

# Neighbours

A part of the community since 1972

Fall 2006

## A message from Nanticoke Plant Manager Doug Taylor



### Dear Neighbour:

Earlier this year, the Ontario government announced that it had delayed its coal replacement plan to ensure the Province's power system remains reliable. In making the announcement, the government referred the question of how to best replace OPG's coal plants to the Ontario Power Authority (OPA). The OPA was also directed to recommend options for cost-effective measures to reduce air emissions at coal-fuelled stations.

This means that Nanticoke GS and OPG's other three coal-fuelled generating stations will operate beyond 2009. These plants will meet environmental regulations for as long as they are needed. We will make additional, prudent investments to improve our environmental performance.

While our industry continues to change, it is one with a long history. This year marks the 100th anniversary of the founding of the Hydro-Electric Power Commission of Ontario, and the appointment of Sir Adam Beck as its Chairman. Over the past century we have seen electricity evolve from a scientific wonder with great potential to a commodity that enriches our daily lives.

All of us at the Nanticoke Generating Station are proud of our public service. Many things have changed since 1906, and since this plant was built, but our commitment to provide safe, reliable electricity to the people of Ontario remains as strong as ever.

Yours truly,  
Doug Taylor

## OPG Working for the Consumer

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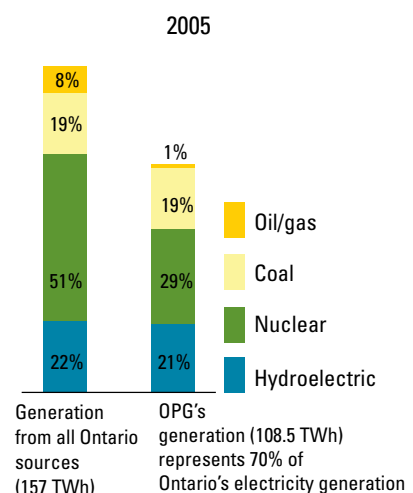
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A reliable supply of electricity at an affordable price is important to electricity consumers across the province. During the first six months of 2006, OPG's fleet of nuclear, hydroelectric and fossil generating stations produced enough electricity to satisfy 71.5 per cent of Ontario's demand. With almost 95 per cent of our production subject to regulated rates or price caps, OPG continues to have a moderating influence on Ontario electricity prices. During the first half of 2006, OPG's average revenue for each kilowatt hour sold was 4.6¢ compared to 5.0¢ for the Weighted Average Hourly Ontario Spot Electricity Market Price.

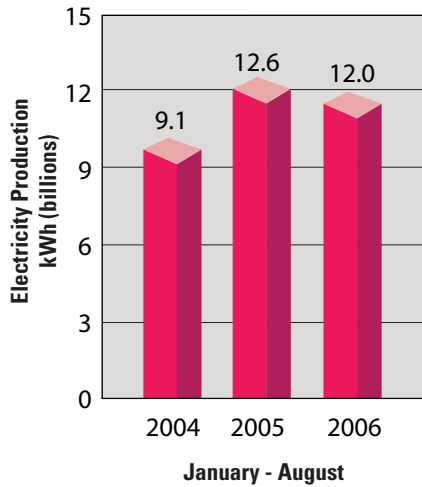


1 Terrawatt hour (TWh) = 1 Billion Kilowatt hours (kWh)

# Performance Report to the Community

## Electricity Production

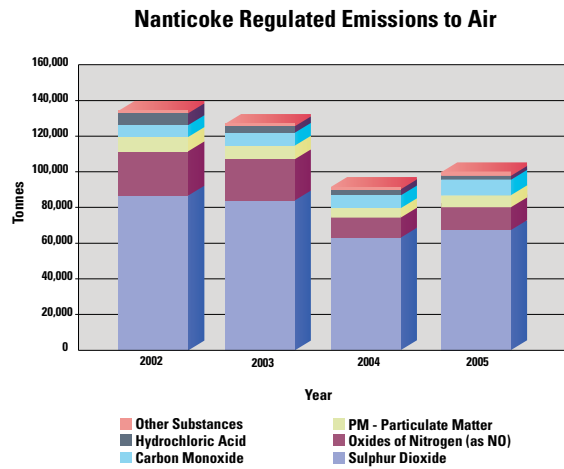
OPG's fossil plants (coal, oil and natural gas) provide the flexibility needed to meet the hour to hour, day to day and year to year changes in electricity demand. Since Nanticoke was completed in 1978, annual production has ranged from a low of eight billion kilowatt hours in 1995 to more than 23 billion kilowatt hours in 2000. The 18 billion kilowatt hours produced in 2005 was 22 per cent higher than 2004.



