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Commentary

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Government can't do it alone: Estimating the cost of building enough homes to meet Canada's core housing need

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Introduction

Canada faces a housing crisis, driven primarily by a severe shortage of homes. On this, experts and political parties of all stripes broadly agree. Solutions, however, are more contentious. One possible conclusion is that the current housing system, on its own, is unable to supply the amount of housing Canadians need, and that, in order to supply more of the "right type" of housing, governments should play a greater role in both the funding and provision of non-market housing.

Indeed, government subsidies to the most vulnerable, either direct or through intermediaries such as public and non-profit housing providers continue to play a key role in Canada's housing continuum. There may also be a case for greater public funding for housing, either as subsidies to households or as partially or

fully government-funded development targeting those most in need. However, the case for mass construction of government-funded housing as a primary means of addressing Canada's housing shortage is weaker.

Likely the greatest challenge that would arise in addressing Canada's housing deficit primarily through government funding is the sheer scale of the financial costs required. The analysis that follows examines just one aspect of the possible large-scale expansion of government-funded housing as a primary solution to Canada's housing shortage: the cost of construction. It does so by combining available information on the number of households in greatest need, construction costs, and various attributes of the units provided.

Erring to the most conservative, or generous assumptions, the estimated cost of building enough housing to meet a minimum of Canada's housing needs ranges from $196 billion to $300 billion, a significant sum relative to government revenues. It is therefore imperative that policy solutions to Canada's housing crisis focus first on the proper functioning of the private housing market, improving broad housing affordability, followed by targeted assistance for the most vulnerable.

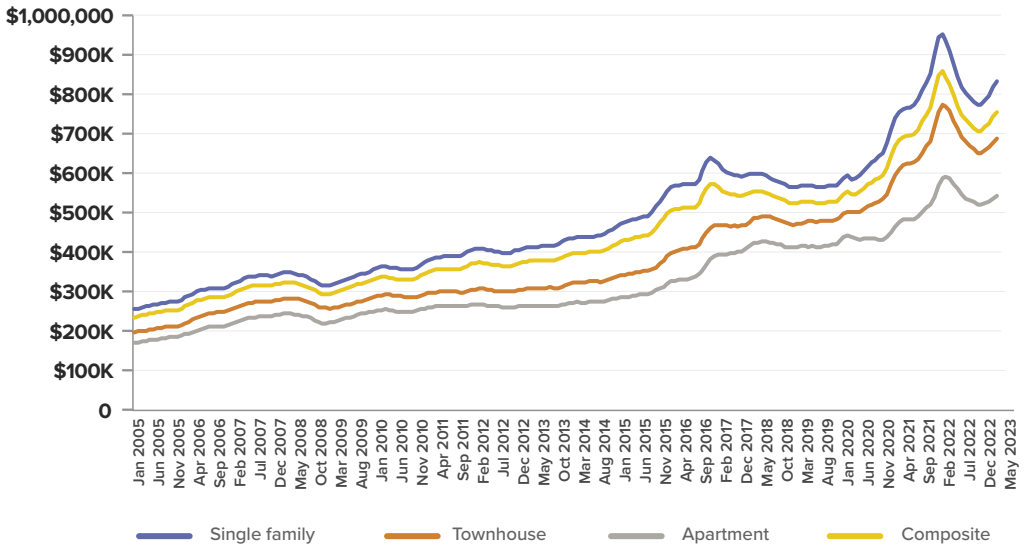
Needless to say, these conservative estimates are just that – estimates. As such, the findings that follow serve only to highlight the scale of investment required to remedy Canada's housing shortage, and not to provide a comprehensive costing.

Eroding housing affordability in Canada

Conversations around housing affordability frequently focus on the purchase price of homes. Figure 1 presents benchmark Canadian home prices across single family homes, townhouses and apartments between 2005 and 2023 – the full extent of data from the Canadian Real Estate Association. The increase in purchase prices over this period has been dramatic, especially since the onset of the COVID-19 pandemic.

