Ontario Public Health Association
l'Association pour la santé publique de l'Ontario
Established/Établi 1949

The mission of OPHA is to provide leadership on issues affecting the public's health and to strengthen the impact of people who are active in public and community health throughout Ontario.

700 Lawrence Ave. W., Suite 310
Toronto, Ontario M6A 3B4

Tel: (416) 367-3313
1-800-267-6817 (Ont)
Fax: (416) 367-2844
E-mail: info@opha.on.ca
www.opha.on.ca

August 24, 2004

Eric Loi
Senior Policy Coordinator
Ontario Ministry of the Environment
Air Policy & Climate Change Branch
135 St. Clair Avenue, 4th Floor
Toronto, Ontario, M4V 1P5

Re: EBR Number PA02E0031
Ontario's Industry Emissions Reduction Plan

I am writing to you on behalf of the Ontario Public Health Association (OPHA), a volunteer, charitable organization founded in 1949 that provides leadership on issues affecting the public's health and strengthens the impact of people who are active in public and community health throughout Ontario.

We are pleased that the Ministry of the Environment has released a formal proposal to regulate smog precursors emitted from Ontario's industrial sector with the policy paper, "Ontario's Industry Emissions Reduction Plan". A regulatory approach to this issue is badly needed, and we welcome the opportunity to participate in discussions related to its development. If you have any questions respecting our views, I would invite you to call Kim Perrotta, the OPHA Environmental Health Manager at 905-628-9437.

In the comments below, we articulate our views, concerns and recommendations on:

1. The need for clearly articulated goals for regional air quality;
2. Emissions trading as a regulatory approach;
3. The design of Ontario's existing emissions trading framework;
4. The emission caps proposed for nitrogen oxides (NOx) and sulphur dioxide (SO2); and
5. The continued inclusion of the electrical sector in the emissions trading framework.

1. Need Clearly Articulated Goals for Regional Air Quality

Air quality is a significant health concern in Ontario. In 2000, the Ontario Medical Association reported that air levels of fine particulate matter and ozone are contributing to about 1,900

premature deaths and 9,800 hospital admissions in Ontario each year. In July 2004, Toronto Public Health reported that the five common air pollutants - fine particulate matter, ozone, nitrogen dioxide (NO2), SO2 and carbon monoxide - are contributing to about 1,700 premature deaths and 6,000 hospitalizations each year in Toronto alone.

Air levels of fine particulate matter (PM2.5) and ozone frequently exceed the health-based reference levels recommended by the Federal Provincial Working Group on Air Quality Objectives and Guidelines of 20 ppb for ozone (1-hour) and 15 ug/m3 (24-hour) for PM2.5 in communities across Ontario.

The Ontario government has made a number of commitments to reduce emissions of SO2 and/or NOx in the context of provincial, national and/or bi-national agreements (see Appendix 1), but it has no clearly articulated strategy that identifies its regional air quality goals, the emission reductions needed on both sides of the border to achieve those goals, and the role of the Industrial Emission Reduction Plan (IERP) within that overall strategy. While we do no believe that action on the IERP should wait for the development of an overall strategy, we do believe that the emission caps for the industrial sector must be established with a view to the short-term and long-term goals for regional air quality.

It is recommended that the Minister of the Environment clearly establish the following targets as regional air quality goals to guide the development of Ontario's Industry Emissions Reduction Plan:

- *To reduce NOx and SO2 emissions in Ontario by 45% and 50% respectively relative to 1990 by 2010;*
- *To comply with the newly adopted Canada Wide Standards for ozone and PM2.5 by 2010; and*
- *To aim for compliance with the health-based reference levels for ozone and PM2.5 as the long-term goal.*

2. Emissions Trading as a Regulatory Approach

Within the public health sector, there is an understanding that an emissions trading framework, if properly designed, can be a cost-effective framework for achieving emissions reductions. For air emissions such as greenhouse gases that are not associated with direct local health or environmental impacts, emissions trading appears to be a framework that offers many benefits. However, when emissions trading is applied to air pollutants such as NOx and SO2, there is a greater level of uneasiness for the public health sector.

