

Background

Report Summary

Regardless of what the world accomplishes in Copenhagen by the end of next week, the Government of Canada must emerge ready to take concrete action on climate change here at home. The federal government has already committed to cut greenhouse gas (GHG) emissions by 20 per cent below 2006 levels by 2020. Canadians want to see all orders of government working together to achieve that goal.

Act Locally: The Municipal Role in Fighting Climate Change shows that municipal governments are taking action, and they're delivering results. More importantly, it shows that municipalities have the proven, cost-effective projects to jump start Canada's climate change strategy and, at the same time, increase competitiveness and build more livable communities.

Untapped potential in our communities

Municipalities have direct or indirect influence on activities that account for between 20 and 55 megatonnes (Mt) of emission reductions, equivalent to 15 to 40 per cent of Canada's 2020 emission reduction target, including waste management, transportation, and design of commercial and residential buildings.

Over one-quarter of these emission reductions can provide a neutral or even positive return on investment (less than \$0/tonne reduced), even without the implementation of a carbon price. More than two-thirds of emission reductions can be achieved at a cost of less than \$25/tonne reduced – less than the average cost of regulating industry or developing renewable energy, and a fraction of the price of carbon capture and storage. All of the emission reductions are projected to cost less than \$75 per tonne reduced, which is significantly less than the projected cost of competing options such as carbon capture and storage.

During the past decade, municipalities have undertaken thousands of projects to reduce GHG emissions, from turning landfill gas into electricity to putting high-efficiency buses on the road. Many projects pay for themselves – and save taxpayers money – by improving energy efficiency. These projects build more liveable communities, boost our quality of life and economic competitiveness. They don't hinge on experimental technologies or complex legislation.

Municipal Fiscal Challenges

Municipal property tax payers cannot afford to underwrite a national climate change strategy all on their own. Their communities are struggling to pay down the \$123-billion municipal infrastructure deficit – and meet growing responsibilities – while receiving just eight cents of every tax dollar collected in Canada.

Findings and Conclusions

Municipal contributions to Canada's GHG reduction objectives must be considered an essential element to achieving long-term and cost-effective emission reductions. A strategic approach led and, in part, funded by the Government of Canada, is required in order to maximize this potential and ensure that more progress is made in achieving emission reductions in the next decade.

The report contains the following key findings and conclusions:

- 1. Rationale for investing in local, community-based GHG emission reduction initiatives:**
 - a. Significant emission reductions are ready to go.
 - b. Local, community-based emission reductions are low cost.
 - c. Significant health, social and economic benefits accompany municipal GHG actions.
 - d. Lower municipal operating costs
- 2. Barriers and challenges to maximizing the municipal potential:** Realizing the full municipal potential for GHG emission reductions is not a given, and several barriers exist, both at the local, as well as national or regional levels.
 - a. No carbon price in Canada;
 - b. Legislative barriers;
 - c. Access to capital;
 - d. Capacity and expertise;
 - e. Budgeting and financial reporting challenges.

Taking Action Locally

What is needed now, more urgently than new money, is a new mindset. The federal government must commit to working with provinces, territories and municipalities to put all options for fighting climate change on the table, and to invest in the ones that deliver the best value for Canadians. *Act Locally: The Municipal Role in Fighting Climate Change* shows that cost-effective, community-based projects offer the very best opportunities to fight climate change while building better communities to live and work.

About FCM

The Federation of Canadian Municipalities (FCM) has been the national voice of municipal government since 1901. With 1,796 members, FCM represents the interests of municipalities on policy and program matters that fall within federal jurisdiction. Members include Canada's largest cities, small urban and rural communities, and 18 provincial and territorial municipal associations.

