

Greenhouse

Gas Markets

By Jane Rigby

What will market mechanisms under the Canadian Emissions Trading system look like? The Canadian government just released its greenhouse gas reduction strategy: *Moving forward on Climate Change: A Plan for Honouring our Kyoto Commitment*. Two kinds of companies will be affected by this new state-of-play: those that emit large amounts of CO₂ will now be caught under regulated restrictions and those that can innovate to reduce CO₂ will be rewarded.

Canada's obligation under the Kyoto Protocol is significant. We have agreed to reduce greenhouse gas (GHG) emissions to 6% below 1990 levels through the period 2008 to 2012. This amounts to a reduction of somewhere in the realm of 270 million tonnes from business-as-usual projections for 2010.

Part of the government plan to achieve this goal is to require a reduction of 45 megatonnes from Large Final Emitters (LFEs) — about 700 companies in the oil and gas, thermal electricity, mining and manufacturing sectors. These companies will be assigned a cap on their CO₂ intensity and will receive a permit for every tonne of CO₂ they emit up to that cap. All the CO₂ they emit must be covered by permits at the end of each year or they will face financial penalty. By trading permits, companies are able to achieve compliance at the lowest possible cost.

Besides Canadian permits, companies caught under this regulation can access other tradable instruments to meet their commitments, including:

1. Certified Emission Reductions (CERs) from developing countries that have ratified the Kyoto Protocol;
2. Emission Reduction Units (ERUs) from economies-in-transition (Eastern Europe) that have ratified the Kyoto Protocol;
3. Domestic offset credits from Canadian entities (credits attesting that a real emission reduction or carbon sequestration has been generated outside the LFE system); and,
4. Other "green" international credits that are linked to sales of Canadian technology or otherwise meet national interests.

LFEs would also be able to invest in up to nine megatonnes of technology developments at \$15 a tonne and count those investments for compliance purposes.

Since the Canadian government will have to reduce emissions beyond volumes it anticipates achieving at home, it will also be in the market for these project-based credits and other international instruments. It will make these purchases through a Climate Fund. Budget 2005 provided an initial \$1 billion for this fund, which is expected to yield 75 to 115 megatonnes of reductions annually in the 2008 to 2012 period.

In an attempt to have purchases from the fund meet Canada's larger sustainability interests, international reductions will have

Capturing Emission Deals

Large CDM project includes Canadian company

On August 24, 2004, CO₂e.com announced the facilitation of two transactions in one of the largest Clean Development Mechanism (CDM) projects to date.

The multi-million dollar deal, transacted under the CDM, involves contracts between Agrosuper, the leading pork producer in Chile, and two of the world's leading electric utilities companies, Transalta of Canada and Tokyo Electric Power Company (TEPCO) of Japan. It is also the first official transaction in Chile that uses approved U.N. methodology and has also received approval from the Chilean Designated National Authority.

The project, involving the capture and combustion of methane by an innovative swine manure treatment process, is part of over 400,000 tonnes of greenhouse gases reduced per year on the farm generated by over 100,000 pigs, putting Agrosuper well ahead of worldwide treatment standards.

CO₂e.com worked closely with Mitsui & Co. (part owner of CO₂e) in Japan, and Urquidí, Riesco & Compañía in Chile to facilitate the transaction and to develop the documentation necessary to attain the required approvals for the project under the U.N. approval process.

to apply Canadian technology, improve our competitiveness, deliver other environmental benefits or advance our international development objectives.

What is happening now

Canadian companies have been purchasing project-based emission reductions for nearly 10 years, to meet voluntary emission reduction targets, or more recently, in anticipation of their use in meeting Kyoto targets. Part of the motivation for early trading has been the determination of the largest CO₂ emitting companies to develop a robust market through which they can easily hedge their exposure to their liabilities. It makes sense for those likely to be most affected to prepare well in advance of the necessity to trade.

In the last year, a Canadian company, Transalta, transacted the first CER deal in Canada. (See "Capturing Emission Deals.") CERs have appeal in that they are competitively priced, can be purchased in large enough volumes to minimize administration costs, and can be re-sold outside the Canadian market if not required for compliance. The CDM Methodology Panel has approved a number of methodologies, and the CDM Executive Board is in the process of approving the registration of the first CDM projects.

