



2005
TORONTO
SMOG
REPORT CARD

Final Grade C-

Prepared by:



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TORONTO SMOG REPORT CARD 2005

Subject	Comments	Grade
Energy	The City's drive toward energy efficiency went into neutral this year and still no green power on-line, but there are real efforts in the works to make this happen.	16/25
Transit	Modest service improvements and better passes offset by fare hike. Plans to improve transit are behind schedule but the City is finally thinking big.	16/25
Walking and Biking	No new bike lanes or paths this year, but a pedestrian safety plan is in the works.	4/20
Fleets and Fuels	City continues to purchase cleaner vehicles and bio-fuels for its own fleet.	9/10
Intergovernmental Action	Negotiated real money for transit from the provincial and federal governments, while showing leadership by refusing to use loopholes in Canada's Kyoto Plan.	10/10
New Air Quality Strategy	After five years, we finally have a plan to make a plan. There are some bright spots, but the draft needs a lot of work	5/10

Final Grade = 60% = C-

2005: The Year Climate Change Hit Home

The polar ice is melting and Toronto had a record number of smog days. Climate change is here now and will only get worse until we dramatically reduce pollution from our use of fossil fuels which cause both smog and global warming.

The Toronto Environmental Alliance’s annual Smog Report Card evaluates City Council’s actions based on the clean air commitments that they have made. We do not grade them based on how bad the air was (it was terrible) or if their commitments are sufficient to solve the problem (they’re not).

This year we have given the City a grade of C-, which is down from last year’s B+.

Toronto can take credit for having a better record on smog and climate change than either the provincial or federal levels. Our greenhouse gas emissions are actually going down whereas they are up 12% provincially and 24% federally, and the City is following through on most of its commitments. This does stand in contrast to the federal level, where the federal Commissioner for Environment and Sustainable Development recently wrote that “When it comes to protecting the environment, bold announcements are made and then often forgotten as soon as the confetti hits the ground.”

But we must set the bar much higher. We must have a massive shift from automobile use to transit, walking and cycling. We must double the efficiency of our energy use and get this energy from green, renewable sources like the wind, sun, and plants.

We must re-use resources rather than tossing them into a landfill.

Toronto has been a global leader on climate change in the past, and must be once again. The international negotiations on limiting greenhouse gases, which were launched in Toronto in 1988, will take the next big step in Montreal later this year. Canada will be playing a key role chairing the post-Kyoto negotiations over the next year and they should be able to point to their largest city as a place to be emulated.

This year, the City is developing a new Air Quality Management Strategy to replace the old Smog Plan. Future grades will depend on whether this strategy is up to the challenge.

Year	Grade
1998	D (old Toronto) F (Metro)
1999	D
2000	C-
2001	D
2002	D+
2003	C-
2004	B+

Toronto Smog Facts

TORONTO SMOG BY THE NUMBERS

- **48 smog advisory days so far in 2005, more than doubling the previous record for Toronto of 20 smog days set in 2001.**
 - **1,700 premature deaths and 6,000 hospitalizations annually in Toronto.**
 - **\$118 million in health care costs to Toronto hospitals.**
 - **Ozone and nitrogen oxide levels have been rising steadily since 1981.**
-

Smog affects everyone's health, although small children, seniors and those with heart or lung ailments are most affected.