So far this year we are slightly behind last year's electricity production levels – largely due to a mild winter.

## Report on Air Emissions

Nanticoke Generating Station reports its air emissions to the Ontario Ministry of the Environment and to Environment Canada's National Pollutant Release Inventory (NPRI). Regulated air emissions in 2005 were up 10.5 per cent over 2004, largely due to the 22 per cent increase in electricity production.



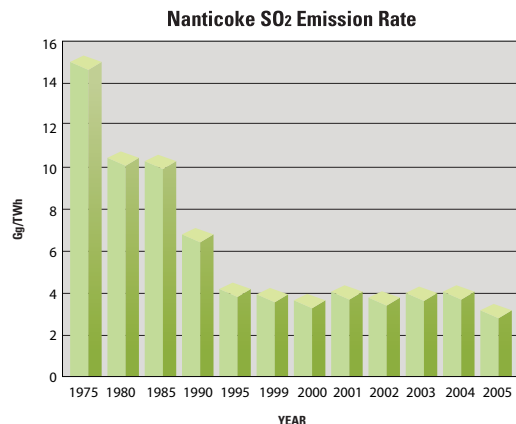
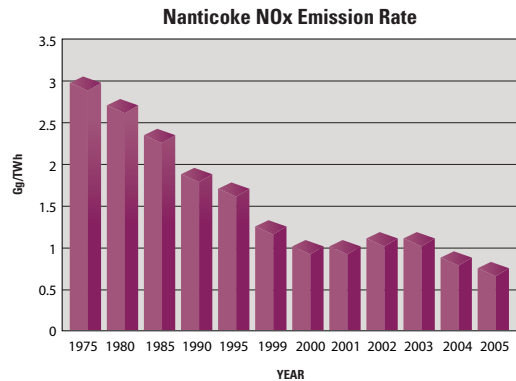
## Current Environmental Improvements

OPG is making prudent investments in our coal-fuelled generating stations to improve environmental performance. Our current program targets specific generating units. Some projects will result in lower emissions of nitrogen oxides and particulates. Efficiency improvements will reduce fuel consumption and air emissions per unit of energy produced. We have also initiated a noise control program that will benefit our closest neighbours.



Turbine replacements improve plant efficiency and reduce emissions per unit of electricity produced.

Sulphur dioxide and nitrogen oxides which contribute to acid precipitation and smog are key emissions and have been the subject of regulation for years. In 2005, Nanticoke achieved our lowest-ever emission rates per unit of electricity produced for these two substances.





According to OPG, Darlington nuclear station and Nanticoke GS were Ontario's biggest producers of electricity when a new record electricity peak demand was set on August 1, 2006.



## OPG and Nanticoke Responded When the Heat Was On

Very hot weather from July 31 to August 2, 2006 saw unprecedented electricity demand in Ontario. These three days respectively represent the fourth highest, highest, and eighth highest demand days in Ontario's history. On Tuesday, August 1, a new, all-time peak electricity demand record of 27,005 megawatts was set, exceeding the previous record of 26,160 megawatts set on July 13, 2005.

The steady production from our nuclear operations, our reliable hydroelectric facilities, and the flexible performance of our fossil-fuelled stations combined to help ensure that Ontario had sufficient and uninterrupted power.

