

March 9, 2007

EXECUTIVE COMMITTEE:

City Council on March 5 to 8, 2007, referred the following Motion to the Executive Committee:

M25 Toronto Environmental Protection Plan (TEPP): Toward Integrated Action on Climate Change and Air-Quality

Moved by Councillor Walker, seconded by Councillor Thompson

SUMMARY:

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The Problem: Climate Change and Global Warming

The earth is in flux. There is an imbalance in the earth's atmospheric gases caused by manmade sources, mainly the burning of fossil fuels. The present concentration of so-called 'greenhouse gases' in the earth's atmosphere has been compared to past levels by using ice core samples that date back 650,000 years. In the last 200 years, since the Industrial Revolution, the concentration of carbon dioxide, methane, and nitrous oxide has greatly increased, thus dangerously upsetting a past balance. It is now commonly agreed that this imbalance caused by irregular and profuse amounts of certain gases in the earth's atmosphere is due to human activity (conclusion of International Panel on Climate Change report, February 2007). That is to say, human activity is at the root cause of climate change, also known as global warming.

The greenhouse gases are produced when we combust fossil fuel (i.e. oil, coal, natural gas) to power our industrial processes, our residential heating and electricity, our hot water heaters, our cars and trucks, and so on. These gases are released even when we dispose of our waste or from our intensified agriculture processes and mass animal breeding. From what we know, the largest organism that thrives on these gases and transforms them into oxygen for us to breathe is the tree – and ironically, trees are being cut down faster than they can be planted.

This imbalance is causing a ‘greenhouse effect’ in the earth’s atmosphere where heat-filled sunlight is trapped in the atmosphere by the gases, creating a blanket of heat over the earth. Over the past century, the average temperature of the earth’s atmosphere and surface has been increasing. Think of it as the earth having a fever – you know what it feels like to have a fever of just 2 degrees over normal: it’s incapacitating.

The results of this climate change situation are being experienced all over the world. With the rising average temperature of the earth, the polar ice caps and Greenland glaciers seem to be melting at an accelerating pace which could raise the world’s sea level by up to 20 metres and cause a low-salinity imbalance in the water content, if the ice continues to melt at the same rate. The world’s water currents and air currents are changing, causing the weather patterns to change. Extreme heat waves, extreme precipitation and extreme drought are becoming more commonplace. Canada is experiencing some weather changes but other parts of the world are being catastrophically affected by extreme weather (i.e. Southern USA, the Netherlands, Bikini Islands). The interdependence of the earth’s ecosphere ensures that there is no hiding from the effects of this global warming, whether they come sooner or later.

The International Panel on Climate Change (IPCC) Report (February 2007) states that a worldwide reduction in greenhouse gas (GHG) emissions of 22% is needed immediately in order to stabilize the global warming climate situation.

The Solutions:

The Kyoto Protocol

The Kyoto Protocol to the Framework Convention on Climate Change was adopted in Kyoto, Japan, in December 1997 and entered into force in February 2005. The rules and requirements for implementation of the Kyoto Protocol were further elaborated in a package of decisions called the Marrakesh Accords which were formally adopted in Montreal, Canada, in December 2005.

The Kyoto Protocol shares the ultimate objective of the United Nations Framework Convention on Climate Change to stabilize atmospheric concentrations of greenhouse gases at a level that will prevent dangerous interference with the climate system. The Kyoto Protocol identifies mechanisms (i.e. greenhouse gas credit trading or grant programs) to be used by participants to meet set targets to reduce their respective pollution emissions.

The targets cover emissions of the six main greenhouse gases, namely:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs); and
- Sulphur hexafluoride (SF₆).

Canada is an original Kyoto Protocol participant (“Annex I Party”, 1998) and helped create the agreement. Canada ratified the Kyoto Protocol on December 17, 2002. The Kyoto Protocol entered into force for Canada on February 16, 2005, just over two years ago.

Canada’s commitment is a reduction in greenhouse gas emissions to 6% below 1990 emission levels by 2012. For comparison, Canada has the same target as Japan, Hungary and Poland. The United States of America has not signed or ratified the Kyoto Protocol but has pledged a reduction of 7% below 1990 emission levels. Some countries have lower targets, some higher. The highest target is 8% below 1990 levels (i.e. European Union).