These positive attributes are marred by concerns over project delivery failure and counterparty credit. Clarity on how credits can be transferred in the various national and international registries has not been forthcoming; however many companies in the EU and Japan are also realizing the flexibility and potential of CERs, and starting to contract volumes of CERs from CDM projects. The certainty of purchasing CERs on a long-term

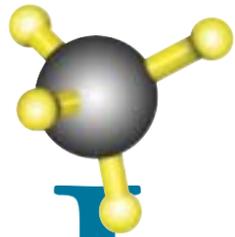
forward contract at current prices offers some comfort to companies likely to face stringent targets come 2008 to 2012.

The infrastructure for a trading system in Canada still needs to be developed, including detailed allocations, a registry for transferring tradable instruments and new financial accounting standards. For project-based credits, standard methodologies for measuring baseline and reductions need to be created. Hundreds of small- to medium-size firms across Canada are only now grasping the full implications of being brought into this system. Most have no trading capability or even permissions to trade; many still have to get specific permission from their boards to buy or sell these types of permits and most likely will delay purchasing for as long as possible.

As these issues get addressed in the next several months, volumes, contract size, and the number of companies involved in trading will increase. If we look to the European Emissions Trading Scheme, which started in January of this year, much of the financial infrastructure is emerging with banks, exchanges and even insurance companies getting into the market. Standard contracts are being developed and the first carbon funds are under way. As the details of our plan are articulated, the trading community looks forward to Canadian permits becoming liquid financial instruments moving Canada towards meeting its Kyoto commitments at the lowest cost. **HMM**

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Losing a Tonne

by Trisha Richards

Toronto residents are asked to take part in Canada's commitment to Kyoto.

A plan is under way to get Canada's largest city to cut its personal greenhouse gas (GHG) emissions. It's called One-Tonne Toronto, a community-based project that is part of the national One-Tonne Challenge program. One-Tonne Toronto is one of many projects launched in April, asking Canadians to personally address climate change. But how does a city like Toronto fit into the equation?

The average Canadian produces more than five tonnes of GHG emissions per year, which amounts to approximately 28 per cent of Canada's total emissions. But individual emissions account for 47 per cent of Toronto's overall emissions, says Amanda Mongeon, the project coordinator for One-Tonne Toronto. "Toronto will ideally make a huge difference," she says. In fact, Canada likely won't reach its Kyoto mandate without getting individual Torontonians to decrease or change their energy use.

Ms. Mongeon works for the Clean Air Partnership (CAP), a group that develops and delivers local market and community-based strategies to reduce energy use and clean the air in an effort to achieve healthy and sustainable local communities. CAP, along with a number of environmental groups in Toronto, have recognized the need for a Toronto-specific initiative.

The realities of Toronto living will make the challenge harder for some than others. The bulk of the One-Tonne Challenge is aimed towards people who own their own cars and homes, and urges them to lower their thermostats, buy energy-efficient appliances, and take transit or carpool to work. But according to Statistics Canada, more than half of those who live in Toronto's downtown core do not own a vehicle. In fact, 27 per cent of Torontonians take public transit, walk or bike to work, compared with 18 per cent for all of Canada. Individuals in urban areas like Toronto are more likely to rent than those in rural areas, and most renters don't have control over their thermostats or purchase home appliances. It may seem Torontonians have few emissions left to conserve.

Cool Shops is one of the business-specific initiatives in the One-Tonne Toronto program.

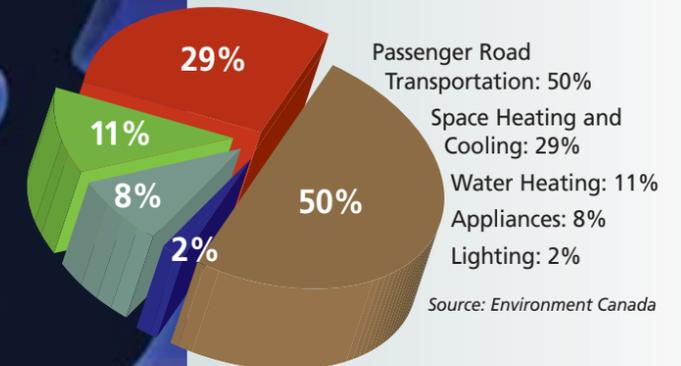


Challenge Communities

Forty-one communities across Canada were selected to implement local initiatives that support the federal One-Tonne Challenge program and to ask individuals to take personal action to reduce GHG emissions. The following is a list of those communities:

