



ONTARIO  
CLEAN AIR  
ALLIANCE

**SUBMISSION TO THE  
STANDING COMMITTEE ON RESOURCES DEVELOPMENT  
WITH RESPECT TO  
BILL 35: THE ENERGY COMPETITION ACT**

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**On Behalf Of  
The Ontario Clean Air Alliance**

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## **INTRODUCTION**

The Ontario Clean Air Alliance (OCAA) is a 45 member coalition. Our members, which represent over three million Ontarians, include the City of Toronto, 10 electric utilities, the Ontario Forestry Association, the Ontario Lung Association, the Ontario College of Family Physicians, the Consumers Association of Canada, the United Church of Canada, CAW-Canada, Pollution Probe, the Sierra Club of Canada, the Canadian Institute for Environmental Law and Policy and many others. (Please see Appendix A for a complete list of our members.)

The objective of the Ontario Clean Air Alliance is to ensure that electricity deregulation leads to cleaner air, not increased pollution.

This submission to the Standing Committee on Resources Development regarding Bill 35 covers four topics: i) why air pollution from fossil-fuel fired electricity generating stations is a major threat to human health and the environment; ii) why electricity deregulation could lead to increased air pollution; iii) how we can ensure that electricity competition leads to cleaner air; and iv) the Ontario Clean Air Alliance's recommendations.

## **POLLUTION FROM POWER PLANTS: DAMAGES TO HUMAN HEALTH AND THE ENVIRONMENT**

Fossil-fuel fired electricity generating stations are a major source of air pollution in Ontario. Coal and oil-fired power stations emit sulphur dioxide, nitrogen oxides, greenhouse gases, and air toxics such as mercury. These pollutants contribute to a wide range of health and environmental problems including asthma,

bronchitis, cancer, smog, acid rain, and climate change.

A number of recent scientific studies document the severity of Ontario's air pollution problem. For example, the Ontario Medical Association's (OMA) recent report, Health Effects of Ground-Level Ozone, Acid Aerosols and Particulate Matter, explains that ground level ozone and fine particulates cause serious health problems in both urban and rural communities which cost the health care system millions of dollars annually. These pollutants aggravate respiratory diseases such as asthma and bronchitis, alter lung function, and can even cause premature death. The OMA's research findings led them to conclude that air pollution is a "public health crisis" in Ontario.<sup>1</sup>

Recent federal and provincial government studies also confirm the seriousness of the air pollution problem in Ontario. For instance, the Government of Ontario estimates that air pollution is causing 1,800 premature deaths each year in the province. Moreover, federal government estimates show that air pollution is adding an extra \$1 billion annually to Canada's health care costs.

Air pollution is also causing significant environmental damage. For example, the Acidifying Emissions Task Group (a multi-stakeholder group consisting of government, industry, health and environmental representatives) recently reported that even with full implementation of current Canadian and U.S. acid rain programs, by the year 2010, "almost 800,000 km<sup>2</sup> in southeastern Canada - an area the size of France and the United Kingdom combined - will receive harmful levels of acid rain".<sup>2</sup>

The Ontario Clean Air Alliance is concerned that if electricity market restructuring is not done with exceptional care to protect human health and the environment, it could exacerbate the air pollution crisis in Ontario.

## **WHY DEREGULATION COULD LEAD TO INCREASED AIR POLLUTION**

At present, Ontario Hydro's electricity generating stations are subject to sulphur dioxide, nitrogen oxides and greenhouse gas emission limits or caps: Ontario Hydro's sulphur dioxide emissions are capped at 175 kilotonnes (KT) per year; the company's combined sulphur dioxide and nitrogen oxides emissions are capped at 215 KT per year and, beginning in the year 2000, its nitrogen oxides emissions will be capped at 38 KT per year; in addition, Ontario Hydro must stabilize its greenhouse gas emissions at its 1990 level (26,000 KT per year) in the year 2000 and further reduce these emissions by 10% in 2005 (to 23,400 KT per year).

Ontario Hydro's emission caps will not, however, be sufficient to protect public health and the environment in a deregulated electricity market for three reasons.

First, ***Ontario Hydro's emission caps will not limit the emissions of its domestic and U.S. competitors*** who will be supplying power to Ontario consumers. As a result, without effective new environmental regulations, electricity deregulation will lead to a rise in Ontario's total (domestic and imported) electricity-related air pollution.