CLIMATE CHANGE FACTS AND FIGURES

Canada's greenhouse gas (GHG) emissions and performance

- Canada emitted **718 megatonnes** (Mt) of greenhouse gas (GHG) emissions in 2006 (the latest detailed estimates).
- Canada's GHG emissions represent just **two per cent of world total**, but we are the **8th largest total emitter**, after China, U.S., Russia, India, Japan, Germany, and UK.
- Canada was ranked **16th out of 17 OECD countries on GHG emissions per capita** in 2005 by the Conference Board of Canada. Canada's per capita GHG emissions were also almost four times greater than Norway's, the top performer.
- Most recently, the Government of Canada has committed to reduce Canada's GHG emissions by 20 per cent below 2006 emissions, by 2020. This is equivalent to three per cent below 1990 emissions.
- President Obama recently proposed a U.S. target of 17 per cent below 2005 emissions by 2020.

Municipalities and climate change

- In 2005, the World Mayors and Municipal Leaders Declaration on Climate Change, adopted at COP-11 in Montreal, committed municipal governments, each according to their individual circumstances and abilities, to reduce greenhouse gas emissions by 30 per cent below 1990 levels by 2020 and by 80 per cent by 2050.
- Municipal governments currently have direct or indirect control over approximately 44 per cent of GHG emissions in Canada. In 2006, this represented control over 315 megatonnes (Mt) of carbon dioxide equivalent (CO₂e).
- FCM's December 2009 report estimates that municipalities could contribute between 20 Mt and 55 Mt in emission reductions, equivalent to 15 to 40 per cent of Canada's 2020 emission reductions target.
- FCM's Partners for Climate Protection (PCP) program is a national network that commits municipalities to reduce GHG emissions in their own operations and within their community boundaries. Membership has increased significantly over the years and today 194 municipalities, representing over 78 per cent of the Canadian population, are included in the network.
- It is estimated that the capital investment costs for landfill gas capture and utilization projects in Canada will cost between \$250 and \$400 million in order to achieve 6.5 Mt in annual reductions. #####

Partners for Climate Protection

The Partners for Climate Protection (PCP) program is a network of Canadian municipal governments who have committed to reducing greenhouse gases and acting on climate change. PCP provides a framework, network and toolkit to facilitate action.

Municipalities join PCP by passing a resolution at council. Membership is free. There are currently 194 members representing municipalities in all provinces and territories. Members represent a broad mix of population from 600 to 3.5 million. Two-thirds of members are under 50,000 population. In the last two years, these municipalities have tracked 1,400,000 tonnes of GHG reductions.

PCP started as an FCM policy initiative in 1994 called the 20% Club. FCM's 20% Club aimed to build political support for federal action on climate change while promoting and recognizing municipal action. This program became PCP in 1998 after merging with ICLEI-Local Governments for Sustainability's Canadian Cities for Climate Protection (CCP) program. At that time, PCP became a partnership program between FCM and ICLEI. The international CCP program comprises more than 1,100 local governments worldwide making the same efforts. A memorandum of understanding (MOU) is in place between FCM and ICLEI that identifies the role of each organization. PCP receives financial support through FCM's Green Municipal Fund (GMF). An advisory committee provides guidance on program activities.

Municipalities in PCP use a five-milestone framework to build capacity for energy and emissions management. In conjunction with this framework, PCP provides the International Emissions Analysis Protocol developed by ICLEI to guide inventories and emissions quantification. The five milestones include:

- Creating a greenhouse gas emissions inventory and forecast;
- Setting an emissions reductions target;
- Developing a local action plan;
- Implementing the local action plan or a set of activities; and
- Monitoring progress and reporting results.

The PCP toolkit provides a selection of resource materials to help municipalities through the milestone process. All materials are posted online in both English and French. A secretariat service provided through FCM and ICLEI facilitates municipal networking, technical assistance and access to these tools. Municipalities can access the GMF for grant funding to complete milestones two and three, along with funding for feasibility studies and capital projects at milestone four. Councils are recognized for their membership and progress through letters from FCM's president.

PCP continues to build partnerships with the federal government, provincial and territorial governments and other organizations that can deliver on the program's objectives. Over the next 18 months, PCP will work with Environment Canada to deliver a program to reduce fuel consumption and emissions from municipal heavy duty fleet vehicles. A strategic plan is currently being developed to establish how PCP can continue to support municipal action through the next five years.

