

RETROFIT FINANCE TOWARDS A RESILIENT CANADIAN HOUSING STOCK



SUMMARY

The majority of Canada's affordable purpose built rental housing is aging and at risk.

Postwar towers – apartment buildings built before 1985 – make up most of the purpose-built rental stock across the country with almost 800,000 households calling these apartments home. Constructed through the support of federal policies and incentives, many towers are now in need of renovation. As these buildings age, our cities grow, and the global climate changes, deep retrofits are needed to preserve these affordable homes.

The time to act is now. With 76% of Canada's rental units more than 36 years old, it is increasingly urgent that action be taken to avoid losing this crucial stock to deterioration or loss of affordability.

WHY RETROFIT?

The prevalence of these towers across Canada's cities provides opportunity for repeatable solutions on a national scale. That means retrofits will become faster and cheaper as they are scaled across the country. At scale, retrofits can stimulate the retrofit construction industry and drive innovation.

Postwar towers' critical role in the affordable housing ecosystem, and the significant opportunity they represent for reducing GHG emissions, create beneficial social and environmental outcomes from retrofitting – in line with federal commitments and policy objectives.

As older towers now begin to reach the end of their lifecycle, there is an increasing risk of losing affordable housing stock to deterioration. Retrofitting existing affordable housing is significantly less expensive than building new housing or replacing towers, and requires less government support to maintain both the stock and its affordability.

"Financial Tools for Tower Renewal" identifies four levels of retrofits along a spectrum, ranging from business-as-usual to net-zero-ready buildings. The cost of a retrofit in today's market can range along this spectrum from \$10,000 to \$110,000 per unit. Policy objectives related to carbon emissions reduction can be measured against this spectrum.

WHAT ARE DEEP RETROFITS?

Deep retrofits are transformative interventions from social, economic, environmental and cultural perspectives.

They can include:

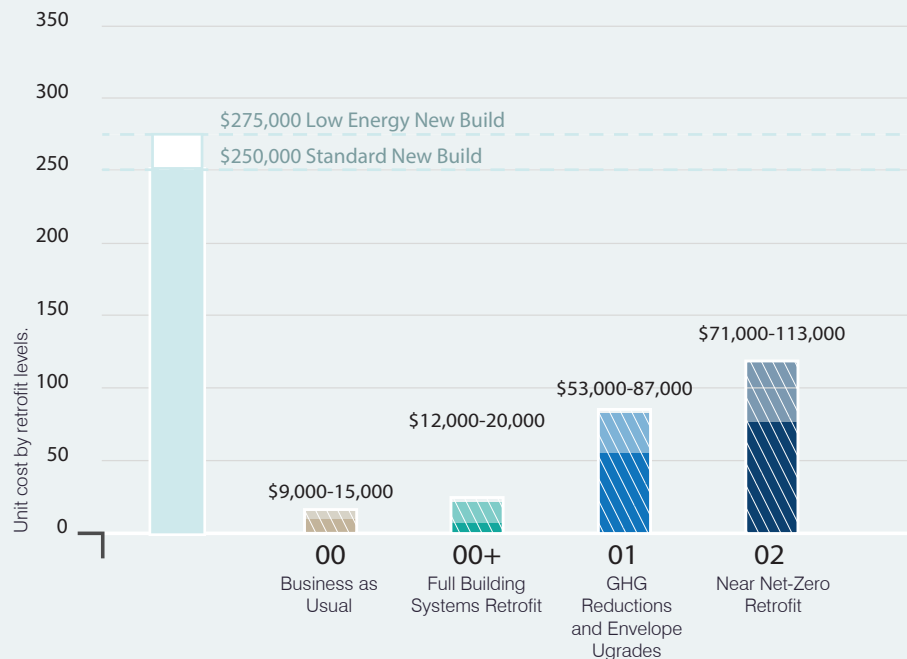
- » Improving the building envelope to reduce energy demand and carbon emissions while increasing thermal comfort through overcladding, roof insulation, replacing doors and windows.
- » Moderating the interior thermal environment to reduce energy consumption and improve housing comfort and quality by re-engineering heating system, providing in-suite energy recovery ventilation units.
- » Improving indoor air quality through ventilation system upgrades
- » Reducing consumption through water and electricity conservation measures, waste diversion improvements.
- » Improving life safety (introducing sprinkler systems) and accessibility (converting units and common areas to become barrier-free).

WHY HAVEN'T BUILDING OWNERS ALREADY RETROFITTED?

Unfortunately, little multi-residential retrofitting has happened to date. While commercial buildings have seen increased retrofitting, residential tower owners have been much more reticent to invest. This is because deep retrofits can be expensive and involve complex construction projects that do not sufficiently increase revenues or reduce costs to make investments economically viable without regulation or incentive. Commercial properties, on the other hand, have been subject to sufficient market and regulatory pressure to allow some level of retrofits to become business-as-usual. In apartment tower retrofits, as in the commercial leasing sector, the primary challenge is financial, not technical. These financial barriers are the most challenging to overcome. Slow returns on investment and energy pricing contribute significantly to this challenge, as do tax increases associated with capital improvements. The associated risk with construction disruptions, unquantified benefits of GHG emission reduction, and low vacancy rates in most urban centres support more of a patch-and-repair, “like-for-like” approach with little impact on housing quality for residents.

