September 2023

Auckland's Housing Supply Experiment: What Does it Mean for British Columbia's Homes for People Plan?

Summary of Findings

- New evidence from Auckland shows that policy change can achieve a 50 per cent increase in housing permits in less than a decade and successfully soften housing costs.
- Per capita housing starts in BC are historically low, and a 50 per cent boost in starts by the end of this decade would bring activity back to the level of the early 90s, but still well below the level of the 70s.
- BCREA's Real Estate Policy Analysis Model model (REPAM) predicts that such a boom in housing starts would increase home completions by 37 per cent per quarter relative to a status quo baseline by Q4 of 2030, while the total housing stock would be 2 per cent higher.
- The model predicts that the increase in housing supply would pull average prices down by 4 per cent relative to a status quo baseline by Q4 of 2030, and slow long-run price growth, modestly improving affordability.

Introduction

Since the start of the COVID-19 pandemic, average home prices in British Columbia have risen nearly 40 per cent, with new rental costs up by a similar amount. Listings on the MLS® System have plummeted by nearly a quarter. Nationally, the Bank of Canada's home affordability index, a function of mortgage rates, prices, and average incomes, is near its worst level in over 30 years. Despite this intense price pressure, BC is not completing significantly more homes than it was in the 1970s. Indeed, in recent years, the province has completed roughly half the number of homes per capita as in the 1970s (and just two-thirds the per capita home completions of the 1990s).

Figure 1: Completions per Capita
British Columbia

Source: CMHC, BC Stats

Amid this affordability crisis, a tentative consensus is emerging in BC and elsewhere that increasing housing supply via regulatory reform is the principal policy governments should use to slow price appreciation. Jurisdictions in the United States[1], Ontario[2], and BC communities such as Victoria[3] and Vancouver[4] are already making tweaks to enable more housing, and political leaders across the spectrum have embraced housing supply as central to the problem. In BC, the provincial government's Homes for People plan aims to address housing supply by legalizing housing in new places and putting pressure on municipalities to build. This occurs as new evidence emerges from New Zealand, an early adopter of a supply-driven approach. In Auckland, a policy of upzoning called the Auckland Unitary Plan (AUP) appears linked to a construction boom and in recent years a softening in rents relative to comparable cities.

In this market intelligence, we take the example of Auckland as indicative of what a policy of aggressive housing liberalization and upzoning could achieve in the BC housing market. Specifically, we examine what a surge in permits proportional in magnitude to Auckland's would mean for BC. Using BCREA's REPAM, we find that a surge in new home construction equivalent in magnitude to that realized following the upzoning policy in Auckland would materially improve affordability in BC by slowing price growth and allowing incomes to catch up. Moreover, expanding the housing stock would lead to healthier resale inventories and more balanced markets while shifting the distribution of sales toward principal owners while reducing speculative activity.

Why are the Beneficial Effects of New Housing Supply Difficult to Measure?

By increasing the supply of available homes (as measured by the number of units or total square footage of housing stock), most economists believe upzoning is likely to put downward pressure on housing costs (both home prices and rents). This effect is achieved by the basic theory of supply and demand; like most goods, more housing units distributed among the same number of residents will tend to push prices downwards. As surely as water flows downhill, in economics, scarcity drives prices upwards and abundance drives prices downwards. Still, while simple in economic theory, the empirical relationship between housing supply and housing costs can be challenging to measure as there are many real-world confounders. It is not for nothing that some doubt the classic economic story of more supply driving lower housing costs. Let's first discuss why new home completions can sometimes appear linked to rising prices.

[1] What just happened with single-family zoning in California? - Los Angeles Times (latimes.com)
[2] Ontario housing changes to override some municipal zoning laws | CTV News
[3] Victoria adopts its missing middle housing initiative in bid to retain residents - Saanich News
[4] Vancouver's new duplex rules explained | CBC News

1) First, **home building booms when home prices are rising.** If builders think they can sell units for a premium, they will tend to start more projects, causing home completions and prices to move together. Furthermore, variables such as interest rates affect both building and home prices in the same direction, reinforcing this correlation; low interest rates goose home prices, and at the same time they help builders finance new development projects.