While both NOx and SO2 are well recognized as precursors of smog (i.e. NOx for ozone and PM2.5 and SO2 for PM2.5), both have also been associated with health impacts when present in their primary gaseous states (ie. as nitrogen dioxide and SO2). This means that both air pollutants appear to be capable of producing negative health impacts in the local communities in which they are released, while also contributing as secondary air pollutants (ie. as ozone, nitrates, sulphates and PM2.5) to negative health impacts experienced on a regional level.

For this reason, the OPHA is concerned about a regulatory framework that allows a large point source in one community to maintain higher levels of emissions by "buying" credits or allowances from another source in a distant community. Our concerns about local air quality impacts would not be so great if we had confidence in the standards that apply to air pollutants and in the Certificate of Approval (CofA) process that applies to local point sources However, at present, we do not.

The ambient air quality criteria (AAQC) that currently apply to NO2 and SO2 are many times higher than the ambient air levels associated with significant health impacts, and there is not yet an AAQC for PM2.5 that can be applied in the CofA process. We have a number of concerns with the CofA process itself, which we will address when we submit comments on the Ministry's proposals respecting local air quality that were released in June 2004 as well.

We are also concerned about a regulatory framework that could allow emissions trading between point sources and mobile sources (i.e. by allowing the transportation sector to create emission reduction credits). Air monitoring studies have demonstrated that air levels of PM10 and PM2.5 can be much higher along high-traffic corridors than indicated by ambient air levels in the community as a whole. These studies indicate that a tonne of NOx or SO2 released at ground-level from mobile sources can produce a very different exposure scenario for individuals than a tonne of NOx or SO2 released from the tall stack of a point source.

In order to address the local air quality problems that could be associated with emissions trading, the OPHA recommends that the Ministry of the Environment establish health-protective air standards for NO2, SO2 and fine particulate matter (PM2.5) that can be used in the CofA process, and that the CofA process be improved to protect people in communities across the province from the local air quality impacts associated with industrial air emissions.

The OPHA recommends that the emissions trading framework explicitly prohibit mobile sources from selling emission reduction credits to point sources.

3. Design of Ontario's Existing Emissions Trading Framework

In 2001, the Ontario government established an emissions trading framework in Ontario with Regulation 397 under the Environmental Protection Act. This framework combines a "cap and trade" emissions trading framework with an "open market system" that allows the creation of credits by non-capped sectors.

The Ministry's new proposal, "Ontario's Industry Emissions Reduction Plan" would extend the emissions trading rules enshrined in Regulation 397 to seven new industrial sectors - petroleum, iron and steel, pulp and paper, glass, cement, carbon black and non-ferrous smelting. While the OPHA is very pleased to see a regulatory framework for smog precursors being extended to seven industrial sectors, we continue to have serious concerns with Ontario's emissions trading framework.

We believe that the Ontario government cannot ensure that emissions in the regional airshed will come down over time when it allows uncapped sectors to sell "emission reduction credits" to capped sectors. In fact, we believe that this regulatory framework could allow increased emissions in the regional airshed.

The OPHA's concern respecting uncapped sectors is one expressed formally by many other organizations including the United States Environmental Protection Agency and Environment Canada.

The OPHA strongly supports the development of a regulatory framework to address industrial emissions of smog precursors.

The OPHA recommends that Ontario's existing emissions trading framework be revised so that it does not allow uncapped sectors to create and sell emission reduction credits to capped sectors.

4. Emission Caps Proposed for NOx & SO2

In order to achieve significant improvements in air quality, an emissions trading system must be driven by stringent air emission caps. Given the concerns associated with ozone levels in Ontario, the NOx caps proposed for the five industrial sectors are far too modest. The proposed caps would only require the five industrial sectors collectively to reduce NOx emissions by 5% and 9% respectively by 2010 and 2015 relative to 2001 emission levels (see Table 1).

Table 1: NOx Emissions & Proposed Caps, Kilotonnes

Sector	2001	2010	2015	% Change: 2001-2010	% Change: 2001-2015
Petroleum	10.4	10.2	10.2	-2%	-2%
Iron & Steel	12.7	10.9	10.9	-14%	-14%
Pulp & Paper	6.8	6.2	6.2	-9%	-9%
Glass	2.1	1.8	1.8	-14%	-14%
Cement	19.7	16.9	14.8	-14%	-25%
Set-Asides	NA	3.1	3.1		
Total	**51.7**	**49.0**	**46.9**	**-5%**	**-9%**

(Source: Data from MOE, Ontario's Industry Emissions Reduction Plan. 2004)

The SO2 caps proposed for the industrial sectors are more ambitious than those proposed for NOx. The OPHA is pleased to see the significant reductions proposed for 2015 for the non-ferrous smelting sector and for 2010 for the petroleum sector.

