The Public Housing Dividend:

Social and Economic Impacts of Public Housing in the GTHA

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Canadian Centre for Economic Analysis

GTHA Community Housing Collaborative

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Executive Summary

Five public housing investment pathways across the GTHA are assessed for their effects on housing outcomes, resident well-being, community effects, downstream public-system pressure, and regional economic performance over 2026-2050.

The decision problem for the GTHA Community Housing Collaborative and its government and funding audiences is whether the region preserves and expands public housing capacity or allows deterioration, closures, and displaced burden to accumulate over the next quarter-century.

The central finding is that the strongest integrated pathway is a combination of renewal and new construction, which simultaneously protects the inherited housing stock and expands future access. It is the option that produces the highest social value, generates the strongest GDP and employment outcomes, and delivers the greatest reduction in downstream healthcare-, justice-, and homelessness-related pressure. Reduced Funding is consistently the weakest pathway, as it shrinks system capacity and allows deterioration to intensify, resulting in negative cumulative social value, and greater long-run burden onto other public systems.

The Decision Context

The GTHA public housing system is already large and consequential. At the start of the evaluation period, it serves roughly 80,000 public housing units and about 160,000 residents across more than 600 developments and over 79,500 households. What happens to that system over the next twenty-five years matters not only for current residents, but also for households that could gain access in the future, the communities in which those buildings sit, the workers and industries that build and supply them, and the governments that bear downstream fiscal and service-system pressure when housing conditions worsen.

Public housing investment is more than a capital-spending question. The evidence shows that pathway choice affects long-run system capacity, building condition, resident stability, community well-being, healthcare and justice utilisation, homelessness pressure, GDP, employment, and tax revenue. The issue is regional because the system spans Toronto, Peel, York, Halton, Durham, and Hamilton, and the effects of deterioration or improvement do not stop at municipal boundaries. It is long-horizon because renewal and new construction decisions made now determine the quality, viability, and reach of the system for decades.

The analysis is scenario-based and compares alternative pathways on common terms over the same period. That matters because the policy trade-offs are not one-dimensional. Renewal protects the condition and viability of the existing stock.

Construction expands access and system scale. The strongest decision cannot be identified by looking at only one of those functions in isolation.

The Five Investment Pathways

The five pathways considered in the study are:

1. Expected Funding, which reflects the current funding path staying status quo.
2. Reduced Funding, which models a lower-investment pathway.
3. Renewal Only, which focuses on rehabilitation and state-of-good-repair outcomes for inherited stock.
4. New Construction Only, which focuses on net-new supply and system expansion.
5. Both (Renewal + Construction), which combines renewal with new construction.

These pathways are estimated to produce significantly different housing systems by 2050. Renewal and construction solve different parts of the problem. Renewal changes building condition, closure risk, and resident exposure to poor-quality housing. Construction changes who can access housing, how many people can be housed, and how large the system can become. The combined pathway performs best because it addresses both sides of the problem at once.

The five-scenario structure allows decision-makers to see what happens under different levels and types of investment, and provide a comparative framework with traceable consequences across housing, resident well-being, public systems, and the wider economy, for each specified pathway.

Overall Comparative Verdict

Both (Renewal + Construction) is the strongest integrated pathway. It reaches about 102,500 active units by 2050, avoids closures and lost units, houses about 239,500 people, generates about $48.3B in cumulative social value, produces about $49.6B in cumulative GDP, supports about 354,500 cumulative job-years, and delivers the largest reduction in downstream public-system burden.

Reduced Funding is the weakest pathway. By 2050, it represents a reduction of stock to about 66,400 active units, with an estimated 139 building closures and about 13,322 lost units. In 2050, the system houses only about 153,300 people, yields negative cumulative social value at -$8.8B, reduces cumulative GDP to about $12.0B, and increases long-run utilisation pressure and homelessness-related burden.

The single-track pathways (Renewal Only and New Construction Only) each capture one side of the problem. Renewal Only protects the quality and viability of the inherited stock and performs strongly on resident well-being, but it does not expand access at the same scale as the growth pathways. New Construction Only performs strongly on access, GDP, and employment, but it does not solve deterioration in the existing

portfolio. The combined pathway outperforms because it preserves what already exists while also widening future access.

The scorecards below provide a visual comparison across the social, economic, and overall value dimensions of this study.

See following pages for tables.

Table 1: Social scorecard

Scenario	Total Social Value	Resident SV	Community SV	Health+ Justice Avoided Costs	Hospital Days Δ vs Expected	ED Visits Δ vs Expected	Justice Events Δ vs Expected	Homeless Avoided vs Expected
S1: Expected Funding	$4.4B	$5.2B	-$0.8B	$0	—	—	—	—
S2: Reduced Funding	-$8.8B	-$6.1B	-$2.7B	-$1.2B	-285,805	-107,024	-22,582	-3,093
S3: Renewal Only	$9.0B	$7.7B	$1.4B	$977M	+353,685	+46,013	+29,777	-2,153
S4: New Construction	$35.2B	$33.6B	$1.7B	$691M	+161,077	+88,483	+14,377	+4,695
S5: Both	$48.3B	$44.2B	$4.2B	$1.8B	+524,133	+156,476	+44,226	+4,700

Table 2: Economic scorecard

Scenario	Capital Invested Cumulative	GDP Cumulative	GDP 2050	Jobs Cum. Emp-Yrs	Jobs 2050 FTEs	Cumulative Fed. Tax Revenue	Cumulative Prov. Tax Revenue
S1: Expected Funding	$17.1B	$25.6B	$1.0B	196,067	8,173	$3.9B	$2.8B
S2: Reduced Funding	$6.5B	$12.0B	$334M	110,897	4,310	$1.8B	$1.3B
S3: Renewal Only	$23.1B	$32.5B	$1.2B	236,699	8,580	$4.8B	$3.5B
S4: New Construction	$28.2B	$38.6B	$1.7B	282,841	12,691	$5.7B	$4.2B
S5: Both	$36.4B	$49.6B	$2.1B	354,549	14,935	$7.4B	$5.3B

Table 3: Overall scorecard

Scenario	Total Social Value	GDP Cumulative	Avoided Costs	Capital Invested Cumulative	BCR (Cumulative Benefits to Total Capital Cost)	Notes
S1: Expected Funding	$4.4B	$25.6B	$0	$17.1B	1.75×	Baseline expected path
S2: Reduced Funding	-$8.8B	$12.0B	-$3.7B	$6.5B	-0.08×	Value is weaker and social value turns negative
S3: Renewal Only	$9.0B	$32.5B	-$909M	$23.1B	1.76×	Strong condition and health case
S4: New Construction	$35.2B	$38.6B	$3.0B	$28.2B	2.72×	Strongest marginal social value efficiency
S5: Both	$48.3B	$49.6B	$4.2B	$36.4B	2.80×	Strongest overall absolute impact

What The Results Show

Housing System Outcomes

The housing system result represents the number of housing units, but also more broadly, whether the inherited stock remains viable, whether closures are avoided, and whether the system can continue to house more people rather than fewer. On that test, the difference among pathways is large.

Under Expected Funding, the GTHA sees some growth, but the system remains under condition pressure. Under Reduced Funding, over 13,300 units are lost from the public housing stock over the next twenty-five years, the system reaches 139 building closures, and roughly 6,000 fewer people are housed than today. Under Both (Renewal + Construction), no closures or lost units occur by 2050, the system expands to about 102,500 active units, and housing access widens substantially.

With respect to the number of people housed by 2050, the combined pathway houses about 239,500 people, compared with about 153,300 under Reduced Funding, a difference of more than 86,000 residents. The policy meaning is straightforward: lower-investment pathways shrink capacity and narrow access, while stronger pathways preserve viability and widen access. The evidence also shows that stock growth alone is not enough. New Construction Only expands the number of units, but without sufficient renewal it does not solve the condition problem in the inherited portfolio. The combined pathway is strongest because it improves both scale and quality.

Social Value And Resident Outcomes

The social-value case is one of the strongest reasons the combined pathway stands out. Over 2026-2050, cumulative social value reaches about $48.3B under Both (Renewal + Construction), compared with $35.2B under New Construction Only, $9.0B under Renewal Only, $4.4B under Expected Funding, and -$8.8B under Reduced Funding.

The social value estimates are not limited to the households directly housed, as better housing conditions, stability, and access also generate wider community effects. The total social value estimate for the combined pathway is composed of $44.2B in resident social value, driven by residents moving into the new housing, and $4.2B in community social value. The social scorecard shows that Reduced Funding carries more than $2.7B in lost community social value, underscoring that the cost of underinvestment extends beyond the housing stock itself.

The difference is also significant on non-monetary metrics. The combined pathway is expected to avoid more than 520,000 hospitalization days relative to Expected Funding, alongside major improvements in resident well-being and sharply lower exposure to poor housing conditions. Renewal Only performs strongly on average resident well-being because it improves the quality of the existing stock. New Construction Only

performs strongly on social value per dollar because it expands access. The combined pathway is strongest overall because it brings those two strengths together rather than choosing between them.

Economic Contribution

The economic case also strongly favours the combined pathway. Over the full twenty-five-year horizon, Both (Renewal + Construction) generates about $49.6B in cumulative GDP, compared with $38.6B under New Construction Only, $32.5B under Renewal Only, $25.6B under Expected Funding, and $12.0B under Reduced Funding.

Employment follows the same pattern. The combined pathway supports about 354,500 cumulative job-years and about 14,900 jobs in 2050. New Construction Only remains a strong single-track economic pathway, with about 282,800 cumulative job-years and about 12,700 jobs in 2050, while Renewal Only produces a more moderate but still substantially stronger result than Expected Funding. Reduced Funding is the weakest outcome, with only about 110,900 cumulative job-years and about 4,300 jobs in 2050.

Relative to Expected Funding, the combined pathway adds roughly $24.0B in cumulative GDP and about 158,500 cumulative job-years. Relative to Reduced Funding, it adds about $37.6B in cumulative GDP and about 243,700 cumulative job-years. By 2050, cumulative federal and provincial tax revenue under the combined pathway reaches about $12.6B, compared with about $6.5B under Expected Funding and $3.1B under Reduced Funding.

These results show how stronger housing pathways support broader regional production, employment, and government revenue. The single-track comparison remains important here as well. New Construction Only is stronger on scale and economic growth than Renewal Only, but the combined pathway still performs best because it captures growth and the avoidance of deterioration-driven drag.

Government And Service-System Effects

Housing policy meaningfully changes downstream public-system demand. Under Both (Renewal + Construction), cumulative utilisation savings versus Expected Funding reach about $1.8B. That includes about $1.5B in lower healthcare burden and about $227.0M in lower justice-system burden.

With respect to healthcare event counts, relative to Expected Funding, the combined pathway results in about 524,100 fewer inpatient days, about 156,500 fewer emergency department visits, and about 44,200 fewer justice events. These differences reflect structurally lower crisis burden over time when housing quality is protected and more people can access stable housing.

Homelessness results strengthen the case for Renewal + Construction further. By 2050, the combined pathway results in about 4,700 fewer homeless people relative to Expected Funding, with roughly 52,230 fewer homeless-years over the period and

about $2.4B in reduced government services relative to the expected path. Compared with Reduced Funding, the gap rises to roughly 83,000 fewer person-years of homelessness and about $4.9B in reduced government services.

Even after accounting for capacity that is reabsorbed by other unmet demand, better housing pathways reduce long-run system pressure, while weaker pathways increase it.

Value Bridge By Audience

Residents

For residents, the difference among pathways is visible in both access and conditions. The combined pathway houses more people, protects the existing stock, and produces the strongest overall social-value result. Lower-investment pathways mean fewer people housed, more people exposed to poor conditions, and weaker health and well-being outcomes.

Communities

For communities, the value case includes both neighbourhood effects and the prevention of deterioration spillovers. The combined pathway produces about $4.2B in community social value, while weaker pathways allow community well-being to deteriorate and increase visible stress across the wider urban system.

Governments

For governments, pathway choice affects system capacity, service utilisation, homelessness-related burden, and revenue. The combined pathway pairs about $1.8B in cumulative utilisation savings with about $12.6B in cumulative federal and provincial tax revenue. Reduced Funding moves in the opposite direction, producing weaker revenues and higher downstream burden.

Wider Economy

For the wider economy, public housing investment is not only a social-protection tool. It is also a growth, productivity, and labour-market issue. The combined pathway produces the strongest cumulative GDP, the strongest employment outcomes, and the strongest revenue case over the evaluation horizon. Reduced Funding again moves in the opposite direction, producing the weakest cumulative GDP, weakest employment outcomes, and the weakest revenue case over the evaluation horizon.

Value Metrics Table

Impact is used as a present-value-style framing over the evaluation horizon. Under that framing, Table 4 shows the value lenses available from the result base.

Table 4: Value metrics summary for Both (Renewal + Construction)

Value metric	Result	Useful for
Total impact	**$102B** for Both (Renewal + Construction), using cumulative economic impact plus cumulative total social value	Single overall public-value summary
Economic impact	**$53.8B** economic impact for Both (Renewal + Construction)	Macroeconomic and economic performance values
Social value	**$48.3B** total social value for Both (Renewal + Construction)	Lived-outcomes and welfare values
Benefit-cost ratio	**2.80 times** for Both (Renewal + Construction); about 2.72x for New Construction Only; about 1.76x for Renewal Only; about 1.75x for Expected Funding; and about -0.08x for Reduced Funding	Value-for-money
Social return on investment	**1.33 times** for Both (Renewal + Construction); about 1.24x for New Construction Only; about 0.39x for Renewal Only; about 0.26x for Expected Funding; and negative under Reduced Funding	Social-value return lens
Public-and-social benefit-cost ratio	**1.80 times** for Both (Renewal + Construction); about 1.72x for New Construction Only; about 0.76x for Renewal Only; about 0.65x for Expected Funding; and -1.5x for Reduced Funding	Government-facing policy values
Net fiscal position	Government-budget lens to be read from the fiscal output stream (Section 6.5 Government Revenue Effects and Section7 Service-System and Fiscal Effects) rather than condensed into an unsupported single summary figure here	Treasury and budget values
Avoided public expenditure / avoided burden	**$1.8B** utilisation savings versus Expected Funding, plus about $2.4B cumulative homelessness-related savings versus Expected Funding, for Both (Renewal + Construction)	Downstream public-system impacts
GDP contribution	**$49.6B** GDP benefit and about $2.1B annual GDP in 2050 for Both (Renewal + Construction)	Wider-economy and growth impact
Employment generated	**354,500 cumulative jobs** and about 14,900 jobs in 2050 for Both (Renewal + Construction)	Labour-market impacts, policy framing

All numbers cumulative 2026 dollars, unless otherwise stated.

How Public Housing Compares with Wider Economic Alternatives

On the report's benefit-to-cost framing, investment in stronger public housing pathways compares favourably with broader economic alternatives where the equivalent amount of investment is spread across general economic expenditures rather than focused into public housing. Against the general-economy benchmark, Renewal Only performs about 10% better than putting the same capital into the wider economy, New Construction Only performs about 70% better, and Both (Renewal + Construction) about 76% better. Public housing also delivers resident, community, and public-system benefits that broader alternatives are not designed to produce.

Who Gains and Who Is Most at Risk

The benefits are not distributed evenly. Growth pathways widen access for additional households, including younger households and families with children who would otherwise struggle to enter the system. Renewal pathways reduce exposure to poor and critical building conditions among those already housed. Lower-investment pathways do the opposite: they narrow access while concentrating more risk among residents and households exposed to deterioration.

This distributional pattern matters for the overall reading of the results. The difference among pathways is not only a difference in average outcomes. It is also a difference in who gets access, who remains protected from poor conditions, and who bears the long-run consequences when housing quality is allowed to decline.

What Is at Risk If Better Pathways Are Not Funded

The cost of weaker pathways includes lost housing capacity, weaker resident outcomes, lower social value, lower GDP, weaker employment outcomes, and greater long-run pressure on healthcare, justice, and homelessness-related systems.

Relative to the combined pathway, Expected Funding fails to capture the potential for social and economic transformation. Expected Funding leaves about $43.9B in social value, about $24.0B in GDP, and about 158,500 job-years unrealised over 2026-2050. Reduced Funding magnifies those losses, missing about $57.1B in social value, about $37.6B in GDP, and about 243,700 job-years. It also leaves the system with 139 building closures, about 13,322 lost units, about 6000 fewer people housed than today, and an increased cost of about $1.2B in downstream burden on public systems compared to Expected Funding.

The single-track pathways also leave value unrealised. Renewal Only preserves and improves the stock but does not deliver the same access gains as the growth pathways. New Construction Only performs strongly on scale and economic contribution but leaves part of the condition and resident-outcome case unresolved. The combined pathway remains the strongest reference point for understanding what is left on the table under lower-ambition alternatives.

Final Decision Takeaway

The evidence supports a clear decision-facing conclusion. The strongest integrated case for the GTHA comes from combining renewal with new construction. That pathway performs best because it preserves existing homes, expands future access, improves resident and community outcomes, strengthens the regional economy, and reduces downstream pressure on other public systems.

The implication is not simply that more spending is better. It is that the composition of investment matters. Renewal without expansion leaves part of the access problem unresolved. Expansion without renewal leaves deterioration in place. Lower-ambition pathways leave value, capacity, and resident well-being on the table while shifting greater burden elsewhere in the system. The evidence therefore supports renewal plus new construction as the strongest overall pathway for preserving and strengthening community housing across the GTHA.

1. Introduction

1.1 Background

Public housing in the GTHA operates as both a housing system and a socioeconomic system. Investment decisions affect not only the number and condition of buildings, but also the stability, health, well-being, and long-run prospects of residents and households. Those investment decisions also affect public systems outside of the public housing system itself, including local economic activity, and the broader capacity of the region to maintain and expand affordable housing over time.

Public housing in Ontario operates within a legislative framework established by the *Housing Services Act, 2011*, which devolved responsibility for public housing from the provincial government to municipal service managers. This transfer shifted both operating obligations and capital renewal burden to municipalities and their designated housing providers (Hackworth & Moriah, 2006). The consequence has been well documented: capital renewal obligations have consistently exceeded the fiscal capacity of municipal service managers, producing a growing deferred-maintenance backlog across Ontario's public housing stock (Auditor General of Ontario, 2017). At the same time, affordability pressures across the broader GTHA housing market have intensified,x with purpose-built rental vacancy rates remaining below 2% in most submarkets (Canada Mortgage and Housing Corporation [CMHC], 2024) and subsidised-housing waiting lists in the City of Toronto alone exceeding 80,000 households (City of Toronto, 2023). The public housing system is therefore one of the few remaining sources of stable, long-term, affordable accommodation for lower-income households in the region.

The case for forward-looking analysis is therefore not limited to asset management. A public housing portfolio shapes who can be housed, the quality of those housing conditions, and the downstream pressures experienced by governments, communities, and the wider economy. The central policy question is not simply how much to spend in the near term, but what different investment pathways imply for system capacity, resident outcomes, and public value over the full evaluation horizon.

The study addresses that question for the full set of public housing investments covered across the GTHA. It is not a Toronto-only analysis except where a passage explicitly discusses source-data lineage, legacy implementation labels, or Toronto-specific context.

1.2 Objectives

This study has three linked objectives.

First, it provides a formal technical account of how alternative public housing investment pathways affect physical stock, resident outcomes, public-system burdens, and economic performance from 2026 to 2050.

Second, it compares the five scenarios on a common basis so that the risks of underinvestment and the gains from renewal, new construction, or a combined strategy can be assessed consistently.

Third, it translates the technical results into a decision-facing structure.

1.3 Methods

The study was prepared by the Canadian Centre for Economic Analysis (CANCEA) using ONEMODEL Version 7, CANCEA's proprietary agent-based socioeconomic simulation platform. CANCEA conducted a predecessor economic impact analysis of the Toronto Community Housing portfolio in 2015 using an earlier version of the platform (CANCEA, 2015). The current study extends that work by integrating a full social value dimension alongside the economic impact architecture and enabling the Total Impact framework.

The study uses an agent-based model of public housing outcomes across the GTHA. The model simulates annual interactions among governments, cities, neighbourhoods, providers, buildings, units, households, and persons over the 2026-2050 horizon. Scenario parameters act as exogenous investment inputs, while reported outcomes are endogenous responses that emerge through those interactions.

Within this framework, ONEMODEL traces how changes in capital pathways alter building condition, housing access, resident well-being, public-system burdens, and wider economic outcomes through time. Economic outputs are generated endogenously within the model rather than by applying an external multiplier overlay. Housing-related healthcare and justice burden results are interpreted through an observed-versus-counterfactual framework, with negative deltas indicating avoided burden relative to the defined reference trajectory.

Agent-based modelling is appropriate for this problem because it can represent heterogeneous agents, individual buildings, households, and persons, interacting over time, capturing emergent system behaviour that aggregate equilibrium models cannot reproduce (Farmer & Foley, 2009; Baptista et al., 2016). Unlike input-output or computable general equilibrium approaches, the agent-based framework allows the study to trace how a change in capital investment flows through building condition to resident health, through resident health to well-being and social value, and through well-being to productivity, economic output, and public-system burden, all within the same simulation run.

The same integrated structure also supports model integrity: scenario outputs are interpreted within common definitions, geography, time horizon, and reporting rules, with validation, sensitivity, and reproducibility disciplines described in Appendix A.

Impact is used in a present-value-style sense over the evaluation horizon. That framing is conservative because the present value of residual building value at the end of the horizon is not included. Monetary values are expressed in constant 2026 dollars.

The integration of economic impact and social value within a single agent-based model, producing housing, resident, economic, and public-system outcomes from one coherent simulation at this geographic scale and resolution, is, to our knowledge, without precedent in the published literature on public housing evaluation.