2) Second, **upzoning makes land more valuable**. A parcel of land on which one can build a midrise is worth more than one on which only a single-family home can be built. Upzoning then tends to increase the prices of certain homes, particularly land-intensive ones, such as single-family, while putting downward pressure on other housing types. Since planning, permitting, and construction of higher-density housing can take many months or years to complete, the immediate effect of upzoning may be to increase overall prices before the new supply hits the market.

While upzoning typically raises land prices, land costs are not the be-all and end-all concerning affordability. The price we ultimately care about is not the price of land, but the price of a home.

3) Thirdly, **new buildings are typically pricier than older housing stock**. New builds have the latest design, appliances, and amenities, and must comply with current building codes, while older buildings have depreciated and decayed and may be outmoded. It seems counterintuitive that expensive new housing should cause average prices to fall, but this can be true due to filtering effects. Well-off buyers will absorb the new housing, reducing competition and softening prices for the existing housing stock. If the new housing had not been built, these buyers would instead be competing for the older housing stock.

4) Finally, **gentrification effects can cause price appreciation near the new building.** Buyers of new properties often have more disposable income, tilting a neighbourhood towards more upscale businesses. They are also potentially more politically engaged, pay more taxes, and demand more neighbourhood amenities from city hall, which can cause a neighbourhood to improve, gentrify, and appreciate in price.

These four factors (the spurious correlation between prices and housing construction, the positive causal effect of upzoning on land prices, the fact that new builds are more expensive than older stock, and gentrification effects) conspire to conceal the effect of housing supply on reducing home prices. Although, we have strong theoretical reasons to believe that increasing supply softens prices, these confounds and spurious correlations muddy the empirical relationship between supply and prices and make the effect of supply on affordability levels difficult to measure.

Evidence on Supply from New Zealand

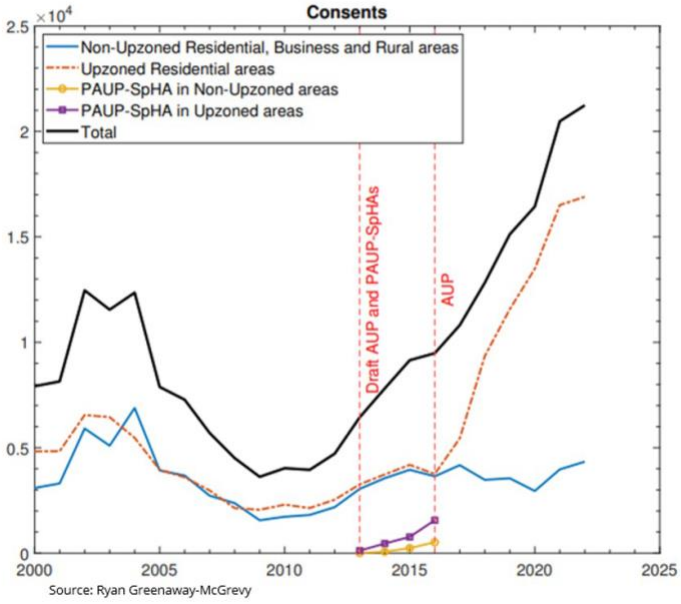
Despite the difficulties measuring the effects of supply on prices, economists have a well-used toolkit for estimating causation from the haystack of correlations. A recent series of papers uses the case study of Auckland, New Zealand's largest city, to identify the effects of upzoning on permits and rents.

In late 2016, Auckland implemented an aggressive policy of upzoning. Referred to as the AUP, the policy relaxed floor-to-area ratios (FAR)[5] on roughly three-quarters of residential land in the Auckland region. The upshot of this policy was that more floors or wider structure footprints became allowable on a greater number of properties, enabling larger and more housing units in the city.