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| Alberta
Bow Valley (Banff and Canmore)
Calgary
Edmonton
Lethbridge | Nova Scotia
Cape Breton
County of Kings, (Wolfville, Berwick and Kentville)
Halifax |
| British Columbia
Abbotsford
Kelowna
Richmond
Vancouver
Vernon and North Okanagan
Regional District
Whistler | Ontario
Don Valley West
Kingston
London
Peterborough
Sudbury
Thunder Bay
Timmins
Toronto
Waterloo
York Region |
| Manitoba
Brandon
Morden/Winkler
Peguis First Nation
Thompson | Prince Edward Island
Summerside |
| New Brunswick
Bathurst
Upper Saint John
River Valley | Quebec
Chambly
Gatineau
Montreal
Quebec City
Vallée du Richelieu |
| Newfoundland and Labrador
Torbay | Saskatchewan
Craik
Regina |
| Northwest Territories
Yellowknife | Yukon
Whitehorse |

Personal Greenhouse Gas Emissions in Canada



COVER STORY

The One-Tonne Toronto challenge recognized that reaching the one-tonne goal wasn't realistic for some individuals. 20/20, one of the challenge's projects, is an initiative of the GTA public health units. The program is based on research that determined that reducing emissions by 20 per cent per household is more practical for Torontonians than one tonne per person. This program offers a planner that recommends realistic methods of lowering daily emissions, such as reducing single occupancy vehicles. Though it doesn't speak directly to people who already walk or take public transit to work, it does recognize people who don't own their homes. A renters' and condominium owners' page has been added to the book. "There is very little control renters have over their own utilities," says Natasha Kanjee, 20/20's project manager. The information for renters focuses on ways to get their property owners and managers to play a role in conserving energy in residential buildings. There's a directory at the back of the planner to put people in touch with specific organizations that can assist with energy reduction.

20/20 also offers an outreach program through schools, where teachers can make 20/20 part of their class lessons. Ms. Kanjee

says the program is best suited to grade five students as they have a curriculum unit on energy conservation. Currently about 120 classrooms in Toronto are participating.

Although One-Tonne Toronto mostly targets at individuals, there are projects involved that are geared at businesses reaching their emissions reduction goals. Cool Shops is an energy-saving program by the Clean Air Foundation for small businesses that helps implement in-store measures meant to improve air quality and save on utility costs. The program originally started in 2000 with a small environmental organization called Greenest City.

"The whole point of the program back then was to get businesses to close their doors while blasting out air conditioning in the summer," says Corey Diamond, manager of Cool Shops. "About six months later, we started to do actual energy audits because businesses wanted to learn more about how they could save energy." The program looks at lighting, heating and cooling, water use, windows and buildings to help small business owners reach their reduction goals. In the summer, the Clean Air Foundation has a big public engagement campaign to make busi-

nesses aware of its services. Mr. Diamond says this year's program will focus less on audits and more on providing businesses with quick and easy to use conservation methods.

One-Tonne Toronto also has projects that urge companies to get their workers involved. The SMART Movement Programme, organized by Pollution Probe in 2002, encourages employers to reinforce the One-Tonne Toronto message to their employees. It focuses on trip reduction and is designed to guide individual workplaces in reducing employee drive-alone car trips. The program currently works with 10 companies in the GTA, totaling about 16,000 employees. "We start from the very basics of assessing a site in terms of transportation challenges and opportunities for employees, and we do a survey," says Jacquelyn Hayward, project manager of SMART Movement program. "Then, we create a true production plan to implement different sorts of initiatives and events and policy changes with the employer. We work with them to create a full commuter options program." Individual company programs may include choices like carpool-matching sites online and Canbike courses, which train individuals to become better cyclists.

One-Tonne Toronto also delivers a Clean Air Consumer Guide to about 750,000 households in the greater Toronto area.

Gabriella Kalapos, project manager of the Clean Air Consumer Guide, describes the booklet as a one-stop resource guide with information and listings of organizations that support an individual's ability to reduce energy use. It has a magazine-style design so people will be more likely to keep it. The fourth edition will be out this summer.