1.4 Scope of the Study

The study compares five investment and operations pathways:

1. Expected Funding
2. Reduced Funding
3. Renewal Only
4. New Construction Only
5. Both (Renewal + Construction)

These pathways form the common comparative frame. They represent different combinations of renewal and expansion rather than minor operational variations around a single baseline.

The analysis is generated by a single model - ONEMODEL - that simulates annual interactions among governments, cities, neighbourhoods, providers, buildings, units, households, and residents over the full evaluation horizon. Housing stock outcomes, social value, economic impact, service-system burden, and distributional effects are all generated within the same framework. This means the report's findings are internally consistent: a change in housing stock feeds through to resident outcomes, which feed through to social value and downstream burden, which feed through to the fiscal and economic case.

2. Public Housing System Baseline

2.1 Baseline Scale and Coverage

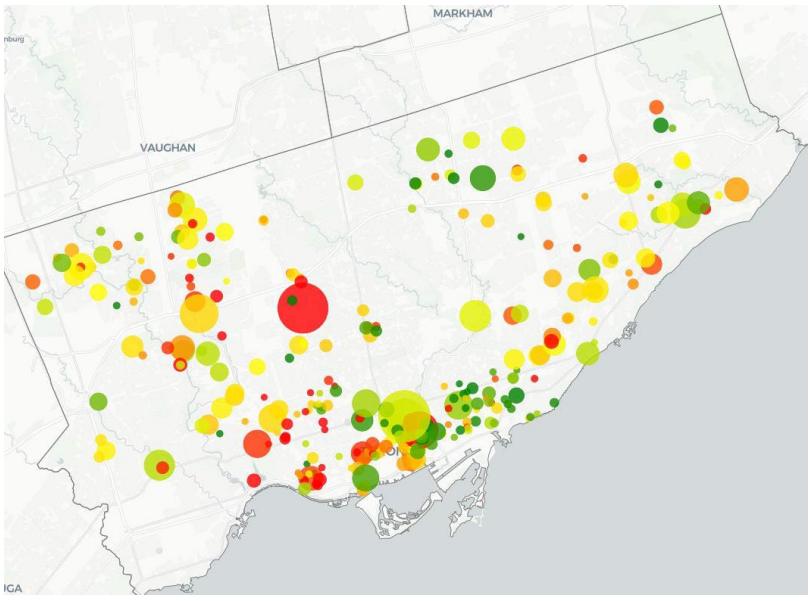
The study begins from a common 2026 baseline across the GTHA. That baseline is approximately 79,705 active public housing units housing 159,227 residents in more than 79,500 households. These units are located across over 600 developments in Toronto, Peel, York, Halton, Durham, and Hamilton.

2.2 Buildings, Units, and Facility Condition

The baseline is defined by the number of units in the system as well as building condition. The Facility Condition Index (FCI) is the standard asset-condition metric used in Canadian public infrastructure management. It is defined as the ratio of the cost of deferred maintenance to the current replacement value of the asset (Vanier, 2004). The Canadian Infrastructure Report Card has consistently identified municipal public housing as one of the public asset classes facing the most severe condition challenges nationally (Canadian Infrastructure Report Card, 2019). In Ontario, the Auditor General found that the provincial public housing system faced an estimated capital repair backlog exceeding $10 billion, with the majority concentrated in large urban providers (Auditor General of Ontario, 2017).

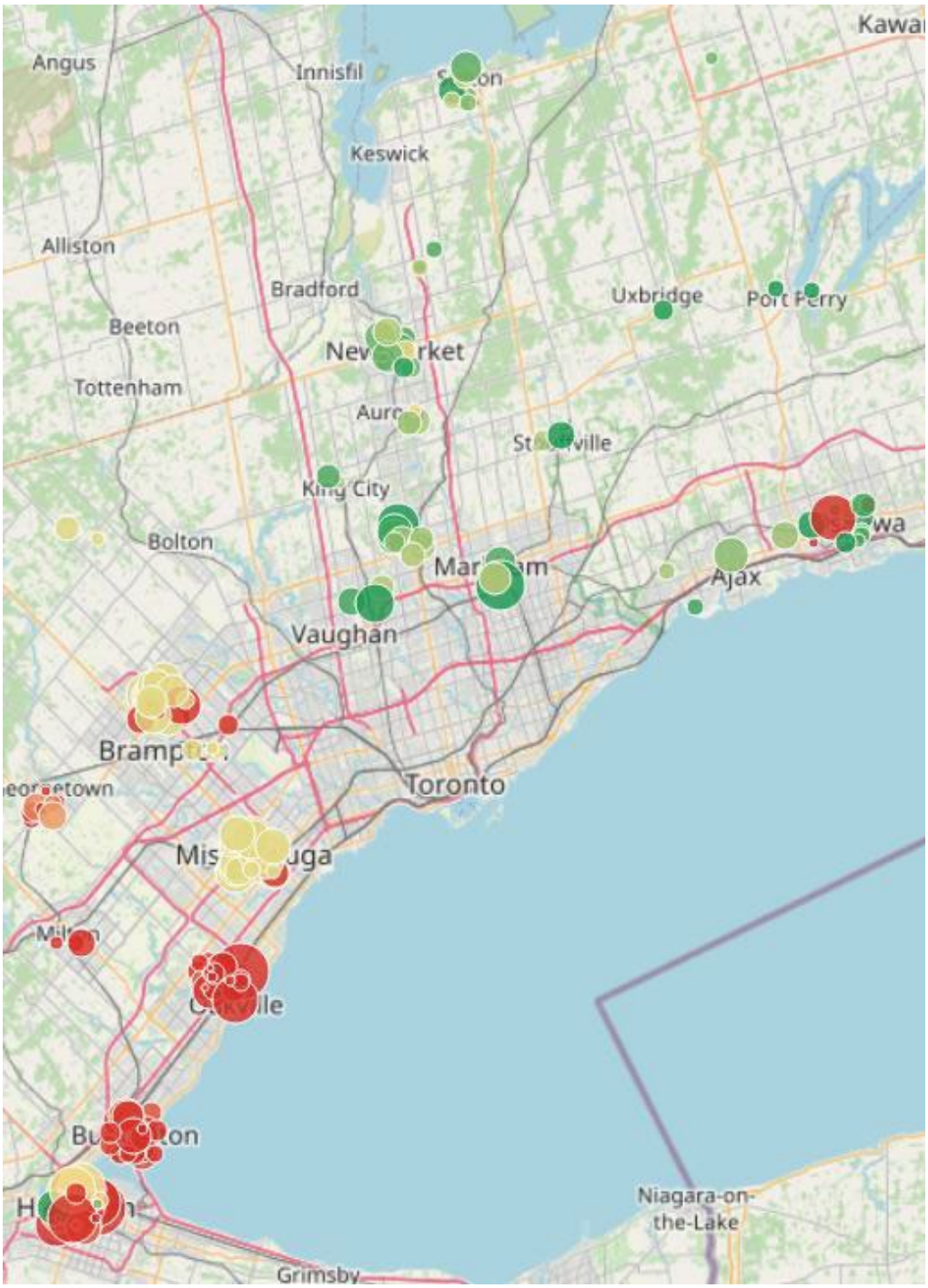
In this study, the Facility Condition Index is used to classify buildings as Good at 0-5% (green), Fair at 5-10% (yellow), Poor at 11-30% (amber), and Critical at more than 30% (red), and at closure risk once FCI rises above 65%. The following map show buildings in the City of Toronto with FCI above 30% in red, with the size of the circle corresponding to the number of units in the building.

Figure 1 Public housing buildings FCI in the Toronto region



The following map show buildings in the regions outside the City of Toronto with FCI above 30% in red, with the size of the circle corresponding to the number of units in the building.

Figure 2 Public housing buildings in the GTHA



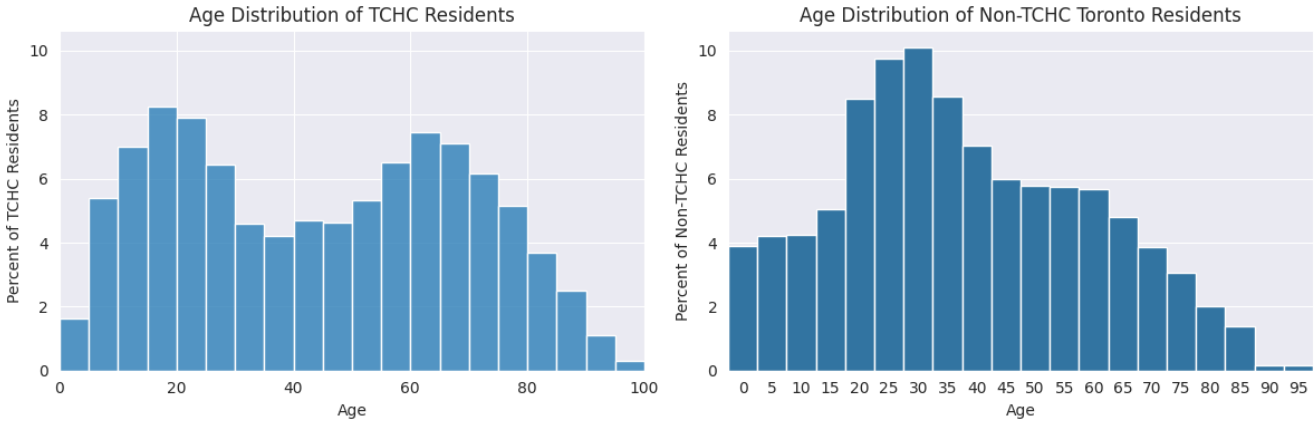
Note the Facility Condition Index is used to classify buildings as Good at 0-5% (green), Fair at 5-10% (yellow), Poor at 11-30% (amber), and Critical at more than 30% (red), and at closure risk once FCI rises above 65%.

2.3 Families, People, and Resident Context

The baseline also includes resident and household context. The public housing population differs considerably from wider city averages: it is characterised by lower average incomes, higher rates of disability, greater reliance on income-support programmes, and higher prevalence of chronic health conditions than the general population (Hwang et al., 2011; Pomeroy & Marquis-Bissonnette, 2016).

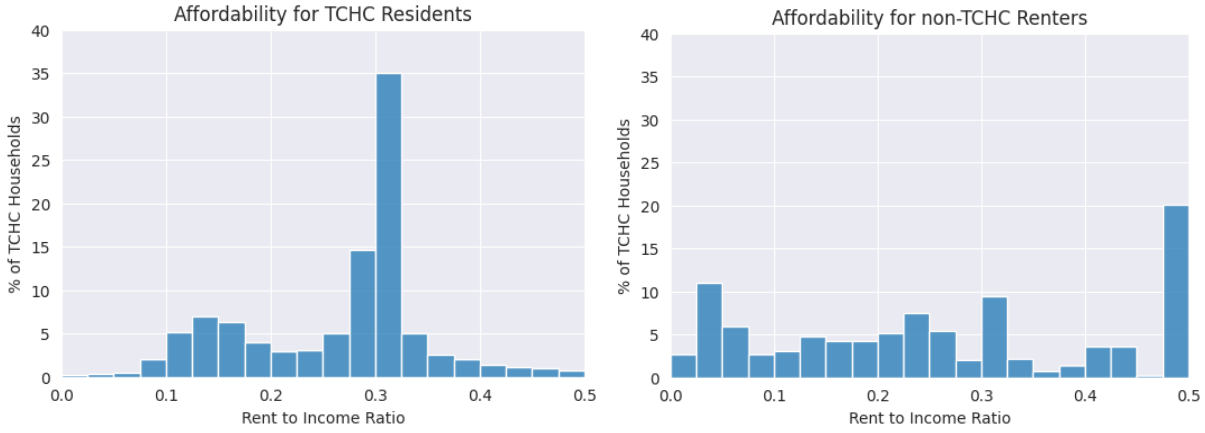
The age distribution also differs: individuals in public housing are overrepresented in the 20-year-old and 60–70-year-old cohorts, and underrepresented among those in their early thirties, relative to the non–public housing population, as shown in Figure 3.

Figure 3 Age distribution of public housing and non-public housing residents



Affordable housing conditions are closely tied to income security, affordability, and lived well-being. Figure 4 shows that, due to RGI and other affordable housing policies, rent-to-income ratio for public housing residents is often near and above the affordability threshold of 30%the standard CMHC benchmark, above which housing is classified as unaffordable (CMHC, 2024).

Figure 4 Rent-to-Income ratio for public and non-public housing residents



Such differences support the use of a model following residents and households directly rather than relying only on aggregate stock measures.

2.4 Tenant Satisfaction and Well-Being at Baseline

Housing quality, affordability, accessibility, access to services, and community safety all matter for resident well-being. Affordable housing can support financial security and stability even where building condition is not ideal, while deterioration in quality can weaken those gains over time.

Figure 6 shows the negative effect of unaffordable housing on well-being, and Figure 7 suggests older residents of public housing tend to report higher satisfaction with their housing.

Figure 5 Affordability and well-being

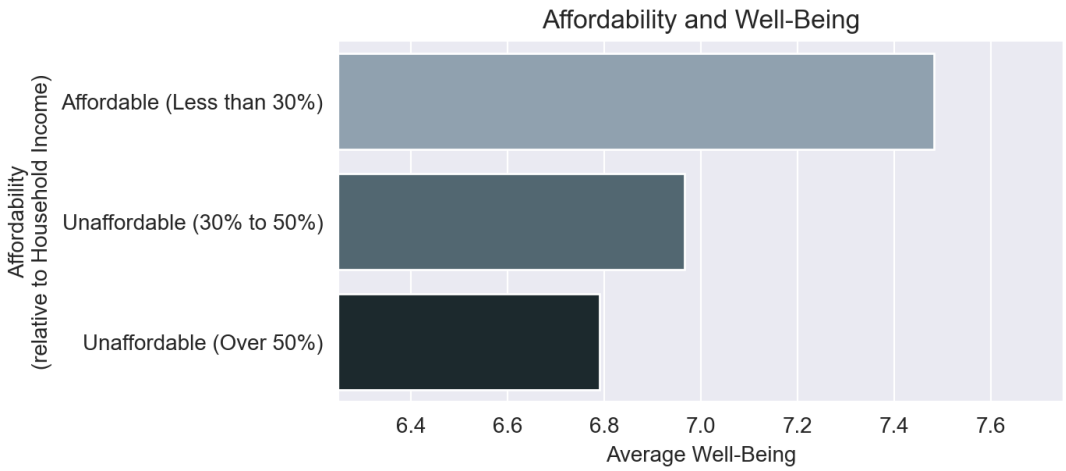
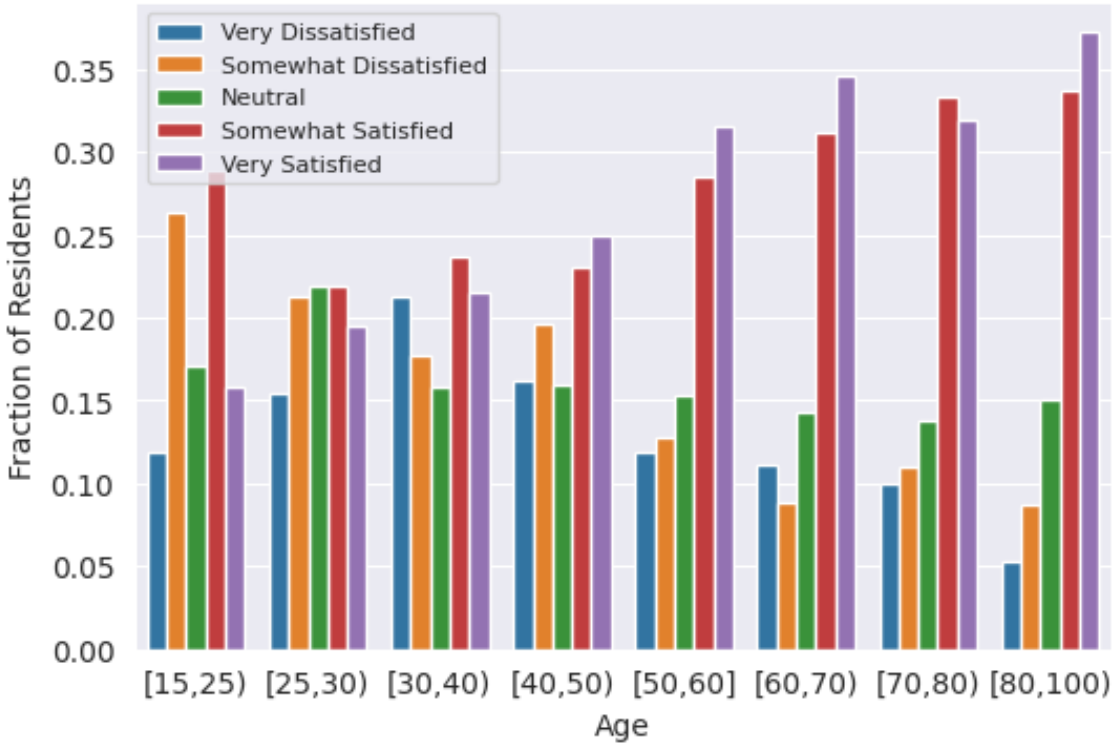


Figure 6 Age group and satisfaction



2.5 Scenario Structure

The report compares five pathways: Expected Funding, Reduced Funding, Renewal Only, New Construction Only, and Both (Renewal + Construction). These pathways represent different combinations of asset preservation and portfolio expansion. Some protect existing stock more effectively, some expand access more strongly, and some do both.

Table 5: Investment pathway scenarios

Scenario	Description
Scenario 1: Expected Funding (Status Quo)	Current funding levels maintained; existing portfolio management approach; baseline assumptions
Scenario 2: Reduced Funding	Decreased investment levels; impact on portfolio condition; service reduction implications
Scenario 3: Renewal Only (State of Good Repair Focus)	Enhanced capital investment for repairs; asset preservation strategy; existing unit rehabilitation; FCI of existing buildings improves to 5% by 2035 and is maintained
Scenario 4: New Construction Only (Construction Focus)	Net-new unit development; portfolio expansion strategy; new builds and acquisitions; maintenance and SOGR remain at status quo level
Scenario 5: Both (Renewal + Construction)	Balanced investment in repairs and new construction; portfolio optimization strategy; integrated capital planning; FCI of existing buildings improves to 5% by 2035 and is maintained

2.6 Why This Baseline Matters

The baseline establishes the starting conditions against which all later results are interpreted. It defines a regional public housing system with meaningful scale, uneven building condition, and a resident population whose outcomes are sensitive to both affordability and quality.

With that starting point established, later differences in units, well-being, GDP, and public-system burden can be read as system choices acting on a clearly defined physical and social base.

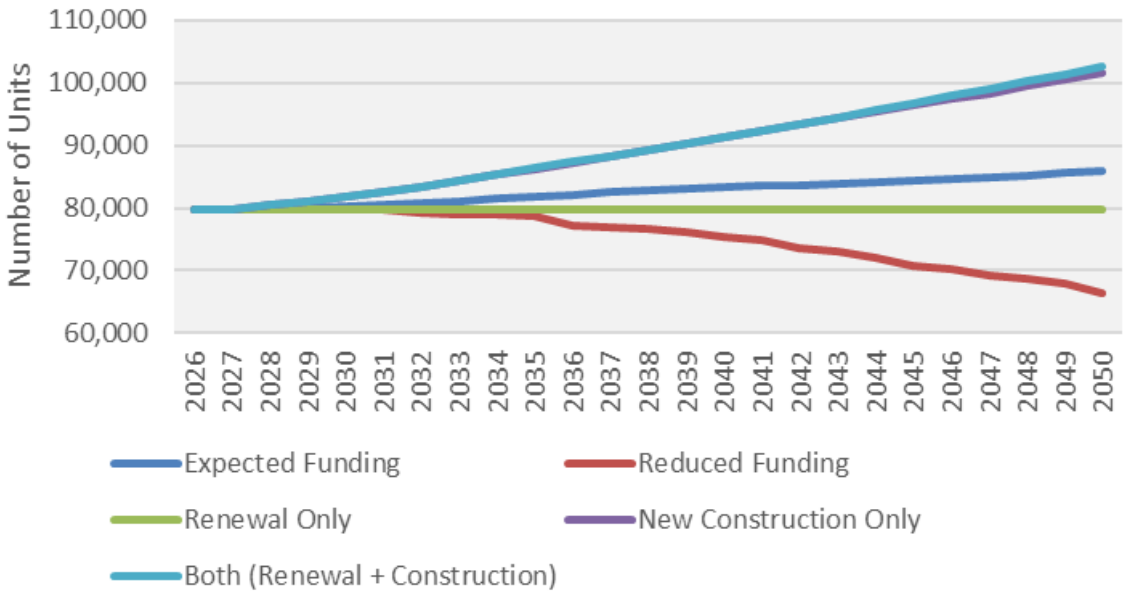
3. Housing Stock and Portfolio Outcomes

ONEMODEL allows the study to trace how each investment pathway changes units, building condition, and people housed over time. The central result is that pathway choice changes not only whether the portfolio grows, but whether the existing system remains physically viable.

