

Carbon Dioxide Reduction Edmonton CO₂RE

Three-Year Implementation Plan
(2008 – 2010)

Recommendation:

That the November 6, 2007 Asset Management and Public Works Department report 2007PW5022 be received for information.

Report Summary

This report provides a three-year implementation plan for City of Edmonton's Community-wide Greenhouse Gas Emission Reduction and Energy Strategy (CO₂RE) to significantly and permanently reduce community-wide greenhouse gas emissions.

Previous Council/Committee Action

At the November 21, 2006, Transportation and Public Works Committee meeting, Report 2006PW0994 was accepted as information.

Report

- Climate change is recognized as one of the most serious environmental issues facing humanity.
- Locally, a recent poll identified that 60% of Edmontonians are somewhat or very concerned about climate change (October 2006 – Hargreaves & Associates survey for CO₂RE).
- Additionally, 82% of Edmontonians reported having made or planning to make energy efficiency upgrade renovations.

- The most recent Citizen's Satisfaction survey also indicates that Edmonton citizens support the City in their leadership and implementation of Environmental Policies and practices. Addressing Climate Change is an important piece in the City's Environmental policy.
- Despite this level of concern, current greenhouse gas emission trends suggest the community will fall well short of the goal of a 6% reduction from 1990 levels by 2010 and 20% by 2020, which were adopted by City Council in 2002.
- This gap was identified at the November 21, 2006, Transportation and Public Works Committee meeting in report 2006PW0994 which also indicated that Administration would undertake the following next steps:
 - In consultation with the City's Environmental Advisory Committee and the CO₂RE Team, develop an expanded CO₂RE Program, the associated budget and explore the viability of funding options.
 - Return to Transportation and Public Works Committee in the 2nd Quarter 2007, with a recommended approach for Committee consideration.
- A Strategic Review of CO₂RE was conducted in the first quarter of 2007.
- The Review was designed with multi-stakeholder consultation, involving the CO₂RE founders (known as the CO₂RE Team – representatives from local business, other orders of government, both school boards, post secondary institutions and not-for-profit environmental

organizations), Environmental Advisory Committee members and representatives of numerous City departments.

- Consulting Team member, Bob Mitchell with Inspired Value Inc. and David Forrest of Global Vision Consulting Ltd., were hired to facilitate the strategic review including facilitating stakeholder workshops, drafting findings and preparing a final report including a recommended program strategy.
- The consultant's concluded in their final report that an aggressive program phased in over the next three years was required if the City had any expectation of achieving its GHG reduction goals.
- This approach will allow CO₂RE to significantly increase the number of actions it can take, extend the breadth of its current actions, increase the pace of program roll-out, and better position the City to seek matching or sponsorship funding.
- Key components of this renewed CO₂RE Strategy include:
 1. Building on existing residential programs and launching commercial/institutional and industrial programs;
 2. A combination of education, incentives and regulation;
 3. Collective effort by all City departments, other orders of government, business, industry and citizens; and
 4. The City becoming a bolder leader in its policies, planning, programs, advocacy and its own operations.

- Components one and two are embodied in Attachment 1: A Three-Year CO₂RE Implementation Plan.
- The third and fourth components are currently being addressed through a review and updating of the City's Environmental Strategic Plan which will strengthen the efforts of the CO₂RE Strategy.
- The Three-Year CO₂RE Implementation Plan received Environmental Advisory Committee (EAC) support on October 4, 2007.

Policy

- The Three-Year CO₂RE Implementation Plan supports the City's Environmental Policy C512.
- More specifically, the plan supports the Environmental Strategic Plan Strategic Objective 2.2.2.2: "*Reduce greenhouse gas emission from the broader Edmonton community.*"; and,
- Strategic Objective 2.2.3.1: "*Collaborate with and encourage other orders of government to promote and support greenhouse gas reduction initiatives that will be effective in Edmonton.*"

Focus Area

- This initiative falls within Edmonton's 2007 Strategic Direction: Focus Areas and Priorities under the Environment Key Outcome of Sustainability and the Healthy Ecosystem Focus Area.

Public Consultation

- The CO₂RE Strategic Review was conducted in accordance with the City Policy C513.

Budget/Financial Implications

- In 2007, CO₂RE incentive funding was leveraged 2 ½ to one with other orders of government and Community Business partnerships. In 2008, increased City funding will be leveraged with programs and partnerships as well as used to attract additional sources of revenue.
- The annual budget required over the next three years to deliver the renewed CO₂RE Strategy is:
 - 2008 - \$1.3 million (Of which \$650,000 is included in the 2008 EcoVision service package to augment current funding)
 - 2009 - \$4 million
 - 2010 - \$6 million

Subject to funding, the CO₂RE Three Year Implementation Plan will be implemented by Administration.