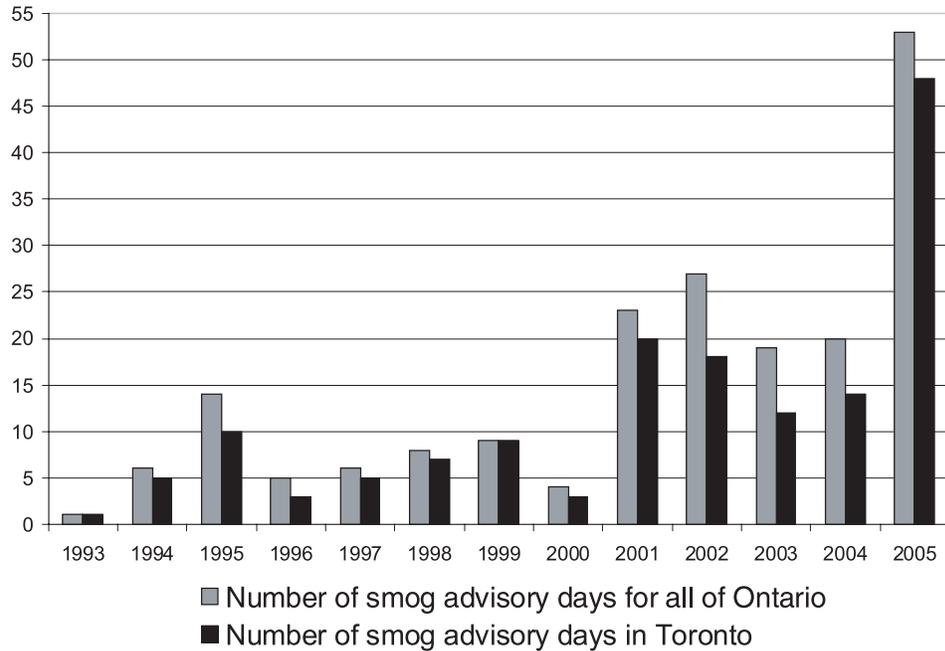
Toronto Public Health estimates that air pollution contributes to about 1,700 premature deaths and 6,000 hospital admissions in Toronto each year.¹ Research in the U.S. has found that air pollution represents a significant risk to children's health² and that levels of fine particulates found in many U.S. cities increase the risk of deaths due to lung cancer to a degree that is roughly comparable to second hand smoke or obesity.³

Treating the victims of air pollution is very expensive. The Ontario Medical Association estimates that it costs Toronto hospitals \$118 million to treat those affected by smog.⁴ These resources could be far better spent on preventing air pollution.

And pollution levels are once again on the rise. After falling fairly rapidly in the 1970s once clean air legislation was introduced, average concentrations of ground-level ozone and nitrogen dioxides have been rising fairly steadily in Toronto over the last twenty years, while particulate levels have remained fairly constant.⁵

One of the most common ways to measure air quality is to compare the number of days for which the Ministry of Environment has issued a 'smog advisory.' In terms of health impacts, however, average levels are more significant than the number of smog advisory days, and comparisons are further complicated by changes in the way smog advisory days are determined. Prior to August 2002, virtually all smog advisories were issued in response to high ozone levels. Yet since then, the provincial government has included particulate matter in the air quality index (the rating system which is used to issue smog advisories). Recent research has shown that particulate matter smaller than 2.5 microns is highly damaging to lungs and hearts, so its addition to the air quality index was a step forward and provides Ontarians with valuable information so they can take action to protect their health. Nevertheless, we have included a chart showing the number of smog advisory days in Toronto and province-wide as it does provide a rough measure of changing air quality.

Smog Days in Ontario and Toronto, 1993 – 2005 (as of October 6, 2005)



Notes:

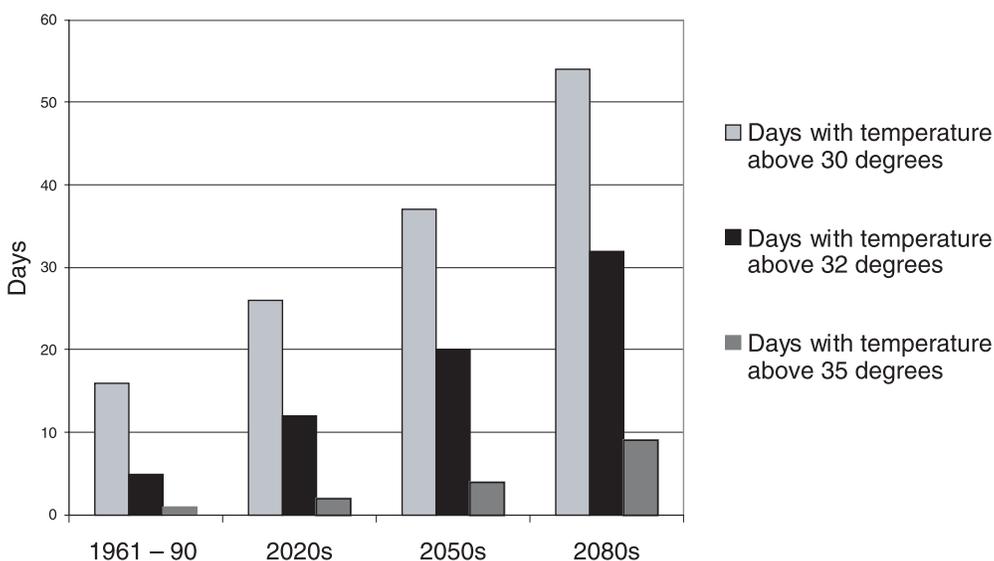
1. Monica Campbell, Ph.D., David Pengelly, Ph.D., and Monica Bienefeld, M.HSc., *Air Pollution Burden of Illness in Toronto: 2004 Summary*, (Toronto: City of Toronto, 2004).
2. John M. Peters, *Epidemiologic Investigation to Identify Chronic Effects of Ambient Air Pollutants in Southern California*, (California Air Resources Board, 2004).
3. C.A. Pope, R. Burnett, M. Thun, E. Calle, D. Krewski, K. Ito and G. Thurston, "Lung Cancer Cardiopulmonary Mortality and Long-Term Exposure to Fine Particulate Air Pollution", *Journal of the American Medical Association* (March 2002).
4. Ontario Medical Association, *The Illness Costs of Air Pollution in Ontario 2005*, (OMA: 2005).
5. Monica Campbell, Ph.D., David Pengelly, Ph.D., and Monica Bienefeld, M.HSc., *Air Pollution Burden of Illness in Toronto: 2004 Summary*, (Toronto: City of Toronto, 2004), p. 3. See also Ontario Ministry of the Environment, *Air Quality in Ontario: 2003 Report* (Queen's Printer for Ontario, 2004).

Smog and Climate Change

This year has obviously been particularly bad for smog due to record-high temperatures and ongoing high levels of pollution that have led to increased smog formation. Yet this should not be dismissed as an anomaly of one hot summer.

Given the anticipated impact of climate change – a doubling of the number of days above 30 degrees Celsius by the 2050s and a tripling of the number of days over 30 degrees Celsius by the 2080s – this past summer looks to be the new norm.

Impact of Climate Change on Number of Hot Days in Toronto
 (Source: Environment Canada, *Science & Impacts of Climate Change: Presentation Graphics*, 2002)



So we should not only be taking measures to reduce greenhouse emissions which cause global warming (which, like smog-causing pollution, are primarily due to the burning of fossil fuels), but also taking measures to reduce the urban heat island effect (by planting trees, improving energy efficiency and using lighter-coloured materials for roads, parking lots and roofs) that enhances the effect of higher temperatures locally, and drives up demand for air conditioning which in turn causes more smog-causing pollution.

This is particularly appropriate because Toronto is, in many ways, the birthplace of international action on climate change. Our city hosted the 1988 *World Conference on the Changing Atmosphere* where scientists and policy-makers issued a declaration that stated “Humanity is conducting an unintended, uncontrolled, globally pervasive experiment whose ultimate consequences could be second only to a global nuclear war.” This Toronto Conference launched

the United Nations process that ultimately led to the 1992 Framework Convention on Climate Change signed in Rio at the Earth Summit, and the 1997 Kyoto Protocol which committed Canada to reducing greenhouse gas emissions to 6% below 1990 levels by the 2008 – 2012 period.

Subsequent to the 1988 conference, the City of Toronto set a target in 1989 to reduce its greenhouse gas emissions to 20% below 1990 levels by 2005 (this came to be known internationally as the Toronto Target and many other cities adopted it). As of 1998, Toronto was on track to at least meet the Kyoto target, if not the deeper 20% target, as city-wide emissions were down by 2% relative to 1990 levels. Much of this success at the municipal level has been attributed to the forward-thinking decision by Council to establish the Toronto Atmospheric Fund (TAF), which has been key to what progress has been made and is being cited as an example which should be replicated across the country and internationally. TAF is currently updating its greenhouse gas inventory for Toronto to better track progress, with the results due to be completed in early 2006.