3.1 Inventory Change

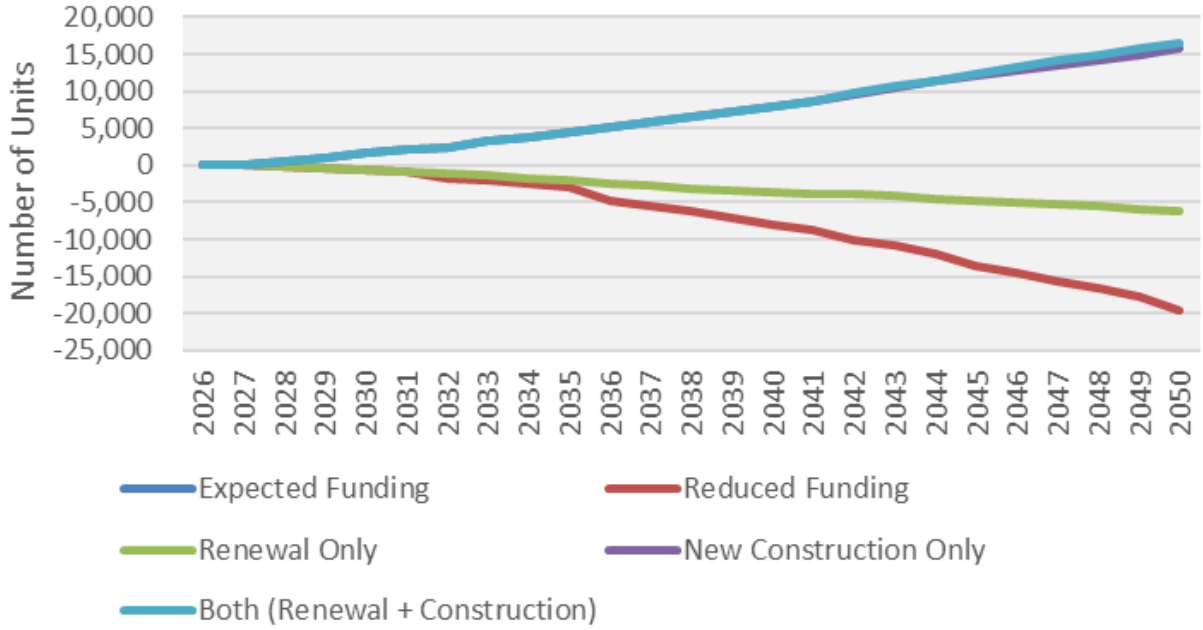
Depending on the investment scenario, there is a wide range in 2050 stock outcomes, as shown in Figure 8. Relative to the 2026 baseline of 79,705 active units, Expected Funding reaches 85,948 units, Reduced Funding falls to 66,383 units, Renewal Only remains at 79,705 units, New Construction Only rises to 101,665 units, and Both (Renewal + Construction) reaches 102,545 units.

Figure 7 Annual estimated number of public housing units until 2050



Relative expected changes in stock are shown in Figure 9. Reduced Funding produces substantial loss of capacity. Renewal protects the existing portfolio but does not substantially expand access. New Construction and the combined pathway expand the stock substantially, with the combined pathway producing the largest absolute 2050 inventory.

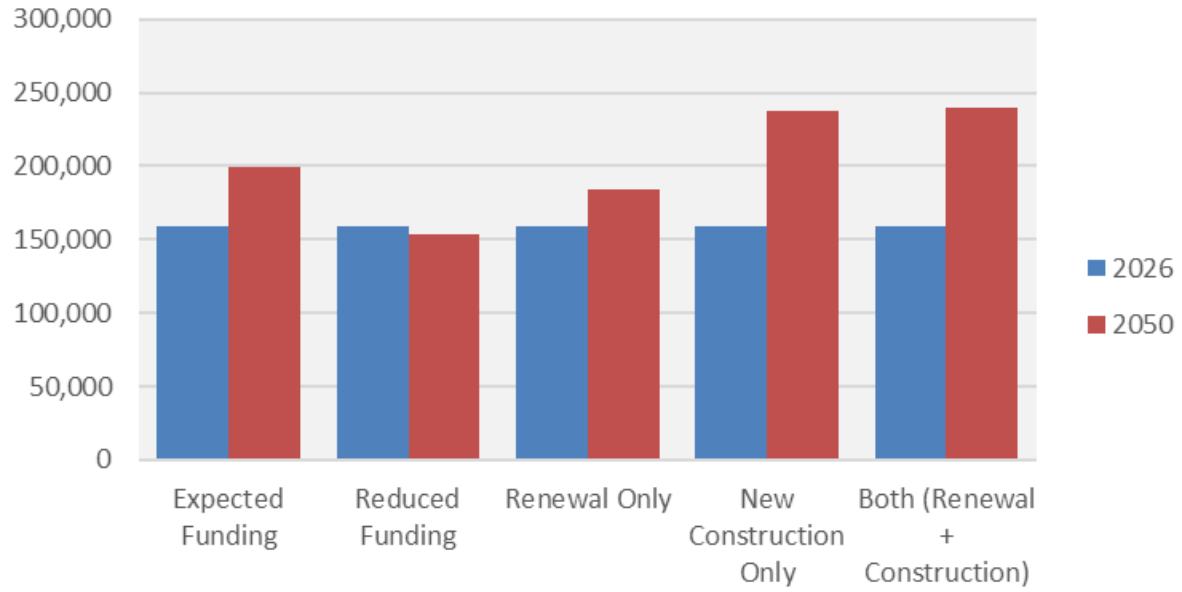
Figure 8 Annual difference in the estimated number of public housing units relative to the expected scenario



3.2 Population Housed

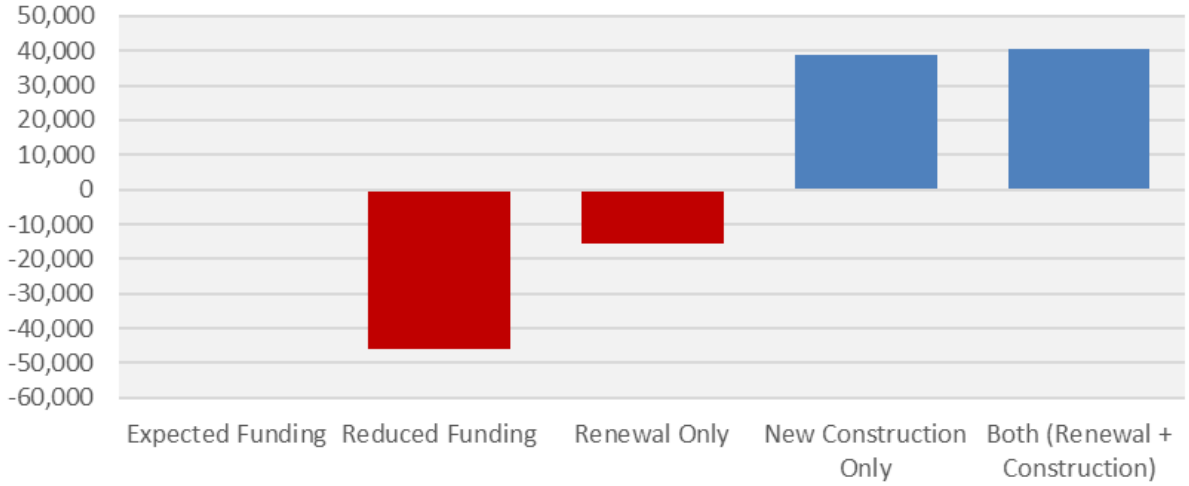
The stock changes are reflected in the number of people housed, shown in Figure 10. The combined pathway reaches 239,500 housed residents by 2050, compared with 153,304 under Reduced Funding. Expected Funding reaches 199,227, Renewal Only reaches 183,764, and New Construction Only reaches 237,909.

Figure 9 Population housed by pathway



The policy significance of this spread is straightforward. Lower-investment pathways reduce system capacity and leave fewer people housed. Growth pathways substantially widen access. The combined pathway houses more than 86,000 additional residents relative to Reduced Funding by 2050, while Reduced Funding leaves roughly 6,000 fewer people housed than at the 2026 baseline. Renewal by itself improves the quality and durability of the existing stock, but without new supply it cannot produce the same access gains as the construction-led pathways.

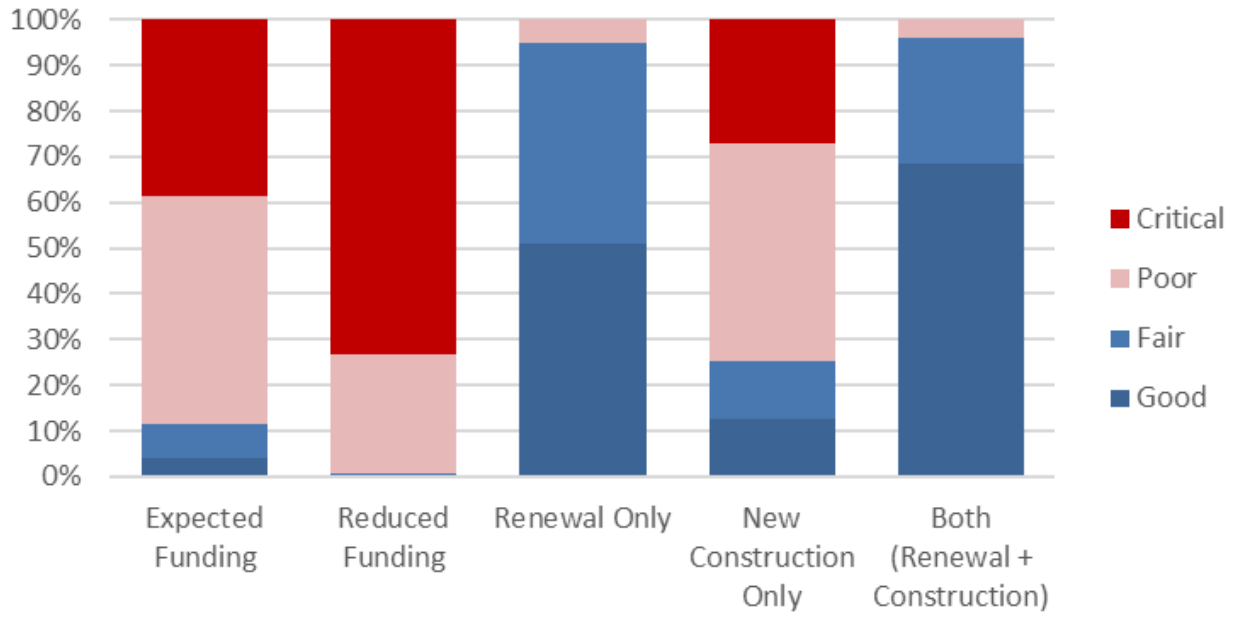
Figure 10 Difference for each investment pathway, relative to Expected Funding1



3.3 Building Condition

Besides unit totals, each pathway affects the condition of the remaining portfolio differently. The final-year FCI band split in Figure 12 shows that Reduced Funding leaves 48,611 units in the critical band by 2050, while Expected Funding still leaves 33,188 units in critical condition. New Construction Only expands stock, but still leaves 27,692 units in critical condition because it does not solve the condition problem in the existing portfolio. By contrast, both Renewal Only and Both (Renewal + Construction) reduce critical-condition units to zero in the final-year reporting split.

Figure 11 FCI distribution for each pathway



Closure risk is also explicit. Under Reduced Funding, the system reaches 139 building closures and 13,322 closed units by 2050. Under the combined pathway, there are no closures or lost units by 2050. In the Reduced Funding case, more than 70% of the remaining buildings are in critical condition by 2050, while even Expected Funding allows average condition to continue deteriorating.

Combined with the estimates for total units, the expected conditions highlight how the combined pathway improves both dimensions at once.

3.4 Investment Pathways

The pathway differences above are driven by substantially different capital profiles. Reduced Funding is the low-investment pathway and the combined pathway is the highest-investment option, with renewal and construction-only scenarios occupying different positions between those poles. Reduced Funding averages about $260M in annual investment across the GTHA, while the combined pathway averages about $1.4B annually. Figures 13 and 14 show the average annual investments as well as the total investments for each scenario.

Figure 12 Average annual investment for each pathway ($M)

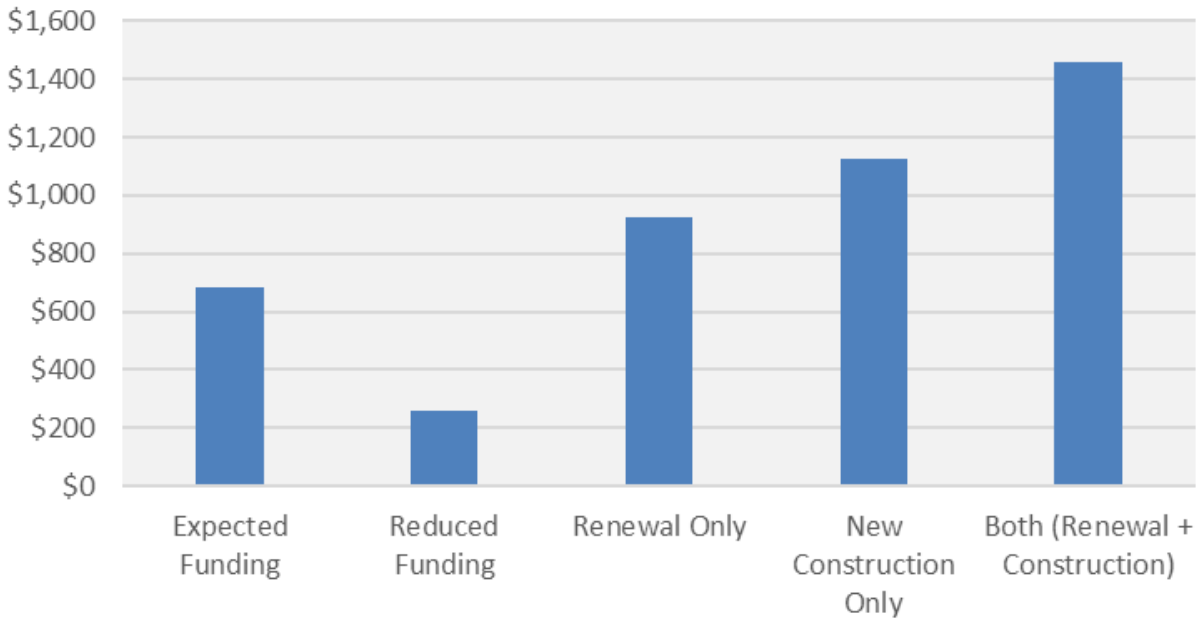
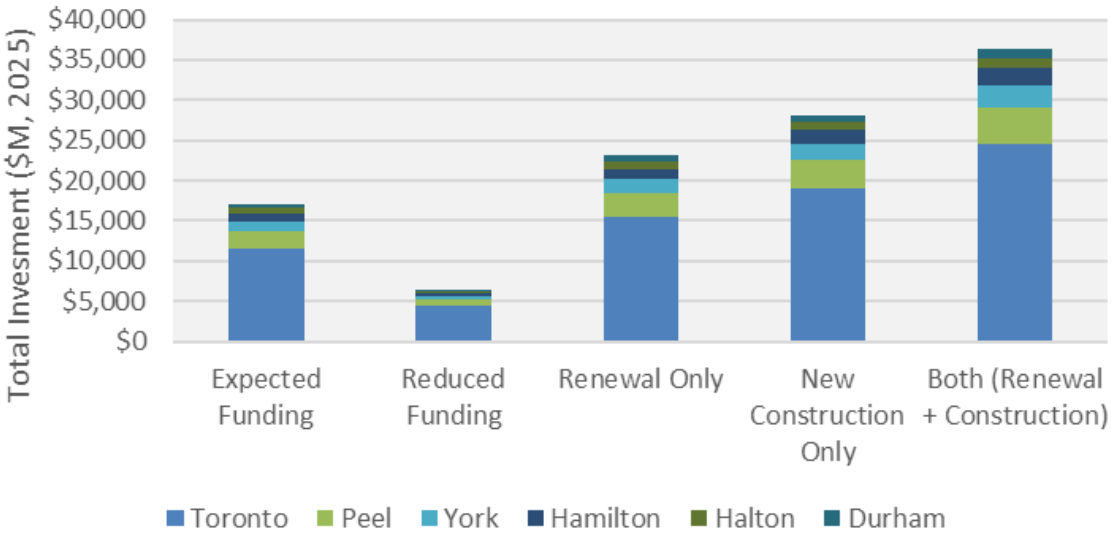


Figure 13 Cumulative investments for each pathway, with region distinction



3.5 Interpretation

Each scenario produces different physical systems by 2050. Reduced Funding shrinks capacity and leaves a heavily deteriorated portfolio. Expected Funding avoids the worst outcome but still allows substantial condition decline. Renewal Only preserves viability but does not substantially expand access. New Construction Only expands stock strongly but leaves much of the legacy portfolio in weak condition. The combined pathway is the only option that both expands access and substantially improves portfolio quality.

4. Value Proposition and Metrics

Value measurement metrics such as NPV, BCR, SROI, IRR, social value, and cost-effectiveness usually come from different disciplines, different datasets, and different methods, which is why they are often presented as separate and sometimes competing answers to the same policy question. Cost-benefit analysis developed its own net-value and ratio tradition (Prest & Turvey, 1965; Remer & Nieto, 1995b). Social return on investment emerged from social-enterprise and public-value practice (Millar & Hall, 2013; Hutchinson et al., 2019). Well-being valuation developed in environmental and health economics as a way of monetising changes in life satisfaction and capability (Welsch, 2006; Luechinger, 2009; Himmler et al., 2020). Return-style measures such as IRR and MIRR come from project appraisal and engineering economics (Hazen, 2003; Magni, 2010).

Because the outputs are generated from one ONEMODEL result base, the report can present social value, economic impact, benefit-cost ratios, public-system savings, and resident outcomes as compatible views of the same scenario pathways. The model traces people, households, businesses, governments, buildings, and units within one connected system, so changes in housing stock can be followed through to resident outcomes, service-system burden, fiscal effects, and economic contribution.

All monetary values in this section are reported in constant 2026 dollars and in present-value terms over 2026-2050. Plain-language definitions are provided below. Formal definitions, formulas, and source notes are provided in the appendices.

4.1 The Metric Set

Table 6: Value metric definitions and interpretation framework

Measure	Plain-language definition	What it captures in ONEMODEL
Total Impact	The broadest overall measure of value created over the study horizon.	The combined economic and social result of each investment pathway.
Economic Impact	The economic contribution generated by the pathway.	Production, jobs, and related economy-facing effects captured in the model's economic outputs.
Social Value	The monetised value of improved well-being and lived outcomes.	Changes in resident and community outcomes arising from housing quality, stability, health, safety, and access.
Resident Social Value	The share of social value accruing directly to people housed in the system.	The direct resident benefit of better housing conditions and stability.
Community Social Value	The share of social value accruing more broadly to communities.	The wider spillover value associated with reduced deterioration, instability, and neighbourhood stress.
Benefit-Cost Ratio	Benefits per dollar of capital cost.	The broad value-for-money lens over the report's benefit stack.
Social Return on Investment	Social value per dollar of capital cost.	The social-value return lens.
Public-and-Social Benefit-Cost Ratio	Public-system savings, social value, and tax revenue per dollar of capital cost.	A government-facing policy lens built from ONEMODEL outputs.
MIRR	A return-style measure using explicit finance and reinvestment assumptions.	A disciplined return measure for multi-year cost and benefit streams.
ERR	A return-style measure based on economically valued flows.	A complementary economic return lens derived from the same result base.

Taken together, these measures show that public housing creates value in more than one way: some metrics describe scale; some describe composition; some describe

value relative to cost; some isolate the social channel; some speak more directly to government. ONEMODEL makes it possible to read all of them from one framework rather than assembling them from disconnected methods.

4.2 Total Impact

The central value measure is:

Total Impact = Economic Impact + Social Value

This is the broadest expression of the investment case because it brings together the two main dimensions of value created by public housing. One dimension is economic: production, employment, income, and related activity. The other is social: better health, greater stability, improved well-being, and stronger community conditions. Keeping those two dimensions together is important because public housing is both social infrastructure and economic infrastructure.

At the GTHA level, the ranking is clear. Both (Renewal + Construction) produces the largest total impact at about $102B, followed by New Construction Only at about $77B, Renewal Only at about $41B, Expected Funding at about $30B, and Reduced Funding at about -$0.5B.

Table 7: Total Impact (Economic Impact + Social Value) by pathway

Pathway	Economic Impact	Social Value	Total Impact
Expected Funding	$25.6B	$4.40B	$30.0B
Reduced Funding	$8.3B	-$8.80B	-$0.5B
Renewal Only	$32.5B	$9.00B	$40.6B
New Construction Only	$41.6B	$35.20B	$76.8B
Both (Renewal + Construction)	$53.8B	$48.30B	$102B

The strongest pathway is not merely the one with the highest construction volume or the largest economic contribution. It is the one that improves the inherited stock, expands future access, and therefore produces the strongest combined economic and social outcome.

4.3 Economic Impact

Economic Impact is the economic contribution generated by each pathway over the evaluation horizon. In the broader literature, economic appraisal often centres on NPV, BCR, or production-linked measures depending on the audience and data available (Prest & Turvey, 1965; Pasqual et al., 2013). In this study, economic impact is

presented directly because it is readily interpretable: it shows how stronger housing pathways affect the wider economy.

At the GTHA level, Both (Renewal + Construction) produces about $53.8B in economic impact. New Construction Only reaches about $41.6B, Renewal Only about $32.5B, Expected Funding about $25.6B, and Reduced Funding about $8.3B.

Public housing investment does not stop at the housing system itself. It feeds through to employment, production, and government revenues. In ONEMODEL, those are not external overlays; they are model outputs generated from the same scenario structure as the housing and social results.

4.4 Social Value

Social Value is the monetised value of improved lived outcomes. In the well-being valuation literature, this kind of measure is built by translating changes in subjective well-being or related quality-of-life states into money-equivalent terms (Welsch, 2006; Luechinger, 2009; Shi et al., 2019; Himmler et al., 2020). For public housing, that matters because the consequences of better housing are not exhausted by rents, units, or GDP. Housing quality, stability, affordability, health, safety, and household resilience all affect well-being directly.

At the GTHA level, Both (Renewal + Construction) produces about $48.3B in social value. New Construction Only produces about $35.2B, Renewal Only about $9.0B, Expected Funding about $4.4B, and Reduced Funding is negative at -$8.8B.

The negative value under Reduced Funding is substantively important. It indicates that lower-investment pathways do not merely create less benefit. They also allow conditions to worsen enough that the cumulative social effect turns harmful over the study horizon.