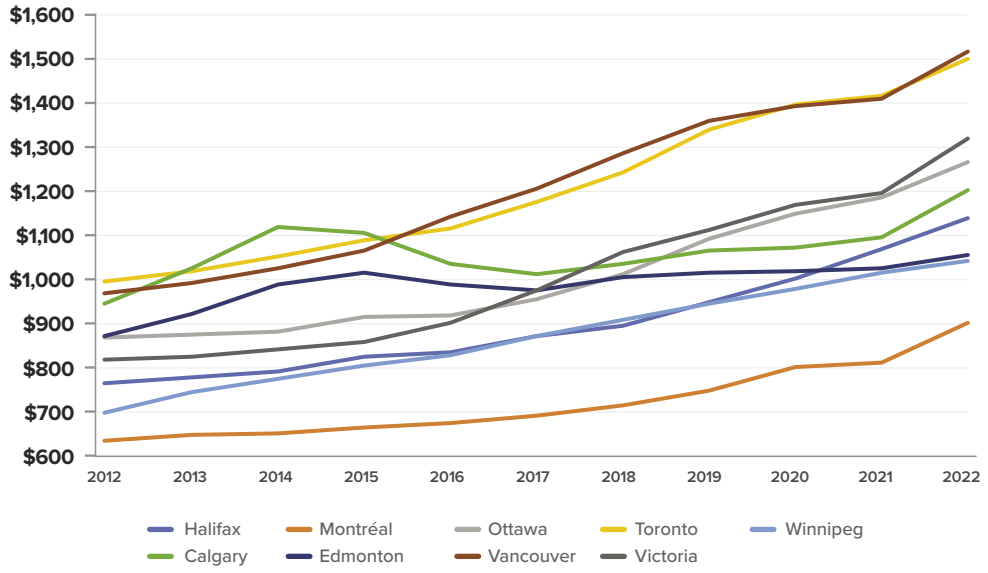
Another, arguably more important measure of eroding housing affordability is the cost of renting. Figure 2 presents average annual rents for one-bedroom units in apartment structures with three or more units across a selection of Canadian metropolitan areas between 2012 and 2022. These averages are conservative, as they include rents for long-time renters as well as rents for new leases. Despite a brief reprieve in the early years of the pandemic, rents have since reached new

Figure 1: Benchmark home prices in Canada (2005 to 2023)



Source: Canadian Real Estate Association (2023).

Figure 2: Average rents for one bedroom units in apartment structures with three or more units, by major city (2012 to 2022)



Source: Statistics Canada (2023a)

Figure 3: Rental vacancy rates in Census Metropolitan Areas (1992 to 2022)

*In apartment structures of six units and over, privately initiated in census metropolitan areas

Source: Statistics Canada (2023b).

highs and continue to rise as the number of rental households grows faster than the inventory of available rental units.

Indeed, rental vacancies are close to historic lows. Figure 3 charts the rental vacancy rate – the percentage of rental units available – across Canadian census metropolitan areas (CMAs) between 1992 and 2022. At 1.9% in 2022, the rental vacancy rate reached its lowest point in two decades, placing increased pressure on already tight rental markets.

High rents create major challenges for low, but also middle-income households, as they erode household budgets and hamper saving. Low vacancy rates place upward pressure on rents, by making would-be renters compete for and bid up the cost of renting scarce units. They also limit renters' choices of accommodations and locations, prompting difficult compromises regarding unit sizes (such as a growing family unable to find family-sized units) and unit locations (such as a recent university or college graduate unable to afford rents near the best job opportunities).

Underlying the rising cost of buying and renting homes is a shortage of housing supply relative to growing demand. Successive reports by the Canada Mortgage

and Housing Corporation (CMHC) identify both the link between housing shortages and eroding affordability (2018), and the estimated magnitude of Canada's shortage (2022), which will be explored further in the next section. Available data and analysis on this subject, therefore, suggest that Canada's housing crisis is driven primarily by an already large and still growing gap between the quantity and quality of homes needed, and the quantity and quality of homes on offer.

Estimating the number of units needed

Given Canada's housing shortage, and associated pressures on the cost of buying and renting homes, the question becomes how much housing will be required to reduce these pressures. A variety of approaches exist to produce such an estimate.

For instance, public housing backlogs reported by provincial and municipal social housing agencies present one measure of current need among the most vulnerable. Such a number would not be comprehensive, however, both because of potential variations in measurement and data availability between jurisdictions, but also because such backlogs only include households that have expressed their need by registering for subsidized units, rather than all households that may be in need.

Another approach is to estimate the structural shortage of housing units market wide. This has notably been attempted in analysis produced by Scotiabank, which compared the number of housing units per 1000 residents in each G7 country. It finds that Canada had the lowest number of housing units per 1000 residents of any G7 country in 2020. The analysis estimates that it would take 1.8 million additional housing units for Canada to reach the G7 average (Perrault, 2021).