Yet if we are to stabilize the climate, scientists say that developed countries need to reduce their greenhouse gas emissions by between 60 and 80 percent from 1990 levels by 2050. To date, our national climate policy has focused on tinkering around the edges and looking for loopholes to get to a 6% reduction in the short-term. Meeting the long-term challenge of preventing dangerous climate change demands much deeper changes in the way we design our cities and our transportation systems, how we build and power our homes and workplaces, and how we live.

We look forward to working with Toronto citizens, elected officials and staff to meet this challenge.

Energy

HIGHLIGHTS

- **Toronto is doing a better job than the provincial or federal levels at reducing greenhouse gases, but we are a long way from being on the path to the 60 – 80% reduction targets scientists say are necessary to prevent dangerous climate change.**
 - **The drive towards energy efficiency stalled this year, with no major new initiatives announced although retrofit of arenas and community centres announced last year are ongoing.**
 - **Still no green power purchased or build for the City.**
 - **Council has agreed to develop a ‘cool city’ strategy to reduce the urban heat island effect and to retrofit low-income housing for comfort and energy efficiency.**
 - **Province’s proposal for 500 megawatts of generation present an interesting opportunity for the City to support efficiency and green power as a way to keep the lights on.**
-

The way we produce and use energy in Toronto has huge implications for our environment, our economy and social equity. The City of Toronto and its agencies spent over \$190 million on energy in 2001, when natural gas and electricity prices were much lower than today, so City operations not only have a substantial impact on the environment but can provide leadership in the transition to a sustainable energy system.

Toronto has made impressive commitments to the efficient use of energy that comes increasingly from renewable sources. Toronto City Council adopted an Environmental Plan – *Clean Green and Healthy: A Plan for an Environmentally Sustainable Toronto* – at its April 2000 meeting that included commitments to reduce its own energy consumption by 15 percent and to meet 25% of its energy needs from green power sources (e.g. wind, solar, or small-scale hydro) by 2005 relative to 2000 levels.

Given the recent rise in energy prices, the City should be seeking out energy waste and acting quickly to eliminate it. There were significant investments (\$35 million) in improving energy efficiency begun in 2004 (and many of which are still ongoing), but the only significant new initiative in 2005 was the acceleration of the switch to high-efficiency LED bulbs in traffic lights. The City should be actively seeking out new projects to further reduce its energy demand, reducing both pollution and bills.

Council did pass a motion in July 2005 that called for a strategy to address the urban heat island effect by developing a ‘cool city’ strategy of plantings trees and shifting to lighter-coloured building materials (to reduce heat gain) and has endorsed TEA’s call to retrofit low-income housing in order

to reduce year-round energy consumption (and energy bills) while ensuring safe, comfortable homes for everyone in our city. We look forward to implementation of these measures.

There has been no green power purchase by the City, in spite of the fact that Council has authorized payment of a premium for green power of up to 60% above the average cost for other sources of electricity. There are some green power pilot programs underway at Exhibition Place and Enwave's Deep Lake Water Cooling project is an excellent program, but the City should be playing a leadership role in this area. There are efforts underway to get the green power file moving again, and we hope to see these bear fruit in 2006.

Getting green power on-line is particularly pressing now, as the Ontario government's coal phase-out plan calls for 500 megawatts worth of new power generation in downtown Toronto. Toronto could work with the province to ensure that the lights stay on through a combination of conservation measures that reduce demand, new green power sources (e.g. wind turbines, more deep lake water cooling, solar thermal water and space heating and cooling, and methane recovery from sewage treatment plants and green bin composting plants), and smaller, high-efficiency gas co-generation (heat and power) plants, so that overall electricity and natural gas consumption within the city are reduced.

