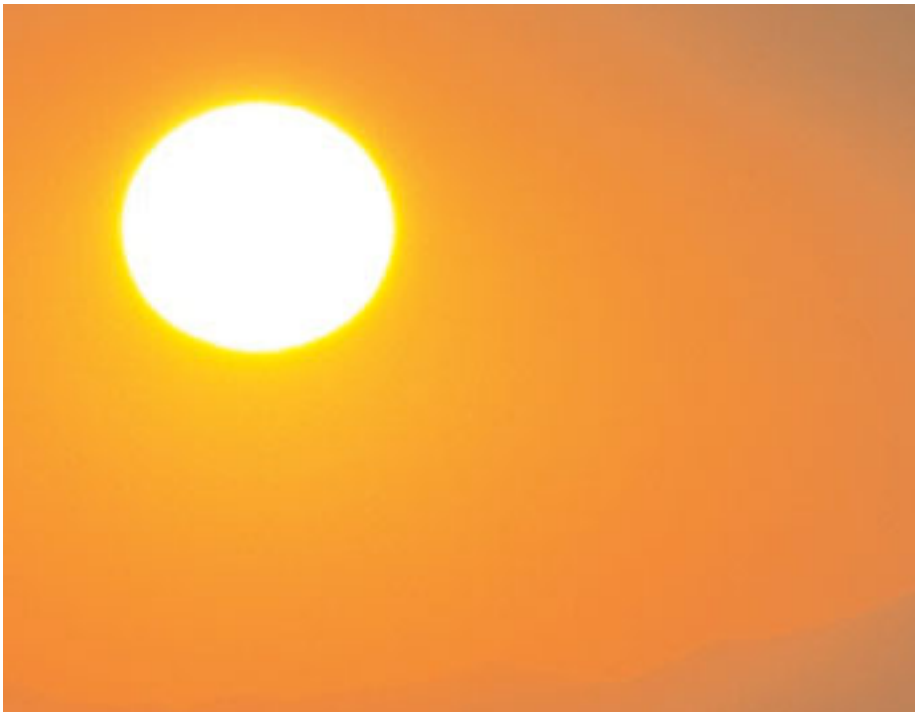
More Than Hot Air:



Greenhouse Gas Emissions from Ontario Power Generation's Coal-Fired Power Plants

Ontario Clean Air Alliance

FEBRUARY 10, 2005

More than hot air:

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February 2005

About the Ontario Clean Air Alliance

The Ontario Clean Air Alliance (OCAA) is a coalition of health, environmental and consumer organizations, municipalities, utilities, faith communities, unions and individuals working for cleaner air through strict emission limits and the phase-out of coal in the electricity sector. Our partner organizations represent over six million Ontarians.

Acknowledgments

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Laidlaw Foundation

TORONTO Atmospheric Fund

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Conclusion and Recommendations prepared by Jack Gibbons.
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Executive Summary

1. Climate Change is coming to Ontario

Scientists estimate that Ontario will warm by an average of 2-5 degrees Celsius in the next 75-100 years. This change will have many consequences, including increased frequency and severity of extreme weather-related events such as floods, drought, and storms; increased risk of heat stress and health-related problems; increased number of very hot days; increased number of smog and "bad air" days; increased potential for insect-borne disease; lower water levels in the Great Lakes; earlier and longer frost-free seasons; less consistent snow cover; and increased periods of drought.[6]

2. The major source of greenhouse gas emissions is the combustion of fossil fuels

In 2002, Canada's total emissions of greenhouse gases from all sources were 731 million tonnes (expressed as carbon dioxide equivalent*)[3]. Approximately 74% of Canada's greenhouse gas emissions came from the combustion of fossil fuels[3]. Fossil fuels are burnt in cars and trucks, in power plants, in houses and in industrial processes. Coal-fired power plants alone contributed 102 million tonnes (carbon dioxide equivalent) of greenhouse gases to the national total in 2002. Agriculture, forestry and industrial processes are other sources of greenhouse gases.

3. The five coal-fired plants operated by Ontario Power Generation (OPG) are a significant source of greenhouse gas emissions in Ontario

The Nanticoke Generating Station was the largest single source of greenhouse gas emissions in Ontario in 2002. Ontario Power Generation, which is 100% owned by the Government of Ontario, was the largest corporate emitter of greenhouse gases in Ontario in 2002.

In 2002, Ontario emitted a total of 203.5 million tonnes of greenhouse gases (carbon dioxide equivalent). Approximately 176 million tonnes (75%) of this total was made up of carbon dioxide emissions.[3]

The total amount of carbon dioxide emitted from the five OPG coal-fired plants in 2002 was 35.2 million tonnes. Therefore, in 2002, the OPG coal-fired plants accounted for 20% of Ontario's emissions of carbon dioxide[3] – the equivalent of the emissions from 6.2 million cars – and 17% of the province's total greenhouse gas emissions.