The papers resolve the issue of spurious correlation using econometric techniques, which provide a plausible counterfactual scenario to compare against the reality with the AUP implemented. In other words, these papers attempt to tell us what would have happened in the absence of the AUP, and then compare this against what actually occurred. The first paper relies on a technique called difference-in-differences, while the second paper uses a synthetic control group methodology.

First, in *The Impact of Upzoning on House Prices and Urban Development in Auckland*[6], the authors show that upzoning caused an increase in permitting (or consents) in upzoned areas of Auckland relative to non-upzoned areas. Figure 2 shows that following the AUP, consents in upzoned areas surged, while non-upzoned areas remained flat. The authors find the policy increased the city's housing stock by 5.1per cent by 2021 and doubled the rate of housing construction.

Figure 2: Rents in Auckland Before and After Rezoning

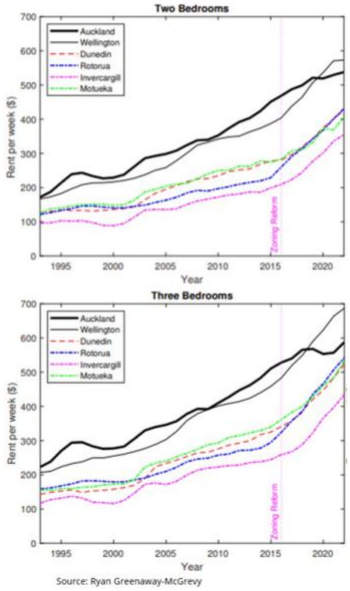


[5] FAR indicates the amount of floor space allowed on a given unit of land.

[6] Greenaway-McGrevy, R., &; Phillips, P. C. B. (2023). The impact of upzoning on housing construction in Auckland. Journal of Urban Economics, 136, 103555. https://doi.org/10.1016/j.jue.2023.103555.

In a subsequent paper[7], the authors find that three-bedroom rents in Auckland were 22 to 35 per cent lower than a synthetic control group, which represents what rents would have been in the absence of the AUP. In addition, the rent for two-bedroom units were found to be 14 to 21 per cent lower than the synthetic control group. Figure 3 compares average weekly rents in Auckland against other cities in New Zealand. A downward tilt in average rents is visually evident in Auckland relative to other cities following the implementation of AUP. It is also statistically significant relative to the synthetic control counterfactual scenario for Auckland.

Figure 3: Rents in Auckland Before and After Rezoning



Source: Ryan Greenaway-McGrevy

To summarize, these papers provide evidence that the AUP increased permitting and construction activity, and that this construction activity likely contributed to softening housing costs in Auckland relative to other parts of New Zealand, which supports the theoretical argument that housing supply pushes housing costs down.

Implications of the AUP for BC's Housing Plan

The results of the AUP have clear implications for BC as the province attempts to expand housing supply and improve housing affordability. BC's forthcoming housing plan has the potential to allow a building boom similar in magnitude to the AUP through a policy of re-zonings and incentives for new home construction. Therefore, in this section, we model an equivalently large construction boom to Auckland in BC using BCREA's REPAM and report the results on prices and affordability achievable by the end of 2030.

In the spring of 2023, the BC government announced its "Homes for People" plan. As part of the plan, the government intends to introduce legislation in the fall of 2023 allowing three to four homes on a traditional single-family detached lot with additional density permitted in areas well served by transit. Additionally, the government intends to legalize secondary suites across the province and speed up permitting processes.

[7] Greenaway-McGrevy, R. (2023). Can Zoning Reform Reduce Housing Costs? Evidence from Rents in Auckland. University of Auckland Business School Working Paper.