Transit

HIGHLIGHTS

- **Good work in securing provincial and federal funding for transit.**
 - **Modest service improvements and innovations like the weekly and transferable passes will attract some new riders, but the fare hike will drive others away.**
 - **Implementation of the TTC's Ridership Growth Strategy is behind schedule.**
 - **Started work on the ambitious Building a Transit City plan.**
-

Toronto City Council had a very mixed record on public transit over the last year. They were champions in getting federal and provincial transit funding. They did provide funding for modest service improvements and fare innovations such as the weekly pass, the transferable passes and some expansion of the VIP bulk purchase program. However, they also imposed funding limits on the TTC that forced a fare increase (25 cents on cash fares and 10 cents on tickets and tokens) and an arbitrary 10% reduction in capital expenditure.

Of particular concern is the slippage in the delivery of the Ridership Growth Strategy. Now in its second year the RGS has been subject to yearly delays because of funding constraints. Further, planning tools to improve transit performance were requested by TTC staff as part of the implementation of the RGS. Innovations such as queue jump lanes have not been pursued by City Council.

The City did introduce the landmark *Building a Transit City* report – which lays out a city-wide plan for surface transit improvements – in January 2005 and launched planning studies for some of the right-of-ways.

SUMMARY OF RIDERSHIP GROWTH STRATEGY IMPLEMENTATION TO DATE

<i>Program</i>	<i>Status</i>
2004 Initiatives	
Improve afternoon peak service on all major routes	Late
Senior/student trip rate reduction	No Start Date
VIP program	Late
Peak Bus purchase	Late
SRT capacity expansion EA	Late
EAs to Upgrade Transit on Avenues (Transit City)	On time
Commuter parking lots	Late
Signal Priority	Late
2005 Initiatives	
Group 2 off-peak service improvements	No Start Date
Discount Metro Pass	No Start Date
Day Pass time restriction removal	Late
Student/Senior Day Pass	No Start Date

Walking and Biking

HIGHLIGHTS

- **City has a long way to go to become pedestrian-friendly.**
 - **Bike Plan is in limbo, with no new lanes or paths this year and real problems in getting future improvements on the streets.**
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In an average year, cars kill 40 pedestrians in Toronto. Further, many areas of the City are designed in ways that make them inaccessible to pedestrians. Many more areas are hostile to pedestrians because of small sidewalks, high traffic speed and other poor planning features.

To address these problems, the City of Toronto adopted a pedestrian charter in 2003. Also, it has a citizen-led pedestrian committee. Unfortunately, it took until the September 2005 Council Meeting for Council to direct staff to develop a pedestrian safety plan. This plan is scheduled for delivery in 2007. Furthermore, public calls for pedestrian planning tools such as the Walkability Index continue to be rejected by the City.

The Toronto Bicycle Plan continues to falter. Introduced in 2001, the bike plan was designed to (among other goals) double the number of cycling trips taken in Toronto and create a 1,000 kilometre network within ten years.

The bike network is the largest and most visible component of the Bike Plan, and it is woefully behind schedule with no bike lanes or off-road paths added in the last year (see table). At this rate, it will be impossible to complete the network within 10 years.

STATUS OF BIKEWAY NETWORK BY BIKEWAY TYPE AS OF MAY 2005

	<i>Bikeway Type</i>			Total
	Bike lanes	Shared roadways (i.e. no separate lane)	Off-road paths	
Km at start of Bike Plan	35	37	150	222
Km added in years 1 – 3 (2002 – 2004)	28	0	9	37
Km added in year 4 (2005)	0	32	0	32
Proposed new km to be added	421	236	126	783
Total km at completion of network	484	305	285	1,074

In previous years the Smog Report Card has highlighted understaffing and underfunding as a source of delay. In response the City Staff developed a beefed-up staffing and funding proposal for consideration by council.

Further, a new implementation problem has arisen. While council has approved the Bike Plan as a whole, it is reviewing each segment of the bike plan independently. This is delaying implementation and causing some sections of the proposed network to be eliminated. In some cases parking and other automobile oriented roadway uses are being given preference over the bike network.

Fleets and Fuels

HIGHLIGHTS

- **Green Fleet Transition program is on its way to reducing emissions from City vehicles by 23% by 2007.**
-

The Green Fleet Transition program – launched in 2004 – calls for the City of Toronto to replace 84% of its new light duty vehicle purchases with alternatives such as natural gas and hybrid electric vehicles, and for the City to use more than 20 million litres of blended biodiesel fuel. This is anticipated to reduce emissions from the City of Toronto fleet by 23%.

