

Kyoto comes to town

Calgary and Edmonton find good reasons for greenhouse gas reduction

AS THE FEDERAL GOVERNMENT launched its Kyoto implementation plan recently, two cities in Alberta's oil patch were celebrating their success in reducing harmful greenhouse gas (GHG) emissions. In early March, Calgary became the first municipality in Canada, followed closely by Edmonton, to reach all five milestones set by Partners for Climate Protection (PCP), a program that helps municipalities take stock of their energy use and develop plans to reduce GHG emissions.

Despite Calgary's sometimes-negative reputation on Kyoto, "there was surprisingly little resistance to the city having a climate change program," says Calgary's Environment Specialist Rob Shymanski, who credits champions on city council and in the administration with providing the necessary resources to succeed.

PCP's website (<http://kn.fcm.ca>) says municipalities can reduce Canada's total GHG emissions by as much as 50 megatonnes a year by 2012, and reap the cost-saving benefits of efficiencies and conservation by investing in community-wide improvements to environmental and transportation infrastructure.

PCP – a partnership between the Federation of Canadian Municipalities and the International Council for Local Environmental Initiatives – essentially guides municipalities through five milestones, from designing long-term strategies to setting reduction targets and timelines, and monitoring progress. The initiative has a membership of 123 Canadian municipalities.

"We have some responsibility as Edmontonians, Albertans, North Americans, who use a lot of energy, to reduce greenhouse gas emission – that's the ethical part," says Mark Brostrom, environmental engineer with the City of Edmonton. "But there's also the opportunity, both within our own operations to look at the economic opportunities of reducing energy use, and at a community level to become a more efficient city – that's a good economic driver."

PCP says that municipalities can reduce operating costs with climate protection measures. For example, energy-efficient building retrofits reduce heating bills. The renewable energy that powers urban transit can save the capital costs of expanding coal-fired generators. The savings may not be immediate, but they add up over time. For example, Calgary switched its residential street lights to low-watt fixtures – the first North American city to do so. This will reduce GHG emissions by 16 kilotonnes a year, saving an expected \$2 million a year, which pays for the retrofit in about seven years.

The private sector may find this too long to wait for payback, says Calgary's Shymanski, "but we see that as a pretty good return, because we know we're going to be around in seven years."

Calgary has committed to reducing GHG emissions from municipal operations to six percent below 1990 levels by 2012. Edmonton is aiming for a community-wide reduction of up to

six percent from 1990 levels by 2010, and a further target of 20 percent by 2020. Both cities began their emission reduction strategies in earnest in the late 1990s.

Their goals are challenging, says Edmonton's Brostrom, but PCP's active national network is a motivator. "One of the great things about [PCP] is that it is a peer-recognized program – communities from across Canada are involved," he says. "Members range from very small municipalities up to the big cities, so there is a lot of good opportunity for sharing information."

There are a number of benefits with the climate change issue – economic, environmental and creating jobs

A council resolution is all it takes to kick-start PCP's reduction strategy. Current members are in various stages of their strategies. But the fifth milestone – monitoring – may prove to be the most difficult, says Shymanski, especially for a city with operations the size of Calgary. Pre-PCP, the city only had the capacity to report every three years and had to develop its own corporate GHG monitoring and tracking system (called HEAT).

Once a strategy is established, says Edmonton's Brostrom, it takes work to keep it a priority with the necessary political and financial support. "There are a number of benefits with the climate change issue – economic, environmental and creating jobs with energy efficiency projects," he says. "The challenge is to keep those benefits upfront and remind people why we're doing what we're doing, because it's a long-term initiative."

It also takes a collegial approach, says Calgary's Shymanski. Rather than "coming from top down" it must involve all departments – public works, water and wastewater, buildings and waste management – to ensure their participation in shaping the initiative, he says.

For Calgary, these initiatives include: a greener municipal fleet with more gasoline-electric hybrid vehicles and an idling reduction policy; North America's first wind-powered light-rail transit system; more energy efficient buildings and facilities, and light emitting diode (LED) technology in traffic signals. The city is also one of the first Canadian municipalities to attain corporate-wide ISO 14001 registration, an achievement that won a 2004 sustainable community award from FCM-CH2M HILL.