Despite all these plans, the One-Tonne Toronto program still has a number of challenges to achieve its goal. First off, the program is voluntary, which means each individual has to be moved by its message in some manner. But even getting the message out to Torontonians in a city of 100 languages is no easy

One-Tonne Challenge Partnerships

Retailers, industry, utilities and other groups across Canada have committed to helping the One-Tonne Challenge reach individuals by providing information, motivation and the tools citizens need to address climate change. The Government of Canada will build on investments made through the Climate Change Action Fund (CCAF) and on existing programs and services, including energy efficiency programs, community-based social marketing initiatives, and municipal activities. The following are some examples of how companies and organizations are doing their part:

- Sobeys and Quebec-based Alcoa are engaging their employees in the challenge;
- The Pembina Institute has engaged major companies such as Suncor, Shell and PetroCanada in employee-based emissions reduction activities;
- Home Depot and the Hudson's Bay Company are looking at ways to link existing programs to the One-Tonne Challenge goal;
- Labour groups have expressed an interest in educational programs for workers;
- The non-government community has provided important advice to the program and expressed an interest in helping to promote the challenge among the environmental community;
- Public education and outreach "Hubs" in most provinces and territories will play an important coordination and networking role and provide advice to the One-Tonne Challenge program as it develops;
- The Youth Environmental Network has consulted youth groups across the country to develop a by-youth-for-youth component of the challenge;
- Scouts Canada has unveiled a nationwide climate change education and action program. This comprehensive climate change program, also sponsored by Alcan Inc. and Nexen Inc., will include awareness activities, ideas on how to reduce household greenhouse gas emissions and instructions on how to conduct an energy audit.



Eco Cleaners, one of the businesses taking part in Cool Shops.

COVER STORY

task. And the term “tonne” (metric spelling aside) seems to confuse people, since the emissions they are asked to reduce seem weightless. And finally, if the One-Tonne Toronto program does get people motivated to lower their emissions, how can the project measure and monitor its success?

Ms. Mongeon says there may still be a few snags to mend before One-Tonne Toronto can go off without a hitch. “Monitoring is a challenge. It’s also a challenge to reach everyone and get everyone onboard,” she admits. The program will most likely monitor the progress of the people involved by use of phone surveys and through the responses received by partnering organizations. And, information on the web site will be multilingual in order to reach as many groups as possible. While the project has its hurdles, Ms. Mongeon remains hopeful. “Everyone can reduce their emissions to some degree.”

Hitting the Target

Can Canada achieve its Kyoto goals? Large industrial polluters do not have to meet the

55-megatonne reduction in greenhouse gas emissions first proposed in the 2002 plan. Proposals to cut emissions targets for large industrial polluters were floating through the Prime Minister’s Office, which eventually settled on a 45-megatonne target. Nine megatonnes of credits are also available by investing in government research or its development fund. Credits can also be obtained by purchasing emissions credits from other large emitters or by investing in emissions-cutting projects in developing countries. (See page 10.)

The automotive industry reached a voluntary deal with the government to cut emissions by 5.3 megatonnes by 2010 — an agreement some critics say doesn’t ask enough of the automakers. Others say the deal should be mandatory and impose penalties if the industry fails to meet its goals.

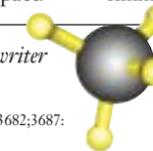
The success of One-Tonne Toronto — and the One-Tonne Challenge program — depends on how Canadians are affected by the message of climate change. Individuals are moved by health incentives, especially in a city where the air pollution is so visible. Financial

incentives may prove to be most alluring, since energy prices are on the rise. “There is also a social acceptance side to all of this,” says Ms. Mongeon. “The ‘feel good’ incentive is becoming more and more popular.”

Eva Ligeti says she hopes One-Tonne Toronto will create the same stigma with emissions wasting as there is with littering. “In the 1970s, there was a huge anti-littering campaign; people were throwing away disposable bottles and littering highways. Seeing someone litter is now considered anti-social behaviour,” says the executive of the Clean Air Partnership and the former environmental commissioner of Ontario. “Toronto is the largest urban community. If we can change behaviour here, it will be a huge contribution to Kyoto.” And, if that stigma catches on with Canadians, it is bound to also spur corporate social responsibility in big business, where it also can have a profound impact.

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