Community GHG reduction Projects
Examples
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City of Regina, Sask., Street light Retrofit

To date, the City of Regina's corporate emissions have been reduced through a series of operational improvements including converting street lights to high pressure sodium vapour in partnership with SaskPower. The street light retrofit resulted in annual cost savings of \$450,000 and a savings of 1.3 million kilowatt hours. The annual greenhouse gas reduction of this measure is 1,053 tonnes.

Town of Caledon, Ont., By-law Hybrid Vehicle Pilot Study

In 2007, the Town of Caledon purchased a hybrid vehicle to join its corporate fleet of service vehicles. The hybrid, used for by-law enforcement, is a fuel-efficient and environmentally friendly option that upholds the town's commitment to promoting environmental responsibility and awareness in a publicly visible way. The town is experiencing annual cost savings of \$13,735 (for overall operating costs reported by the local government) with resource savings of 1,473 litres of gasoline.

City of Greater Sudbury, Ont., Solar Wall Installation

The installation of a 569 m² solar wall constructed at a Greater Sudbury Housing Corporation 250-unit high-rise dramatically increases the efficiency of the building's heating system. The Solar-Wall technology provides a low cost, high value option for reducing on-site energy consumption that produces warm air. This measure, as reported by the City of Greater Sudbury, has resulted in annual cost savings of \$23,600 and annual resource savings of 600,555 kilowatt hours. The annual greenhouse gas reduction is 108 tonnes.

City of Greater Sudbury, Ont., Energy Efficient School Upgrades

In the City of Greater Sudbury, the Conseil Scolaire Catholique du Nouvel-Ontario (CSCNO) has upgraded schools with high efficiency (98 per cent) natural gas condensing boilers, heat recovery ventilation systems, windows, and motion sensors. Since 2002, a total of 25 schools have undergone retrofits of varying degrees. This measure, as reported by the City of Greater Sudbury, has resulted in annual cost savings of \$469,000 and resource savings of 1.53 million kilowatt hours of natural gas. The annual reduction in greenhouse gas of the school upgrades is 1,300 tonnes.

City of Surrey, B.C., Single-Stream Recycling Program

In 2009, the commencement of residential single-stream curbside recyclables collection was begun in the City of Surrey. The city's new recycling processing facility allowed residents to place all of their recyclable materials into one blue box. This has increased ease of use, and increased the volume of material recycled, with a significant reduction in collection vehicle daily trips. This measure, as reported by the City of Surrey, has resulted in annual cost savings of \$1.72 million and annual resource savings of 160,400 litres of diesel fuel. The annual greenhouse gas reduction of single-stream recycling is 435 tonnes.

City of Ottawa, Ont., Alternative Fuel Mix

In the City of Ottawa, public transit buses were fuelled with biodiesel as part of the city's efforts to cut greenhouse gas emissions and to reduce dependence on non-renewable fossil fuels as part of a pilot study. The city used five to 20 per cent Biofuel (soya) mix with regular fuels, thus reducing emissions of hydrocarbons, carbon monoxide and particulate matter. This measure, as reported by the City of Ottawa, has resulted in annual resource savings of 3.5 million litres of diesel and an annual greenhouse gas reduction of 8,936 tonnes.

City of Toronto, Ont., Energy Retrofit Programs

Under numerous City of Toronto programs, energy retrofits have been carried out in over 500 city-owned buildings. The improvements include updating lighting systems; installing heat recovery systems; reducing drafts and leaks around windows, walls, and doors; installing deep lake cooling systems; and upgrading heating, ventilation, and air conditioning systems. Combined with other initiatives such as greening the city fleet, switching 2000 traffic signals to LEDs, and powering City Hall with renewable energy, these programs have resulted in annual cost savings of approximately \$19 million per year, and associated annual greenhouse gas reduction of 692,000 tonnes.

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