Table 2: SO2 Emissions & Proposed Caps, Kilotonnes

Sector	2001	2010	2015	% Change: 2001-2010	% Change: 2001-2015
Petroleum	58.7	34.9	34.9	-41%	-41%
Iron & Steel	18.5	17.2	17.2	-7%	-7%
Pulp & Paper	7.5	5.8	5.8	-23%	-23%
Carbon Black	9.5	10.7	10.7	+13%	+13%
Cement	21.0	19.6	15.7	-7%	-25%
Non-Ferrous Smelting	281*	241	91	-14%	-68%
Set-Asides	NA	17.1	17.1		
Total	**396.2***	**346.3**	**192.4**	**-13%**	**-51%**

(Source: Data from MOE, Ontario's Industry Emissions Reduction Plan. 2004 except * which is based on emissions reported by Inco & Falconbridge in 2001 to the NPRI.)

The OPHA recommends that more ambitious caps be established for NOx.

The OPHA strongly supports the caps proposed for SO2.

5. Continued Inclusion of the Electrical Sector

We are concerned however that these caps -- those that are modest and those that are more ambitious -- may be rendered meaningless by the continued inclusion of the electrical sector in the emissions trading framework.

Regulation 397 was passed before the Ontario government made a commitment to phase-out coal-fired power plants in Ontario. Under that Regulation, the electrical sector is allowed to emit 28 kilotonnes of NOx and 131 kiltonnes of SOx from 2008 on. With the phase-out of coal-fired power plants, SO2 emissions from the electrical sector should be virtually eliminated while NOx emissions should be cut by at least 90% (i.e. assuming that combined cycle natural gas generators are used to replace all coal-fired power plants). This would mean that there could be about 23 kilotonnes of NOx emission reduction credits and 131 kilotonnes of SO2 emission reduction credits available for trading with the industrial sectors proposed for inclusion. These electrical sector credits represent 8.5 times and 2.6 times the NOx and SO2 reductions identified respectively for the industrial sectors to achieve by 2010. If these allowances remain in the emissions trading system, there will be no benefits associated with the Ministry's proposal.

The OPHA recommends that the emissions trading framework not include the electrical sector unless the allowances for the electrical sector have been revised to reflect the phase-out of coal-fired power plants by 2007.

In closing, we would like to thank you for providing the OPHA with the opportunity to comment on the Ministry's proposal. We are very pleased that the Ministry is taking steps to improve air quality in Ontario by regulating industrial emissions of smog precursors, and we look forward to further discussions on this important endeavour.

Yours truly,

Elizabeth Leach
Executive Director

cc. Leona Dombrowsky, Minister of the Environment
George Smitherman, Minister of Health and Long-Term Care
Kim Perrotta, OPHA

Appendix 1

Related Air Quality Commitments

The Province has made a number of commitments that have the potential to substantially improve regional air quality in southern Ontario:

- In 1996, it committed to reducing emissions of nitrogen oxides (NOx) and volatile organic compounds (VOCs) in Ontario by 45% of 1990 levels by 2015 in order to reduce by 75% the number of times each year that ozone readings in the province exceed the Ambient Air Quality Criterion (AAQC) of 80 ppb;

- Under the Canada-Wide Acid Rain Strategy for Post-2000, Ontario is committed to reducing emissions of sulphur dioxide (SO2) by an additional 50% by the year 2015 to 442.5 kilotonnes per year by 2015. While this commitment is designed to address the issue of acid rain, it provides benefits for air quality as well;
- Under the Ozone Annex of the Canada-U.S. Air Quality Agreement, the Province is committed to capping NOx emissions from the electrical sector in southern Ontario to 39 kT of nitrogen dioxide (NO2) by 2007; and
- In June 2000, Ontario endorsed the Canada-Wide Standards (CWS) of 30 ug/m3 (24-hour) for fine particulate matter (PM2.5) and of 65 ppb (8-hour) for ozone to be achieved by 2010.