

PEMBINA Institute

REFRAMED INITIATIVE
BY PEMBINA INSTITUTE

From the Reframed Initiative Forum to a Provincial Path Forward

The Reframed Forum

This past August, the Pembina Institute brought together the people, organizations and community who over the past decade have delivered the Reframed Initiative. We reflected on the lessons learned, and celebrated this powerful example of what becomes possible when climate action, housing affordability, and community resilience are brought together with practical solutions.

What we heard: themes and challenges

More than 60 participants across industry, social and affordable housing, local, provincial and federal governments, utilities, not-for-profit and academia engaged in a mix of conversation-driven activities to exchange knowledge, unpack common issues they faced and identify opportunities for collective action. Seven themes recurred across the Forum's workshops and panels.

> *"We have a crisis — not enough housing and deteriorating housing. We need to be collectively solving this, not treating it like someone else's problem because it's their asset."*
>
> – Forum participant

- **Collaborative delivery and procurement:** Design-bid-build excludes contractor input; low trust and transparency; contracts don't reward performance outcomes; low familiarity with integrated models; success depends on an ambitious owner and is not a repeatable process
- **Permitting and approvals:** No early, multi-party engagement between city staff, contractors, architects, and utilities; inconsistent municipal regulations and code interpretation; permitting is spread across departments and subject to shifting council priorities
- **Utility interconnection and grid capacity:** BC Hydro's "can't say no" mandate can result in oversized, unnecessary connections; liability concerns prevent offering design guidance; conservative equipment buffers compound at every step
- **Distributed energy resources:** Solar/storage adoption is constrained by tariffs, net-metering changes, building massing, and technology lock-in; regulatory "flip-flop" undermines the business case; low-income tenants are structurally excluded from early-adopter incentives
- **Tenants-in-place:** Design often underestimates real tenant conditions; vulnerable populations (seniors, health/addiction needs) require specialized planning; tenant protection rules add regulatory complexity and project delay
- **Funding and financing:** Funding is fragmented across 800+ housing providers with no centralized source; incentive pullback is increasing cost pressure; business cases undervalue non-energy and societal benefits
- **Knowledge, capacity and accountability:** Building variability makes standardization difficult; the contractor base lacks retrofit-specific experience; lessons from pilots are not systematically shared across the sector

Origin of the Reframed Initiative

In 2017, the Pembina Institute launched the Reframed Initiative, one of the first Canadian research initiatives to delve into the deep retrofit of multi-unit residential buildings (MURBs). Inspired by the Netherlands' Energiesprong model, the pilot was a rallying call for housing providers, designers, contractors, government, utilities and other partners to reimagine these retrofits and the value they offer both in energy and emissions reductions as well as non-energy benefits such as comfort, health, and resiliency. Industry leaders worked through challenges together to broaden their horizons, test assumptions, and learn from one another. The partnerships and solutions they co-created carried on in their future work.

The pilot's influence rippled beyond the six buildings, supporting a culture in B.C. where collaboration is the norm, innovation is nurtured and retrofits protect both the environment and the dignity of the people. It is through this shared learning and transformation that Reframed has grown into what it is today — a home for research, a convening platform, a learning lab and a catalyst for change in Canada's building sector.

A decade of iterative successes

Alongside building capacity in B.C.'s affordable housing and retrofit sectors, many of Reframed's six pilot projects have already delivered significant emissions reductions and safe, healthy, resilient and affordable homes for more than 300 tenants. They've also produced concrete evidence for replicable improvements to **five foundational processes** that have long stalled retrofit scale-up.

Collaborative design

Early and structured cross-disciplinary collaboration brought architects, engineers, contractors, municipalities, and utilities together to develop a clear process including technical design, project charters, shared terms of engagement, and defined decision points.

Tenant engagement

Building use patterns and pain points were surfaced through an experimental engagement process and tenant advisory group during early design. Projects like Crossroads Inn and Manor House built and demonstrated tenant-in-place strategies that reduced disruption. At Crossroads Inn, where relocation was deemed inevitable, careful planning allowed vulnerable populations to be temporarily relocated and brought back home post-retrofit.

Procurement

Reframed surfaced the failure of the typical design-bid-build contracts and tested more collaborative delivery approaches such as progressive design-build, construction management, design-assist and performance contracting. Best-in-class delivery approaches give contractors a voice earlier and align payment with outcomes rather than task completion.

Panelization and prefabrication

Le Château's prefabrication pilot moved panelized retrofits from concept to real-world implementation. It generated grounded data on both costing and installation, and brought out key lessons on where prefabrication has the potential to reduce tenant impact and speed delivery.

Knowledge dissemination

Reframed is a platform that fills the space between silos, creating meaningful opportunities for cross-sectoral engagement, discovery and learning.

A new approach emerging

The Reframed Initiative has opened new ways of thinking about whole-building retrofits in B.C. and beyond. Providers and teams have experienced the benefits of deliberately targeting tenant comfort, health, seismic upgrades, lower embodied carbon, climate resilience, and a longer building life to make the most out of a single retrofit. It also proved multi-partner financing is workable in practice, blending government, utility, municipal, and low-interest loans across every project. Reframed's spirit of collaboration has built lasting social capital through the development of a shared vocabulary and cross-sector relationships that participants described as unique in Canada.

