

BUILDING FAST ACTION FOR CLIMATE CHANGE AND GREEN JOBS



This Green House

EXECUTIVE SUMMARY

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To avoid catastrophic climate change, the UN Intergovernmental Panel on Climate Change names 2015 as the year green house gas emissions must peak and begin a downhill slide. The IPCC calls on developed countries to lower emissions from 1990 levels by 25% to 40% by the year 2020. Canada, the world's 9th largest economy, is failing spectacularly at this goal. Canada's current goal, adjusted to 1990, amounts to a 3% reduction. In fact we're not meeting that, emissions continue to rise in Canada.

Forward thinking municipal leaders are not waiting to take action. All across Canada early adopters are developing climate action plans, looking ahead to manage climate impacts like sea level rise and taking action on clean energy.

Energy use in buildings accounts for a significant portion of greenhouse gas (GHG) emissions in Canada. Energy-efficiency retrofits offer a fast and affordable way to cut GHG emissions, conserve energy and save consumers money on their utility bills. The bonus for individual homeowners, besides lower energy bills and increased comfort, is that their home increases in value with energy retrofitting.¹

There are community bonuses too. Money invested in retrofitting stays in the local and regional economy and retrofit programs result in jobs and training opportunities.

In addition to direct cuts in emissions from energy conservation, retrofit jobs are green jobs. They perform well in environmental terms. As an example, construction jobs produce 180 times less in emissions per job than those in oil and gas extraction.²

Unlike some other measures, retrofits can be started right now, using existing skills and technologies

Municipalities can take action on climate change, stimulate their local economy and help homeowners save money on energy bills, live in increased comfort and add value to their homes all at the same time.

This Green House: Building Fast Action on Climate Change and Green Jobs examines a core idea: Municipalities providing low-cost financing to cover the upfront cost of energy-efficient retrofits and property owners repaying over time on their property taxes with their energy savings. The report identifies two promising models for municipal residential energy-efficiency financing programs in Canada: Local Improvement Charges for Energy Efficiency and on-utility bill financing (sometimes called "Pay as You Save").

Both models are essentially types of low-cost financing to help homeowners overcome barriers to home energy-efficiency retrofits, and both can be run as full cost-recovery programs, at no net cost to the municipality.

Drawing on Canadian policy research and case studies and lessons learned from existing US programs, this report provides a general overview and then province-by-province analysis of opportun-

ities, potential legislative and regulatory barriers (and solutions), useful policy precedents and other resources that can help local leaders get started on the development of municipally led energy-efficiency home-retrofit programs.

Report Highlights

Environmental Benefits of Energy-Efficiency Retrofitting

- A \$7,000 retrofit in Canada can reduce the average detached home's energy use by 23% to 26%,³ and cut the average household's GHG emissions by approximately 3.1 tonnes per year.
- Widespread investment in efficiency retrofits could cut GHG emissions in the buildings sector by 27%.⁴
- This means GHG reductions in the range of 19 megatonnes (mt) of CO₂e per year, slicing off about 2.6% of Canada's overall national total.

Community Benefits of Energy-Efficiency Retrofitting

- Retrofitting creates between 13 and 16 direct jobs for every \$1 million of increased economic output—that's 50 to 60 times the job creation rate of oil and gas extraction.⁵
- Dollars invested in retrofitting stimulate the local and regional economy and stay in local and regional circulation several times over.
- Financing programs can be run at full cost-recovery for the municipality.
- Efficiency retrofits can help communities meet legislated GHG reduction targets and voluntary emissions reduction commitments.

Homeowner benefits

- Homeowners can save \$700 a year on a \$2,000 annual heating bill by implementing home retrofit recommendations from the existing federal home energy audit program.⁶
- Homeowners will increase the value of their homes
- Homeowners will live in increased comfort

Models for Municipal Financing Programs

Local Improvement Charges for energy efficiency and Utility On-Bill financing are promising models for Canadian municipalities. Both models are designed to help homeowners overcome the key financial barriers to energy retrofits: upfront costs, expensive consumer credit and home ownership lengths that are too short to realize cost savings from a retrofit.

Two Canadian cities (Halifax and Vancouver) are launching programs using variants of these models in 2011, and case studies of similar programs operating in the USA are analyzed in section 3 of this report.

1. Local Improvement Charges for Energy Efficiency (or “Property Assessed Payments for Energy Retrofits”)

- Municipalities provide low-cost financing for homeowners to pay the upfront cost of approved energy-efficiency retrofits, and participating owners repay the city over time as a special assessment on their property taxes.
- The special assessment can be attached to the property rather than the owners upon resale of the property, responsibility for any remaining repayments are passed to the new owner.
- Repayments can be scheduled to balance out with energy bill savings, so that repayments are cash-flow neutral for participating homeowners during the financing period.
- The special assessment can be secured with a lien on the property in the event of default, similar to what happens in the case of failure to pay property taxes. Default rates have been very low in similar programs elsewhere.
- Program participation is entirely voluntary and does not affect the property taxes of nonparticipants.

2. On-Utility Bill Financing (or “Pay as You Save”)

- Energy consumers borrow money to carry out retrofits and then pay back the loan as a charge on their energy utility bills.
- Repayment is usually designed so that monthly payments are approximately equal to (or even less than) the savings in energy costs resulting from energy-efficiency measures.
- At the municipal level, on-bill financing programs are most viable for municipalities that own their local energy utilities. Other municipalities could play a role through partnerships with provincial public utilities or even private energy companies.

What do Canadian municipalities need to move forward?

Legislative and regulatory changes

- Municipalities need clarification from provincial governments about the use of Local Improvement Charges (LICs) to finance energy-efficiency measures on private property. In some provinces, this may require changes to existing municipal legislation and regulations.
 - In provinces with ambiguous legislation or regulations governing the use and scope of LICs, clarification or official authorization from provincial municipal affairs ministries would open the door to municipal retrofit programs.
 - In provinces with explicitly restrictive legislation governing the use of LICs, legislative amendments will likely be necessary. Legislation enabling the use of LICs to finance residential renewable energy and efficiency retrofits was passed by the province of Nova Scotia in December 2010 and provides a precedent for similar changes in other provinces.

Potential capital sources

While the financing programs can be designed to be full cost-recovery and thus revenue-neutral, municipalities will nonetheless need sources of capital to back retrofit financing programs. Possibilities identified in this report include:

- Low-interest borrowing via provincial municipal finance pools (such as the Municipal Financing Authority in BC or Infrastructure Ontario's Loan Program).
- The establishment of a federal or provincial energy-efficiency loan fund.
- Municipal/community bonds.
- Credit-enhanced capital pools.
- Partnerships with credit unions or other financial institutions.
- Energy utilities as "banks" for municipally administered retrofit financing.
- Pilot-project funding from the FCM's Green Municipal Fund.