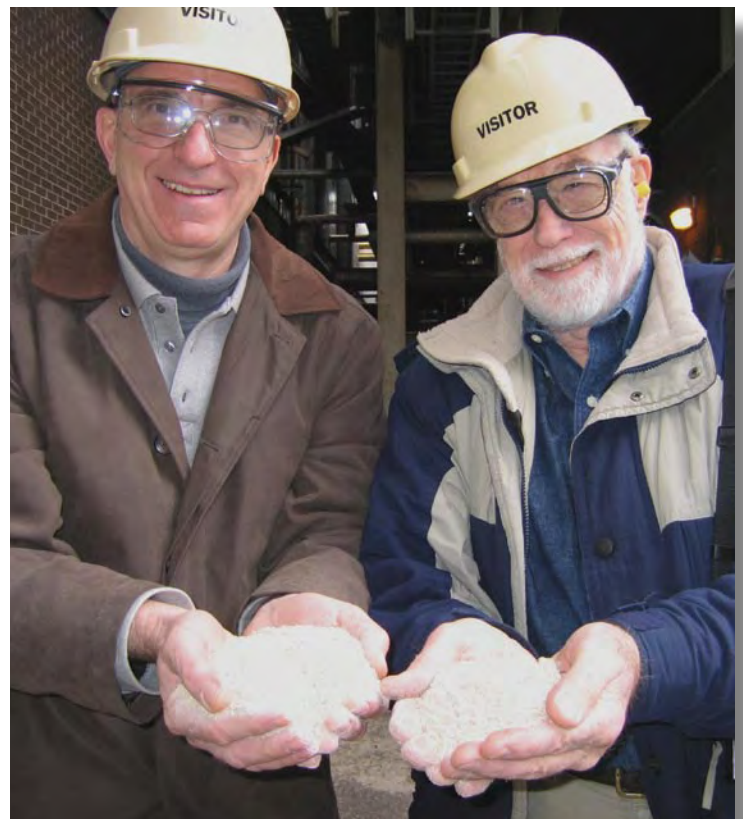
## OMAFRA Encourages Biomass Test

In 2005, Nanticoke was contacted by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Ontario Millers' Association about a potential test burn of "wheat shorts". "Wheat shorts" are a by-product of milling wheat into flour and is an ideal fuel. The material looks like sawdust and it has low ash and sulphur content and has high energy content. A successful test burn at Nanticoke was carried out in March.

Mixing biomass with coal to produce electricity is common practice in Europe. Biomass, which can be wood, grain screenings, corn and other crops, is considered "carbon neutral" - for power companies it has the potential to play an important role in reducing net greenhouse gas emissions by replacing coal with renewable biomass. European power plants routinely displace 10 per cent of their coal supply with biomass.

There is interest in biomass in other parts of Ontario as well. Earlier this year the Province of Ontario announced a \$4 million fund to establish a biomass research centre in Atikokan. The Ontario Federation of Agriculture is also promoting the biomass concept.

More extensive testing is planned to provide detailed energy and environmental data and biomass fuel supply potential.



Peter Illyckyj, Ontario Ministry of Agriculture, Food and Rural Affairs and Michael Rich, Renewable Energy Generation Inc. with "wheat shorts" used in the Nanticoke test burn.

# LEARNING WITH OPG CAN BE FUN!

## Outdoor Education at Taquanyah Nature Centre

Ontario Power Generation made a five-year commitment to the Grand River Conservation Foundation supporting the return of outdoor education to the Taquanyah Nature Centre near Cayuga. Working with local community groups, the Grand River Conservation Authority brought the Centre back to life providing an outdoor experience for thousands of students. In addition, OPG provided Habitat Haldimand with funds for the restoration and development of Taquanyah's trail network in 2001.



With help from Nanticoke GS and the community, students are again able to participate in the Grand River Conservation Authority's Outdoor Education Programs at Taquanyah Nature Centre.



## Read Your Way to the Fair

OPG joined with the Norfolk County Fair to launch the "Read Your Way to the Fair" program in 2004. With the full and enthusiastic support of the school boards, students in Norfolk County can win admission to the Fair by completing and logging their back-to-school reading assignments. This innovative program won a 2006 "Merit Award" from the Canadian Association of Fairs and Exhibitions.



Visitors to the Norfolk County Fair, the fifth largest agricultural fair in Ontario, which Nanticoke GS has sponsored annually since 2001. Photo courtesy of the Norfolk County Fair and Horse Show.



## Kids Can Visit the Learning Zone at [www.opg.com](http://www.opg.com)

Students and teachers alike will want to visit the Learning Zone. You will be able to find information about electricity, OPG and careers. There are project ideas for students and a helpful resource for teachers. Visit the Learning Zone at [www.opg.com](http://www.opg.com) or [www.mypowercareer.com](http://www.mypowercareer.com).



## Mid-Year Report

OPG has released its 2006 mid-year report, "It's All About Performance". To access this report go to [www.opg.com](http://www.opg.com)

## Neighbours

**Nanticoke Neighbours** is published for the neighbours of Ontario Power Generation, Nanticoke Generating Station.

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