Program implementation is well underway. Toronto currently has 18 hybrid-electric pickups and sedans in service (with another 26 on order), as well as 138 natural gas pickups and vans, and 12 propane units (vehicles, fork lifts, etc.) on the road. The City purchased another 300,000 litres of biodiesel in July 2005, and is developing a hydraulic hybrid garbage packer that will run on 100% biodiesel. The TTC is also testing biodiesel in 180 buses, with the test scheduled to end in December 2005.

Intergovernmental Action

HIGHLIGHTS

- **Coal phase-out work bears fruit in closure of Lakeview.**
 - **Negotiated real cash from the provincial and federal governments for transit.**
 - **Smog Summit needs new energy.**
 - **Pushing federal Kyoto plan in the right direction.**
-

Toronto has long been a leader in working with other governments to promote action to reduce smog and 2005 was no exception.

Toronto's long-standing support of a phase-out of coal power in Ontario bore fruit with the closure of the Lakeview Generating station.

Toronto also led the effort to bring federal and provincial funding to public transit. This has resulted in: the three-way funding announcement last year; the provincial gas tax funding; the communities gas tax initiative (which Toronto is applying exclusively to transit); and, the NDP-Liberal budget addition of transit specific gas tax funding.

Toronto also continues to host the smog summit. This forum helps to drive smog reduction policy development for three levels of government, including many GTA municipal governments. However, this year's summit did not yield much in the way of innovation. The Smog Summit should continue, but needs to be reinvigorated.

Toronto has also proven to be a leader among municipalities in working to get wise action from the federal government on the implementation of the Kyoto protocol. Recently, Toronto council adopted a very progressive policy on greenhouse gas emission reduction credits. That policy commits the City to only selling the credits to the federal government, and further requiring that the sale be based on the credits being retired (i.e. not re-sold to a polluter who can thus avoid reducing their own emissions). Further, all money from such sales will be spent on further reductions, for example improving transit service. In effect this position reduces the total emissions by taking credits out of circulation (retiring them) and reinvesting in reduction activity.

Similarly, Toronto is advocating for significant improvements to the federal governments' proposed Renewable Power Production Incentive. Toronto Council sent a letter to the federal government outlining proposed changes to this incentive program which would have the effect of encouraging small green power projects, and better financial support for wind and solar projects.

The New Air Quality Management Strategy

HIGHLIGHTS

- **After five years, we finally have a plan to develop a plan to fight smog and climate change.**
 - **The draft Strategy is more laundry-list than comprehensive plan to achieve clean air and climate change objectives.**
-

Recognizing the ad hoc nature of much of its activities on air pollution, City Council committed itself to developing a Comprehensive Air Quality Strategy in April 2000.

In January 2005, city staff released a plan for developing this strategy that focused primarily on better data information and analysis, monitoring and evaluation, and appeals for other jurisdictions to take action. No new actions by the City were anticipated prior to 2008.

To their credit, councillors and the Board of Health have requested staff to bring forward new measures in 2006 and 2007. There is still a danger, however, of developing a laundry-list of initiatives which don't add up to a comprehensive plan to meet clear targets.

While better data analysis, monitoring and evaluation are important elements of a comprehensive air quality strategy, the Toronto Environmental Alliance is concerned that the resultant management framework could focus on what are the cheapest things to do (i.e. a relatively narrow range of actions) rather than on how we can do what is necessary to meet clean air and climate change objectives. The latter would entail a much broader range of actions that will have to go beyond what the City does within its own operations to engage Toronto residents and businesses in taking action as well through new building and retrofit codes, transportation and energy planning and service delivery, incentives, and penalties.

There is some promising work being done on the Transit City initiative, Green Development Standards and the Better Buildings New Construction Program, but these will have to go beyond pilot projects and become embedded in the way Toronto transforms itself over the next twenty years if we are to see real improvements in air quality and greenhouse gas emissions.



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