4. The Nanticoke Generating Station had the largest carbon dioxide emissions of any power plant in North America in 2002

According to a report from the Commission for Environmental Cooperation, in 2002 the Nanticoke Generating Station produced the largest emissions of carbon dioxide of any power plant in North America.[1] Nanticoke had larger emissions than the top U.S. power plant (Georgia Power's Bowen Steam Electric Generating Station in Cartersville, Georgia) and the top Mexican power plant (Comision Federal de Electricidad's Adolfo Lopez Mateos power plant in Tuxpan, in the state of Veracruz).

5. Emissions and emission rates of greenhouse gases from the five coal-fired plants operated by Ontario Power Generation are increasing

From 1995-2003, carbon dioxide emissions from the five coal-fired OPG plants increased from 15.4

* Each greenhouse gas can be multiplied by a number called a global warming potential to give an amount in carbon dioxide equivalent units. This conversion allows different gases to be compared. The global warming potential for carbon dioxide is set at 1.

million tonnes to 34.5 million tonnes, an increase of 124%. Some stations, such as Nanticoke, more than doubled their emissions of greenhouse gases in this period.

The emission rate (emissions divided by net generation) for the five coal-fired OPG stations also marginally increased from 1995-2003. The emission rate in 1995 was 922 tonnes carbon dioxide per gigawatt (GWh) net, which increased to 953 tonnes carbon dioxide per GWh net. This is an increase of 3% from 1995-2003. However the emissions rate increased more rapidly in the latter half of this period, increasing by over 6% between 1998-2003.

6. The phase-out of coal-fired plants in Ontario will be a significant step toward meeting Ontario's obligations under the Kyoto Protocol

In 1990, the base year for the Kyoto Protocol, Ontario emitted approximately 181 million tonnes of greenhouse gases (carbon dioxide equivalent).[3] Reducing Ontario's emissions by 6% to meet its Kyoto target would require reducing this total to approximately 170 million tonnes.

In 2002, the Government of Canada projected that Ontario's greenhouse gas emissions will grow to 215 million tonnes by 2010.[11] (This is under a business as usual scenario that assumes no significant measures are taken before then to reduce greenhouse gas emissions.) This will require Ontario to reduce its greenhouse gas emissions by 45 million tonnes by 2010 in order to meet its Kyoto target of 170 million tonnes.

The phase-out of coal-fired plants in Ontario will deliver 21-34 million tonnes of greenhouse gas emissions reductions annually or 47-77% (depending on the need for replacement power and sources used) of the 45 million tonne reduction needed for Ontario to meet its 2010 Kyoto target. This means that the coal phase-out represents a significant step toward meeting Ontario's obligations under the Kyoto Protocol.

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Introduction

Weather and climate are related, but different. The conditions outside our windows are the weather. Climate is the average weather in a specific place. Climate change is the gradual changing of long-term weather patterns.[8] Our climate determines many things: the trees and crops that we can grow, the types of outdoor activities we can enjoy, the type of wildlife that thrives in our environment, and our energy use.

The Earth has gases that trap heat from the sun like the glass in a greenhouse. If there were no heat-trapping gases around the earth's atmosphere, the temperature of the Earth would be -18 degrees Celsius. However, we are increasing our emissions of many gases that compound the greenhouse effect and therefore increase the Earth's average temperature.

These greenhouse gases are:

- Carbon dioxide
- Methane
- Nitrous oxide
- Sulphur hexafluoride
- Perfluorocarbons
- Hydrofluorocarbons

Looking back over temperature records kept for the past 140 years, we can determine that the average temperature of the Earth has increased by a full degree Celsius in this period. The 1990s, in keeping with this trend, were the warmest decade on record.[8] Since the mid-1800s, atmospheric carbon dioxide concentrations have increased almost 30% to a current level which has not been seen on Earth in about 160,000 years. Other greenhouse gases such as methane and nitrous oxide have also increased significantly. [4]

As temperatures rise, patterns of precipitation and wind change. Severe weather events, such as tornadoes, floods, ice storms, thunderstorms and drought, occur more frequently. Polar ice caps melt, increasing sea levels and threatening coastal cities and island communities. Forest fires increase in frequency and intensity. Hot weather-related health problems, such as heat stress, aggravation of existing conditions by poor air quality and the incidence of insect-borne diseases, increase. Increasing temperatures change our agricultural zones and wildlife habitats.[4]

The Government of Canada estimates that Ontario will warm by an average of 2-5 degrees Celsius in the next 75-100 years. It is estimated that the winter months will warm faster than the summer months. Extreme events, such as floods, droughts and storms, are expected to become more severe and more common. Heat waves are projected to increase in Southern Ontario, with as many as 30 days over 30 degrees Celsius each summer – up from the current average of 10 days.

