

Health Impacts of Coal-Fired Power Generating Stations

Aresolution adopted at the 1999 OPHA Annual General Meeting

Code: 1999-01 (RES) *Status:* Active

RESOLUTION

WHEREAS poor air quality in Ontario is a major public health issue, linked to premature deaths, and hospital admissions for cardiac and respiratory problems;

WHEREAS the coal-fired plants operated by the Ontario Power Generation Company are a major source of hazardous air pollutants;

WHEREAS there is a danger that, in the absence of strong regulatory standards, the level of air pollutants from power generation may increase as a result of the deregulation of Ontario's electricity market;

WHEREAS evidence has demonstrated that the level of air-borne pollutants resulting from electrical generation could be reduced significantly at low cost if the coal-fired power generating plants were converted to natural gas;

THEREFORE BE IT RESOLVED THAT the Ontario Public Health Association call upon the Ontario Minister of the Environment and the Ontario Minister of Energy, Science and Technology to:

- ensure that air emission caps for sulphur dioxide and nitrogen oxide apply to all companies supplying electricity to Ontario;
- adopt the emission caps recommended by the Ontario Clean Air Alliance for the year 2002, including 17.5 kt for sulphur dioxide, 25 kt for nitrogen oxides, 15,000 kt for carbon dioxide and 45 kg for mercury;
- set emission caps for carbon dioxide and persistent toxins to encourage a shift towards natural gas and renewable energies.

BE IT FURTHER RESOLVED the OPHA support the Ontario Clean Air Alliance's call for the conversion of 78 % of coal-fired power generating facilities to natural gas by the year 2002.

BACKGROUND

According to the Ontario Medical Association (OMA), air pollution is a public health crisis in Ontario (1). To address this crisis, the OMA has called for a 75% reduction in lung-searing sulphur dioxide emissions and an 85% reduction in nitrogen oxide emissions (2). Nitrogen oxide emissions are a precursor of ground-level ozone or smog.

The adverse health effects of air pollution have been demonstrated at air particulate levels as low as 20 ug/m³. In Toronto, air levels of particulates commonly exceed 20 ug/m³, and can get as high as 75 ug/m³. Ground level ozone has been linked to increased rates of hospitalization for asthma, lung disease and respiratory infections at levels as low as 31 ppb. Ozone levels in Toronto frequently exceed 80 ppb (3). By the province's own admission, smog has been linked to 1,800 premature deaths and 1,400 cardiac and respiratory hospital admissions each year (4).

The five coal-fired power plants operated by the Ontario Power Generation (OPG) Company are major contributors to the smog problem in Ontario. Specifically, OPG is Ontario's largest corporate source of nitrogen oxide, carbon dioxide and mercury emissions, and the second largest corporate source of sulphur dioxide emissions (5). In addition, OPG's coal fired power plants also emit a number of air-borne carcinogens, including arsenic, beryllium, chromium, lead and nickel (6).

Public health experts and environmental groups are fearful that Ontario air quality will worsen if environmental regulations are not in place before the implementation of Bill 35, which introduces competition to Ontario's electrical sector (5, 7, 8). The introduction of competition within the U.S. electricity market in 1992 has resulted in increased use of coal fired plants, especially those with the highest levels of air particulate emissions (5).

Research commissioned by the Ontario Clean Air Alliance has demonstrated that air emissions from Ontario's electrical market could be cut dramatically by converting 78% of coal-fired electricity to natural gas by the year 2002. For a small increase in monthly electrical bills (\$1.86 per month for the typical residential customer), this shift could reduce sulphur dioxide emissions by 90%, nitrogen oxide emissions by 57%, carbon dioxide emissions by 37% and emissions of seven persistent toxins, including mercury, by 78% (9).

Clearly, there is a strong public health case for phasing out Ontario's coal fired power plants by switching to cleaner sources of electricity. As an organization committed to ensuring a healthy biophysical environment for the people of Ontario, the Ontario Public Health Association calls for the sunsetting of coal-generating power plants in the province and the adoption of more environmentally-friendly sources of electricity generation.

IMPLEMENTATION PLAN

The resolution will be implemented by the Environmental Health Workgroup, with the cooperation of the OPHA Board and Executive where necessary. Copies of the resolution will be sent to the Minister of the Environment and the Minister of Energy, Science and Technology. The Environmental Health Workgroup will monitor progress towards the implementation of the recommendations

specified in the resolution, and will endeavour to participate in consultation and advocacy opportunities related to the issues addressed in the resolution.

REFERENCES

1. Ontario Medical Association “Beware the Air You Breathe: Ontario’s Doctors Call for Cleaner Air,” News Release, May 12, 1998.
2. Ontario Medical Association **Health Effects of Ground-Level Ozone, Acid Aerosols and Particulate Matter** May 1998, p. 27.
3. Toronto Public Health “Toronto Public Health fears air quality will worsen with electricity deregulation.” Media Release, April 6, 1999.
4. Ontario Ministry of the Environment **Ontario’s Smog Plan** January 1998, p. 5.
5. Ontario Ministry of the Environment **Fast Reference Emission Document** November 1998, pp. 12, 14.
6. Gibbons, J., and Bjorkquist, S. **Electricity Competition and Clean Air** Toronto: Ontario Clean Air Alliance July 1998, p. 17.
7. Ontario Clean Air Alliance “The Ontario Energy Board’s Draft Standard Supply Service Code and Air Quality Toronto, June 14, 1999.
8. Pollution Probe “Environmental Protection in a Competitive Electricity Market in Ontario.” Toronto, May 1999.
9. Diener Consulting Inc.-Acres International **Emissions Reduction Study for the Ontario Clean Air Alliance** November 1998.

Regarding resolutions, position papers and motions:

Status: Policy statements (resolutions, position papers and motions) are categorized as:

ACTIVE, if:

1. The activities outlined in the policy statement’s implementation plan have not yet been completed; or
2. The policy statement addresses an issue that is currently relevant to public health in Ontario.

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1. The activities outlined in the policy statement’s implementation plan have been completed; or
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