As of 2007, Canada produces 3.3% of the world’s carbon/greenhouse gas emissions. Canada’s emissions are 27% higher now than in 1990, therefore Canada needs to reduce emissions by at least 33% by 2012 to meet Kyoto’s targets. The problem is we’re trailing the pack because the Federal government has not made any progress reducing Canada’s greenhouse gas emissions so far.

Some other basic commitments of the Protocol are:

- Each Kyoto Protocol participant must undertake domestic policies and measures to reduce greenhouse gas (GHG) emissions and to enhance removals by sinks (i.e. adding new forests).
- In implementing these policies and measures, each Kyoto Protocol participant must strive to minimize any adverse impact of these policies and measures on other participants, particularly developing country Parties.
- Kyoto Protocol participants must provide additional financial resources to advance the implementation of commitments by developing countries.
- All participants in the Kyoto Protocol must cooperate in the areas of:

- a. the development, application and diffusion of climate-friendly technologies;
- b. research on and systematic observation of the climate system;
- c. education, training and public awareness of climate change; and
- d. the improvement of methodologies and data for greenhouse gas inventories.

Unlike other multilateral environmental agreements, the Kyoto Protocol allows its participants to change their assigned amounts, and thus the level of their allowed emissions over the commitment period, through LULUCF (Land-Use, Land-Use Change, and Forestry) activities and through participation in the Kyoto Protocol mechanisms. Through these activities, participants may generate, cancel, acquire or transfer emission allowances. These emission allowances are collectively called Kyoto Protocol units and are subject to explicit rules, depending on the particular unit type. Each Kyoto Protocol participant is required to implement domestic policies and measures to reduce its GHG emissions and help meet its commitments. In addition, Annex I Parties are required to take measures to protect and enhance emission removals in the LULUCF sector.

The most useful of the Kyoto Protocol's mechanisms is the clean development mechanism (CDM). The CDM is designed to stimulate sustainable development by allowing countries with commitments under the Kyoto Protocol to fulfill part of their commitments by investing in emission-reducing projects in developing countries. Apparently, Canada has no CDM projects registered whereas there are 500 CDM projects registered worldwide as of February 2007. Canada could be building CDM projects in Afghanistan as part of their rebuilding efforts and sponsorship.

CDM projects are being conducted in more than 40 countries and have so far generated more than 31 million certified emission reduction (CER) units, each equivalent to one tonne of carbon dioxide, the main greenhouse gas responsible for global warming. The mechanism is anticipated to generate more than 1.8 billion CERs in the first commitment period of the Kyoto Protocol to 2012 – equivalent to the *combined* annual emissions of Canada, France, Spain and Switzerland.

If a Party fails to meet its emissions target, it must make up the difference in the second commitment period, plus a penalty of 30%. It must also develop a compliance action plan, and its eligibility to “sell” under emissions trading will be suspended. Emissions trading should not be considered real progress since it does not reduce a country's actual emission output.

As of February 2007, there is an official Kyoto Protocol Reference Manual to aid participant countries to reach their reduction targets.

Developing A New Environmental Plan For The City Of Toronto

The City of Toronto's "Clean, Green and Healthy: A Plan for an Environmentally Sustainable Toronto (February 2000)" is a good plan which needs a lot of strengthening and updating due to the recent acceleration of environmental problems. We need an aggressive and accountable new plan as soon as possible to help Canada as a whole meet its commitments of the Kyoto Protocol. We need to synchronize living and working with sustainability in every City operation.

The City will be in a position to develop a new plan once it has:

- a. an inventory of Green House Gases (GHG) and smog causing pollution sources (due March 31, 2007 from Toronto Atmospheric Fund);
- b. a target and timeline for reductions in emissions; and
- c. a clear picture of the powers at its disposal.

The climate change portion of our environmental plan should set targets and timelines consistent with Canada's commitment to the Kyoto Protocol (1997).

The climate change portion of our environmental plan should identify a baseline of emissions from 1990, a current level of emissions and a targeted level of emissions reductions that the City is moving toward. Each GHG reduction initiative within the plan should include a numerical reduction target. Action to reduce smog-causing pollution should be similarly measured and planned.