These higher temperatures can increase the number of bad air days, increase the risk of heat stress and the spread of diseases such as Lyme Disease. Water levels in the Great Lakes are expected to decrease, possibly by more than one metre. Runoff in the spring would be earlier and smaller, which could affect shipping, recreational boating, water supplies, hydroelectricity generation and ecosystems. Agriculture may be affected by the warmer temperatures, earlier and longer frost-free periods, less rainfall during certain periods and less consistent protective snow cover.[6]

Canada's total emissions of greenhouse gases were 731 million tonnes (carbon dioxide equivalent*) from all sources in 2002.[3] Approximately 74% of Canada's greenhouse gas emissions came from the combustion of fossil fuels.[3] Fossil fuels are burnt in cars and trucks, in power plants, in houses and in industrial processes. Coal-fired power plants contributed 102 million tonnes (carbon dioxide equivalent) of greenhouse gases to the

* Each greenhouse gas can be multiplied by a number called a global warming potential to give an amount in carbon dioxide equivalent units. This conversion allows different gases to be compared. The global warming potential for carbon dioxide is set at 1.

national total in 2002. Agriculture, forestry and industrial processes are other sources of greenhouse gases.

Carbon dioxide makes up the largest share of greenhouse gas emissions (79% or about 576 million tonnes of Canada's 2002 total)[3]. Methane contributed 13% and nitrous oxide 7% (with other gases totaling less than 2%) to total 2002 greenhouse gas releases.

Previous reports from the Ontario Clean Air Alliance (OCAA) have documented the large amounts of particulates and other criteria air contaminants associated with respiratory diseases and death emitted from OPG's coal-fired plants (*Particularly Harmful*, 2004). These coal-fired plants also release large amounts of acid gases such as sulphuric and hydrochloric acid associated with acid rain (*Up The Stack*, 2002). The coal-fired stations also release a variety of toxics, including the neurotoxin mercury (*Mercury Rising*, 2004). For copies of the previous reports and more information on the phase-out of coal-fired plants, please see the OCAA website at www.cleanairalliance.org.

This report focuses on greenhouse gas emissions from the five coal-fired power plants operated by Ontario Power Generation. These plants are responsible for 96% of OPG's emissions of carbon dioxide.

1. Emissions of greenhouse gases from Ontario Power Generation's generating stations

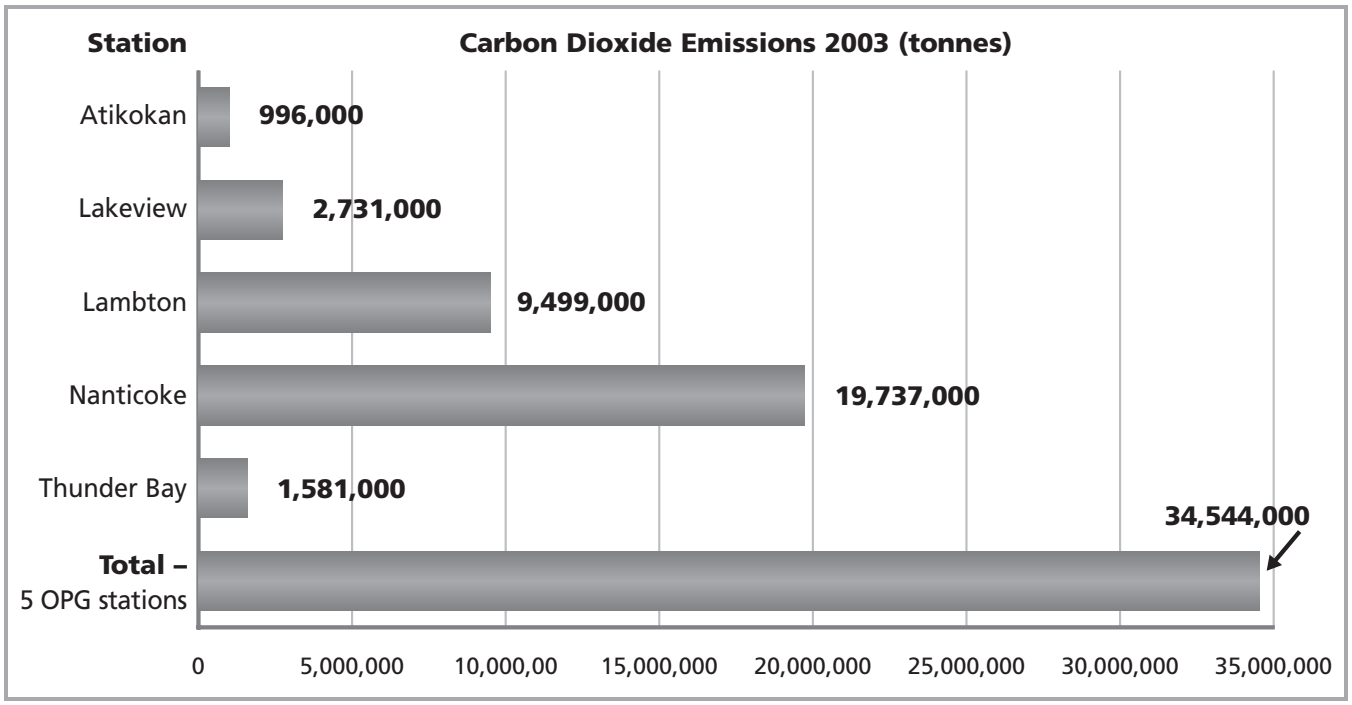
Ontario Power Generation (formerly Ontario Hydro) operates five coal-fired power plants in Ontario:

- Atikokan Generating Station (Atikokan, west of Thunder Bay)
- Lakeview Generating Station (Mississauga)
- Lambton Generating Station (Courtright, near Sarnia)
- Nanticoke Generating Station (Nanticoke, north shore of Lake Erie)
- Thunder Bay Generating Station (Thunder Bay)

Power plants using coal account for 96% of OPG's greenhouse gas emissions of carbon dioxide.[15] OPG also states that carbon dioxide is the primary greenhouse gas emitted by OPG operations.

OPG is required to report its greenhouse gas emissions of carbon dioxide, nitrous oxide, methane and other pollutants to the Ontario Government (Ontario Regulation 127/01 – reports available at www.moe.gov.on.ca/onair/). OPG also publishes information on greenhouse gas emissions of carbon dioxide in their annual report, "Towards Sustainable Development," which now also includes the company's Greenhouse Gas Action Plan (available at www.opg.com). OPG also files reports on greenhouse gases and actions as a member of Canada's Climate Change Voluntary Challenge and Registry (more information available at www.vcr-mvrca). Starting this year, OPG and other large emitters across Canada will be required to report their greenhouse gas emissions annually to Statistics Canada.

Figure 1: Emissions of carbon dioxide from the five coal-fired power plants operated by Ontario Power Generation in 2003 (tonnes)



Source: Ontario Power Generation. 2004. Towards Sustainable Development. 2003 Progress Report. Available at www.opg.com