Attachments

1. Three-Year CO₂RE Implementation Plan – Renewed CO₂RE Strategy Summary

Background Information Available on Request

1. Three-Year CO₂RE Implementation Plan – Renewed CO₂RE Strategy
2. CO₂RE Strategic Review Final Report
3. 2006 CO₂RE Annual Report

Others Approving this Report

- Senior Management Team

Three-Year CO₂RE Implementation Plan – Renewed CO₂RE Strategy – Summary

Background

CO₂RE was successfully launched in the residential sector in the fall of 2004. Since that time, the focus has remained primarily on delivering residential programs, particularly related to improving home energy efficiency. A strategic review of CO₂RE in 2007 with the goal of expanding the program to achieve additional greenhouse gas emission reductions confirmed:

1. That to achieve significant greenhouse gas emissions reduction, CO₂RE needs to expand its residential programs and launch programs for the commercial and industrial sectors;
2. Across all sectors, a combination of education (know-how), incentives (call to action) and regulation (enforcement) are required to achieve significant and permanent greenhouse gas emission reduction;
3. Achieving significant GHG reduction requires collective effort by all City departments, other orders of government, business, industry and citizen; and,
4. The City needs to become a bolder leader in its policies, planning, programs, advocacy and its own operations – there is a tremendous opportunity and need to demonstrate Community Leadership.

Three-Year Implementation Plan

This CO₂RE Implementation Plan is based on the results of the CO₂RE Strategic Review and incorporates action items that have either medium or high impact on reducing greenhouse gas emissions for each sector. In Edmonton, each of the sectors (residential, commercial and institutional and industrial) account for approximately one-third of our total community greenhouse gas emissions. This is why the involvement of every sector is vital to the success of the CO₂RE strategy.

The programs recommended, particularly for the residential and commercial sector, focus on improving both the energy efficiency of existing homes and buildings as well as increasing the energy efficiency of new construction in Edmonton. Commercial and residential buildings account for approximately 38% of our total energy use and produce almost one-third of our greenhouse gas emissions; more than any other sector including transportation.

The strategy will be implemented over a three year period from 2008 – 2010. Program changes will be introduced each year based on an annual review and incorporated into a revised implementation plan.

Year 1 Initiatives - 2008

- Continue building on the successful residential programs such as:
 - distributing the CO₂RE Home\$avers booklet through Community Business Partners SEARS HomeCentral and ATCO Energy Sense
 - hosting “Take Action on Climate Change” presentations and displays
 - distributing a bi-annual newsletter
 - running CO₂RE membership drives supported by Community Business Partners
 - increasing the number of rebates available for energy efficiency upgrades
 - introducing two new rebates; one for solar hot water heaters and one to encourage new home buyers to purchase more energy efficient homes;
- Expand CO₂RE’s net of influence through new school programs, expanded community partnerships and volunteer programs;
- Research and develop a city-wide home energy efficiency certification program;
- Work with Climate Change Central and other interested municipalities to reduce the barriers homeowners face when wanting to purchase and install renewable energy systems and high cost energy efficiency retrofits.
- Re-offer Fleet Vehicle Driver training to local businesses;
- Launch training targeted at commercial warehouse owners;
- Provide financial assistance for business energy audits and energy efficiency upgrades; and,
- Start working towards establishing an energy efficiency bylaw for all new commercial buildings built in the City of Edmonton focusing on voluntary adoption of accepted standards.

Year 1 Objectives:

- 20% increase in the number of Edmontonians (residents and business owners) aware of CO₂RE programs and services
- Doubling of the number of residents and businesses participating in CO₂RE rebate and training programs
- 20% increase in CO₂RE membership (bring total to 14,400)
- 5,000 tonnes of measurable GHG emission reduction resulting from the incentive programs
- Securing one new and significant source of external funding

Year 2 Initiatives - 2009

- Increase incentive funding for residential energy efficiency upgrades;
- Pilot a volunteer outreach program;
- Implement an energy certification service to provide energy evaluations/home energy efficiency ratings for new homes;

- Continue working to move the community towards a more substantial renewable energy portfolio.
- Greatly expand the number of training workshops and subsidized energy audits available to local businesses;
- Publish energy efficiency improvement how-to publications developed specifically for the commercial sector;
- Partner with a local financial institution to finance a high profile commercial energy efficiency improvement project; and,
- Target industries with high energy use with boiler and facility operators training.