4.5 Resident Social Value and Community Social Value

One of the strengths of the social-value lens is that it can answer the question of who benefits. In this study, the social-value scorecard separates value accruing directly to residents from value accruing more broadly to communities.

At the GTHA level, the combined pathway produces about $44.2B in resident social value and about $4.2B in community social value, for a total of about $48.3B. New Construction Only produces about $33.6B in resident social value and about $1.7B in community social value. Reduced Funding is negative on both components.

Table 8: Resident and community social value by pathway

Pathway	Resident Social Value	Community Social Value	Total Social Value
Expected Funding	$5.2B	-$0.8B	$4.4B
Reduced Funding	-$6.1B	-$2.7B	-$8.8B
Renewal Only	$7.7B	$1.4B	$9.0B
New Construction Only	$33.6B	$1.7B	$35.2B
Both (Renewal + Construction)	$44.2	$4.2	$48.3

This split shows that public housing generates both direct and spillover benefits. Residents gain through better living conditions, greater security, improved health, and stronger day-to-day stability. Communities benefit when deterioration is reduced, public disorder pressures ease, and the wider local environment becomes more stable.

4.6 Benefit-Cost Ratio

Benefit-Cost Ratio is the broad value-for-money measure used here. In the project-appraisal literature, the measure is straightforward: discounted benefits divided by discounted costs (Prest & Turvey, 1965; Remer & Nieto, 1995b). Here it shows how much value is generated relative to capital invested under the report's broad benefit stack.

At the GTHA level, the ratio is 2.80x for Both (Renewal + Construction), 2.72x for New Construction Only, 1.76x for Renewal Only, 1.75x for Expected Funding, and -0.08x for Reduced Funding.

4.7 Social Return on Investment

Social Return on Investment isolates the social channel by asking how much social value is created for each dollar of capital cost. In the literature, SROI is often used where the social consequences of an intervention are central to the decision being made (Millar & Hall, 2013; Banke-Thomas et al., 2015; Hutchinson et al., 2019).

At the GTHA level, Social Return on Investment is 1.33x for Both (Renewal + Construction) and 1.25x for New Construction Only. It falls to 0.39x for Renewal Only, 0.26x for Expected Funding, and becomes negative under Reduced Funding.

4.8 Public-and-Social Benefit-Cost Ratio

Public-and-Social Benefit-Cost Ratio is a policy-focused measure built from the ONEMODEL result base. It combines utilisation savings, social assistance savings, social value, and tax revenue, then compares that total with cumulative capital cost.

It answers a practical government question: how much public and social benefit is generated for each dollar invested when the focus is on system pressure, social outcomes, and revenue effects rather than on GDP alone?

At the GTHA level, the measure is 1.8x for Both (Renewal + Construction), 1.72x for New Construction Only, 0.76x for Renewal Only, 0.65x for Expected Funding, and -1.46x for Reduced Funding.

For government readers, the metric is most useful when the underlying channels are visible. The table below shows the full GTHA decomposition.

Table 9: Public-and-Social Benefit-Cost Ratio decomposition by pathway

Pathway	Capital Cost	Utilisation Savings	Social Assistance Savings	Social Value	Public Revenue	Public-and-Social Benefit Numerator	Public-and-Social Benefit-Cost Ratio
Expected Funding	$17.1B	$0.0B	$0.00B	$4.40B	$6.77B	$11.2	0.65x
Reduced Funding	$6.4B	-$1.2B	-$2.51B	-$8.80B	$3.15B	-$9.4	-1.46x
Renewal Only	$23.1B	$0.98B	-$0.99B	$9.00B	$8.57B	$17.6	0.76x
New Construction Only	$28.2B	$0.69B	$2.33B	$35.20B	$10.25B	$48.5	1.72x
Both (Renewal + Construction)	$36.4B	$1.76B	$2.43B	$48.30B	$13.15B	$65.6	1.80x

4.9 Reading The Metrics Together

ONEMODEL allows the same investment pathways to be read through several valid and academically recognisable value lenses without losing coherence across them.

Total Impact shows the broad overall case. Economic Impact shows the wider-economy contribution. Social Value shows the lived-outcomes case. Resident Social Value and Community Social Value show who gains. Benefit-Cost Ratio shows broad value for money. Social Return on Investment isolates the social return. Public-and-Social Benefit-Cost Ratio brings the government-facing case into focus.

Across that set of measures, the conclusion is stable. Both (Renewal + Construction) is the strongest overall pathway. It produces the largest total impact, the largest social value, the largest economic impact, the strongest broad value-for-money ratio, and the strongest government-facing policy ratio. That is why the combined pathway stands out not only as the best-performing scenario on one metric, but as the strongest performance across the full set of value lenses.

5. Social Value Impact

ONEMODEL follows housing changes through to lived outcomes for residents and nearby communities. Social value is the monetised expression of those outcomes, combining resident well-being effects and community spillovers.

5.1 What Social Value Means in This Study

Social value captures how housing stability, building condition, affordability, health, mental health, family resilience, and broader community effects accumulate over time. It is distinct from GDP, employment, tax revenue, and avoided healthcare or justice cost (which are reported in the Economic Impact and Service-System sections).

The social value methodology used in this study draws on the subjective well-being valuation approach, which monetises changes in well-being using income-equivalent valuations. Peer-reviewed applications and refinements of this approach appear in health, environmental, and non-market valuation research (Ferrer-i-Carbonell & van Praag, 2002; van Praag & Baarsma, 2005; Luechinger, 2009; Powdthavee & van den Berg, 2011). This approach is now standard in United Kingdom government appraisal (HM Treasury, 2021). In Canada, CANCEA's Social Value Trust framework applies person-level, agent-based modelling to social value measurement, modelling individuals within their unique circumstances rather than as group averages, and has been applied to pension plans, buildings, infrastructure, and housing (CANCEA, 2022; CANCEA, 2024). The well-being composite used in this study follows an OECD-style multidimensional structure (OECD, 2013), weighting health, economic conditions, housing quality, family stability, and accessibility.

The cumulative totals show that the combined pathway produces about $48.3B in total social value across 2026-2050, consisting of about $44.2B in resident social value, driven by the availability of new housing, and about $4.2B in community social value. New Construction Only produces about $35.2B in total social value, Renewal Only about $9.0B, Expected Funding about $4.4B, and Reduced Funding about -$8.8B.

Renewal Only reaches the highest average resident well-being score, while Both (Renewal + Construction) combines strong well-being with much greater housing access. New Construction Only leads on social value per dollar, even though the combined pathway produces the strongest overall absolute social-value total.

5.2 Residents, Buildings, and Exposure to Poor Conditions

Insufficient renewal leaves more residents exposed to poor or critical buildings. As seen in Figure 12, that pattern appears not only under Reduced Funding, but also under Expected Funding and New Construction Only, where stock growth or maintenance of the status quo does not by itself remove deterioration pressure from the inherited stock.

5.3 Age Profiles and Access

Pathway choice also changes who can access housing. Growth pathways allow more younger households and families with children to enter the system, while lower-investment and no-growth pathways constrain that access, as shown in Figures 15 and 16.

Figure 14 Number of residents by age group in 2026 for each pathway

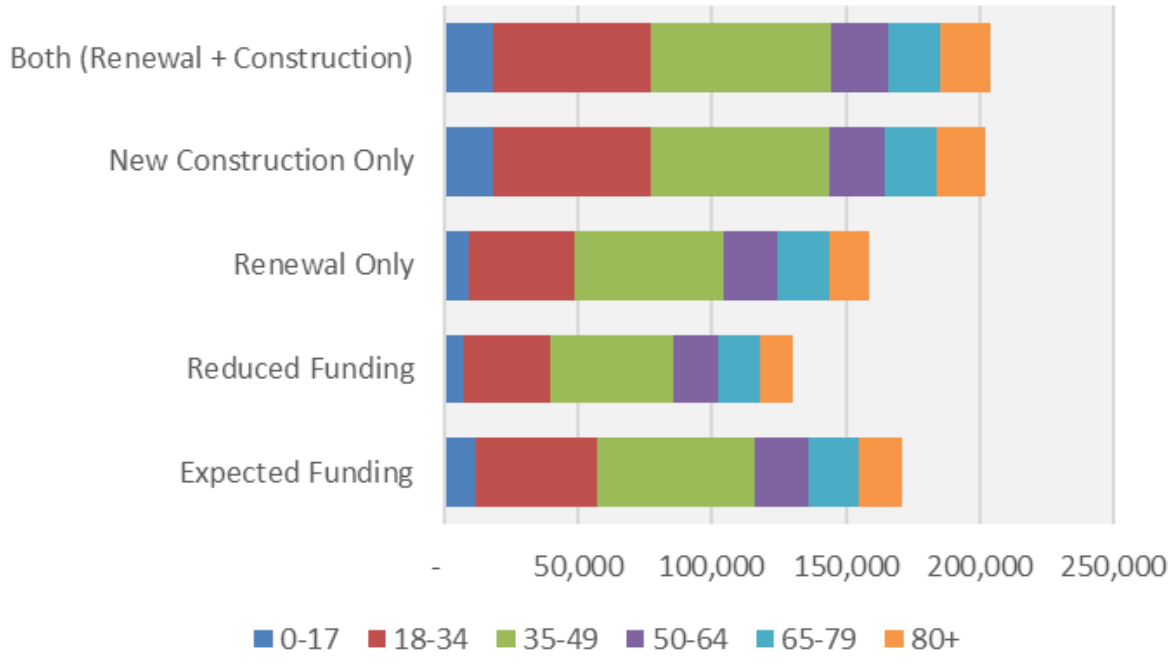
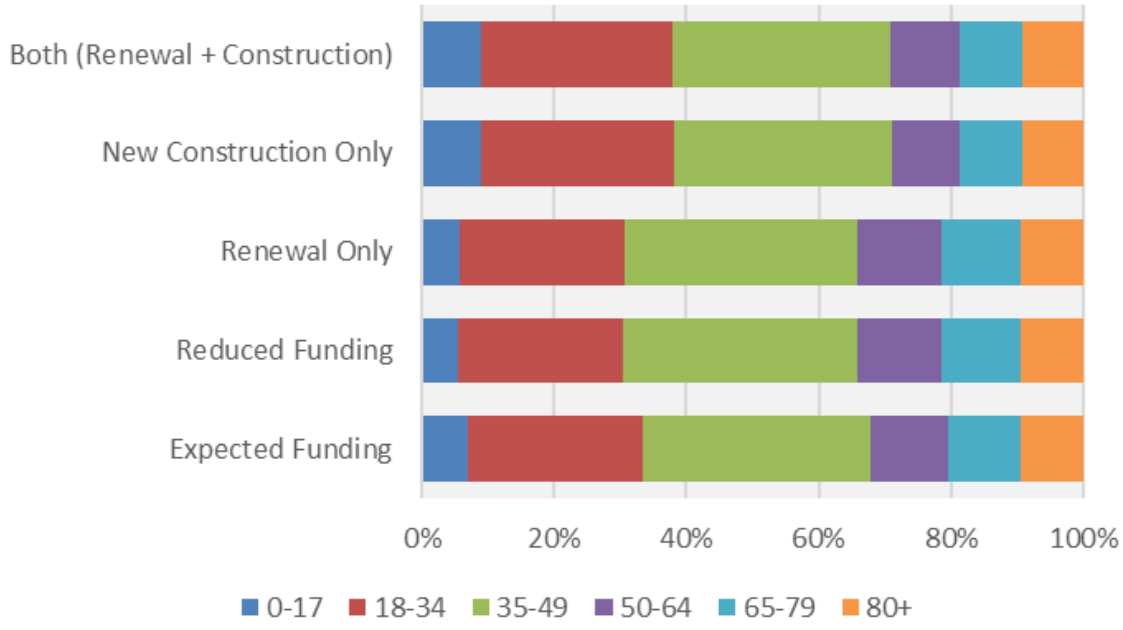


Figure 15 Distribution of residents by age group in 2050 for each pathway

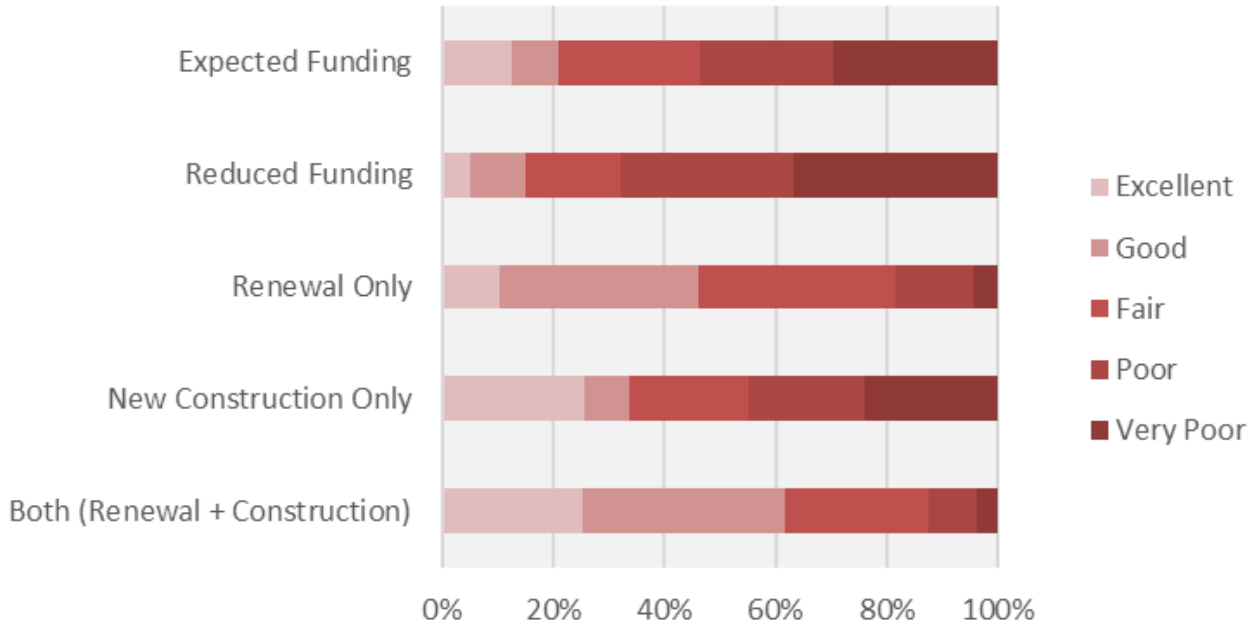


5.4 Health and Mental Health

The relationship between housing conditions and health outcomes is extensively documented in social epidemiology. Housing improvements have been consistently associated with improvements in general health, respiratory health, and mental health (Thomson et al., 2013). In the Canadian context, public housing residents have been found to have significantly elevated rates of chronic disease, mental health conditions, and acute healthcare utilisation compared with the general population (Hwang et al., 2011). Housing affordability stress, typically defined as housing costs exceeding 30% of household income, has been independently associated with poorer mental health outcomes (Bentley et al., 2011).

Housing quality and affordability affect health and mental health directly. Figure 17 shows expected outcomes for general health on each scenario. Under Reduced Funding, over 67% of residents are likely to have poor or very poor health, while the combined pathway reduces that share to 12%. These improvements are also connected to both resident well-being and lower downstream system burden.

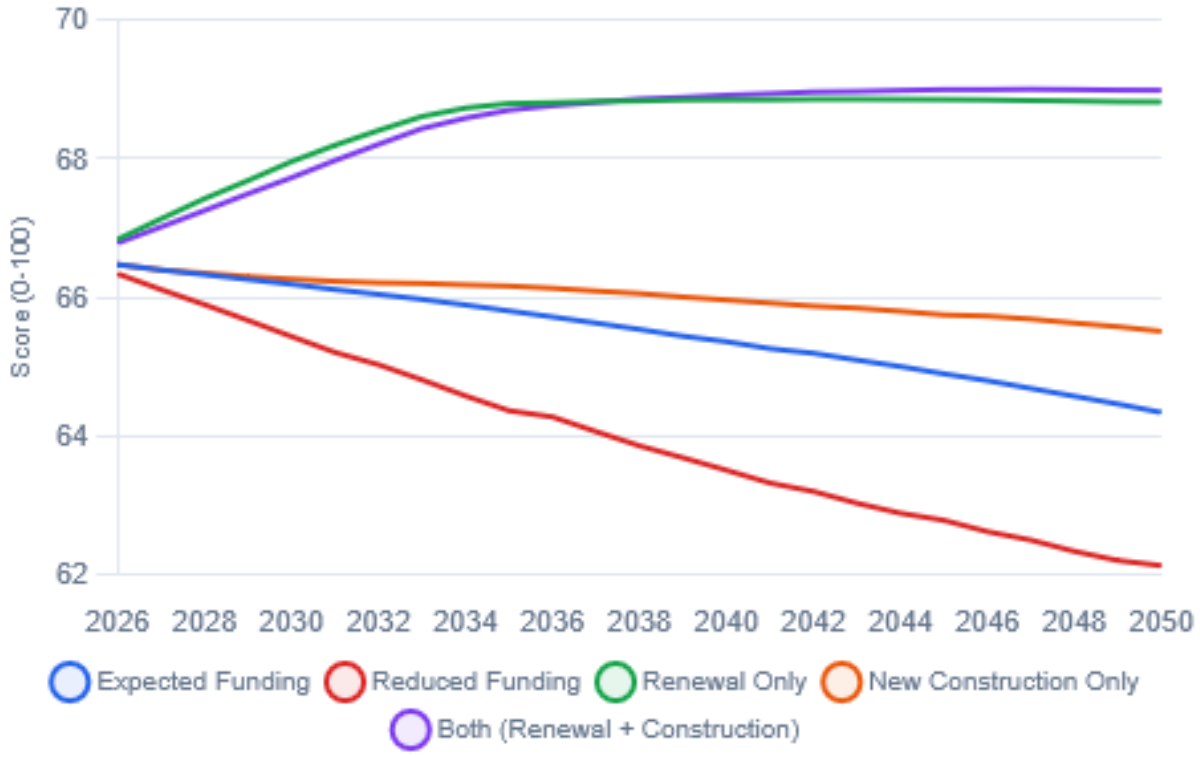
Figure 16 Health distribution of public housing residents for each pathway by 2050



5.5 Family Stability and Satisfaction

Family stability and satisfaction are part of the mechanisms through which housing affects daily resilience, tenancy continuity, and the capacity to absorb health or income shocks. Renewal pathways improve family stability, while lower-investment pathways weaken it. Figure 18 shows the expected average score for each scenario.

Figure 17 Average family stability score for each pathway



The table below shows how to interpret the stability scores, with indicators below 60 meaning vulnerability is present.

Table 10: Family stability score interpretation scale

Score Range	Description
80–100	Very stable household context
70–79	Generally stable with manageable stress
60–69	Mixed stability; vulnerability to shocks is present
50–59	Fragile stability; recurring strain likely
Below 50	High instability risk

5.6 Resident Well-Being and Aggregate Social Value

Across the well-being and social value comparison, in cumulative terms, the combined pathway produces the highest total social value, while Reduced Funding is the only pathway that turns cumulative social value clearly negative. New Construction Only performs strongly on aggregate scale, while Renewal Only performs more strongly on condition-led resident well-being than on access scale. The combined pathway captures both effects.

There is also a further threshold effect in the well-being distribution. By 2050, about 30% of residents are in the excellent well-being range under the Renewal Only and Both (Renewal + Construction) pathways, compared with under 15% in the other scenarios. That is a meaningful distributional point, not just a marginal shift in the average score.

Figure 18 Resident well-being score by pathway

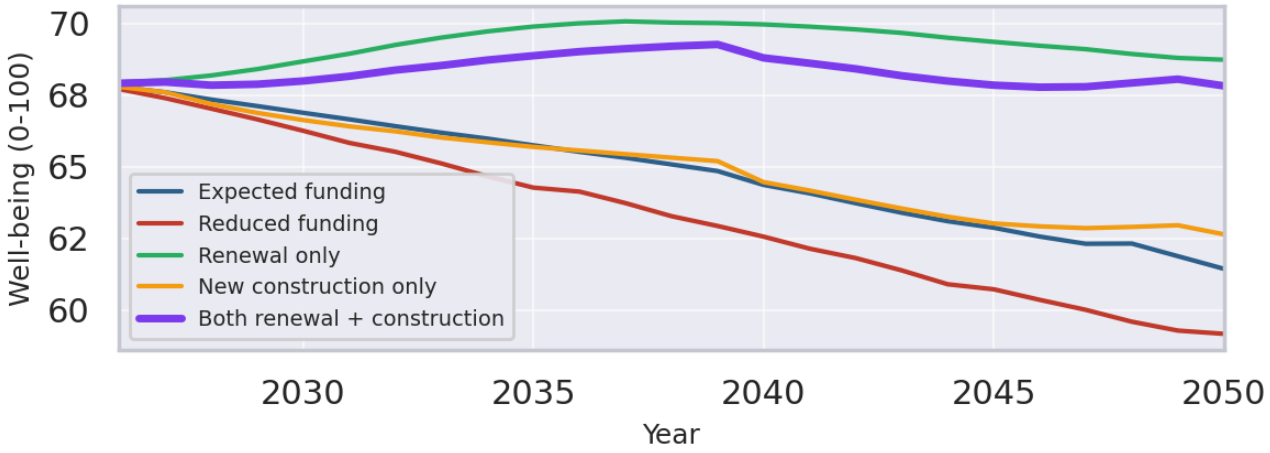
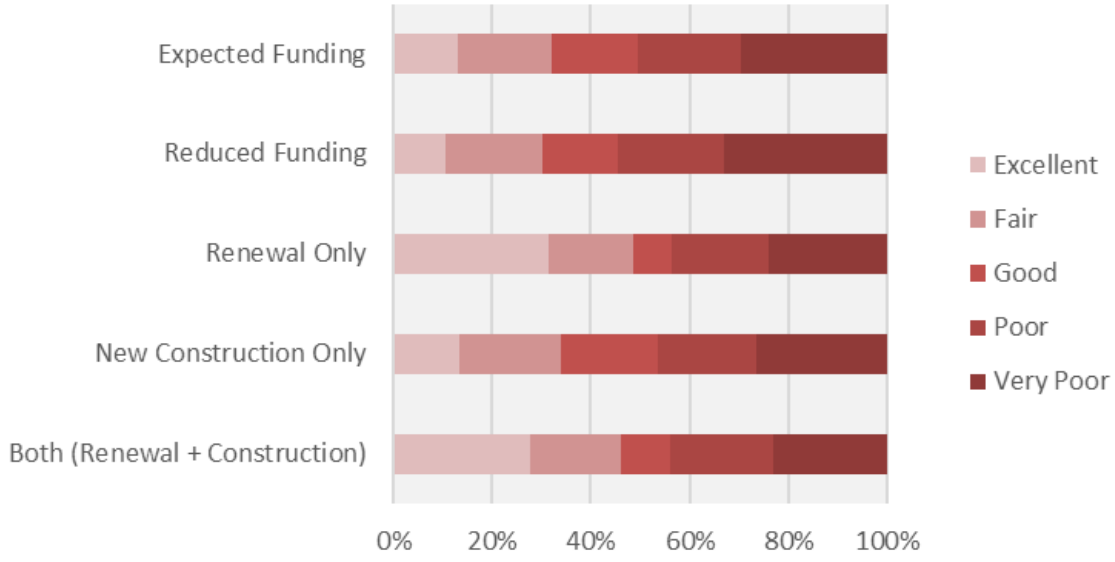


Figure 19 Distribution of resident well-being scores by pathway by 2050



5.7 Interpretation

The social value section showed that pathway choice changes lived experience in ways that are not reducible to GDP or fiscal savings. Lower-investment pathways worsen exposure to poor conditions, weaken health and household outcomes, and ultimately turn cumulative social value negative. Renewal improves the quality side of the system. New construction improves the access side. The combined pathway performs best overall because it improves both at the same time.