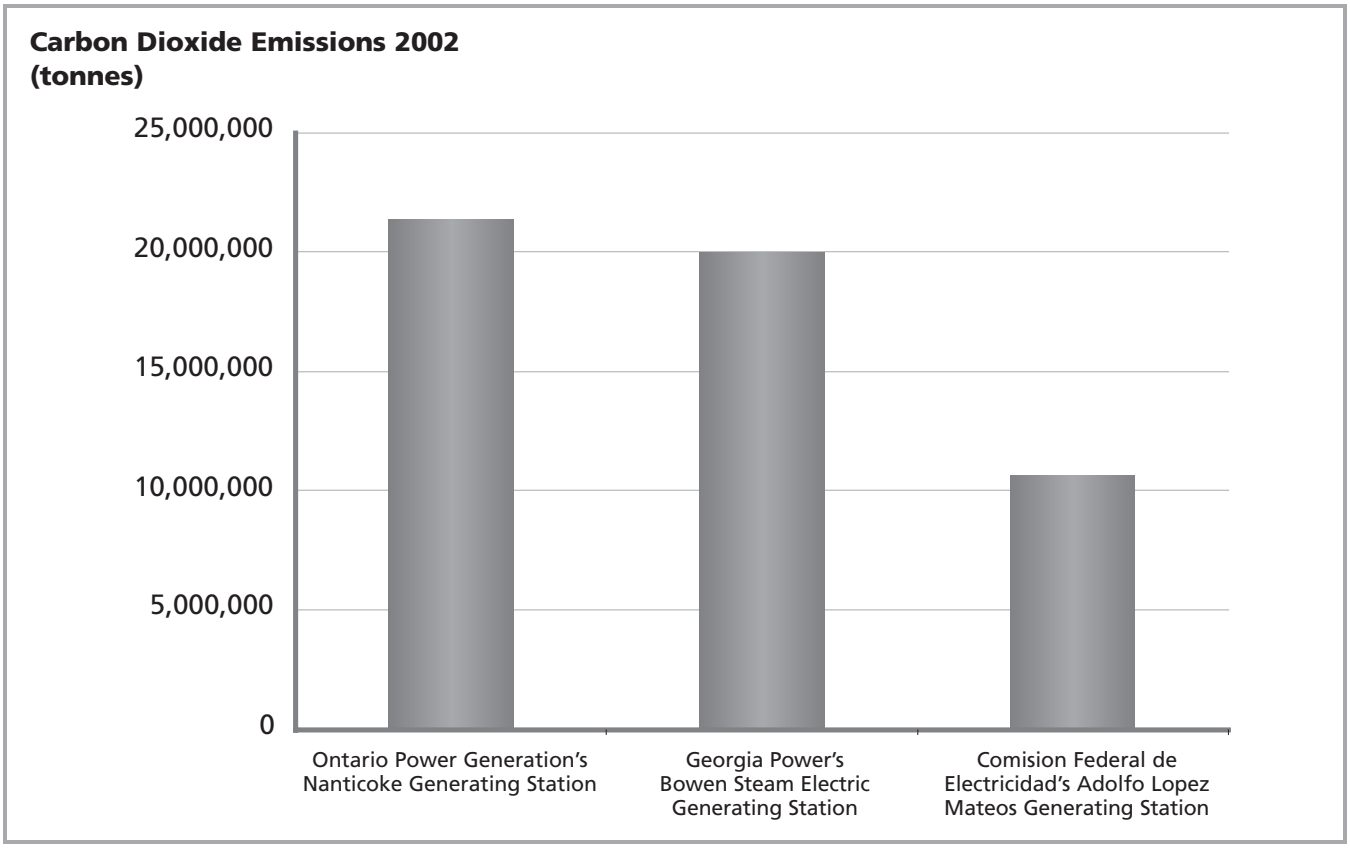
The total amount of carbon dioxide emitted from the five plants in 2003 was 34.5 million tonnes (**Figure 1**). This is the equivalent of the emissions from 6.2 million cars. One tonne of emissions is enough to fill a two story, three bedroom house.[7] Therefore, the emissions from the five OPG coal-fired stations are enough to fill approximately 34 million houses.

Nanticoke has the largest emissions of carbon dioxide of all OPG coal-fired plants, emitting 19.7 million tonnes or 57% of the total OPG coal plant emissions in 2003. Lambton, with emissions of 9.5 million tonnes, accounts for another one-quarter of the total OPG coal-fired emissions. Lakeview, with emissions of 2.7 million tonnes, ranks third, accounting for 8% of the OPG total. Thunder Bay has emissions of 1.6 million tonnes, accounting for 5% of the OPG total. Atikokan has emissions of 1 million tonnes, 3% of the OPG total (**Figure 1**).

According to a report from the Commission for Environmental Cooperation, Nanticoke had the largest emissions of carbon dioxide of any power plant in North America in 2002.[1] The Nanticoke station had larger emissions than the top U.S. power plant, Georgia Power's Bowen Steam Electric Generating Station in Cartersville, Georgia, which emitted 19,968,520 tonnes. Nanticoke also had larger carbon dioxide emissions than the top Mexican power plant, Comision Federal de Electricidad's Adolfo Lopez Mateos power plant in the municipality of Tuxpan, in the state of Veracruz, which emitted 10,603,037 tonnes of carbon dioxide (**Figure 2**).

OPG coal-fired plants also report on their emissions of nitrous oxide to the Ontario Ministry of Environment. In 2003, the total emissions of nitrous oxide from the five OPG plants was 354 tonnes.[9] Nitrous oxide is a more powerful greenhouse gas than carbon dioxide, with a global warming potential of 310.[3] However, OPG's nitrous oxide emissions were only 109,740 tonnes in carbon dioxide equivalents, less than 0.3% of the utility's carbon dioxide emissions. OPG's coal-fired plants methane emissions fall below the reporting threshold.

Figure 2: Carbon dioxide emissions from top power plants in Canada, the United States and Mexico, 2002



Source: Commission for Environmental Cooperation. 2005. North American Power Plant Emissions. Available at www.cec.org

2. How much do OPG emissions contribute to the Province of Ontario's total emissions?

The Nanticoke Generating Station was the largest single source of greenhouse gas emissions in Ontario in 2002. Ontario Power Generation, which is 100% owned by the Government of Ontario, was the largest corporate emitter of greenhouse gases in Ontario in 2002.