Second, *there are no caps on the 35 air toxic emissions* associated with coal-fired electricity generation (e.g., mercury and six known cancer-causing agents: arsenic, beryllium, cadmium, chromium, lead and nickel). Air toxics are among the most harmful pollutants released by coal-fired generators. They are persistent and can bioaccumulate in living organisms causing immune system dysfunction, reproductive deficits, developmental and neurobehavioural abnormalities, and cancer.

Third, *Ontario Hydro's current emission caps are too high*. Even with current emission limits we still have an air pollution crisis in Ontario. As a result, many organizations have called for dramatic cuts to the existing emission limits. For example, the Acidifying Emissions Task Group has called for a further 75% reduction in sulphur dioxide emissions.<sup>3</sup> In addition, the Ontario Medical Association has called for an 85% reduction in Ontario Hydro's nitrogen oxides emissions.<sup>4</sup>

## **HOW ELECTRICITY COMPETITION CAN LEAD TO CLEANER AIR**

In its White Paper on electricity deregulation, the Government of Ontario promised that in implementing a competitive electricity market it "will ensure that the province's environmental protection record is maintained and improved."<sup>5</sup> In order to fulfil this commitment, the Government of Ontario must ensure that Ontario's total electricity-related air pollution will decline when competition begins in the year 2000.

The Government must, therefore, establish the following emission caps with respect to all electricity generated in Ontario or imported into Ontario:

1. Greenhouse gas emission caps which stabilize, at 1990 levels, the greenhouse gas emissions associated with the production or sale of electricity in Ontario by the year 2000 and reduce the greenhouse gas emissions associated with the production or sale of electricity in Ontario by **more** than 10%, relative to 1990 levels, by 2005.
2. Sulphur dioxide emission caps which reduce the sulphur dioxide emissions associated with the production or sale of electricity in Ontario **below** 175 KT per year.
3. Nitrogen oxides emission caps which reduce the nitrogen oxides emissions associated with the production or sale of electricity in Ontario **below** 38 KT per year.
4. Air toxics emission caps which **reduce** the air toxic emissions associated with the production or sale of electricity in Ontario.

The Ontario Clean Air Alliance is pleased to note that the Market Design Committee, established by the Honourable Jim Wilson, has also endorsed a comprehensive set of emission caps to control Ontario's total (domestic and U.S.) electricity-related air pollution.<sup>6</sup>

However, the Government of Ontario has not made any commitment to establish emission caps for all generators selling in the Ontario market which would actually reduce electricity-related air pollution in the province. Instead, the

Government is considering a range of emission control models, including several which could actually lead to increased air pollution. For example, one option under consideration is the establishment of emission performance standards for all generators in the Ontario market with no explicit sector caps. Emission performance standards merely define the acceptable emissions levels per unit of electricity generated -- they do not set a maximum limit on total emissions for the province. Therefore, when electricity demand increases, pollution can also increase.

Moreover, the Government is not exploring measures to control *all* electricity-related pollutants, as recommended by the Market Design Committee. In fact, the Government is only considering regulations with respect to sulphur dioxide and nitrogen oxides. As discussed, coal-fired generating stations also produce 35 air toxics, including mercury and at least six known carcinogens, and greenhouse gases. The Government would be remiss to leave these deadly pollutants off the environmental protection agenda given their harmful effects on human health and the environment, not to mention Canada's international commitment to reduce greenhouse gases.

In sum, the only way to ensure that Ontario's air quality improves is through establishing mandatory emission caps which reduce Ontario's total (domestic and imported) electricity-related emissions of sulphur dioxide, nitrogen oxides, air toxics and greenhouse gases.

## RECOMMENDATIONS

At the present, the Environmental Protection Act permits the Government of Ontario to establish emission caps with respect to domestic electricity generators. Furthermore, if the Energy Competition Act becomes law, the Government of Ontario will also have the authority to cap the emissions associated with electricity imports.<sup>7</sup> The Ontario Clean Air Alliance recommends that:

1. The provisions of the proposed Energy Competition Act which would permit the Government of Ontario to establish emission caps with respect to electricity imports should be approved.

2. The Ministry of the Environment should issue a discussion paper which analyses the benefits and costs of achieving various levels of reductions in Ontario's total electricity-related emissions of sulphur dioxide, nitrogen oxides, air toxics and greenhouse gases.