6. Economic Impact

ONEMODEL shows how housing and resident outcomes feed back into jobs, GDP, private investment, wages, and business performance.

6.1 Economic Interpretation

Two distinct lenses are used in this section and the appendices:

- GDP (cumulative, 2026-2050) measures regional economic output generated by the investment pathway. The Economic Impact section reports GDP figures (for example, $49.6B for the combined pathway versus $25.6B for Expected Funding).
- Economic Impact = GDP + Resource Savings, where Resource Savings = utilisation savings + social-assistance savings versus Expected Funding. Appendix C.1 and Appendix C.5 report Economic Impact figures (for example, $53.8B for the combined pathway), as does the Total Impact summary in the Value Proposition section.

The two lenses are consistent and additive: Economic Impact differs from GDP by the value of public-system pressure relief generated by stronger pathways (and by the additional pressure created by weaker ones, where Resource Savings is negative).

The current ONEMODEL implementation does not rely on external direct, indirect, or induced multiplier overlay. Economic outputs are generated endogenously within the model. Businesses form expectations about demand, plan production, attempt to secure labour and non-labour inputs, and then realize revenues and operating costs through market activity. Wages respond to labour-market conditions and business behaviour, while gross operating surplus emerges as a residual operating balance rather than as an imposed external assumption.

This distinction is methodologically significant. Traditional economic impact assessment in housing typically relies on input-output multipliers derived from national accounts tables. While widely used, input-output analysis assumes fixed-coefficient production functions, constant returns to scale, and unlimited factor supply, assumptions that are increasingly recognised as limitations in policy-relevant analysis (Miller & Blair, 2009). ONEMODEL's endogenous approach avoids these limitations by capturing feedback effects, tight labour markets raising wages, which affect business margins and hiring decisions, and by respecting resource constraints, so that planned output is only realised if firms can secure labour, inputs, and financing. This is consistent with the agent-based computational economics tradition (Tesfatsion & Judd, 2006; Dosi et al., 2010) and represents a departure from the standard practice in housing economic impact assessment.

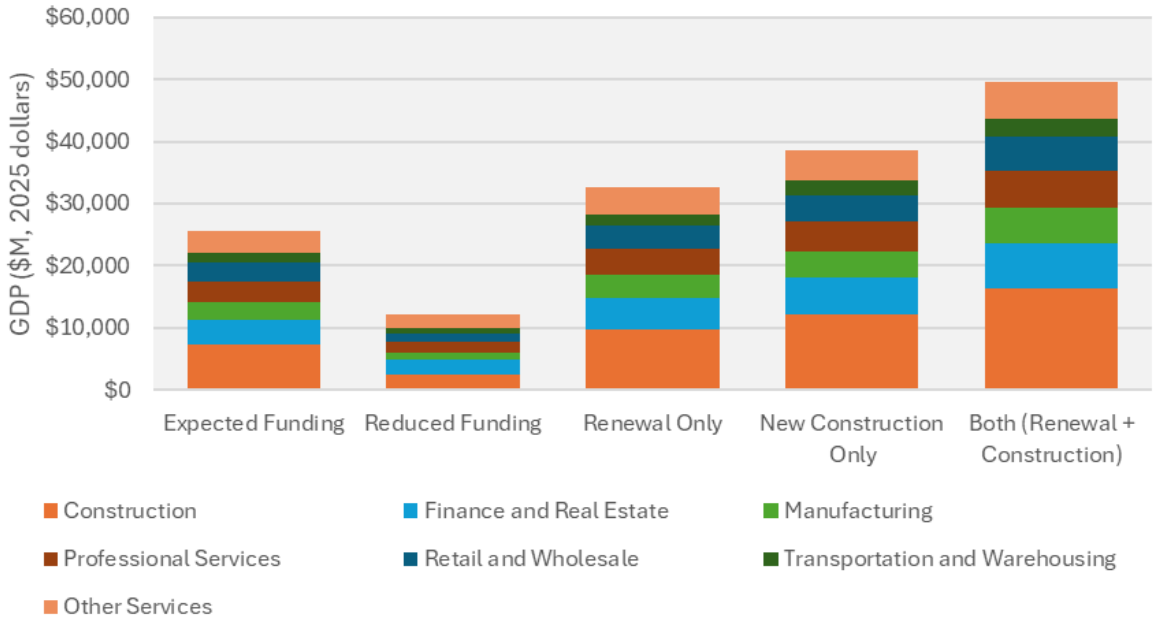
GDP, employment, private investment, and tax revenues are therefore endogenous model outputs that respond to investment pathways, housing conditions, access, and productivity-related channels.

6.2 GDP

There is a strong cumulative GDP spread across scenarios. Across 2026-2050, cumulative GDP benefit is about $25.6B under Expected Funding, $12.0B under Reduced Funding, $32.5B under Renewal Only, $38.6B under New Construction Only, and $49.6B under Both (Renewal + Construction). Final-year annual GDP in 2050 ranges from about $334M under Reduced Funding to about $2.1B under the combined pathway.

Measured against the alternatives, the combined pathway outperforms Expected Funding by roughly $24B in cumulative GDP and about 158,500 cumulative job-years, and it outperforms Reduced Funding by about $37.6B in cumulative GDP and about 243,700 cumulative job-years. These are substantial differences in economic scale.

Figure 20 Cumulative GDP impact by pathway, 2026-2050

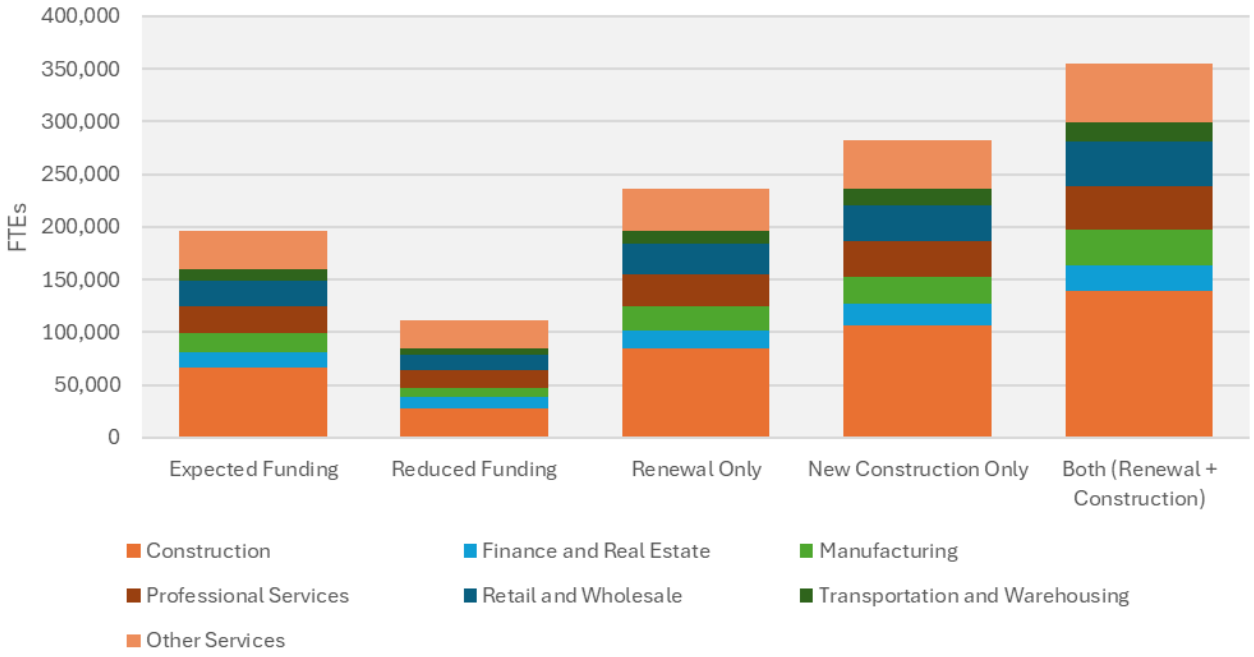


6.3 Employment

The same ordering appears in employment. Final-year FTEs reach about 4,310 under Reduced Funding, 8,173 under Expected Funding, 8,580 under Renewal Only, 12,691 under New Construction Only, and 14,935 under the combined pathway in 2050.

Renewal and construction affect labour demand through different channels. Renewal protects portfolio quality and reduces drag, while new construction adds scale and capacity. The combined pathway performs best because it activates both mechanisms at once.

Figure 21 Employment outcomes by sector and pathway, 2026-2050

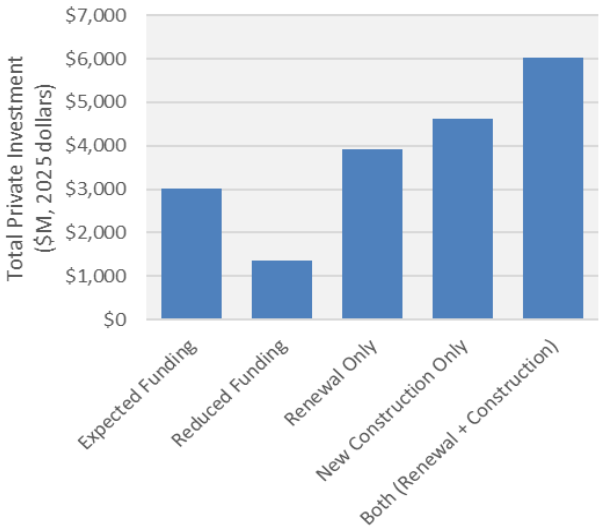


6.4 Private Capital and Business Conditions

Private capital responds strongly to pathway choice. Cumulative private investment to 2050 reaches about $1.4B under Reduced Funding, about $3.0B under Expected Funding, about $3.9B under Renewal Only, about $4.6B under New Construction Only, and about $6.0B under the combined pathway.

Under the combined pathway, about $6.0B in cumulative private capital is attracted by 2050, equivalent to roughly $0.16 in private capital per public dollar invested. Under Reduced Funding, cumulative private capital falls to about $1.4B, leaving a gap of roughly $4.7B relative to the combined pathway.

Figure 22 Cumulative private capital attracted by pathway, 2026-2050

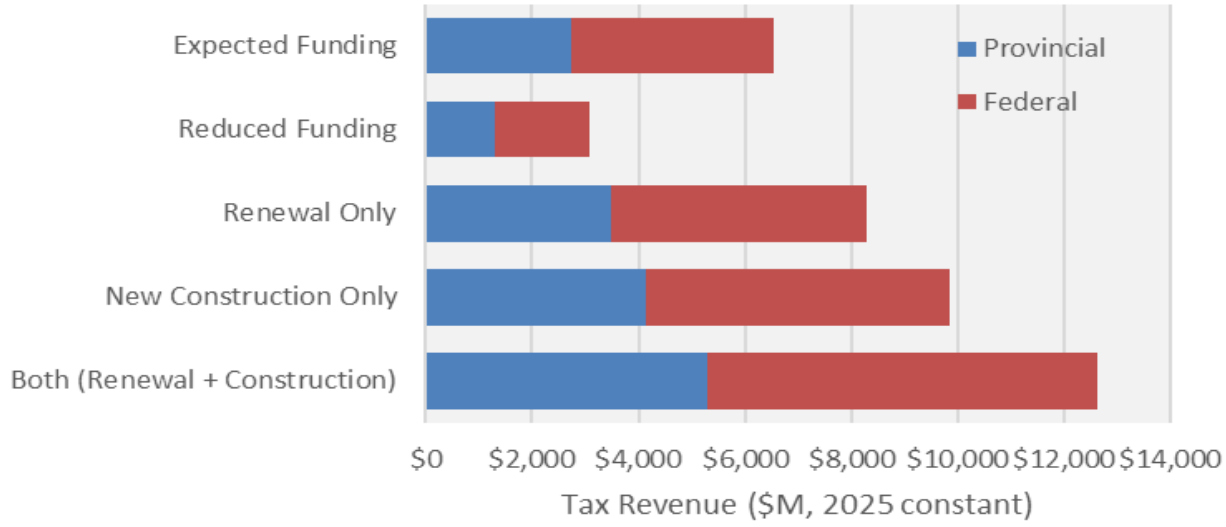


6.5 Government Revenue Effects

The revenue side of the government story also belongs in the economic section. By 2050, cumulative federal and provincial revenue totals reach roughly $9.8B under New Construction Only and roughly $12.6B under the combined pathway when those two orders of government are added together. Expected Funding generates noticeably more modest totals, while Reduced Funding produces the weakest revenue case.

This pattern can also be summarized more compactly as cumulative tax revenue rising from about $3.1B under Reduced Funding to about $12.6B under Both (Renewal + Construction). That summary is directionally and quantitatively consistent with the underlying totals.

Figure 23 Cumulative fiscal impacts and government returns by pathway, 2026-2050



6.6 Interpretation

The economic impact section showed that investment pathway choice substantially changes regional economic performance. Reduced Funding produces the weakest GDP, employment, private-investment, and revenue outcomes. Renewal Only improves condition and supports a stronger economic case than Expected Funding, but without the same access and scale effects as the construction-led pathways. New Construction Only performs strongly on scale. The combined pathway performs best overall because it adds supply while also protecting the condition and functioning of the inherited portfolio.

7. Service-System and Fiscal Effects

ONEMODEL traces how housing quality and stability shape downstream burdens on healthcare, justice, homelessness, and public budgets, reported here as distinct from GDP and employment effects.

7.1 Interpretation Framework

Healthcare and justice deltas are reported as observed - counterfactual. Negative values indicate avoided burden relative to the defined reference trajectory. For cross-scenario policy comparison, the most reliable comparison is the union-population or total-population view, because construction pathways house different numbers of people and simple observed-cost comparison would otherwise be misleading.

This section therefore distinguishes among three concepts:

1. absolute burden within a scenario
2. burden delta versus the modelled counterfactual
3. cross-scenario total burden comparison on a population-equivalent basis

7.2 Healthcare and Justice Utilisation

The relationship between housing conditions and healthcare utilisation is extensively documented. Poor housing quality is associated with increased emergency department visits, hospital admissions, and lengths of stay (Maqbool et al., 2015). In Canada, homeless adults under universal health insurance have been found to use emergency departments at rates approximately five times higher than the general population (Hwang et al., 2013). The healthcare cost parameters used in this study are anchored in the Canadian Institute for Health Information's *National Health Expenditure Trends 2025*, the most authoritative Canadian source for population-level healthcare cost allocation. The relationship between housing instability and justice-system contact has also been documented in the Canadian context, with housing precarity associated with significantly elevated rates of police contact, arrests, and incarceration (Gaetz & O'Grady, 2013).

Service utilisation changes arise through both event likelihood and event intensity. Poorer housing conditions and instability raise the probability of acute episodes and can lengthen their severity or duration. Better housing quality and stability move the system in the opposite direction.

7.3 Avoided Events and Cost Relief

Against Expected Funding, the combined pathway is the strongest pressure-relief case over the full horizon. It delivers 524,133 fewer inpatient days, 156,476 fewer ED visits, and 44,226 fewer justice events under Both (Renewal + Construction), alongside major healthcare cost relief. Reduced Funding moves in the opposite direction, increasing cumulative system burden relative to the expected pathway.

Figure 24 Cumulative avoided hospital admissions by scenario versus Expected Funding, 2026-2050

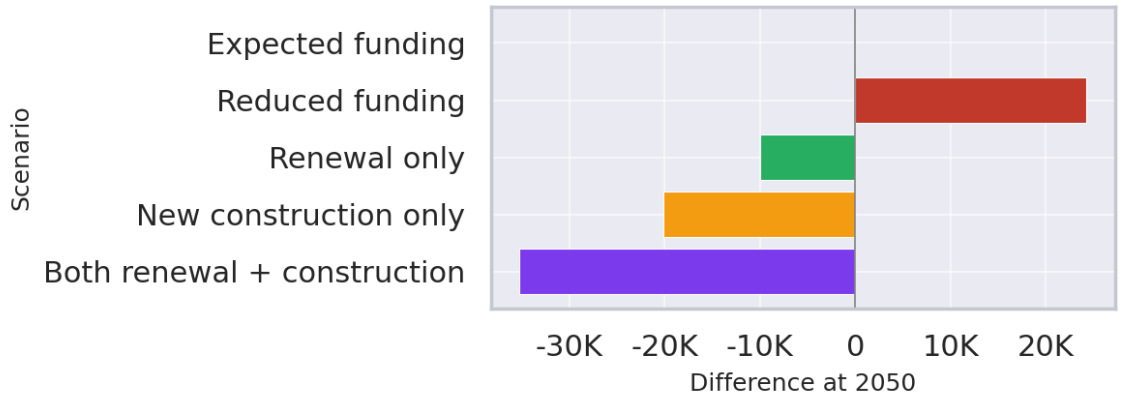


Figure 25 Cumulative avoided justice events by scenario versus Expected Funding, 2026-2050

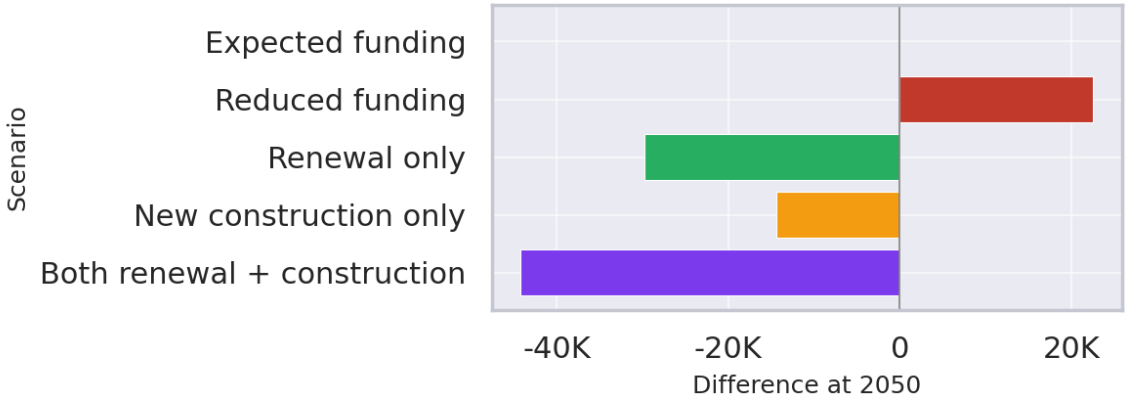


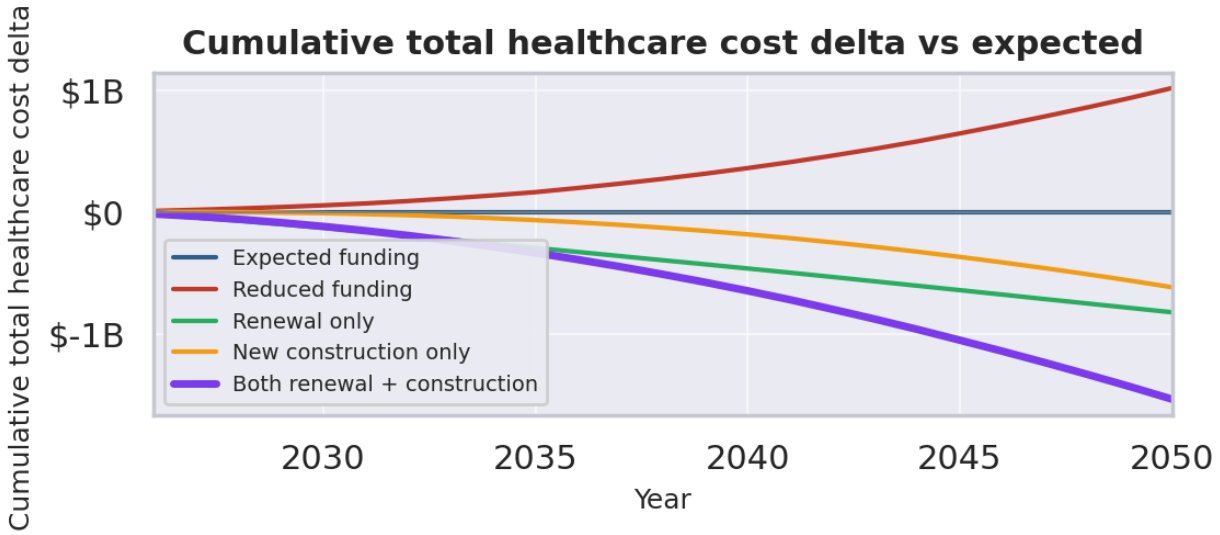
Table 11: GTHA cumulative change in events and healthcare cost by pathway versus Expected Funding

Horizon	Scenario	Hospital admissions change	ED visits change	Justice events change	Total cost change
10y (2026-2035)	Both (Renewal + Construction)	-5,852	-26,107	-8,768	-$381M
10y (2026-2035)	New Construction Only	-2,204	-9,693	-1,661	-$76M
10y (2026-2035)	Reduced Funding	2,947	13,133	4,263	$184M
10y (2026-2035)	Renewal Only	-3,296	-14,933	-7,594	-$334M
25y (2026-2050)	Both (Renewal + Construction)	-35,241	-156,476	-44,226	-$1.8B
25y (2026-2050)	New Construction Only	-20,135	-88,483	-14,377	-$0.7B
25y (2026-2050)	Reduced Funding	24,251	107,024	22,582	$1.2B
25y (2026-2050)	Renewal Only	-10,028	-46,013	-29,777	-$1.0B

7.4 Total-Population Burden Comparison

A total-burden comparison using union-population adjustment is the most reliable cross-scenario burden comparison. This matters because the high-construction scenarios house more people; lower observed burden among housed residents in a low-construction scenario does not mean the overall regional burden is lower once the would-be residents outside the system are accounted for.