According to the federal greenhouse gas inventory, the total amount of greenhouse gases emitted in Ontario in 2002 was 203.5 million tonnes (carbon dioxide equivalent). Approximately 176 million tonnes of this total was carbon dioxide emissions.[3]

The total amount of carbon dioxide emitted from the five coal-fired OPG plants in 2002 was 35.2 million tonnes. Therefore, in 2002, the coal-fired OPG plants accounted for 20% of Ontario's emissions of carbon dioxide[3] and 17% of the province's total greenhouse gas emissions.

3. Are OPG's emissions of greenhouse gases increasing or decreasing over time?

From 1995 to 2003, carbon dioxide emissions from OPG's coal-fired plants increased from 15.4 million tonnes to 34.5 million tonnes, an increase of 124% (**Table 1**).

Each OPG coal-fired plant has markedly increased its greenhouse gas emissions over this period and many stations have more than doubled their emissions of greenhouse gases since 1995. For example, the Nanticoke Generating Station increased its emissions of carbon dioxide by almost 12 million tonnes or 153% from 1995-2003. The Lambton Generating Station increased its emissions by 5.1 million tonnes or 116%. Lakeview increased its greenhouse gas emissions by 1.3 million tonnes or 95% from 1995-2003 (**Table 1**).

The emission rate (emissions divided by net generation) for the five OPG stations also increased from 1995-2003. In 1995, the emission rate was 922 tonnes of carbon dioxide per GWh net, which increased to 953 tonnes carbon dioxide per GWh net in 2003. This is an increase of 3% from 1995-2003 and a 6% increase from 1998-2003 (**Table 1**).

Across Canada, greenhouse gas emissions from all sources increased by 20% from 1990 to 2002. Greenhouse gas emissions from Canadian coal fired power plants increased by 29% from 1990 to 2002.[3] According to the federal greenhouse gas inventory, Ontario's emissions increased by 12% or 22 million tonnes (carbon dioxide equivalent) from 1990 to 2002.[3]

In 1995, OPG set a voluntary target to stabilize greenhouse gas emissions at 1990 levels commencing 2000. This corresponds to a voluntary emission limit of approximately 26 million tonnes. OPG states that it continues to operate under this greenhouse gas emission target[15] and that it uses many options to meet this target, including energy efficiency programs, nuclear energy and green power.

However, OPG now measures its emission target in terms of net emissions, which are gross emissions (emissions to the air) minus emission reductions, including emission reduction credits. Emission reduction credits can be purchased from third parties who have reduced their greenhouse gas emissions.

OPG has also changed how it calculates its greenhouse gas limit. In 2003, OPG reviewed its voluntary greenhouse gas emission target. The company said that given the province's commitment to close the coal-fired plants by 2007 and the (then) uncertainty surrounding international ratification of the Kyoto Protocol, the company

had decided to extend its "true up period" from annual reconciliation to reconciliation by 2010. So instead of having to meet its emissions reduction target on an annual basis, OPG has changed it to meeting it on a ten year average from 2001 to 2010. This increase in the allowable time between reconciliation of gross and net emissions will make it easier for OPG to meet its self-imposed target.

4. How much would a phase-out of OPG's coal-fired plants contribute to Ontario meeting its commitments under the Kyoto Protocol?

A coal phase-out would contribute 47-77% of the emissions reductions that Ontario needs to meet the Kyoto Protocol targets.

Canada signed the Kyoto Protocol in 1997 and ratified it in 2002. With ratifications now in place from a sufficient number of other countries, the protocol will come into force globally in February 2005. The Kyoto Protocol requires Canada to reduce its greenhouse gas emissions to 6% below 1990 levels over the period 2008-2012.

However, currently both Canada and Ontario are moving in the opposite direction with increases rather than decreases in greenhouse gas emissions. In 2002, Canada's emissions of greenhouse gases were 20% higher than in 1990. In Ontario, emissions of greenhouse gases increased by 22 million tonnes (carbon dioxide equivalent) or 12% from 1990-2002.[3]

In 1990, the base year for the Kyoto Protocol, Canada emitted 609 million tonnes of greenhouse gases (carbon dioxide equivalent)[3]. Based on the Kyoto reduction goal of 6% from 1990 levels, Canada's Kyoto target is approximately 571 million tonnes. However Canada's greenhouse gas "business as usual" projections (which assume no major initiatives to reduce emissions) are emissions of 810 million tonnes of greenhouse gases in 2010.