Analysis published in 2022 by CMHC also estimates the structural shortage of housing in Canada. It goes beyond estimating the current shortage by attempting to measure the number of units that would be required to restore housing affordability by 2030. It estimates that 3.5 million housing units beyond current building projections would be required to achieve this outcome (CMHC, 2022).

Yet another approach to generate a national estimate of current shortages is CMHC's core housing need (CHN) indicator. To be considered in core housing need, households must fall below specific standards of adequacy,

Table 1: Number and share of households in core housing need in Canada, by tenure (2021)

Total number of households	Total number of renter households	Share of all households in core housing need	Share of renter households in core housing need	Total number of households in core housing need	Number of renter households in core housing need
14,978,940	4,953,840	10.1%	20.0%	1,512,873	990,768

Sources: Statistics Canada (2022, 2023c, 2023d), authors' own calculations.

suitability, and affordability, and must spend more than 30% of their before-tax income in order to access housing that meets all three standards (CMHC, 2019).[1] Statistics Canada collects data for this indicator during each census period, which occur every five years. Table 1 shows how many households were considered in CHN during the most recent census, and how many of these were renter households.

In 2021, 1,512,873 households out of 14,978,940, or 10.1% of all households in Canada, met the CHN threshold. A majority (990,768) of households in CHN were renters. These numbers reflect only those households meeting the three standards mentioned above, meaning that more households experience issues of affordability or suitability alone, without meeting the full definition of CHN. Further, CHN estimates exclude households that are in housing deemed suitable to current needs but not anticipated needs (e.g. a family waiting for a larger home to grow), households that have yet to form (e.g. adult children living with parents), as well as anticipated population growth and resulting future demand.

For all these reasons, CHN presents a relatively conservative estimate of Canada's housing needs. The number of households it affects is also smaller in magnitude than the available estimates of Canada's structural housing shortage, offering the most modest readily available estimate for the purposes of this analysis.

The cost of building enough government-funded homes to meet core housing need

Housing production entails several important costs. These include, but are not limited to, acquiring land, the "hard" costs of materials and labour for construction, and various "soft" costs such as office staff, fees and charges levied by local governments, marketing, and the carrying costs accrued throughout (e.g. property taxes and interest payments on loans). All these costs can vary depending on local factors such as land, material and labour costs, as well as broader factors such as lending environments.

Costs can also vary depending on the nature of individual projects. For example, the construction costs of a single-family home built on a lot purchased in central Toronto or Vancouver will likely be below the costs of acquiring the land on that lot, due to high land costs. However, if that same lot is used for the construction of a 12-unit apartment building, the construction costs may exceed the land purchase costs, due to the larger scale of the project. Similarly, smaller wood structures are cheaper to construct, per square foot, than taller concrete-based structures.

With these considerations in mind, the analysis that follows estimates the total cost of building a sufficient number of government-funded units to house all households deemed in CHN in 2021, as well as only renter households deemed in CHN. The assumptions it makes are conservative – that is, generous to the governments and builders that would undertake them – in several important regards.

First, this analysis excludes one of the most important non-construction costs – the cost of acquiring land. The rationale for excluding this significant expense rests on the assumption that all land used for constructing enough units to fill CHN is gifted, rather than purchased. Though highly optimistic, the premise of this assumption is that, as government-funded housing, these units would be ideal candidates for construction on government-owned sites, or sites otherwise donated for the purpose of constructing non-market housing affordable to households in CHN.

Second, and related to the first, this analysis assumes that all fees and charges levied by local governments – another major non-construction cost – are waived for these projects. These fees include development charges, community amenity contributions, density bonuses, or any other fee levied on new development. This assumption is also highly optimistic, given both the infrastructure

costs associated with increasing density on certain sites, as well as significant changes in amenity needs engendered by increased homebuilding in certain neighbourhoods. Nevertheless, there is precedent for reduced or waived fees for non-market housing projects.[2]

Third, this analysis assumes no carrying costs for the duration of construction. This means that, throughout construction, local governments would waive property tax obligations on projects deemed of public interest (as reasoned for waiving development fees and charges), and that project funding would come either from zero-interest loans or direct government grants.

Fourth, this analysis assumes no additional upfront administrative costs. In other words, no additional administrative budget would be required to oversee a generational government-funded housing buildout, meaning existing staffing and administrative capacity within or funded by government housing agencies would suffice to plan for and administer this buildout. The rationale for this assumption is equally optimistic, as it presumes significant economies of scale in project roll-out.