The City should identify and use the full range of legislative, financial/purchasing and educational/cultural elements at its disposal in the new City of Toronto Act to reach its goals. The plan should cover every area where the City has the power to legislate or finance change.

The City should identify opportunities for pollution reduction that could be implemented with the financial or legislative assistance of the Provincial and Federal governments.

The City will need to cost its initiatives and regularly monitor its progress; the plan should come with costs fully identified. Progress in reducing emissions should be publicly reported by the City's Auditor.

We need to engage our citizens and businesses – the stakeholders. The City should be fully transparent in its planning and implementation of this initiative. The City should use its advertising and media assets to deliver the message about the necessity and opportunity the clean air challenge poses to the City. Special grants and financing for participants can be used to cut energy costs, as a central way of engaging the larger community.

The City of Toronto, as well as the Federal government, should work with ICLEI (International Council of Local Environment Initiatives) - Local Governments for Sustainability (City Hall, 16th floor, West Tower) and other appropriate organizations to track progress and implementation of any environmental protection plan.

Toronto can use the following tools to protect our environment:

- a. licensing (i.e. restaurants or apartment buildings);
- b. by-laws (i.e. zoning or waste disposal);
- c. Program Delivery (i.e. waste collection, public education campaigns); and
- d. City Operations can be improved (lead by example)
(Advocate for environmental protection with Province of Ontario & Government of Canada).

The following are options for the City to use to reduce pollution emissions in Toronto:

- a. control over land-use planning (to protect greenspace, ensure sunlight, mandate green building controls);
- b. control over transportation planning (including additional subways, strategic downtown parking and congestion charges);
- c. develop transportation service infrastructure: extensive transit, bicycle and pedestrian-friendly paths, trails and sidewalks;
- d. reducing energy demand through efficiency and conservation;
- e. cut operating costs for businesses and residents by subsidizing efficiency improvements;
- f. promote and plan 'complete' and sustainable communities with the aim of reducing commuting;
- g. opportunity to displace energy purchased from outside the City is greatest economic opportunity by generating energy from captured landfill gases, solar panels, wind turbines and waste-to-energy technologies;
- h. use Toronto Hydro to expand direct delivery of climate change education programming to residential and small commercial customers;
- i. use Toronto Hydro to improve the 'EnerGuide for Homes';
- j. use Toronto Hydro to lease energy-efficient equipment or provide financing for energy-efficient building improvements (i.e. on-bill financing for energy efficiency investments by its customers); and
- k. use our relationship with other utilities (i.e. gas) to enrich conservation programs.

The Problem of our Federal Government not following through on Kyoto

The former Federal government, a Liberal government, recognized Canada's commitment to Kyoto. Canada's New Government, a Conservative government, do not recognize Canada's commitment to Kyoto but instead have identified they will present a plan tailored for Canada, notwithstanding the Kyoto commitments made by our previous government.

On February 14, 2007, the House of Commons passed a Liberal backbencher's private members bill, C-288, that requires Environment Minister John Baird to present a climate change plan within 60 days, providing a map for Canada to meet the Kyoto Protocol's greenhouse gas reduction targets. After the bill's passage, by a vote of 161-113, the Prime Minister stated he would ignore the bill. Within a week of its passage, however, the Prime Minister agreed to recognize the bill.

Obviously, the Prime Minister needs to hear how important the issue of global warming is to Canadian cities, the place where impacts are first felt and where impacts can be best mitigated. Once the Prime Minister gets a strong message from Canadian cities in support of the Kyoto Protocol, then maybe the required funding will flow to municipalities.