This will require a national emission reduction of approximately 240 million tonnes by 2010. Therefore, in order to achieve its Kyoto target, Canada will have to reduce emissions by about 30 percent by 2010 from a business as usual level.[5]

In 1990, Ontario emitted approximately 181 million tonnes of greenhouse gases (carbon dioxide equivalent).[3] Reducing emissions by 6% to meet its Kyoto commitment, the Ontario greenhouse gas emission target is approximately 170 million tonnes per year between 2008-2012. However, greenhouse gas emissions are actually increasing in Ontario: Ontario's greenhouse gas emissions in 2002 were 203 million tonnes. In 2002, Natural Resources Canada estimated that Ontario's greenhouse gas emissions will grow to 215 million tonnes by 2010 if current growth rates persist.[11] This means Ontario will have to reduce its greenhouse gas emissions by up to 45 million tonnes (215 million tonnes – 170 million tonnes) to meet its Kyoto target in 2010.

However, Premier McGuinty's promise to phase-out all of our coal-fired power plants by 2007 will provide Ontario with 47-77% (depending on factors such as how much replacement power is required and what form this takes) of the total greenhouse gas emission reductions the entire province needs to achieve compliance with its Kyoto Protocol target by 2010.

- In 2003 the greenhouse gas emissions of Ontario's coal plants equaled 34.5 million tonnes. Replacing the coal-fired boilers with natural gas-fired combined-cycle turbines will lead to a 21 million tonne or 61% net reduction in greenhouse gas emissions.[2] Twenty one million tonnes equals 47% of Ontario's total required greenhouse gas emission reductions in 2010.
- Replacing the power from Ontario's coal plants with a combination of energy efficiency and renewable power sources that have zero greenhouse gas emissions would reduce greenhouse gas emissions by 34.5 million tonnes. This equals 77% of Ontario's total required greenhouse gas emission reductions in 2010.

Table 1

CO2 Emissions (tonnes)	1995	1996	1997	1998	1999	2000	2001	2002	2003	Percentage change 1995-2003
Atikokan	600,000	800,000	840,000	1,450,000	1,130,000	1,020,000	850,000	889,000	996,000	66.00%
Lakeview	1,400,000	1,100,000	1,890,000	2,600,000	3,000,000	2,700,000	2,760,000	2,340,000	2,731,000	95.07%
Lambton	4,400,000	5,900,000	6,500,000	8,300,000	7,800,000	10,800,000	9,420,000	8,990,000	9,499,000	115.89%
Nanticoke	7,800,000	9,100,000	11,700,000	15,500,000	17,000,000	21,500,000	20,260,000	21,370,000	19,737,000	153.04%
Thunder Bay	1,200,000	1,000,000	1,500,000	1,950,000	1,600,000	1,620,000	1,800,000	1,663,000	1,581,000	31.75%
Total - 5 OPG stations	15,400,000	17,900,000	22,430,000	29,800,000	30,530,000	37,640,000	35,090,000	35,252,000	34,544,000	124.31%
Net generation (Gwh)										
Atikokan	534	798	822	1,434	1,115	994	838	823	946	77.15%
Lakeview	1,472	1,114	2,018	2,921	3,271	2,905	3,081	2,450	2,806	90.63%
Lambton	5,128	6,172	7,366	9,526	9,001	12,415	10,472	10,022	10,636	107.41%
Nanticoke	8,431	9,852	12,765	17,378	19,038	23,519	21,124	22,156	20,393	141.88%
Thunder Bay	1,134	979	1,552	2,016	1,643	1,613	1,670	1,490	1,474	29.98%
Total - 5 OPG stations	16,699	18,915	24,523	33,275	34,068	41,446	37,185	36,941	36,255	117.11%
Emissions rate (tonnes/Gwh)										
Atikokan	1123.60	1002.51	1021.90	1011.16	1013.45	1026.16	1014.32	1080.19	1052.85	-6.30%
Lakeview	951.09	987.43	936.57	890.11	917.15	929.43	895.81	955.10	973.27	2.33%
Lambton	858.03	955.93	882.43	871.30	866.57	869.92	899.54	897.03	893.10	4.09%
Nanticoke	925.16	923.67	916.57	891.93	892.95	914.15	959.10	964.52	967.83	4.61%
Thunder Bay	1058.20	1021.45	966.49	967.26	973.83	1004.34	1077.84	1116.11	1072.59	1.36%
Total - 5 OPG stations	922.21	946.34	914.65	895.57	896.15	908.17	943.66	954.28	952.81	3.32%

OCAA Conclusions and Recommendations

Climate change is significant and poses a real threat to the people, environment and economy of Ontario. The risks of climate change become increasingly apparent every year as changes in our climate accelerate along with rising greenhouse gas emissions.