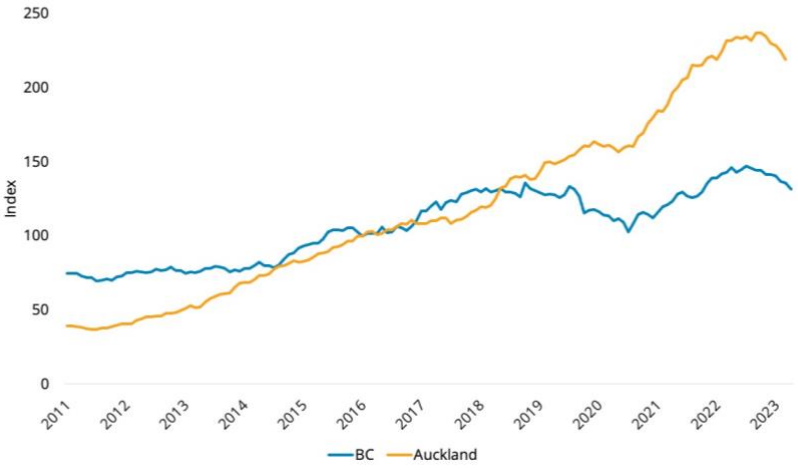
Finally, the government's *Housing Supply Act* identified 47 municipalities that will be encouraged by carrots and sticks to increase housing supply. Improvements will be rewarded with additional funding, while the provincial government can force laggards to upzone areas of the city.[8]

BC's housing plan differs in essential ways from the Auckland Unitary Plan. While Auckland focused on increasing FAR, or the amount of buildable space on each parcel of land, BC's plan so far makes limited mention of FAR (more commonly referred to as FSR in BC). Instead, BC is focusing on legalizing additional units on each parcel of land. This could be less effective if other binding constraints, such as FAR/FSR, prevent builders from making substantial changes. On the other hand, mechanisms such as the provincial government's plan to force municipalities to permit additional housing theoretically enable the province to bring about a construction boom like Auckland's. The details of how aggressively the province will push municipalities to permit remain to be seen.

Using BCREA's REPAM, we estimate the impacts on BC's housing market of an increase in housing permits proportional in magnitude to the AUP.[9] Figure 4 shows housing permits (or consents) in BC and Auckland, normalized to January 2016, in line with the implementation of AUP. As of March 2023, permits in BC are about 36 per cent above the levels from January 2016, whereas they are up by about 119 per cent from the same point in time in Auckland.

Figure 4: Normalized Housing Permits

British Columbia, Jan 2016 = 100



Source: Statistics Canada, Statistics New Zealand

[8] Homes For People: A housing action plan to meet the challenges of today and deliver more homes for people, faster. April 3, 2023; Ministry of Housing.

[9] The model assumes that average nominal household incomes will grow at roughly 2 per cent annually and that mortgage rates will gradually decline towards 4.5 per cent by the end of the decade. The model also assumes that net migration into BC will remain elevated, as set by federal policy, before gradually declining after 2025.

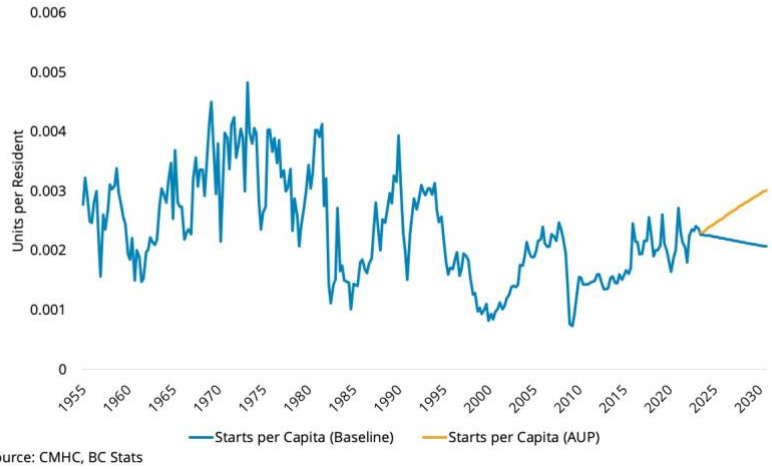
Housing permits in Auckland under the AUP are up by about 61 per cent relative to if they had permitted housing at a rate equivalent to BC. Housing starts follow permits very closely, so to model the impact of implementing something like AUP in BC, we conservatively assume that starts gradually increase until they are 50 per cent above current levels by the fourth quarter of 2030. This is contrasted with a baseline scenario with starts remaining at their current (already elevated) levels indefinitely. Figure 5 depicts these scenarios for starts.