3. The Ministry of the Environment should consult with the people of Ontario with respect to the appropriate levels for Ontario's total (domestic and imported) electricity-related sulphur dioxide, nitrogen oxides, air toxics and greenhouse gas emission caps.

4. The Ministry of the Environment should establish sulphur dioxide, nitrogen oxides, air toxics and greenhouse gas emission caps which will reduce Ontario's total electricity-related air pollution when competition begins in the year 2000.



## **CONCLUSIONS**

The Government has suggested that it will continue consulting with environmental groups and other experts on the design of the environmental protection regime for the competitive electricity market. The Ontario Clean Air Alliance's goal is to see that this regime actually improves air quality, thereby protecting human health and the environment. The Alliance is planning to undertake a detailed technical analysis regarding the costs of achieving various levels of emission reduction and requests the opportunity to share these results with the Government and to continue providing input into the setting of the environmental regulations for the competitive market.

## ENDNOTES

- 1 . Ontario Medical Association News Release, "Beware The Air You Breathe: Ontario's Doctors Call For Cleaner Air", May 12, 1998.
- 2 . The Acidifying Emissions Task Group, Towards a National Acid Rain Strategy, October, 1997.
- 3 . The Acidifying Emissions Task Group, Towards a National Acid Rain Strategy, (1997), pp. v, vi, 41 and 52.
- 4 . Ontario Medical Association, Health Effects of Ground-Level Ozone, Acid Aerosols and Particulate Matter, (May 1998), p. 27.
- 5 . Government of Ontario, Direction For Change: Charting a Course for Competitive Electricity and Jobs in Ontario, (November, 1997), p. 12.
- 6 . Market Design Committee, Second Interim Report of the Market Design Committee To the Honourable Jim Wilson, Minister of Energy, Science and Technology, (June 30, 1998), Chapter 5, Section 2.
- 7 . To be specific, if passed, the Energy Competition Act will allow the Government to establish an Emission Performance Standard (EPS) with respect to electricity imports. An EPS establishes a maximum emission rate(s) for one or more pollutants per kilowatt-hour of electricity produced. At the present, Ontario has the transmission capacity to import up to 24 billion kilowatt-hours per year of coal-fired electricity from the U.S. Therefore, once an EPS is established, the EPS multiplied by 24 billion kilowatt-hours will equal Ontario's annual emission cap with respect to U.S. electricity imports.

## APPENDIX A: ONTARIO CLEAN AIR ALLIANCE MEMBER LIST

The undersigned have endorsed the OCAA's recommendations for greenhouse gas, sulphur dioxide, nitrogen oxides and air toxics emissions caps and joined the Alliance:

Alfred-Plantagenet Hydro  
Algoma Manitoulin Environmental Awareness  
Algoma Manitoulin Nuclear Awareness  
Allergy/Asthma Information Association  
Almonte Hydro  
Bruce Peninsula Environment Group  
Canadian Association of Physicians for the Environment  
Canadian Institute for Environmental Law and Policy  
CAW Canada\*  
Chatham Hydro  
Citizens Environmental Alliance of Southwestern Ontario  
Citizens for Renewable Energy  
Citizens' Network on Waste Management  
City of Toronto  
Clarington Hydro  
Clean North  
Community Action Parkdale East  
Conservation Society of Hamilton and District, Hamilton Chapter  
Consumers Association of Canada (Ontario)  
Echo Lake Association  
For A Safe Environment  
Greenest City  
Kingston Environmental Action Project  
Lucan Hydro  
Metro Toronto Pesticide Action League  
North Toronto Green Community  
Ontario College of Family Physicians  
Ontario Forestry Association  
Ontario Lung Association  
Ontario Public Health Association  
Ontario Public Interest Research Group/McMaster University  
Paisley Hydro  
Pesticide Action Group/Waterloo  
Peterborough Utilities Commission  
Pollution Probe  
Rockwood Hydro-Electric  
South Riverdale Community Health Centre  
The Sierra Club of Canada  
Sudbury Hydro  
Torrie Smith Associates  
Toronto District Heating Corporation

Toronto Environmental Alliance  
Toronto Hydro  
The United Church of Canada  
Wastewise

\*CAW Canada is opposed to the privatization of Ontario Hydro