Figure 26 Total-population utilisation costs by pathway versus Expected Funding, 2026-2050



Relative to Expected Funding, the combined pathway reduces cumulative total burden by about $1.8B, including about $1.5B in lower healthcare burden and about $227.0M in lower justice-system burden. Reduced Funding moves in the opposite direction, increasing total burden by about $1.158B, including about $1.015B in higher healthcare burden and about $142.9M in higher justice burden.

7.5 Homelessness and Social Assistance Pressure

The per-person public cost of homelessness in Canada has been estimated at between $30,000 and $55,000 per year depending on the population segment and the services included (Gaetz, 2012). Canada's largest randomised controlled trial of Housing First, the At Home/Chez Soi trial, demonstrated that stable housing with supports significantly reduced emergency department visits, hospitalisations, and justice-system contacts among people experiencing homelessness and mental illness (Goering et al., 2014). These findings provide a strong evidence base for the model's treatment of homelessness as part of the downstream burden pathway.

The homelessness pathway is part of the same downstream-system story. By 2050 the combined pathway results in about 4,700 fewer homeless people relative to Expected Funding, with roughly 52,230 fewer homeless-years over 2026-2050 and about $2.4B in cumulative savings relative to the expected pathway. The gap between the combined pathway and Reduced Funding amounts to roughly 83,000 fewer person-years of homelessness over the period and about $4.9B in reduced government services relative to the reduced case. About 25% of available units are allocated to those in chronic homelessness in order to balance this objective against other housing-system demands. Reduced Funding moves in the opposite direction, increasing homelessness pressure and worsening cumulative savings.

The table below shows the estimates for homelessness metrics for each pathway considered.

Table 12: Homelessness metrics by pathway vs Expected Funding

Scenario	Homeless Avoided vs Expected (2050)	Homeless-Years Avoided vs Expected (2026 to 2050)	Cumulative Savings vs Expected
S1: Expected Funding	—	—	$0
S2: Reduced Funding	-3,093	-31,701	-$2.5B
S3: Renewal Only	-2,153	-23,707	-$986M
S4: New Construction	+4,695	+51,702	$2.3B
S5: Both	+4,700	+52,230	$2.4B

7.6 Government Resource Summary and Fiscal Meaning

Higher investment in renewal and construction meaningfully reduces long-run demand on health and justice systems and generates net fiscal savings over time by lowering cumulative service use and total public expenditure. In contrast, reduced funding increases downstream utilisation across inpatient, emergency, hospital admission, and justice pathways, resulting in persistently higher long-term costs. However, an important caution applies here: in most cases, lower utilisation should be interpreted as pressure relief rather than literal cash that can be fully removed from public budgets. Capacity released in one place is often absorbed by other unmet demand.

7.7 Interpretation

The service-system section showed that housing policy changes downstream public-system pressure. Better pathways reduce acute utilisation, justice-system burden, and homelessness-related strain. Lower-investment pathways increase pressure. The combined pathway performs best because it improves both the condition and the scale of the housing system, reducing the number of people exposed to poor housing or left outside the system altogether.

8. Equity and Distributional Effects

ONEMODEL shows not only average outcomes, but also how gains and losses are distributed across groups and circumstances. The equity lens shows who benefits, who loses, and where the largest gaps remain beyond the aggregate scorecards.

8.1 Why Averages Are Not Enough

The preceding sections establish average differences across scenarios in stock, social value, economic impact, and downstream burden. Those averages are important, but they compress meaningful differences across age groups, households, and building-condition contexts. A pathway can improve average outcomes while still leaving some groups more exposed than others.

Distributional analysis is a standard requirement in rigorous programme evaluation. The UK Treasury's *Green Book* requires that distributional impacts be assessed as part of any major policy appraisal (HM Treasury, 2022), and the Canadian *Guide to Cost-Benefit Analysis* similarly recommends distributional analysis for programmes affecting heterogeneous populations (Treasury Board of Canada Secretariat, 2007). In the housing context, distributional analysis is particularly important because housing conditions, access constraints, and investment effects are not uniformly distributed across age, household type, and building quality.

The analysis draws on the subgroup evidence visible in the age-profile figures (Figures 15 and 16) and heatmap figures (Figures 19, 20, 21, 23 and 30-33) and interprets what that distributional pattern means.

8.2 Access Differences Across Resident Groups

The expected age profile for each pathway in 2050 shown in Figures 15 and 16 shows that pathway choice changes who can access public housing over time. Higher-growth pathways allow more younger households and families with children to enter the system, while lower-investment pathways constrain that access. The distributional significance of this is substantial; access itself is an equity outcome, not just a capacity outcome.

8.3 Building Condition as a Distributional Divider

The heatmaps organise subgroup effects by age, sex, and building FCI, showing that building condition is not just a portfolio variable but a distributional divider that helps determine which residents face stronger adverse health, mental health, family-quality, and well-being effects.

Figure 27 Health status heatmap by age, sex, and FCI band — equity lens view

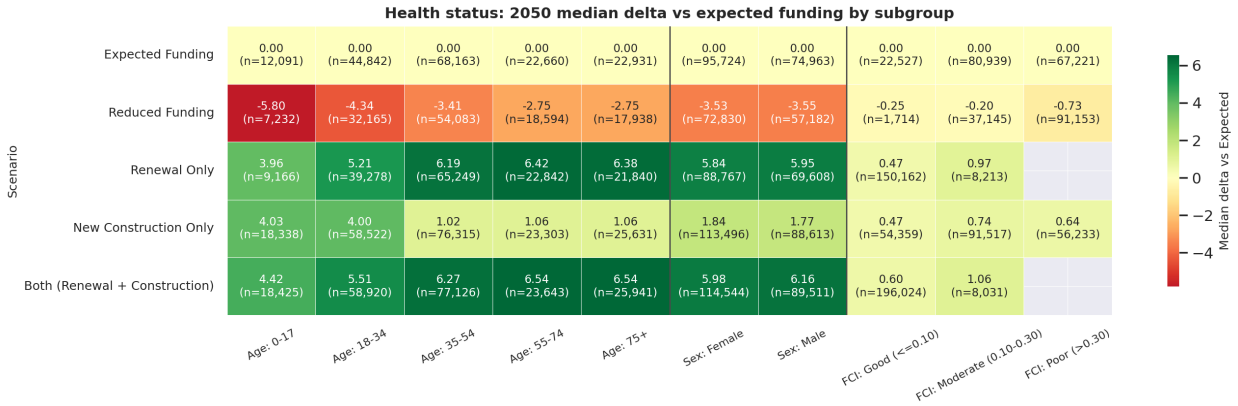
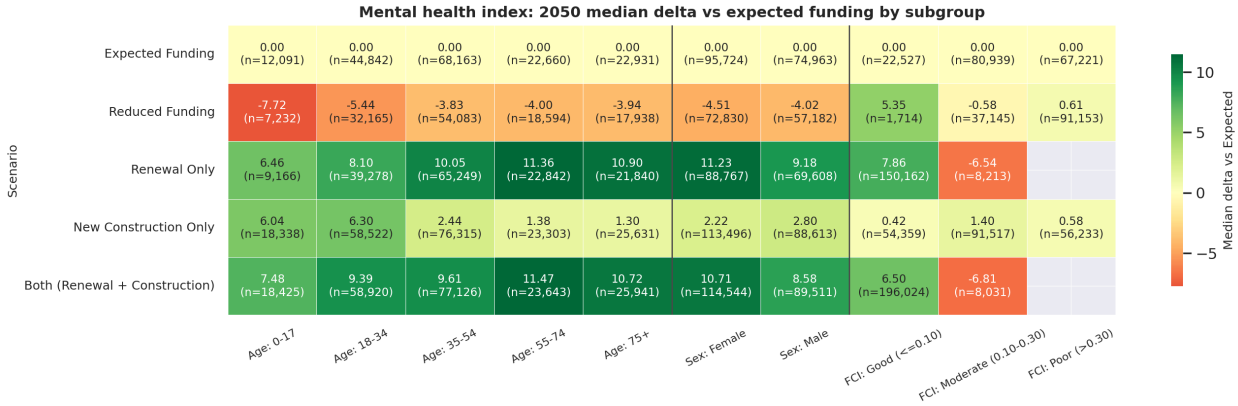


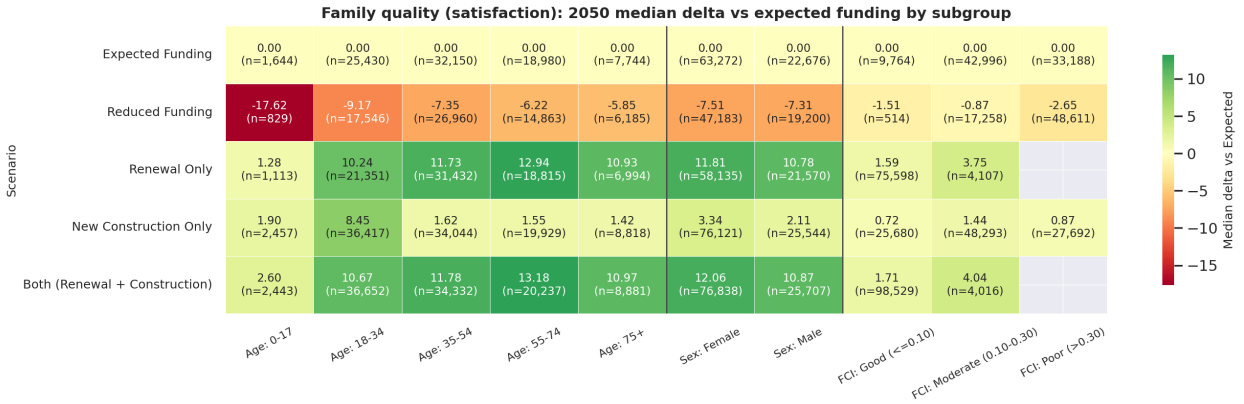
Figure 28 Mental health heatmap by age, sex, and FCI band — equity lens view



8.4 Family and Household Differences

The family-quality heatmap below (Figure 34) shows that pathway choice affects household resilience as well as individual outcomes. Lower-investment and low-renewal pathways weaken family stability and satisfaction, while renewal pathways strengthen them. This means the distributional story is not limited to individual health. It also includes the household-level capacity to maintain routines, continuity, and resilience under stress.

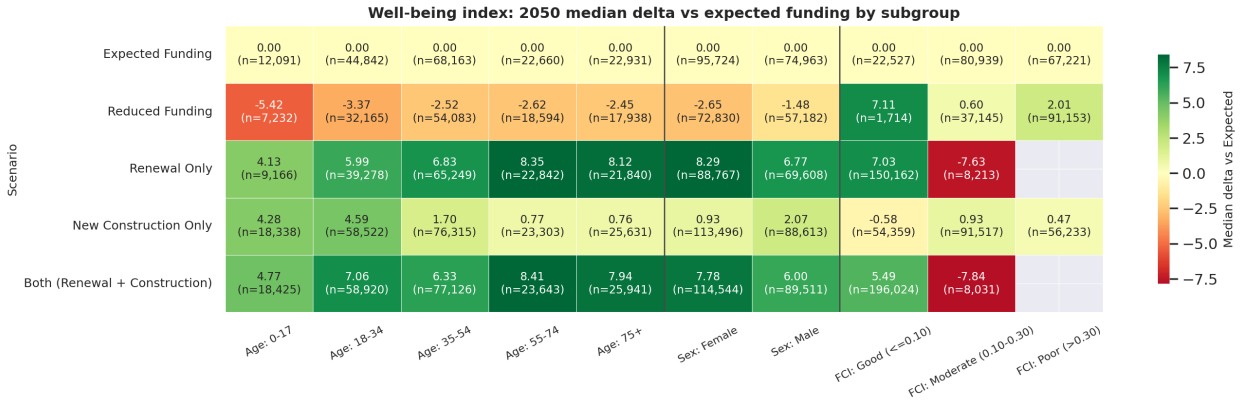
Figure 29 Family quality heatmap by age, sex, and FCI band — equity lens view



8.5 Well-Being Differences Across Groups

The following well-being heatmap provides the integrated subgroup view. It pulls together the effects of health, mental health, housing quality, accessibility, and economic conditions at the level of subgroup distributions.

Figure 30 Well-being heatmap by age, sex, and FCI band — equity lens view



8.6 What The Equity Lens Adds

The equity lens adds three things to the overall interpretation.

First, it shows that access is itself a distributional issue. Pathways that expand supply change who can enter the system, not just what happens within it.

Second, it shows that building condition shapes the distribution of outcomes inside the housed population. Residents are not equally exposed to deterioration risk.

Third, it shows that pathway choice affects both individual and household resilience, meaning that the social implications of investment are broader than a single average well-being line.

8.7 Interpretation

The strongest pathways do not only improve average results. They also reduce the concentration of disadvantage associated with poor conditions and constrained access. Lower-investment pathways do the opposite: they leave more of the burden concentrated among residents and households exposed to poor-quality housing while also narrowing access to those who would otherwise benefit from the system.

9. Conclusions and Implications

9.1 Key Findings

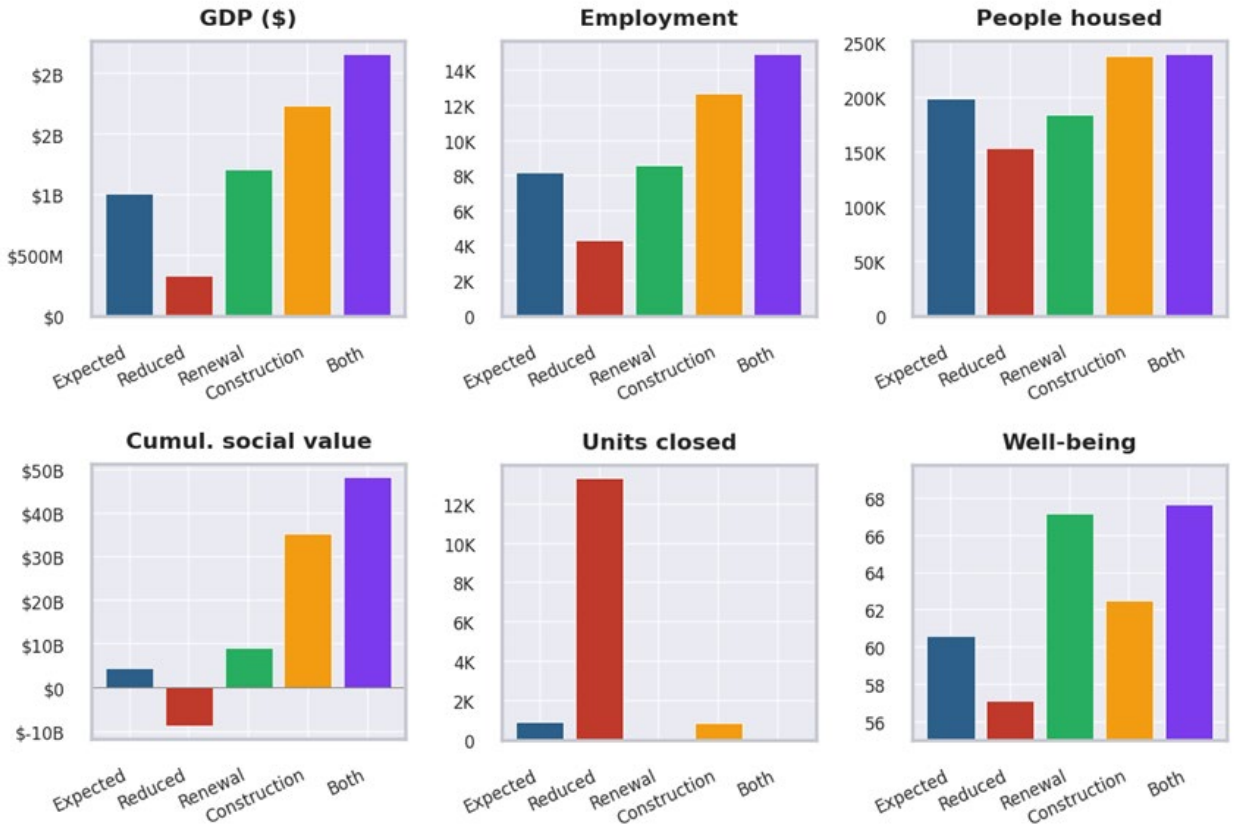
The overall conclusion is that a combined renewal-and-construction pathway is the strongest all-round scenario across the major dimensions of the study. It expands housing access, improves portfolio condition, delivers the largest total social value, produces the strongest economic output, and reduces downstream public-system burden relative to the lower-investment alternatives.

Reduced Funding is consistently the weakest pathway. It reduces active stock, leaves a heavily deteriorated portfolio, produces the weakest GDP and employment outcomes, turns cumulative social value negative, and increases system burden relative to the stronger pathways.

9.2 Comparative Scenario Performance

The following charts compare the outcomes for the five scenarios considered.

Figure 31 Comparative scenario performance across major outcome dimensions by 2050



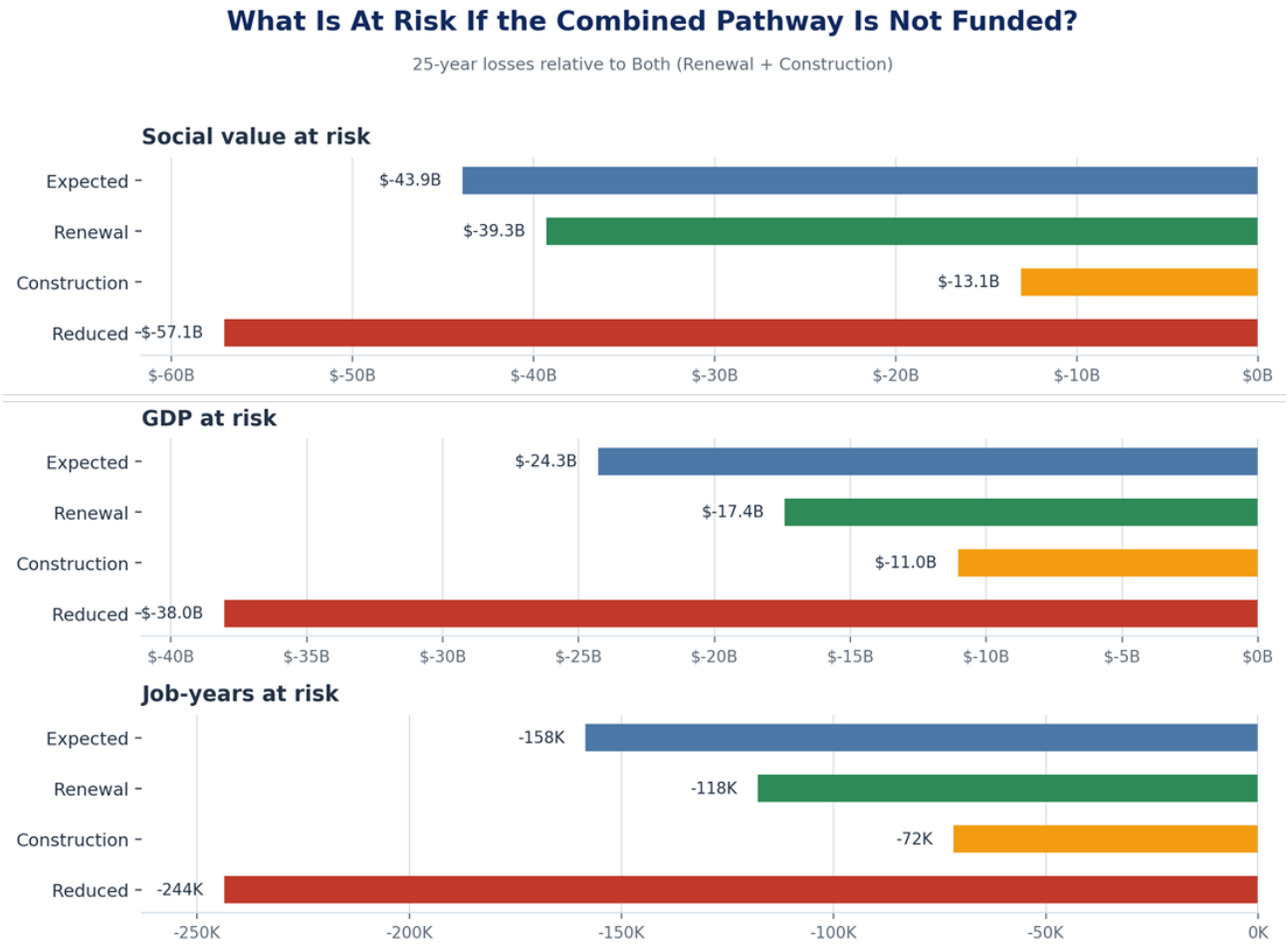
Renewal Only performs strongly on portfolio-condition and resident-outcome logic, but without the same access gains as the construction-led pathways. New Construction Only performs strongly on access scale and economic expansion, but it does not resolve deterioration in the inherited stock to the same extent as the renewal-led pathways. The combined pathway performs best because it captures the advantages of both.