Figure 5: Housing Starts
British Columbia

Source: CMHC, BCREA Economics

Although a 50 per cent increase in starts from already historically elevated levels may seem like a steep path, Auckland has shown that it is feasible. Moreover, that level of per capita housing starts is equivalent to the level that prevailed in the early 90s and is still roughly 30 per cent below the level that prevailed in the 1970s, as shown in Figure 6.

Figure 6: New Home Starts per Capita
British Columbia

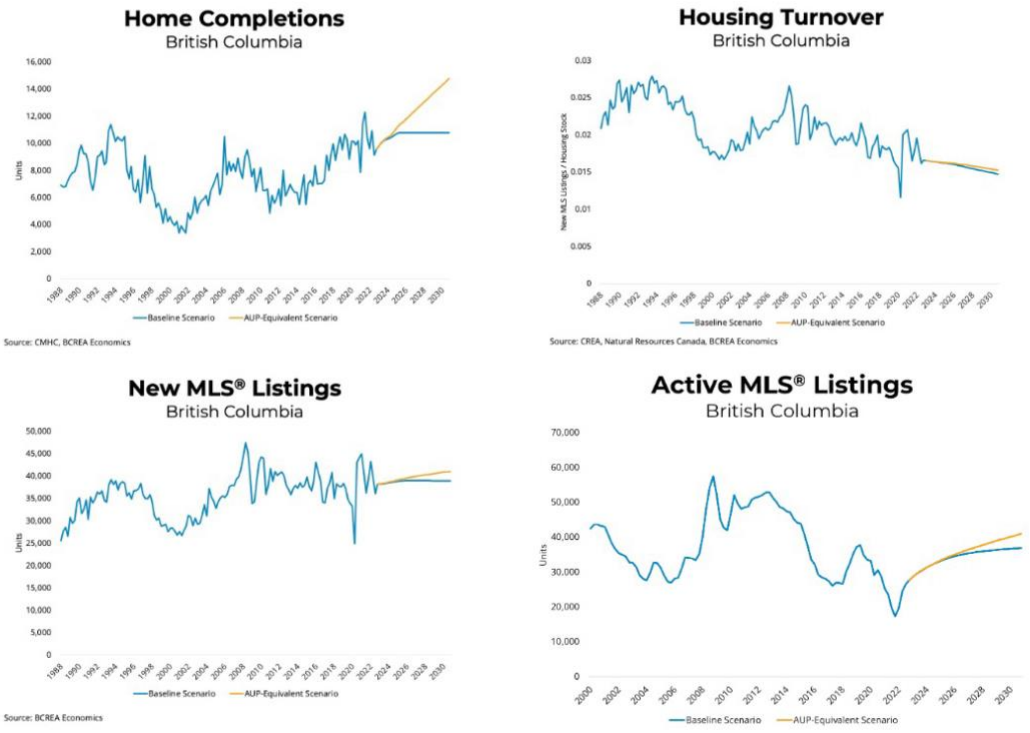


Source: CMHC, BC Stats

The surge in starts then filters through with a lag into increased completions, which rise linearly in the forecast period. By Q4 of 2030, home completions under the AUP-equivalent scenario are 37 per cent above the baseline scenario. This rise in home completions causes an increase in the housing stock. By Q4 of 2030, the housing stock is 2 per cent higher under the AUP-equivalent scenario than the baseline scenario.