One project Shymanski cites as particularly satisfying is Calgary's fire department's use of biodiesel in one of its smaller trucks. "Biodiesel was not on the map in Alberta; no one had even

heard of it, even though it's old hat in southern Ontario," he says. So, while the city hasn't started bulk-buying biodiesel, the fire department is interested in expanding and the city's recycling department is exploring using the fuel, made from oil seed and waste cooking oil, in their trucks. "What a great combination," says Shymanski, laughing at the obvious link. "Environmentally friendly fuel in a truck doing an environmentally friendly task."

Edmonton has also focused on reducing emissions from its municipal fleet, as well as city buildings, street lighting and public transit. The city is about to complete its LED traffic signal conversion and is moving toward ISO 14001 registration, says Brostrom. He also notes a \$30-million energy management revolving fund to retrofit city buildings and facilities. The internal borrowing mechanism provides capital for upgrades, which is then repaid through energy savings. "We started this type of funding at a smaller level in the mid-90s at \$1 million," he says.

Calgary decided on a slightly different route with Energy Performance Contracting to retrofit buildings, while Edmonton followed their LED conversion lead. "We sometimes take turns, where we'll take the lead on something and the folks [in Calgary] will take a look at that and use it as a bit of a lever to get their programs going – and we'll do the same," says Edmonton's Brostrom. "It's a supportive competition."

"We consult with each other on all sorts of different issues; there's a real cooperative spirit between city staff," adds Calgary's Shymanski. "[Our] cities are similar. We are in the same time zone and legislative environment, so it just makes sense." He credits Edmonton with having an excellent community engagement strategy.

There are two components to a PCP plan: reducing emissions from operations under direct municipal control, and community-wide reductions. When Edmonton council realized that city operations contributed only three percent of emissions, they turned to the broader community. Some 20 stakeholders from all sectors with a role in producing GHG emissions – industry, non-governmental, environmental and community organizations, and home-builders – came together under CO₂RE ("RE" stands for reduction) to develop an action plan for every sector – industrial, residential and commercial.

Currently, the program has a strong residential focus, says Brostrom, with partners such as Home Depot getting information out to people, including "at the point of purchase when they

need to decide about programmable thermostats or low-flush toilets." Residents are asked to become CO₂RE members. More than 10,000 have done so since 2003. Membership is free and includes a newsletter, discounts on energy-efficient products at Home Depot – from thermostats to furnaces – and the occasional chance to win a \$1,000 shopping spree at the chain's local stores. The award-winning program has attracted attention from around the world.

CO₂RE has also been linked to the federal government's One-Tonne Challenge. Edmonton participates as a group in the challenge, which does not really resonate with Alberta residents who are unsure what they need to do, says Brostrom. Focusing on local and personal action as part of CO₂RE is key to getting the challenge off the ground, he says. "What we're able to do... is say 'okay, well, here's what you can do' because we've got some specific local information."

PCP is simply one part of both municipalities' environmental planning and their focus on quality of life and sustainable communities. "It put the issue on the agenda and made taking action on climate change a council priority," says Calgary's Shymanski.

"Municipalities are a great place to look at environmental issues," says Brostrom, noting everything from climate change and brownfields to pesticides and growth management.

This attention to GHG emission reductions in Calgary and Edmonton plays a crucial role in the objectives of the recently released federal Kyoto implementation plan – *Moving Forward on Climate Change: A Plan for Honouring our Kyoto Commitment* – which sets Canada's overall reduction target at 270 megatonnes a year over 2008-2012.

Shymanski says a municipality's role on Kyoto is twofold. They can run reduction initiatives, and they show the public and private sector that "it's working for us; you can do this too."

"This is maybe a bit of a biased opinion," chuckled Brostrom. "But I really truly believe – and my understanding or take on things probably got stronger over time – that if we are to meet Kyoto or any other long-term climate change goals or greenhouse gas emission reduction goals, it's going to have to happen at the community level." ■■■

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