Getting Funding for the Plan (i.e. United States Conference of Mayors)

Currently, 372 U.S. Mayors (representing 55 million people) from all 50 states, working through the U.S. Conference of Mayors, are leading the United States of America (USA) in taking action on the critical issue of global warming. Local governments are in a unique position to implement and co-ordinate local action that will lead to significant and real reductions in energy use and its impact on global warming. Because the U.S. Federal government refused to take action on the issue of climate change, these 372 Mayors (of Cities larger than 30,000 people) are developing extensive action plans for their Cities to reduce carbon emissions and live more sustainably. One of the best City action plans is Seattle's, whose Mayor, Greg Nickels, started the nationwide, bipartisan initiative. This grass roots effort is key to a successful national strategy to reduce energy dependence, decrease carbon emissions and improve the environment. The Federation of Canadian Municipalities (FCM) could serve as a starting point for this kind of campaign in Canada.

On January 25, 2007, The U.S. Conference of Mayors proposed the creation of a Federal \$4 Billion Energy and Environmental Block Grant to provide funding directly to Cities and urban counties for programs to help cities combat global warming that:

- a. improve community energy efficiency;
- b. develop and implement community strategies to reduce carbon emissions, including but not limited to achieving "carbon-free" buildings by 2030;
- c. develop and implement community and transportation energy conservation programs; encourage the development of new technologies and systems to decrease U.S. dependence on foreign oil; and
- d. promotion and development of alternative/renewable energy sources.

Block Grant funds could also be used by non-profit organizations to meet the objectives of the program. The Block Grant would be distributed to each City under a formula based on population and other factors, and include measurable objectives. The U.S. Mayor's conference suggests that initial funding for the Block Grant could come from (in part or in whole) revenues derived from the proposed repeal of the 2004 tax cuts for the oil and gas industry and royalty payments from off-shore oil and gas leases. Similar funding sources could be found in Canada's Federal budget.

Eligible activities under the Block Grant would include, but not be limited to:

- a. development of comprehensive energy, environment, and climate protection strategic plans;
- b. weatherization programs (to reduce our vulnerability to global warming);
- c. energy efficiency audits;
- d. alternative fuel infrastructure;
- e. incentives for energy efficiency technologies;
- f. promotion of public transit;
- g. methane recovery programs;
- h. conversion of alternative fuel fleets;
- i. public education;
- j. brownfields redevelopment; and
- k. land-use policies, etc.

In June 2005, the U.S. Mayors Climate Protection Agreement was endorsed by the U.S. Conference of Mayors, which resolved:

- A. We urge the federal government and state governments to enact policies and programs to meet or beat the target of reducing global warming pollution levels to 7 per cent below 1990 levels by 2012, including efforts to: reduce the United States' dependence on fossil fuels and accelerate the development of clean, economical energy resources and fuel-efficient technologies such as conservation, methane recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels;
- B. We urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that includes: 1) clear timetables and emissions limits; and 2) a flexible, market-based system of tradable allowances among emitting industries; and
- C. We will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and communities such as:

1. inventory global emissions in City operations and in the community, set reduction targets and create an action plan;
2. adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities;
3. promote transportation options such as bicycle trails, commuter trip reduction programs, incentives for car pooling and public transit;
4. increase the use of clean, alternative energy by, for example, investing in “green tags”, advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology;
5. make energy efficiency a priority through building code improvements, retrofitting City facilities with energy efficient lighting and urging employees to conserve energy and save money;
6. purchase only Energy Star equipment and appliances for City use;
7. practice and promote sustainable building practices using the U.S. Green Building Council’s LEED (Leaders in Energy Efficient Design) program or a similar system;
8. increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel to biodiesel;
9. evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production;
10. increase recycling rates in City operations and in the community;
11. maintain healthy urban forests, promote tree planting to increase shading and to absorb carbon dioxide; and
12. help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

Toronto and City Council must focus on this international goal

In December 2006 Mayor Miller stated, “I want to cut smog pollutants in the air we breathe by 20% within six years. We’ll implement a tough anti-smog plan, and we’ll develop a climate change program for Toronto.....Cities must lead....Reducing greenhouse gases is THE issue of our time. Maybe of all time.”

Mayor Miller was dead-on when he said that. In 1998, City Council adopted “a carbon dioxide emissions reduction goal of 20% relative to 1990 levels by the year 2005 as a city-wide target for the new City of Toronto”, a commitment which was renewed by City Council in 2000. We need to mean it when we say it this time because reaching these goals is tied to our quality of life, even our survival.