Higher completions also increase new listings that appear on the MLS® System each month, as completions are either eventually resold on the MLS® System with a lag, or free up the existing housing stock as current owners move to newly completed units. By Q4 of 2030, new monthly listings are about 5 per cent higher under the AUP-equivalent scenario than the baseline scenario. Higher new listings each month contribute to a higher stock of resale inventory, with active listings about 11 per cent higher in the AUP-equivalent scenario than the baseline scenario in Q4 of 2030. Figure 7 shows how this housing supply chain evolves under the baseline scenario compared to the AUP-equivalent scenario (driven by the assumed higher starts shown in Figure 5). The increase in new listings also causes turnover (new listings divided by total housing stock) to be higher under the AUP-equivalent scenario than the baseline scenario. Figure 7 shows the effects of the AUP-equivalent housing starts on the entire housing supply chain.

Figure 7: Completions, Stock, New Listings, and Active Listings Under AUP-Equivalent Scenario vs. Baseline Scenario in British Columbia

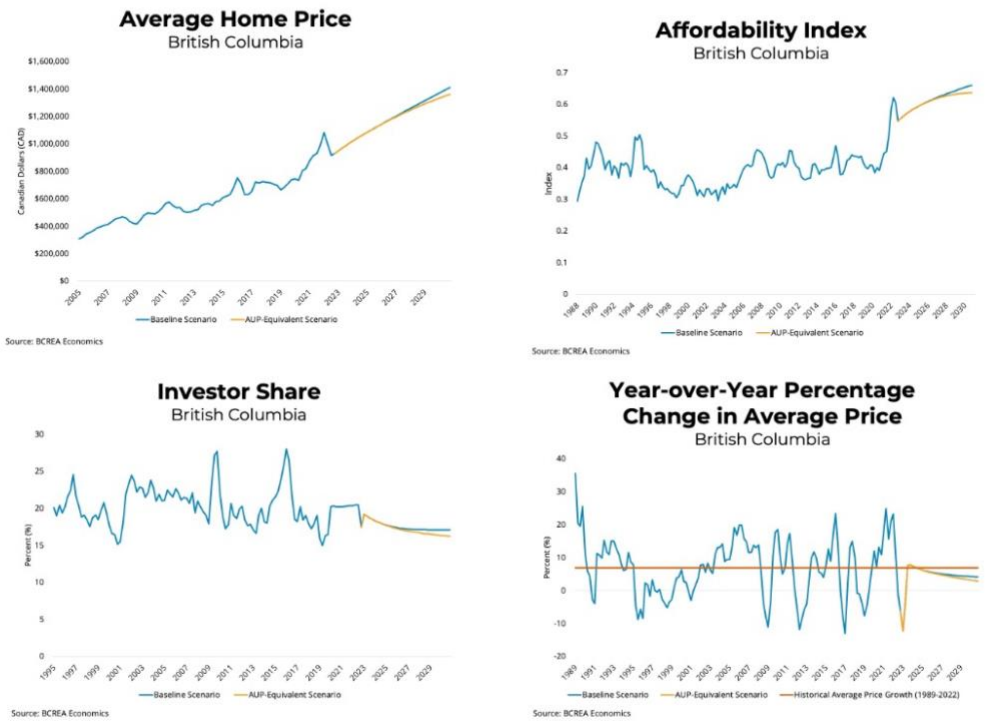


The expansion of housing supply is somewhat mechanical – more construction means more supply of new homes. The primary question is how this shift in policy will impact housing affordability for the average BC household, especially given the significant pressure from elevated immigration over our analysis window.