Successes to build on

Cross-project knowledge sharing and robust community are key

Multiple participants credited the Reframed Initiative with building trust, developing shared vocabulary, and nurturing working relationships across a previously fragmented B.C. retrofit sector. This network is now the foundation for replicating this work across the province and the country at large.

Regulatory and utility bottlenecks highlight needed policy reforms

Reframed produced specific, addressable findings such as inconsistent interpretation of municipal building codes, rigid rules for connection sizing, and disconnected permitting processes. These learnings can be translated directly into policy asks, turning years of anecdotal frustration into an actionable agenda for systemic reform.

An empathetic approach to tenant-in-place retrofits and relocation approaches is possible

Reframed proved that tenant-in-place retrofits can be carried out with compassion and care. Success depended on treating the impact on tenants as an early design driver rather than an afterthought. Considerations included engaging tenants before design is underway, preparing contractor teams for working with vulnerable populations, and navigating the complexities of tenant protection policies. The project proved that even full-building relocation of marginalized tenants (including residents managing addiction) during deep retrofit is achievable. This generated a precedent other providers can now draw on rather than treating tenant disruption as an unsolvable barrier.

Alternative delivery and procurement models are increasingly viable

Reframed opened the door to piloting panelized retrofits and continued the ecosystem-building work inspired by the Netherlands' Energiesprong model, demonstrating that collaborative design and progressive design-build are achievable today. At the Reframed Forum, participants noted that B.C.'s default design-bid-build model excludes contractor input and rewards completion over performance, but saw that a shift to new models is possible.

Retrofits can be done without prohibitive electrical upgrades

Manor House demonstrated GHG reductions of around 65% to 70% using gas heat pumps and water-source heat pumps, adding cooling without triggering costly electrical service upgrades. This was described by participants as "a huge achievement" with direct replicability for other aging MURBs facing the same capacity constraints. Non-energy benefits can be a revenue opportunity.

Retrofits can also accommodate density increases

In Crown Manor, adding two rentable units while removing outdated parking structures strengthened the project's business case. However, it also showed that increasing density requires streamlined municipal permitting, recognizing that existing building needs differ from those of new builds.

Sparking a movement

> *"This is one of those initiatives that has a very long tail — rare and really valuable."*
>
> — Chris Severson-Baker, Pembina Institute Executive Director, closing remarks





Seven levers for scaling MURB retrofits in B.C.

Reframed Initiative answered the question of whether deep MURB retrofits work. The next phase must answer how B.C. scales them by acting on the seven priorities below.

1. Enable collaborative delivery

Shift publicly funded retrofit procurement away from design-bid-build defaults toward integrated project delivery, integrated design, or progressive design-build, paired with mandatory project charters that define success up front.

2. Streamline permitting

Launch a provincial permit hub and standardized code-interpretation guidance so a deep retrofit approach that works in one municipality can be replicated in the next, without starting from zero.

3. Right-size the grid relationship

Empower utilities to provide design guidance and right-sized interconnections, reducing wasted capacity and cost from precautionary over-sizing.

4. Protect and plan for tenants

Build tenant engagement, relocation, and planning for vulnerable populations into the standard retrofit toolkit — not as an afterthought discovered mid-project.

5. Coordinate and stabilize financing

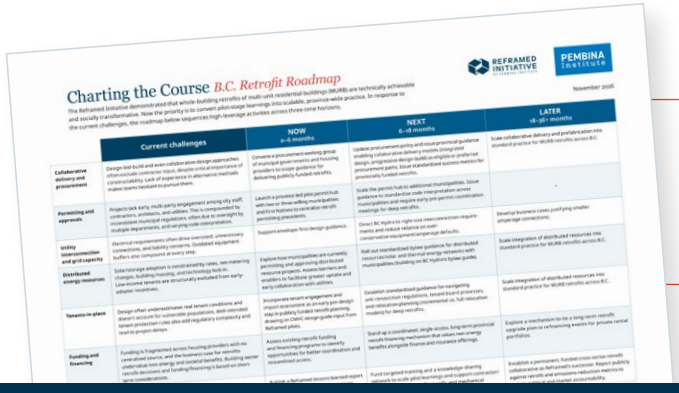
Establish a coordinated, stable, long-term provincial framework for retrofit funding and financing that reduces fragmentation and recognizes health, resilience and other non-energy benefits alongside energy savings.

6. De-risk clean technology adoption

Standardize bylaws around distributed resources and thermal networks and commit to stable policy signals informed by business cases, so building owners can plan solar, storage, and heat-pump investments with confidence.

7. Institutionalize knowledge-sharing

Support a sustained, funded collaborative platform that builds on Reframed's work, connects existing resources and shares pilot learnings to strengthen industry capacity and support the broader adoption of retrofits across B.C.


Charting the Course B.C. Retrofit Roadmap

We lay out how the province, municipalities, industry and utilities can turn these priorities into actions in the B.C. Retrofit Roadmap: pembina.org/pub/bc-retrofit-roadmap