9.3 What Is at Risk if the Stronger Pathway Is Not Funded

The opportunity cost of weaker pathways is substantial when measured against the combined case. Relative to Both (Renewal + Construction), Expected Funding leaves about $43.9B in social value, about $24.0B in GDP, and about 158,500 job-years unrealised over 2026-2050. Relative to the same reference point, Reduced Funding leaves about $57.1B in social value, about $37.6B in GDP, and about 243,700 job-years unrealised. Single-track pathways also leave value unrealised: Renewal Only gives up scale and New Construction Only gives up part of the condition and resident-outcome case.

The following graphs show the opportunity costs for all pathways, on the social value, GDP and job-years dimensions.

Figure 32 Opportunity costs of weaker pathways relative to Both (Renewal + Construction): social value, GDP, and job-years



The stock results are similar. By 2050, the combined pathway ends with 102,545 active units and no closures, while Reduced Funding ends with 66,383 active units and 139 building closures.

9.4 Implications for Decision-Makers

The scenario results reveal a clear policy trade-off. The Renewal Only approach generates the strongest resident well-being outcomes, while New Construction Only delivers stronger gains in scale and overall economic expansion. The Both (Renewal + Construction) pathway is the only option that simultaneously achieves high well-being, high growth, and avoids building closures by 2050.

The results also highlight important investment sequencing considerations. Renewal cannot be postponed without significant consequences. By 2050, lower-investment pathways are associated with substantial unit loss and closures. Construction-led strategies increase system scale but do not match the well-being improvements

associated with renewal-focused investment, indicating that maintaining existing housing stock and expanding supply must be pursued in parallel.

There are also meaningful implications for resource requirements. Housing policy choices significantly affect downstream public service demand. Between 2026 and 2050, the combined scenario reduces total utilisation costs by approximately $1.8 billion relative to Expected Funding, whereas the Reduced Funding scenario increases costs by about $1.2 billion. This implies very different long-run pressures on systems such as health and justice services.

Finally, long-term sustainability is strongest under the combined investment pathway, which avoids the unit losses and closures seen under lower-investment scenarios. Delaying investment does not preserve flexibility; it erodes future system capacity.

9.5 Limits and Caution Areas

The results are model-based estimates conditional on the scenario configurations, parameterisation, and structural assumptions. They should not be described as direct observational causal estimates. Economic outputs should not be described as external multiplier results. Public-system savings should generally be described as avoided burden or pressure relief unless the source explicitly supports literal budget release.

9.6 Final Conclusion

The overall finding of the study is that the combined renewal-and-construction pathway provides the strongest integrated case across stock, resident well-being, social value, economic output, and downstream system burden. It performs best because it addresses both sides of the housing challenge at once: preserving the existing portfolio and expanding future access.

Lower-ambition pathways may preserve parts of the system or deliver narrower forms of value, but they do not produce the same integrated result. In that sense, the report's conclusion is not that every benefit points in exactly the same way, but that the strongest overall pathway is the one that combines renewal with expansion.

10. Appendices

10.1 Appendix A. Method and Data Notes

10.1.1 A.1 Method overview

ONEMODEL, the proprietary agent-based socioeconomic simulation platform of the Canadian Centre for Economic Analysis (CANCEA), supports the analysis. CANCEA conducted a predecessor economic impact analysis of the Toronto Community Housing portfolio in 2015 using an earlier version of the platform (CANCEA, 2015). The current study extends that work by integrating a full social value dimension alongside the economic impact architecture and enabling the Total Impact framework.

The model evaluates five investment pathways over an annual horizon from 2026 to 2050. It covers the full set of public housing investments included in the study across the Greater Toronto and Hamilton Area.

The following sections provide a more detailed account of the model structure, the scenarios considered, counterfactual burden methods, output definitions, economic interpretation, and data foundations.

10.1.2 A.2 Scope, horizon, and scenario logic

The model is run annually from 2026 to 2050. Its core agent layers include governments, cities, neighbourhoods, housing providers, buildings, dwelling units, families, and persons. Scenario settings are exogenous inputs to the model. Reported results are endogenous responses generated through interactions among those agents over time.

The five scenarios are:

1. Expected Funding
2. Reduced Funding
3. Renewal Only
4. New Construction Only
5. Both (Renewal + Construction)

These scenarios are applied against a common base configuration. Expected Funding represents the current funding pathway, Reduced Funding the downside policy pathway, Renewal Only the state-of-good-repair pathway, New Construction Only the large-scale expansion pathway, and Both the combined maximum-investment pathway.

10.1.3 A.3 Annual model sequence

The annual cycle follows a staged sequence that supports coherent reporting across physical, social, economic, and fiscal outcomes.

1. Physical and building-state updates occur first, including deterioration, renewal, climate adjustment, execution-phase rehabilitation, and closure checks.
2. Neighbourhood, provider, and planning-stage financial processes then occur, including rent collection, funding allocation, and capital budgeting.
3. Execution-phase investment updates building condition, capital investment, maintenance, emissions, and energy-cost states.
4. Resident, household, economic, and social updates then occur, including income, rent, health, mental health, well-being, social value, GDP, employment, private investment, taxes, homelessness, and social-assistance effects.
5. Financial close updates depreciation, replacement costs, operating expense, and final link-sum aggregation.

This structure matters because the reported outcomes are not assembled from disconnected sub-models after the fact. They are different reporting views of one simulated annual system.

10.1.4 A.4 Outcome construction and reporting conventions

The core reporting surface is one row per (scenario, year, city). Results are therefore per-city outputs rather than pre-aggregated GTHA totals. Regional reporting is created by aggregating across cities.

Most count and dollar fields are direct model outputs or city allocations from higher-level totals. Some measures are weighted averages rather than simple sums. For example, average FCI is weighted by active buildings, while average health, mental health, well-being, income, rent, and social-value-per-person measures are weighted by housed population.

Fiscal stock fields such as municipal, provincial, and federal tax revenue, funding flows, and net fiscal position are cumulative in the model output. Where annual interpretation is needed, the correct reading is year-over-year change rather than the cumulative stock value itself.

10.1.5 A.5 Economic interpretation

Economic outputs are endogenous ONEMODEL results rather than the product of an external direct, indirect, and induced multiplier overlay.

Businesses form expectations about demand, plan production, attempt to secure labour and non-labour inputs, and then realize revenues and operating costs through market activity. Wages respond to labour-market conditions, worker outside options, and employer wage-setting behaviour. Gross operating surplus emerges as the residual operating balance after costs are paid.

GDP, employment, wages, labour income, and business surplus are outputs of the model's internal economic process rather than a separate multiplier layer attached to the housing results.

10.1.6 A.6 Counterfactual burden logic

Healthcare and justice results are generated through an observed-versus-counterfactual utilisation framework. The model asks what burden is observed under the simulated housing pathway and what burden would be expected under a structured reference trajectory. The reported delta is observed - counterfactual, so negative values indicate avoided burden.

This logic is used because a simple before-versus-after comparison would not adequately isolate the burden implications of changes in housing condition, housing access, and resident outcomes. The same sign convention is used for both cost and event framing.

Three distinctions matter:

- observed burden within a scenario
- counterfactual burden used for the reference case
- delta versus the counterfactual

10.1.7 A.7 Cross-scenario comparison and union population

Cross-scenario comparisons of healthcare and justice burden require an additional adjustment when scenarios house different numbers of people. A lower-construction scenario can appear to have lower observed burden only because fewer people are housed within the system, not because the wider burden is truly lower.

The adjustment identifies the highest-construction reference pathway, tracks the people who would be housed there but are not housed in the lower-construction pathways, and adds external healthcare and justice burden terms for those external persons. This produces total-population burden comparisons that are valid across scenarios on a common population basis.

10.1.8 A.8 Data foundations

The model is anchored in a broad source base rather than a single dataset. The strongest current data foundations include:

- building and facility-condition information, including Facility Condition Index assessments covering 342 developments (2023 and 2024 year-end)
- portfolio and unit detail from the TCHC portfolio database (1,252 buildings) and TCHC Unit Search Report (45,514 units, September 2025)
- rent-roll and occupancy information from the TCHC Rent Roll (40,861 units, September 2025)

- resident and household demographics from 16 years of TCHC administrative tenant records (2009-2024, approximately 95,000 to 115,000 persons per year)
- capital budget data from TCHC capital budget reports (2019-2024)
- tenant survey material for validation and calibration support, including the 2021 Tenant Survey (1,717 responses) and 2023 Tenant Survey (8,135 responses)
- regional provider and stock detail from Durham, Halton, Hamilton, York, and Peel housing providers
- healthcare cost parameters from the Canadian Institute for Health Information *National Health Expenditure Trends 2025*, Table F.3.6.3.a (Ontario)
- fiscal parameters benchmarked to the Ontario Fall Economic Statement 2024 and Federal Public Accounts 2023
- demographic projections from the Ontario Ministry of Finance
- city-level household income proxies from Statistics Canada 2021 Census Profiles
- rental market context from the Canada Mortgage and Housing Corporation *Social and Affordable Housing Survey 2024*

10.1.9 A.9 Limitations and interpretation boundaries

The method has several interpretation limits.

First, results are model-based estimates conditional on the scenario configurations, parameterisation choices, and structural assumptions. They are not direct causal estimates from observed programme evaluation data.

Second, not every parameter family has the same empirical status. The underlying method base draws on published inputs, administrative sources, calibration choices, and model-control assumptions.

Third, some realism gaps remain in the current data architecture. Defaults, synthetic records, or fallback assumptions are still used where complete operating, health-baseline, or neighbourhood-condition data are not available.

Fourth, uncertainty in the current reporting framework is treated primarily through scenario comparison rather than through a full probabilistic confidence-interval presentation in the core output.

10.1.10 A.10 Model integrity and representational adequacy

The model is used to avoid the many-model problem that can arise when separate estimates are combined as though they describe one system. In a public housing study, that risk is material because the analysis combines housing stock, building condition, capital investment, resident outcomes, community effects, public-system burden, fiscal effects, GDP, employment, and social value. If those components were built on different population bases, geographies, time steps, definitions, or accounting boundaries, the final results could become internally inconsistent even if each component appeared reasonable on its own.

ONEMODEL addresses this risk by applying different calculations to the same modelled public housing system rather than stitching together disconnected estimates. The outputs remain distinct: housing stock is not the same concept as social value, public-system burden, tax revenue, or GDP. The advantage is that the outputs are generated from common scenario settings, common geographies, common reporting periods, and a common agent structure. This supports representational adequacy: the model structure is expected to be adequate for the decision purpose before results are used for interpretation or decision support (Smetanin, 2025).

Four modelling disciplines are central to this interpretation:

- Coherence. Housing stock, residents, service-system burden, social value, fiscal effects, and economic outputs are interpreted within compatible definitions, geography, time horizon, and scenario logic.
- Calibration. Housing, cost, utilization, well-being, fiscal, demographic, and economic parameters are tied to project evidence, administrative data, literature, or transparent assumptions.
- Conservation and closure. Counts, stocks, flows, and cost components reconcile within the defined model scope rather than appearing or disappearing through unsupported aggregation.
- Causal traceability. Outputs can be traced to scenario assumptions, building condition, housing access, resident pathways, service-use channels, valuation assumptions, or economic mechanisms.

These disciplines are quality-assurance requirements rather than claims that the model is free of uncertainty. They support the interpretation that the reported outputs are compatible views of one modelled system, conditional on the evidence base and assumptions used for the project.

Consistency is supported through several design features. The model uses a common population and geography frame; typed attributes for people, households, buildings, units, providers, geographies, and scenario states; admissible building and resident states; shared reporting dimensions by scenario, year, and city; separate but connected reporting domains for housing outcomes, public-system burden, fiscal outputs, social value, and economic contribution; and traceable aggregation from lower-level modelled outputs to regional and GTHA totals.

10.1.11 A.11 Validation, sensitivity, and reproducibility

Validation in ONEMODEL is not treated as a single statistical test. It is a set of checks used to assess whether the model is adequate for the decision purpose. In this study, validation occurs through structural review, calibration review, output reconciliation, sensitivity analysis, and documentation of assumptions (Smetanin, 2025).

The minimum validation disciplines are:

- Structural validation. The model represents the relevant population, public housing stock, building condition states, investment pathways, resident outcomes, public-system burden channels, fiscal channels, time horizon, and geography.
- Calibration validation. Housing, cost, utilization, well-being, economic, demographic, fiscal, and social-value parameters are tied to empirical evidence, administrative data, peer-reviewed literature, project data, or transparent assumptions.
- Output validation. Selected outputs are checked against external benchmarks or independently estimated quantities where available.
- Sensitivity analysis. Key assumptions can be varied, including investment pathway assumptions, deterioration and closure assumptions, construction and renewal assumptions, utilization parameters, valuation parameters, discounting conventions, and burden-domain inclusion rules.
- Reproducibility. Outputs are reported through method appendices so that another analyst can trace how results move from scenario assumptions to housing, social value, public-system, fiscal, and economic outputs.

The model is therefore best understood as a transparent scenario-based calculation system with documented structure and assumptions, not as a black-box forecast. Its strength lies in maintaining one coherent analytical frame across housing stock, resident outcomes, public-system burden, fiscal effects, and economic contribution while allowing parameter uncertainty and alternative assumptions to be tested.

Integrated modelling does not mean the model is free of uncertainty, that every parameter has a single uncontested empirical value, or that calibration alone proves causality. It means that the outputs are generated within a disciplined structure in which definitions, time periods, geographies, stocks, flows, and reporting domains are kept aligned.

10.1.12 A.12 Reporting implications

The model-integrity and validation disciplines above imply several reporting conventions for this study:

- scenario comparisons are interpreted within one common base configuration;
- city, regional, and GTHA results are read within the same geography frame;
- housing, social value, fiscal, service-system, and economic outputs remain distinct domains;
- economic and social outcomes are not automatically interchangeable, even when they are generated from the same modelled system;
- public-system savings are interpreted as avoided burden or pressure relief unless literal budget release is supported by the relevant source; and
- sensitivity and alternative-assumption cases should be interpreted as assumption-based ranges unless probability intervals are explicitly produced.

Headline values should therefore be read as outputs of one integrated modelled system, conditional on the evidence base, assumptions, and reporting scope specified for the project.

10.2 Appendix B. Value Metric Definitions and Method Notes

This appendix sets out the technical definitions, formulas, methodological notes, and source logic for the value metrics used in the report's Value Proposition and Metrics section.

Unless otherwise noted, monetary values are presented in constant 2026 dollars and in present-value terms over the 2026-2050 horizon. The appendix distinguishes between:

- report-defined headline lenses used for this study
- standard ratio and return metrics with established academic treatment
- ONEMODEL-specific policy metrics that are valid when defined transparently but are not textbook-standard labels

10.2.1 B.1 Core Report Definitions

Total Impact

Total Impact is the broad headline measure of value created over the study horizon.

$$TotalImpact = EconomicImpact + SocialValue$$

This is a report-defined aggregate, not a universal textbook metric. Its role is to combine the report's economic and social lenses in one decision-facing measure.

The validity of this lens depends on keeping the component definitions explicit rather than silently changing the numerator.

Economic Impact

Economic Impact is the economic contribution associated with the investment pathway over 2026-2050.

Formula used in the report package.

$$EconomicImpact = EconomicValue_{cumulative}$$

Where the cumulative economic value is

$$EconomicValue_{cumulative} = GDPcontribution + resource\ savings$$

Each scenario's Economic Impact is reported as the difference between that scenario's cumulative economic value and the cumulative economic value under the Expected Funding scenario; Expected Funding is itself reported relative to its modelled counterfactual.

This is the economic component nested inside Total Impact.

Social Value

Social Value is the monetised expression of improvements in well-being and related lived outcomes.

General methodological form.

$$SocialValue_s = \sum_{t=0}^{T} D_t \sum_{i \in I} \mu_t \ \Delta LS_{i,s,t}$$

where:

- $\Delta LS_{i,s,t}$ is the modelled change in life satisfaction or well-being for person *i*
- mu_t is the income-equivalent conversion factor
- D_t is the discount factor

The well-being valuation approach is well established in the literature on non-market valuation and welfare measurement (Welsch, 2006; Luechinger, 2009; Shi et al., 2019; Himmler et al., 2020).

Social value is not the same thing as avoided healthcare or justice cost. Those are related but distinct channels.

Resident Social Value

Resident Social Value is the portion of total social value attributable to direct improvements in the lives of people housed in the system.

$$SocialValue \ = \ ResidentSocialValue \ + \ CommunitySocialValue$$

This is the most direct answer to the question of value for residents.

Community Social Value

Community Social Value is the portion of total social value attributable to wider spillover effects in surrounding communities and the broader social environment.

This measure captures value beyond the households directly housed.

10.2.2 B.2 Supporting Ratio and Return Metrics

Benefit-Cost Ratio

Benefit-Cost Ratio compares discounted benefits with discounted costs.

$$BCR = \frac{PV(B)}{PV(C)}$$

This is a standard result in applied cost-benefit analysis and project appraisal (Prest & Turvey, 1965; Remer & Nieto, 1995b; Pasqual et al., 2013).

BCR is a supporting metric for value for money and should not replace Total Impact as the headline claim.

Social Return on Investment

Social Return on Investment compares monetised social value with the investment cost base.

$$SROI = \frac{PV(B^{soc})}{PV(C^{inv})}$$

SROI has an established literature in public-value and social-program evaluation, while also carrying known interpretation cautions (Millar & Hall, 2013; Banke-Thomas et al., 2015; Hutchinson et al., 2019).

SROI is narrower than the report Benefit-Cost Ratio because it isolates the social-value channel.

Modified Internal Rate of Return

Modified Internal Rate of Return replaces the pure internal-rate root with explicit finance and reinvestment assumptions.

$$MIRR = \left(\frac{FV(\text{positive net flows}; r_{\text{reinv}})}{PV(\text{negative net flows}; r_{\text{fin}})}\right)^{\frac{1}{T}} - 1$$

MIRR is widely used as a more stable alternative to raw IRR when cash-flow structure creates interpretation problems (Magni, 2010; Kierulff, 2008).

Economic Rate of Return

Economic Rate of Return expresses a return-style measure using economically valued costs and benefits under an explicit external accumulation rule.

$$ERR = \left(\frac{FV(\text{positive net flows}; q)}{PV(\text{negative net flows})}\right)^{\frac{1}{T}} - 1$$

where q is the external evaluation rate.

The metric is treated in the engineering-economics and investment-analysis literature as a structured alternative to simple IRR use (Ely & Miller, 2001; Barry & Robison, 2014).

10.2.3 B.3 ONEMODEL-Specific Policy Metric

Public-and-Social Benefit-Cost Ratio

Public-and-Social Benefit-Cost Ratio is a policy lens specific to ONEMODEL outputs that restricts the numerator to public-system savings, social value, and tax revenue.

$$PSBCR = \frac{UtilizationSavings + SocialAssistanceSavings + SocialValu + PublicRevenue}{CapitalCost}$$

Where Utilisation Savings, Social Assistance Savings, Social Value, Public Revenue and Capital Cost are all cumulative.

This metric is:

- broader than Social Return on Investment
- narrower than the report Benefit-Cost Ratio
- more government-facing than Total Impact / Cost

10.2.4 B.4 Why These Metrics Are Internally Consistent

The value metrics are generated from one ONEMODEL result base rather than assembled from unrelated tools.

The value metrics are internally consistent because they are generated from one ONEMODEL result base rather than assembled from unrelated tools. Housing stock, resident outcomes, economic effects, public-system burden, and fiscal measures are produced from the same scenario logic. This allows Total Impact, Social Value, Benefit-Cost Ratio, SROI, and Public-and-Social Benefit-Cost Ratio to be presented as compatible views of the same investment pathways, while still preserving the distinct interpretation of each metric.

10.2.5 B.5 References

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10.3 Appendix C. Regional Overviews

Table C.1 Toronto Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$11.6B	$17.8B	$3.3B	61,862
Reduced	$4.4B	$8.2B	-$6.9B	51,320
Renewal	$15.6B	$22.5B	$6.7B	57,123
Construction	$19.0B	$27.1B	$26.2B	73,132
Both	$24.6B	$34.7B	$35.2B	73,483

Table C.2 Hamilton Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$1.0B	$1.9B	$371M	7,891
Reduced	$384M	$994M	-$693M	5,884
Renewal	$1.4B	$2.1B	$788M	7,364
Construction	$1.7B	$3.1B	$3.0B	9,341
Both	$2.2B	$3.7B	$4.3B	9,477

Table C.3 Peel Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$2.1B	$2.8B	$343M	8,104
Reduced	$809M	$1.3B	-$532M	4,060
Renewal	$2.9B	$3.7B	$776M	7,439
Construction	$3.5B	$4.1B	$3.0B	9,575
Both	$4.5B	$5.4B	$4.3B	9,575

Table C.4 York Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$1.3B	$1.5B	$184M	3,553
Reduced	$473M	$726M	-$386M	3,064
Renewal	$1.7B	$2.1B	$360M	3,253
Construction	$2.1B	$2.0B	$1.5B	4,189
Both	$2.7B	$2.8B	$2.0B	4,189

Table C.5 Durham Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$564M	$615M	$56.7M	1,243
Reduced	$214M	$311M	-$81M	429
Renewal	$759M	$901M	$120M	1,138
Construction	$924M	$823M	$459M	1,456
Both	$1.2B	$1.2B	$645M	1,456

Table C.6 Halton Regional Scorecard

Scenario	Total Invested in Housing	GDP	Social Value	Total Housing Units (2050)
Expected	$616M	$996M	$121M	3,295
Reduced	$233M	$473M	-$203M	1,626
Renewal	$830M	$1.2B	$321M	3,388
Construction	$1.0B	$1.5B	$1.2B	3,972
Both	$1.3B	$1.9B	$1.7B	4,365

10.4 Appendix D. About CANCEA

This report was prepared by the Canadian Centre for Economic Analysis (CANCEA). Founded in 2002, CANCEA is an independent socioeconomic analytics and advisory organisation that has served governments, national industry associations, major pension plans, and public institutions for more than two decades.