Aggressive strategies and tactics need to be employed to get to where Toronto needs to be. That is why we need to not only develop our own environmental protection plan but we need to continue to change the attitude of Torontonians – residents, businesses, as well as our own employees – to work together to reach this common goal of carbon emission reduction and sustainable living. Every decision should be made in respect of our environment, of our Earth.

This is a challenge we can turn into an opportunity. If greenhouse gas reductions have a short-term negative effect on business and the economy, we must ensure that the City of Toronto does all it can to foster the new sectors (i.e. green technology sectors) of the economy that can replace the economic growth potentials lost. For instance, the City and the Federal government need to help the domestic development of solar panels, wind turbines, local energy production, clean energy from waste, nanotechnology applications, recycling, green roofs and so on.

And that is why we need to band together formally with the other municipalities in Canada on this issue, like in the United States, to convince the Federal government to help us in this noble national effort.

We need the Federal government to be a real partner with us on the issues of climate protection and achieving energy independence. We need our leaders in Ottawa to step up to the forefront of the effort to protect our climate by adopting the aggressive but achievable goal of cutting emissions 80% nationwide by 2050. Now is the time for action to halt the generation of greenhouse gases, before we reach the tipping point of an irreversible climate catastrophe. We can no longer afford to stand by while this threat to our Cities, our country and our planet grows. We need real solutions for a real problem.

RECOMMENDATIONS:

1. Council adopt a carbon dioxide and greenhouse gas emissions reduction goal of 20% relative to 1990 levels by the year 2012 as a City-wide target for the City of Toronto.
2. Council urge the Federal government to expeditiously implement measures to reduce Canada's pollution emissions to meet our commitments to the Kyoto Protocol.
3. Council direct the City Manager to identify all areas (i.e. by-law amendments and purchasing parameters) of City business that could be changed in order to help the City of Toronto to achieve its pollution emission reduction program, reporting no later than to the July meeting of the Executive Committee.

4. Council direct the City Manager to produce a Status Report to the Executive Committee on all City “green” initiatives (ongoing and completed since Amalgamation) to support the City’s “Clean, Green and Healthy: A Plan for an Environmentally Sustainable Toronto (February 2000)”, and to produce updated Appendices A and B adopted with that Plan.
5. Council direct the City Manager to report to the Executive Committee on the City of Toronto’s green house gas emissions in 1998, compared to the most recent data.
6. Council authorize the Mayor, on behalf of City Council, to develop a Resolution on climate change action to be supported by other Mayors in Canada (similar to the U.S. Conference of Mayors, January 25, 2007) with the aim of receiving specific funding (Block Grants proportionate to population) from the Federal government for environmental initiatives to reduce pollution emissions and aid Canadian Cities’ transition to sustainability.
7. Council direct the City Manager to report to the Executive Committee on the powers of the new City of Toronto Act and the new opportunities for the City to use to reach the goals of our climate action plan (i.e. providing incentives for retrofit modifications or renewable energy production by individuals, homeowners, and owners of multi-residential dwellings).
8. Council urge the Provincial government to assist the City of Toronto to meet its environmental protection goals by providing programs and sustained funding (i.e. for annual transit system construction).
9. Council urge the Federal government to direct the Canadian International Development Agency (CIDA) to conduct projects in developing countries using the Kyoto Protocol’s clean development mechanism (CDM) to help Canada meet its Kyoto Protocol emission reduction target by 2012.
10. Council direct the City Manager to report to the Executive Committee on the Resolutions passed by the U.S. Conference of Mayors for action against global warming, including the U.S. Mayors Climate Protection Agreement and the \$4 Billion Energy and Environment Block Grant proposal.
11. Council adopt a policy of annually reporting pollution emissions to the public, such report to be completed by the Auditor General.

12. Council urge the Provincial government to permanently close the remaining four (4) coal-fired power plants in Ontario (Nanticoke, near Lake Erie; Lambton, near Sarnia; Atikokan and Thunder Bay, both in the northwest) as soon as possible.
13. Council urge the Federal government to work with Canadian cities, especially Toronto as its largest, to help the country achieve and surpass its Kyoto Protocol commitments.

for City Clerk

M. Toft/cd