In February 2005, the international Kyoto Protocol will come into effect. Canada has committed to reducing greenhouse gas emissions to 6% below 1990 levels under Kyoto. Ontario is ideally positioned to show leadership on this issue by following through with its planned coal-fired electricity phase out. This single step could net the province anywhere from 47-77% of the emission reductions it needs by 2010.

The greatest gains will be made if the province aggressively pursues energy conservation and efficiency and renewable power in its plans to eliminate coal power. Nuclear power, while not directly producing greenhouse gases, could, however, undermine progress toward reducing Ontario's greenhouse gas emissions if the continued unreliability of the province's nuclear fleet leads to an extended reliance on coal-fired generation to fill gaps caused by nuclear start-up delays or breakdowns. For example, during the period 1995-2003 during which the annual utilization rate of Ontario's nuclear plants fell to an abysmal 51%, use of coal-fired generation rose by 117%.

In light of the clear climate change advantage inherent in replacing coal with zero emission renewable power and conservation measures along with high-efficiency natural gas generation, the federal government should provide low-interest loans and tax incentives for energy conservation, renewables and natural gas-fired combined heat and power plants. Currently Ontario companies and institutions that meet some or all of their electricity requirements from renewable sources and natural gas are required to pay the province 0.7 cents for each kWh that they self-generate in order to help pay-off Ontario's $20 billion stranded nuclear debt. This charge is a significant and perverse barrier to the development of some of our lowest cost new electricity supply sources. Therefore the province should exempt all new renewable and natural gas cogeneration projects from this charge.

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Appendix A: Ontario Clean Air Alliance Members

MUNICIPALITIES
Guelph
Hamilton
Kitchener
Markham
Peterborough
Regional Municipality of Durham
Regional Municipality of Peel
Regional Municipality of Waterloo
Stratford
Toronto
Windsor

COMPANIES
AIM PowerGen Corporation
Breathe Smog Masks Inc.
Enwave District Energy Limited
Hydro 2000
Indigo Wind Energy Systems
Mississippi River Power Corporation
Oshawa Power and Utilities Corporation
Peterborough Utilities Services
Selectpower
Sudbury Hydro
Toronto Hydro
Torrie Smith Associates
Veridian Corporation
Vertebrae Technologies Inc
Wellington Electric Distribution Company
Whitby Hydro Energy Services Corp.

ORGANIZATIONS AND ASSOCIATIONS
Algoma Manitoulin Environmental Awareness
Algoma Manitoulin Nuclear Awareness
Allergy/Asthma Information Association
Association of Local Public Health Agencies
Canadian Association of Physicians for the Environment
Canadian Institute for Environmental Law and Policy
Canadian Institute of Child Health
Cashmere Avenue PS EnviroClub
CAW Canada*
CAW Durham Regional Environment Council
CAW Windsor Regional Environment Council
Canadian Unitarians For Social Justice, South Peel Chapter
Citizens Advisory Committee on Air Quality - Waterloo
Citizens Advocating Renewable Energy
Citizens Environmental Alliance of Southwestern Ontario**
Citizens For Renewable Energy
Citizens Network on Waste Management
Community Action Parkdale East
Community Environmental Alliance
Conservation Council of Ontario
Conserver Society of Hamilton and District, Hamilton Chapter
Consumers Association of Canada (Ontario)
EarthDay Canada
Earth Works
Echo Lake Association
Eneract
Energy Probe
Evergreen Foundation
Environmental Defence Canada
Environment North
Federation of Ontario Cottagers' Associations
For A Safe Environment
GASP
Green Channel
Greenest City
Hearthmakers Energy Cooperative
Kingston Environmental Action Project
Lakeshore Area Multi-Services Project Inc.
Learning Disabilities Association of Ontario
North Toronto Green Community
Ontario College of Family Physicians
Ontario English Catholic Teachers' Association
Ontario Forestry Association
Ontario Lung Association
Ontario Public Health Association
Ontario Public Interest Research Group McMaster University
Ontario Public Interest Research Group Guelph University
Ontario Public Interest Research Group University of Toronto
Ontario Public Interest Research Group Queen's University
Ontario Society for Environmental Education
Peel Environment Network
Pesticide Action Group/Waterloo
Pollution Probe
South Riverdale Community Health Centre
Thames Region Ecological Association
The United Church of Canada
The Unitarian Fellowship of Sarnia-Port Huron
Wastewise
Wildlands League
World Wildlife Fund

*CAW Canada is opposed to the privatization of Hydro One and Ontario Power Generation

**Citizen's Environmental Alliance of Southwestern Ontario and EnerACT support a full phase-out of nuclear energy.