The model's results are fairly encouraging, though with important caveats. The expansion of the housing stock by about 2 per cent is estimated to slow the rate of price growth such that prices are roughly 4 per cent lower by 2030 than they would have been otherwise. Moreover, affordability (as measured by the ratio of mortgage payments to income) improves as incomes catch up to prices.

A welcome consequence of slowing price growth is that speculation is tamped down. Our model separates buyers into purchases of primary residences and investors. Rising price expectations accelerate purchases of investment properties. This means that high price growth is associated with a higher share of investors among buyers. The surge in home completions in the model softens price expectations and causes speculative activity to fall, mainly leaving investors to fund income-generating new supply rather than purely engaging in flipping activity. Average sale prices, the affordability index, and the share of speculative buyers under the baseline and AUP-equivalent scenarios are shown in Figure 8.

Figure 8: Average MLS® Sale Price, Affordability Index, and Share of Speculative Buyers Under AUP-Equivalent Scenario vs. Baseline Scenario in British Columbia



While there is some modest improvement in affordability by 2030, the ratio remains well above the 44 per cent target for affordability used by the Canada Mortgage and Housing Corporation (CMHC).[10] Indeed, because of the time it takes for new construction to complete and filter through the resale market, the larger impact on affordability will likely occur beyond 2030.

To achieve a 44 per cent target level of affordability by 2030 would require an almost unimaginable level of new construction. The CMHC estimated that close to 600K units above their model baseline, meaning a total increase in the housing stock of about 900K from 2022 levels, would be required to reach their affordability target. Our model produces a similar estimate. A 20 per cent increase in the housing stock, or roughly 105K completions per year over a decade, would be required to keep home prices about 40 per cent below their current baseline trajectory, ultimately resulting in affordability returning to the CMHC target. Given that the record for new home completions in British Columbia for a single year is about 42,000 units, a near-tripling of record completions is unlikely before even contemplating whether private sector homebuilders would deliberately over-supply the market.

Conclusion

This market intelligence report examined evidence from Auckland's recent home construction boom brought about by a pro-building housing policy, the AUP, implemented in 2016. Using BCREA's REPAM housing model, we model how the BC government's Homes for People plan could affect home prices and affordability if the plan were able to generate a similar increase in housing starts to the AUP by 2030. We find that a rise in home completions boosts the housing stock and causes an increase in both new and active listings on the MLS® System, as well as an increase in the turnover of the housing stock. A boom in housing starts is, therefore, associated with a surge in housing across the housing supply chain.

The principal concern for BC policymakers is how to improve affordability, particularly in the context of high mortgage rates, surging migration, and the long history of failed efforts to rein in price appreciation. Happily, REPAM finds that if the Homes for People plan were to cause a surge in housing starts equivalent in magnitude to Auckland's, home prices, while still elevated from today, would be 4 per cent lower by 2030 than if nothing were done. In addition, such a policy would reduce the proportion of speculators among buyers and improve affordability markedly relative to the baseline scenario where nothing is done to increase building.

[10] Canada's Housing Supply Shortages: Estimating what is needed to solve Canada's housing affordability crisis by 2030. Canada Mortgage and Housing Corporation (CMHC); June 2022.

While these results are encouraging and show a path towards a higher standard of living for British Columbians, the scale and immediacy of the problem are also humbling. Starts, already historically elevated, will need to immediately begin rising, before plateauing at 50 per cent above current levels by the 2030s. This building boom would reverse the trend of declining housing starts per capita in BC and bring the ratio back to the level of the early 1990s. Viewed in these terms, a substantial building boom looks more like a reversion to the mean, with the period from the late 90s to the present seeming like a period of unusually low building. By bringing per capita starts back to a more historically normal level, REPAM predicts that the affordability ratio can gradually be bent in the right direction.

While it is promising to see that steps can be taken, affordability in BC deteriorated due to chronic underbuilding over the course of decades and will not quickly be remedied. Still, if policymakers can increase housing supply quickly and substantially through a combination of measures, there is hope that affordability can improve in the province again.