

BIG MOVE 1

Big Move One: Building Retrofits




Retrofitting buildings presents a significant opportunity to achieve reductions in energy consumption and GHG emissions and create local jobs. It is most cost-effective to decarbonize buildings by maximizing energy efficiency prior to adding renewables. Most programs currently retrofit one building at a time, however, in order to achieve the targets identified in the pathway, new approaches will be required. There are many efforts underway across Canada and beyond to undertake retrofits at scale by aggregating building retrofits both for bulk procurement and to achieve efficiencies in project delivery.

What are Energy Retrofits in Buildings?




The term energy retrofits can be used to describe a wide range of activities relating to upgrading energy-consuming systems in a building to reduce building energy-use. Minor energy retrofits can include activities such as upgrading lighting to LEDs and adding insulation. More extensive retrofits include replacing windows and doors, and updating heating and cooling systems with more efficient systems. In this Framework, the term building energy retrofits is used to describe a combination of activities, such as those listed above, that will result in thermal savings of at least 50 per cent and electrical savings of at least 10 per cent in buildings in Regina.



Big Move One: Building Retrofit Actions

ACTION	GREENHOUSE GAS (GHG) IMPACT	CO-BENEFITS	COST	IMPLEMENTATION MECHANISMS	TIMING
1.1 Deep Retrofits: residential, pre-1981 construction		Equity: High (potential) Employment: Medium Cost Effectiveness: Low	\$\$\$\$\$\$	Program: Develop deep retrofit programs for all buildings. Initiative: Pilot a bulk retrofit program.	Start: Immediately Completion: 2030
1.2 Deep retrofits: residential, 1981-2016 construction		Equity: High (potential) Employment: Medium Cost Effectiveness: Low	\$\$\$\$\$\$	Program: Develop deep retrofit programs for all buildings.	Start: Immediately Completion: 2035
1.3 Deep retrofits: ICI		Equity: High (potential) Employment: Medium Cost Effectiveness: High	\$\$\$\$\$\$	Program: Develop deep retrofit programs for all buildings. Leading by example: Retrofit municipal buildings.	Start: Immediately Completion: 2035

GHG IMPACT

-  Low: <1,000 ktCO₂e
-  Medium: 1,000 – 2,000 ktCO₂e
-  High: >2,000 ktCO₂e

CO-BENEFITS

EQUITY –

- Enabler:** No discernible direct effect, but positive outcomes may occur in concert with other actions
- Low:** May favour certain groups or create greater disparity
- Medium:** More likely to be implemented fairly, but existing powerful groups may still be at an advantage
- High:** Contributes to enhanced equity

EMPLOYMENT –

- Enabler:** Enables employment
- Low:** 0 – 5 person years of employment per \$million invested
- Medium:** 5 – 10 person years of employment per \$million invested
- High:** >10 person years of employment per \$million invested

COST EFFECTIVENESS –

- Low:** This action will have a net cost
- Medium:** This action will break even
- High:** This action will have a net return/benefit.

COST

- \$\$\$\$\$ <\$1 million
- \$\$\$\$ \$1 million – \$100 million
- \$\$\$ \$100 million – \$500 million
- \$\$\$\$ \$500 million – \$1 billion
- \$\$\$\$\$ >\$1 billion