Year 2 Objectives: to be developed as part of the annual review process

Year 3 Initiatives - 2010

- Fully implement volunteer based outreach program, energy certification program and residential rebate programs;
- Expand commercial sector training programs;
- Continue working towards establishing an energy efficiency bylaw for new buildings;
- Finance a second commercial energy efficiency improvement project;
- Launch energy efficiency training for intense industrial energy users; and,
- Provide financial assistance to pilot a new energy efficiency project that could be duplicated by other local industries.

Year 3 Objectives: to be developed as part of the annual review process

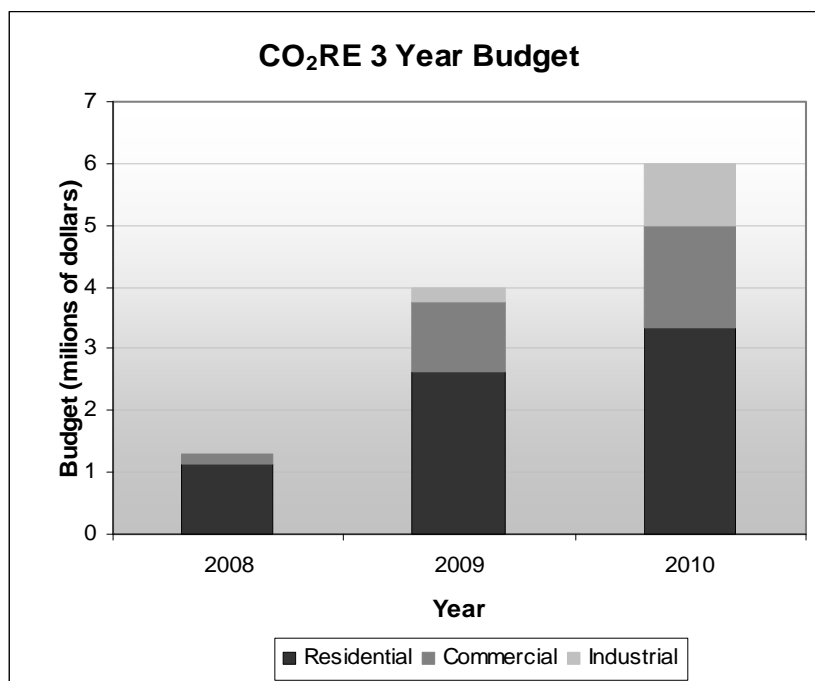
Annual Budget Requirements

Financial

The three year budget required to support this aggressive programming reflects both an expanded residential program and the introduction of commercial and industrial programs and services. While the overall budget will increase, the proportion of funds directed towards residential programs will decrease. By 2010, residential programs will require 56 percent of the total CO₂RE budget. Of the remaining funds, 28 percent will be directed towards the commercial sector and 16 percent towards helping industry reduce its greenhouse gas emissions.

In 2008, tax levy funding will be leveraged with other funding programs and partnerships as well as used to attract one new and significant source of external funding. City funding requirements for year two and three of implementation will be adjusted according.

As seen in the graph below, the total CO₂RE operating budget over the next three years is estimated at \$1.3 million in 2008, \$4 million in 2009 and \$6 million in 2010.



CO₂RE Staffing

CO₂RE currently operates with one contracted Program Manager supported by the Office of the Environment (e.g. GHG inventory and marketing support). Implementation of this plan requires addition technical, business development, administration and project management resources. Staffing requirements include an increase of two people in 2008, two in 2009 and one in 2010 for a staffing compliment of six FTEs in 2010.

Community Leadership

Similar to the community outreach initiatives of CO₂RE, Community Leadership opportunities encompass education, incentives and regulatory/policy initiatives.

The following list provides examples of the types and scope of initiatives identified by participants of the CO₂RE Strategic Review process.

Potential Leadership opportunities worthy of further investigation include:

- putting GHG emissions on utility bills;
- expediting City approvals for green neighbourhoods;
- working with the province for enabling legislation and to update the building code;
- and,

- working with local utilities to enable domestic renewable energy use (e.g. net metering).

While not specifically included in the CO₂RE implementation plan or budget, CO₂RE offers policy, technical and communication support to Community Leadership initiatives. The types of leadership activities identified in the Strategic Review process are currently being addressed through an update of the City's Environmental Strategic Plan.