Energy pricing poses a fundamental challenge to meeting GHG emission reduction goals. It is important to note that while electricity is the most expensive energy source right now, electrical production in most parts of Canada results in lower GHG emissions than natural gas – the largest emitter of GHGs. This results in an inverse relationship between returns on investment and GHG emission reduction.

COST OF RETROFIT BY UNIT - COMPARED TO NEW BUILD



While carbon pricing can help to mitigate this impact, it alone is not projected to make a significant impact on the business case for an owner interested in a deep retrofit.

In the current market, owners need to be incentivized, and eventually regulated, to invest in deep retrofits. Tower Renewal can bridge this gap.

TOWER RENEWAL STRATEGIES CAN CREATE MORE ACCESSIBLE AND FINANCIALLY AGREEABLE SOLUTIONS TO RETROFITTING AGING TOWERS ACROSS CANADA

Tower Renewal is a strategy to ensure that the affordable apartment tower stock is maintained, enhanced and prolonged. The Tower Renewal approach works in tandem to achieve quality of life improvements and realizing federal policy objectives related to climate change, affordable housing, poverty reduction and economic development. “Financial Tools for Tower Renewal” deals with the financing of retrofits that would contribute to GHG reduction, Affordability and Housing Quality.

There is considerable international precedent to support the Tower Renewal approach. Over the past 30 years, many European countries, including the UK, Germany, the Netherlands and Sweden have implemented national retrofit programs targeting postwar apartment tower housing. **Most importantly, these programs have introduced government-driven financial tools and programs to enable retrofits at scale, resulting in significant impacts on their economies.**

A key factor in the initial success of Tower Renewal retrofits is government participation. Most of the towers in need of retrofits were constructed through the support of federal policy and incentives in the postwar period. The government took a proactive role in creating this housing and a proactive government role is now needed again to sustain it.

“Financial Tools for Tower Renewal” conducted investment modelling of several case study apartment towers, at a variety of retrofit levels and investment thresholds. This enabled an assessment of a typical owner’s capacity and a recommended range of incentives needed to carry out deep retrofits.

The study found that typical buildings owners have the capacity to leverage traditional debt toward some retrofits. However, in all cases a substantial gap remains between owner capacity and the investment required to achieve deep retrofits.

The provision of a financing tool designed for deep energy retrofit has the potential to leverage significant private sector investment, securing both deep reductions to GHG emissions and long-term investments in affordable housing preservation.

CREATING FINANCIAL TOOLS THAT ENABLE BUILDING OWNERS TO MAKE DEEP RETROFITS IS CRITICAL

“Financial Tools for Tower Renewal” found that the use of alternative debt instruments with lower interest rates and longer terms, as well as loans back by energy savings, have the ability to enable deeper retrofits. In conjunction with these loans, targeted grant support was also found to fill investment gaps.

The report recommends the introduction of a federal government-backed financial tool that includes:

- Loans backed by energy savings: “Green loans” use post-retrofit energy cost savings to back a long-term loan. Common in other jurisdictions, this would be an opportunity for the federal government to support the creation of energy saving-backed products that provide a longer-term horizon. Government support is needed - although patient capital can be recovered over the long-term, the real returns on this type of investment will be lower and below market tolerance.
- Alternative debt: Alternative debt products at longer terms and lower interest rates can enable viable investment in housing retrofit than typical shorter term and higher rate commercial products
- Favourable interest rates tied to performance: The cost of loans have a significant impact on an owners ability to carry out deep retrofit. Providing low interest loans only to applicants that meet policy objectives (such as maintenance of affordability of a certain level of GHG emission reductions) is another way to incentivize deep retrofits.
- Performance-based grants: In many cases, additional capital support is needed to achieve deep retrofits. Like low interest rates, grants should also be subject to a performance test to ensure policy goals are being met through government investment.



DEMONSTRATION, INCENTIVIZATION, AND REGULATION

A national retrofit program can preserve and renew the existing national affordable housing supply by leveraging owner investments toward federal policy goals. The program described can have tremendous impact moving the market. However, to achieve the most impact, a program roll-out should be staged that first uses a demonstration phase to show proof of concept and to create the first market for retrofits. This would be followed by a period of incentivization and finally by a regulatory phase.

Demonstration (2,500 units) → Incentivize (100,000 units) → Regulation (800,000 units)

“Financial Tools for Tower Renewal” also recommends that a national inventory of towers be undertaken. This will help quantify the number and distribution of households living in towers across the country, as well as the scale of the potential industry and economic impact of retrofitting. Additionally, a geo-located inventory can help understand socio-economic factors impacting tower neighbourhoods, such as quality of life and poverty while also tracking the loss of rental units to condominiumization. These inventories can be used by municipalities and provinces/territories to quantify the pressures on affordable apartment housing in their regions.

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