Fifth, this analysis assumes that all the units constructed would be in 13 to 39 storey apartment towers, rather than less dense housing types. Given the first assumption – that all land is gifted, primarily by governments – the hundreds of thousands of units required to fill CHN would necessarily be concentrated primarily within a finite number of government-owned or donated sites located in or near inhabited areas and existing infrastructure. These include spaces above transit stations, along highway or rail corridors or above existing low-density sites such as post offices, libraries, or liquor stores. Indeed, the vast majority of government-owned land is located in remote or inaccessible areas beyond the urban areas with the highest levels of CHN, necessitating the most efficient use of scarce urban or periurban land.

Sixth, estimated per square foot construction costs reflect a simple average of the eight cities for which cost data are available. This average ($272 per square foot) is conservative, as it gives equal weight to small and large cities. Construction costs also tend to be higher in cities with higher incidences of CHN. Here too the rationale is highly optimistic, first because it assumes economies of scale as government agencies coordinate to manage this historic buildout, and second because it assumes that the construction materials and labour markets can absorb such an important shock to demand (i.e., the construction of hundreds of thousands of additional units) without increasing prices in the short term.

Seventh, the average unit size used for this analysis (730 square feet) reflects the smallest median-sized unit reported by Statistics Canada for buildings built between 2016 and 2017 (Statistics Canada, 2019). These were reported to be 665 square feet in Ontario – the smallest among the periods and geographies reported. Further, common areas – the spaces in buildings shared by all units, such as hallways and elevator shafts – are conservatively assumed to represent approximately 10% of the building space, bringing the total per-unit square footage of construction to 730 square feet. This square footage estimate further assumes that no, or very little, space within structures is dedicated to parking, meaning both that governments optimise scarce urban land by locating these units within proximity to public transit, and that local governments exempt all projects from minimum per-unit parking requirements.

It is equally important clarify that this analysis does not estimate the ongoing operating costs of government-funded housing.

Beyond these assumptions regarding the upfront costs of developing a large number of units in a relatively short period of time, it is equally important clarify that this analysis does not estimate the ongoing operating costs of government-funded housing. Over the longer term, these costs, which include building maintenance and repairs, tenancy management and other supports, become comparable to or can even eclipse upfront costs associated with planning for and building new units. For example, the 2022 operating budget for the Toronto Community Housing Corporation – Canada's largest public housing agency – was $685.8 million, while the total value of its assets amounted to more than $10 billion (City of Toronto, 2023).

Given these optimistic, conservative assumptions, table 2 presents estimates of the total cost associated with constructing enough units to meet both total CHN in 2021 and only CHN for renter households. Building the estimated 990,786 units required to house all renter households in CHN would cost more than $196 billion, while building the 1,512,873 units required to adequately address all CHN would cost more than $300 billion.

Table 2: Estimated construction costs to fill core housing need

Unit type	Unit size in square feet (including common area)	Estimated construction cost per square foot*	Estimated construction cost per unit	Estimated number of renter households in CHN (2021)	Estimated number of all households in CHN (2021)	Estimated construction costs to build one unit per renter household in CHN	Estimated construction costs to build one unit per household in CHN
13-39 storey condo	730 sq ft	$272	$198,469	990,768	1,512,873	$196,636,486,500	$300,258,001,311

* The estimated construction costs per square foot represent a simple (unweighted) average between the 8 cities featured in Altus Consulting's *2023 Canadian Cost Guide*. Though Altus presents construction cost data for nine cities, one of them (St. John's) didn't include construction costs for the building type we use in this report (13-39 storey condos).

Sources: Altus Consulting (2023), Statistics Canada (2022, 2023c, 2023d), authors' own calculations.

The estimates generated should not be interpreted as plausibly comprehensive costs for resolving Canada's housing shortage. Indeed, claiming that addressing Canada's housing crisis would cost $196 to $300 billion would be exceedingly optimistic, and beyond the scope of this analysis. Rather, these estimates should be interpreted as approximations of the scale or magnitude of the costs involved with building the minimum number of units required to satisfy one measure of Canada's housing need. For reference, total federal government revenue was $413.3 billion in 2022.

Discussion

The purpose of this exercise is to take seriously the idea that governments in Canada could and should take a leading role in resolving Canada's housing shortage by directly funding the construction of hundreds of thousands of housing units. The scale of the costs involved, even when making extremely generous assumptions, suggests this idea would cost more than most governments are able to spend. Further, it suggests that government efforts to resolve Canada's housing shortage are best channeled towards, first, improving the functioning of housing markets in Canada, and second, towards directly helping the most vulnerable households.

