer* presents a detailed annual review of Canadian housing conditions and trends, and the key factors influencing them. The *Canadian Housing Observer* consists of a printed or downloadable report, and a range of online data resources which include:

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3. Architect
4. Mortgage lender or broker
5. Builder or Renovator
6. Planner
7. Developer
8. Policy analyst
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12. Researcher
13. Engineer
14. Sales
15. Health care professional
16. Student
17. Inspector
18. Trades person
19. Landlord/Property Manager
20. Executive
21. Manager
22. Deputy minister
23. Elected official
24. Other, please specify: _____

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Current Market Developments	1	2	3	4	N/A
Housing Finance	1	2	3	4	N/A
Sustainable, Healthy Communities and Transportation	1	2	3	4	N/A
Recent Trends in Housing Affordability and Core Housing Need (2002-2004)	1	2	3	4	N/A
Observer Data Resources					
Appendix tables: Key Housing Statistics	1	2	3	4	N/A
Excel spreadsheet Data Tables on CMHC website	1	2	3	4	N/A
Housing in Canada Online (HiCO) on CMHC website	1	2	3	4	N/A
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In a presentation or report	❑	❑
For teaching purposes	❑	❑
To share with or advise colleagues	❑	❑
For personal knowledge / career growth	❑	❑
To do further research	❑	❑

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	Yes	No
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In a presentation or report	❑	❑
For teaching purposes	❑	❑
To share with or advise colleagues	❑	❑
For personal knowledge / career growth	❑	❑
To do further research	❑	❑

8. Thank you very much for providing your feedback. We welcome any additional suggestions or comments that you may have about the *Canadian Housing Observer*, including both its format and its content. Please use the postage-paid envelope included to submit your survey or fax it back to 613-748-4097 or complete online at http://www.cmhc.ca/observersurvey/

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