



A-5: Evaluation of Performance of Deep Energy Retrofits in MURBs

Energy Modelling

Calibration

Evaluation

Deep Retrofits

Summary

The Pembina Institute, via their ReFramed initiative, is undertaking a series of deep retrofit demonstration projects to accelerate market development for the deep renovation of MURBs. ReBuild will evaluate the energy savings, indoor air quality, comfort, moisture management, tenant satisfaction and owner satisfaction following these retrofits.

Partners

Pembina Institute is a not-for-profit think-tank dedicated to tackling some of Canada's biggest problems related to a sustainable and healthy built environment.

Researchers

Under Development

METHODS AND DATA USED

As part of Pembina's ReFramed initiative, a number of multi-unit residential buildings will be retrofitted for deep energy and carbon savings. ReBuild will be a partner in the research and analysis phases of the project and collect data on the pre- and post-occupancy performance.

Final Outcomes

The key outcome will be a holistic analysis of the value proposition for tenants, owners, and society based on energy, economic and health metrics. This will lead to the development of a scalable multi-factor cost-benefit model for deep energy retrofit of MURBs enabling the estimation, at a stock level, of the cost and benefit of decarbonization and climate adaptation. Integration of this costing model with online data platforms incorporating energy use data (EnergyStar Portfolio Manager) will help assess economic potential for deep retrofits in this market segment and facilitate project lead identification and accelerate market development.



A-6: Strategies for Deep Tenant Engagement

Tenant Engagement

Auxiliary Benefits

Evaluation

Deep Retrofits

Summary

The Pembina Institute, via their ReFramed initiative, is undertaking a series of deep retrofit demonstration projects to accelerate market development for the deep renovation of MURBs. This project has the potential for not only increasing the well-being and satisfaction of residents during the retrofit process, but also contributing to the development of better retrofit solutions. This activity will engage resident in the process of developing and implementing retrofit solutions for their buildings, and assess tensions and synergies between residents perspectives and those of the technical design team, as well as incorporating resident knowledge of their building in the retrofit design and implementation process.

Partners

Pembina Institute is a not-for-profit think-tank dedicated to tackling some of Canada's biggest problems related to a sustainable and healthy built environment.

Researchers

METHODS AND DATA USED

Through development of engagement strategies appropriate for building occupants, which may include surveys, interviews or digital engagements. This will span pre-design, during the design phase, and upon completion.

Final Outcomes

The overall goal is to enhance the sustainability and resilience indicators for these buildings. The final outcome will be a set of recommendations for stakeholders on how to best include and consider tenant impacts in the design and recommendations of residential deep energy retrofits.