Improving the functioning of Canada's housing markets means better connecting supply to demand. In other words, when rising demand places upward pressure on rents and home prices, or when rental vacancy rates fall, governments should ensure that the planning and construction of new housing can adequately and rapidly respond.

Rising prices and rents offer important "signals" to homebuilders, who in turn attempt to build as many homes as can be feasibly built. Among the government-controlled (rather than market-controlled) factors affecting homebuilders' feasibility calculations are the number and sizes of units allowed on different lots, the costs they will incur in fees and taxes, and the certainty with which they can navigate approval processes for the various permits required. When these factors are overly restrictive, costly or opaque, the supply of housing cannot adequately respond to demand, in turn exacerbating housing shortages (Green et al., 2016).

> *Resolving these imbalances in Canada's housing markets (...) will reduce home price and rent pressures, in turn making housing more affordable.*

Resolving these imbalances in Canada's housing markets – and the g overnment-controlled factors contributing to them – will reduce home price and rent pressures, in turn making housing more affordable and available to a greater number of Canadian households currently in need of assistance.[3] Far from theoretical, this better balance between supply and demand can be observed in a number of U.S. cities, which successfully combine rapid population growth with steady or improving affordability conditions (Filipowicz, et al., 2020).

Improving the functioning and affordability of housing markets in turn reduces the pressures faced by government-funded housing providers. As more households previously unable to afford rents or home prices are able to access suitable housing at prices they can afford in the private market, government-funded housing providers no longer require as many units at below-market rents. These providers' limited resources can then be channeled towards helping the remaining households facing the most significant barriers to finding suitable housing.

Government resources are scarce, and should be allocated as efficiently as possible when addressing Canadians' needs. Faced with a significant gap between the demand for and supply of housing – especially housing affordable to lower and middle-income households – it is neither efficient nor feasible to fund the construction of enough homes through government means alone. Government policy and funding efforts should focus, first, on improving the functioning of housing markets, thereby reducing the number of households in need of assistance, and second, on directly assisting the most vulnerable.

Conclusion

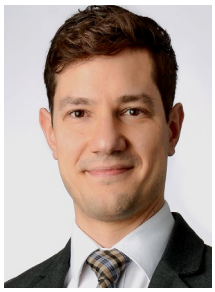
Millions of Canadians are grappling with the costs of inadequate and unaffordable housing, driven primarily by a significant shortage of homes. This study argues that resolving Canada's housing shortage primarily through government funding for homebuilding is virtually unachievable. Even in the most optimistic scenario, where non-construction costs are mostly waived, land-use regulations are relaxed and all land is gifted, all while using the lowest defensible construction cost estimates, building housing units for all Canadian households experiencing the most need during the last census would cost an estimated $196 to $300 billion.

The real number would be much higher. But generating a precise cost estimate is not the purpose of this exercise. The purpose is merely to illustrate the scale of the challenge facing Canada's communities. Even with such a favourable alignment of circumstances as those assumed in this analysis, the costs are significant and arguably impossible to fund through the public purse alone.

Government efforts, therefore, should aim to improve the functioning of housing markets so as to lower costs for a greater share of Canadians. Only then can scarce public subsidies more effectively address the needs of the most vulnerable MLI.

About the authors

Steve Lafleur is a public policy analyst with over a decade of experience working for Canadian think tanks. He is a former Senior Policy Analyst at the Fraser Institute. He holds an M.A. from Wilfrid Laurier University. His work has appeared in most major Canadian media outlets including the *Globe and Mail*, the *National Post*, and the *Toronto Star*. MLI



Josef Filipowicz is an independent policy specialist focusing on urban and regional policy issues, including land-use regulations, housing affordability, property taxation, and municipal finance. He previously held roles in government and think tanks, and holds an M.A. in Political Science from Wilfrid Laurier University and a Bachelor of Urban and Regional Planning from Ryerson University. Josef also comments frequently in interviews, presentations, op-eds and blogs (in English and French). His work has been featured in outlets including the *Wall Street Journal*, *Globe and Mail*, *Toronto Star*, *Maclean's*, *Detroit News*, and *Financial Post*. MLI

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Endnotes

1 For a full definition of core housing need and its various components, see CMHC (2019) and Statistics Canada (2022).

2 For example, Austin, Texas' SMART Housing program provides fee waivers in exchange for the provision of on-site income-restricted units (City of Austin, 2023 https://www.austintexas.gov/department/development-incentives-and-agreements as of June 26, 2023).

3 For an in-depth analysis of this phenomenon in the United States, see Metcalf (2018).

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