The analysis is powered by ONEMODEL, CANCEA's proprietary national-scale agent-based socioeconomic simulation platform. ONEMODEL models interactions among people, households, businesses, buildings, governments, and places over time, drawing on CANCEA's regional data architecture and attribution methods.

The social value components of the analysis are produced through CANCEA's Social Value Trust framework, which models individuals within their circumstances and converts selected changes in well-being into monetary terms that can be compared with traditional economic measures.

CANCEA conducted a predecessor economic impact analysis of the Toronto Community Housing portfolio in 2015, using an earlier version of the platform (CANCEA, 2015). That study demonstrated the economic case for public housing capital investment but did not include a formal social value framework. The current study extends that work by integrating a full social value dimension alongside the economic impact architecture, enabling the Total Impact = Economic Impact + Social Value framework used throughout this report.

CANCEA's broader body of housing research includes studies commissioned by Canada Mortgage and Housing Corporation on housing supply adequacy and social return on investment for affordable housing (CANCEA/CMHC, 2017), the *Locked Out* report on the social value cost of the GTA's housing crisis (CANCEA, 2024a), and the *Macroeconomic Consequences of Unaffordability and Core Housing Need* report (CANCEA, 2024b). CANCEA's social value methodology has also been applied to pension plans (CANCEA, 2022), buildings (CANCEA, 2020), infrastructure, and transportation.

10.5 Appendix E. CANCEA Social Value References

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10.6 Appendix F. Glossary

This glossary consolidates acronyms, report-specific value metrics, and housing terms used or implied in the draft report. Housing definitions are aligned where possible with CMHC, Statistics Canada, and Ontario social/community housing sources.

10.6.1 Table F.1 Acronyms and Abbreviations

Term	Full form	Glossary note
AJPH	American Journal of Public Health	Appears in bibliography references.
ASCE	American Society of Civil Engineers	Appears in a bibliography DOI/reference for asset management literature.
BCR	Benefit-Cost Ratio	A value-for-money metric that compares quantified benefits with costs. In this report, it is a supporting metric rather than the headline impact measure.
BMC	BioMed Central / BMC Public Health	Appears in bibliography references.
BMJ	BMJ / British Medical Journal	Appears in bibliography references, especially BMJ Open.
CANCEA	Canadian Centre for Economic Analysis	The organization that prepared the study and operates ONEMODEL.
CANCEA/CMHC	Canadian Centre for Economic Analysis / Canada Mortgage and Housing Corporation	Used for the referenced 2017 affordable housing social return on investment work.
CIHI	Canadian Institute for Health Information	Source for national health expenditure parameters used in the report.
CMHC	Canada Mortgage and Housing Corporation	Federal housing agency and source for housing definitions, core housing need concepts, rental market context, and National Occupancy Standard guidance.
ED	Emergency Department	Used in the healthcare event results as ED visits.
ERR	Economic Rate of Return	A return-style metric based on economically valued flows. The report treats it as a complementary economic return lens.

Term	Full form	Glossary note
FCI	Facility Condition Index	Asset-condition metric defined as deferred maintenance cost divided by current replacement value. In this report, FCI classifies buildings as Good, Fair, Poor, Critical, or closure risk.
GDP	Gross Domestic Product	A measure of economic output. The report uses cumulative GDP as one economic impact outcome.
GTA	Greater Toronto Area	Refers to the Toronto-centred urban region, typically Toronto plus surrounding regional municipalities.
GTHA	Greater Toronto and Hamilton Area	The report's regional frame, spanning Toronto, Hamilton, and surrounding municipalities/regions included in the study.
HIL	Household Income Limit	Ontario service-level and eligibility term for income limits used in community housing programs. Included because it appears in Ontario RGI/service-level source material.
HM Treasury	His Majesty's Treasury	United Kingdom government finance/economic ministry; cited for Green Book appraisal guidance.
IRR	Internal Rate of Return	A return metric used in investment appraisal. The report notes interpretation issues and also references MIRR.
MIRR	Modified Internal Rate of Return	A return metric that modifies IRR by using explicit finance and reinvestment assumptions.
NPV	Net Present Value	Present value of benefits minus present value of costs. Referenced in the report's discussion of appraisal metrics.
NPV-IRR	Net Present Value / Internal Rate of Return	Appears in a bibliography citation title comparing NPV and IRR ranking.
OECD	Organisation for Economic Co-operation and Development	Cited for subjective well-being measurement guidance.
OMERS	Ontario Municipal Employees Retirement System	Appears in CANCEA social value reference material.

Term	Full form	Glossary note
ONEMODEL	ONEMODEL	CANCEA's proprietary agent-based socioeconomic simulation platform. Treat as a proper-name platform rather than a standard acronym.
RGI	Rent-Geared-to-Income	Ontario housing assistance where rent is calculated based on household income or social-assistance shelter allowance rules.
S1	Scenario 1: Expected Funding	Report scenario label for the current/status quo funding pathway.
S2	Scenario 2: Reduced Funding	Report scenario label for a lower-investment pathway. Also appears once as a journal issue/page reference in the bibliography.
S3	Scenario 3: Renewal Only	Report scenario label for rehabilitation and state-of-good-repair investment in existing stock.
S4	Scenario 4: New Construction	Report scenario label for net-new supply and portfolio expansion.
S5	Scenario 5: Both	Report scenario label for combined renewal and new construction.
SOGR	State of Good Repair	Asset-management term for keeping buildings, systems, and components in a condition that supports safe and reliable operation.
SROI	Social Return on Investment	A metric that estimates social value generated per dollar invested.
SV	Social Value	Used in table labels such as Resident SV and Community SV.
TCHC	Toronto Community Housing Corporation	Major public/community housing provider and data source for the report.
UK	United Kingdom	Appears in policy appraisal and housing-market references.
VECTOR	VECTOR framework	CANCEA framework referenced in Appendix D. Treat as a CANCEA proper-name framework unless an official expansion is supplied by CANCEA.

Extraction note: uppercase strings such as CD008657, S294-S301, and CANCEA58 were detected during harvesting but are not treated as acronyms here because they are bibliography identifiers, page ranges, or table-of-contents page-number artifacts.

10.6.2 Table F.2 Housing and Ontario Community Housing Terms

Term	Definition for this report	Primary source alignment
Acceptable housing	Housing that meets all three CMHC/Statistics Canada housing standards: adequate condition, suitable size, and affordable cost.	Statistics Canada - Core housing need; CMHC - Core housing need
Adequate housing	Housing reported by residents as not requiring major repairs. Major repairs generally involve defective plumbing or electrical wiring, or structural repairs to walls, floors, or ceilings.	Statistics Canada - Core housing need; CMHC glossary
Affordable housing	In the CMHC and Statistics Canada indicator sense, housing with shelter costs below 30% of total before-tax household income. More broadly, affordable housing can be provided by public, non-profit, co-operative, or private sectors and may include rental, ownership, co-operative, temporary, or permanent housing.	CMHC glossary; Statistics Canada - Core housing need
Affordability threshold	The 30% shelter-cost-to-before-tax-income benchmark commonly used by CMHC and Statistics Canada. The report refers to this benchmark when discussing rent-to-income pressure.	CMHC glossary; Statistics Canada - Core housing need
Alternative local housing	In core housing need measurement, acceptable local housing that the household could move to if it were affordable. A household is in core housing need only if it cannot afford acceptable alternative local housing without spending 30% or more of before-tax income.	Statistics Canada - Core housing need
Building closure	Removal of a building from active public housing use because its condition is no longer viable under the scenario assumptions. In this report, closure risk is tied to very high FCI values.	Report-specific usage; FCI concept from asset-management literature.

Term	Definition for this report	Primary source alignment
Building condition	The physical state of the housing asset, represented in the report through FCI and grouped into Good, Fair, Poor, Critical, and closure-risk categories.	Report-specific usage; FCI concept from asset-management literature.
Capital repair	Investment in major repairs, rehabilitation, and component renewal intended to maintain or restore existing housing assets.	Ontario community housing asset-management context; report-specific usage.
Capital renewal	Planned investment to rehabilitate and preserve existing housing stock, reduce FCI, and avoid unit loss or closure.	Report-specific usage; aligned with Ontario community housing priority to keep existing homes in good condition.
Community housing	Ontario umbrella term often used for social and affordable housing, including non-profit, co-operative, and municipal housing. Ontario's strategy says community housing provides homes to over 250,000 families and individuals.	Ontario - Community housing renewal strategy
Community housing provider	An organization that owns or operates community housing, such as a municipal provider, non-profit provider, or housing co-operative.	Ontario - Service agreements; Ontario - Community housing renewal strategy
Co-operative housing	Housing operated as a co-operative, generally part of the community/social housing ecosystem where residents are members rather than conventional tenants. Statistics Canada treats co-operative dwellings as rented for tenure classification when no household member owns the dwelling.	Statistics Canada - Tenure; CMHC glossary

Term	Definition for this report	Primary source alignment
Core housing need	A private household is in core housing need if its housing falls below adequacy, affordability, or suitability standards and the household would have to spend 30% or more of before-tax income to access acceptable alternative local housing.	Statistics Canada - Core housing need; CMHC - Core housing need
Deferred maintenance	Repairs or replacements that have been postponed. In FCI, deferred maintenance cost is the numerator in the ratio.	Report-specific usage; asset-management definition used with FCI.
Dwelling	A set of living quarters. Statistics Canada defines a private dwelling as a separate set of living quarters with a private entrance from outside or from a common hall/lobby/stairway, accessible without passing through another household's living quarters.	Statistics Canada - Private dwelling
Dwelling unit / unit	A housing unit in the public housing stock. In the report, units are the countable housing assets used to measure inventory, active capacity, lost units, and people housed.	Report-specific usage; aligned with Statistics Canada dwelling concepts.
Facility Condition Index	Ratio of deferred maintenance cost to current replacement value. The report uses FCI to classify building condition and closure risk.	Report-specific usage; asset-management literature.
Good/Fair/Poor/Critical condition	Report categories for FCI: Good at 0-5%, Fair at 5-10%, Poor at 11-30%, Critical above 30%, and closure risk above 65%.	Report-specific methodology.
Homelessness pressure	Downstream pressure on homelessness-related systems that can rise or fall depending on housing access, stability, and affordability.	Report-specific usage; aligned with Ontario service manager responsibility for housing and homelessness programs.

Term	Definition for this report	Primary source alignment
Household	A person or group of persons occupying the same dwelling and not having a usual place of residence elsewhere. Statistics Canada uses "private household" for census reporting.	Statistics Canada - Private household
Housing access	The ability of households to enter or remain in the public/community housing system. In the report, access changes with the number of active units and the population housed.	Report-specific usage.
Housing allowance	A form of housing assistance that helps a household pay rent; Statistics Canada includes housing allowances within the broad subsidized housing concept.	Statistics Canada - Subsidized housing
Housing need	A broad term for mismatch between household circumstances and available housing, including affordability, adequacy, suitability, stability, and access issues. "Core housing need" is the formal CMHC/Statistics Canada indicator.	CMHC/Statistics Canada core housing need framework.
Housing pathway / investment pathway	One of the report's modelled public housing investment scenarios over 2026-2050: Expected Funding, Reduced Funding, Renewal Only, New Construction Only, or Both.	Report-specific scenario structure.
Housing portfolio	The collection of public housing buildings, units, and developments included in the study.	Report-specific usage.

Term	Definition for this report	Primary source alignment
Housing provider	A municipal, non-profit, co-operative, or other organization that provides community/social housing, often under arrangements with a service manager.	Ontario - Service agreements; Ontario - Housing Services Act changes
Housing Services Act, 2011	Ontario legislation governing social/community housing responsibilities, including service managers, housing and homelessness plans, service levels, and RGI assistance.	Housing Services Act, 2011; Ontario Regulation 367/11
Housing stock	The supply of housing units in the system. In this report, stock is tracked through active units, lost units, closures, and new construction.	Report-specific usage.
Housing suitability	Whether a dwelling has enough bedrooms for the size and composition of the household under the National Occupancy Standard.	Statistics Canada - Core housing need; CMHC - National Occupancy Standard
Inherited stock	Existing public housing buildings and units present at the start of the evaluation period. The report contrasts preserving inherited stock with adding net-new supply.	Report-specific usage.
Major repairs	Repairs needed for serious deficiencies such as defective plumbing or electrical wiring, or structural repairs to walls, floors, or ceilings. The need for major repairs is the key adequacy threshold.	CMHC glossary; Statistics Canada - Core housing need
Market rent	Rent charged in the market without being geared to tenant income. It is distinct from RGI rent and other subsidized rent arrangements.	Ontario/CMHC housing program usage.

Term	Definition for this report	Primary source alignment
Mixed-income housing / revitalization	Redevelopment or revitalization approach that may combine public/community housing with market and affordable units. The draft references revitalization in relation to prior TCHC work.	Report-specific context; common Ontario housing policy usage.
National Occupancy Standard	CMHC-linked standard for assessing whether housing has enough bedrooms for household size and composition. It is used for suitability/core housing need analysis and is not a landlord enforcement rule.	CMHC - National Occupancy Standard
Net-new supply	Additional housing units created through new construction or acquisition, beyond the inherited stock.	Report-specific usage.
Non-profit housing	Housing owned or operated by a non-profit organization. It is part of the community/social housing ecosystem and is included in Statistics Canada's subsidized housing concept.	CMHC glossary; Statistics Canada - Subsidized housing
Public housing	Government-owned or government-controlled low-cost rental housing. In this report, public housing refers to the municipal/community housing stock included in the GTHA study.	Report-specific usage; aligned with Statistics Canada subsidized housing categories.
Rent supplement	Assistance that helps bridge the gap between what a household can afford and the rent charged for a unit, often in private or non-profit housing. Statistics Canada includes rent supplements within subsidized housing.	Statistics Canada - Subsidized housing

Term	Definition for this report	Primary source alignment
Rent-Geared-to-Income assistance	Ontario housing assistance where rent is calculated according to household income rules. Ontario service-level materials describe assistance where non-social-assistance households pay no more than 30% of adjusted family net income on rent, while social-assistance households pay no more than their shelter allowance.	Ontario - Service level rules; Ontario Regulation 316/19
Renter household	A private household where no member owns the dwelling. Statistics Canada treats a dwelling as rented even if no cash rent is paid.	Statistics Canada - Renter household
Resident	A person living in the public housing system. In this report, resident outcomes include well-being, health, mental health, family stability, and exposure to poor building conditions.	Report-specific usage.
Service area	Geographic area for which an Ontario service manager is responsible.	Ontario Housing Services Act framework.
Service manager	In Ontario, a designated municipality or district social services administration board responsible for local housing and homelessness planning, administration, funding, and service levels.	Housing Services Act, 2011; Ontario - Housing Services Act changes
Shelter cost	Average monthly total of shelter expenses paid by households. For renters, this includes rent and, where applicable, electricity, heat, water, and other municipal services.	Statistics Canada - Shelter cost
Shelter-cost-to-income ratio	Ratio of household shelter costs to household income. It is central to affordability measurement and the 30% affordability benchmark.	Statistics Canada - Shelter-cost-to-income ratio

Term	Definition for this report	Primary source alignment
Social housing	Government-assisted housing that provides lower-cost housing for low- and moderate-income households. In Ontario, community housing is the current umbrella language for much of the social and affordable housing sector.	Ontario - Community housing renewal strategy; CMHC glossary
State of good repair	Condition in which existing assets are maintained so that they can continue to provide service safely and reliably. In the report, SOGR is tied to maintenance, renewal, and avoided deterioration.	Report-specific usage; Ontario infrastructure/community housing usage.
Subsidized housing	Statistics Canada term for renter households living in subsidized dwellings, including RGI, social housing, public housing, government-assisted housing, non-profit housing, rent supplements, and housing allowances.	Statistics Canada - Subsidized housing
Suitable housing	Housing with enough bedrooms for the household size and composition under the National Occupancy Standard.	CMHC - National Occupancy Standard; Statistics Canada - Core housing need
Supportive housing	Housing linked with supports for people who need assistance to live stably, such as people experiencing mental health, addictions, disability, or homelessness-related challenges. The term appears in the bibliography and is relevant to housing stability outcomes.	Ontario/CMHC housing policy usage; report bibliography context.
Tenant	A renter or resident with occupancy rights in a rental/community housing unit. The report uses tenant source data in relation to TCHC records.	Report-specific usage; Statistics Canada renter/tenure concepts.

Term	Definition for this report	Primary source alignment
Tenant satisfaction	Resident-reported satisfaction with housing and living conditions. The report treats satisfaction as part of baseline and well-being context.	Report-specific usage.
Tenure	Whether a household owns or rents its private dwelling. Statistics Canada counts a household as renting if no member owns the dwelling, including reduced-rent, no-cash-rent, and co-operative cases.	Statistics Canada - Tenure
Waiting list / access system	Ontario community housing access systems manage applications, eligibility, priority, and selection rules for RGI and related assistance.	Ontario - Access system rules

10.6.3 Table F.3 Report-Specific Value, Model, and Outcome Terms

Term	Definition for this report
Agent-based model	A model that simulates individual agents such as governments, cities, neighbourhoods, housing providers, buildings, units, households, and people, then observes system outcomes over time.
Avoided cost	Public-system cost that is lower under one pathway than under a comparison pathway, such as reduced healthcare or justice costs relative to Expected Funding.
Avoided event	A healthcare, justice, homelessness, or other service-system event that is lower under one pathway than under a comparison pathway.
Benefit-cost ratio	Benefits divided by costs. A ratio above 1 indicates quantified benefits exceed quantified costs, subject to the included benefit categories and assumptions.
Community social value	Social value that accrues beyond directly housed households, including wider community or system effects.
Counterfactual	The comparison path used to estimate what would likely happen without the simulated change. The report uses counterfactual logic for healthcare and justice burden comparisons.

Term	Definition for this report
Distributional effect	How impacts differ across groups, rather than only changing the average outcome. The report uses this lens for age, family, household, condition, and well-being differences.
Downstream public-system burden	Pressure on public systems such as healthcare, justice, homelessness services, and social assistance that can change as housing conditions and stability change.
Economic impact	Economic contribution generated by each pathway, including GDP, employment, wages/labour income, business surplus, private investment, and government revenue effects.
Employment / job-year	Employment impact accumulated over time. A job-year is one year of employment for one person, or the equivalent amount of work spread across multiple people.
Evaluation horizon	The time period modelled in the study, 2026-2050.
Fiscal effect	Effect on government revenues or public expenditures, including tax revenues and service-system savings or burdens.
Health and justice utilisation	Use of healthcare and justice systems, measured through events, days, visits, or costs depending on the metric.
Inpatient day	A hospital day associated with inpatient care. The report uses avoided inpatient days as one healthcare pressure-relief outcome.
Investment pathway	A modelled public housing funding and delivery scenario. The report compares five pathways from 2026 to 2050.
Marginal social value efficiency	Additional social value created per additional dollar or unit of investment relative to a comparison pathway.
Population housed	Number of residents housed by the public housing system under a pathway.
Public-and-social benefit-cost ratio	Report metric combining public-system savings, social value, and tax revenue per dollar of capital cost.
Resident social value	Social value associated with outcomes for directly housed residents, such as well-being, stability, health, mental health, and housing quality.
Scenario	A modelled investment pathway. The report labels scenarios S1 through S5.
Social assistance pressure	Expected demand or cost pressure on social assistance systems affected by household income, stability, and housing conditions.

Term	Definition for this report
Social value	Monetized value of changes in well-being and related social outcomes, including resident and community channels.
Subjective well-being valuation	Method that monetizes changes in self-reported well-being using income-equivalent valuation methods.
Total impact	The report's broad headline value measure, combining social, economic, and public-system dimensions generated from the model.

10.6.4 Source Base Used

- CMHC, The National Housing Strategy Glossary of Common Terms.
- CMHC, Identifying Core Housing Need.
- CMHC, National Occupancy Standard.
- Statistics Canada, Census Dictionary: Core housing need.
- Statistics Canada, Census Dictionary: Shelter cost.
- Statistics Canada, Census Dictionary: Shelter-cost-to-income ratio.
- Statistics Canada, Census Dictionary: Tenure.
- Statistics Canada, Census Dictionary: Renter household.
- Statistics Canada, Census Dictionary: Private household.
- Statistics Canada, Census Dictionary: Private dwelling.
- Statistics Canada, Census Dictionary: Subsidized housing.
- Ontario, Community Housing Renewal Strategy.
- Ontario, Changes to the Housing Services Act, 2011.
- Ontario, Access system rules.
- Ontario, Service level rules.
- Ontario, Service agreements.
- Ontario, O. Reg. 316/19: Determination of Geared-to-Income Rent.
- Ontario, O. Reg. 367/11: General.
- Ontario, Housing Services Act, 2011.

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