

Finishing the coal phase out

An historic opportunity for climate leadership

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In 2001, the Government of Ontario issued a legally binding regulation requiring the phase-out of coal-burning at the Lakeview Generating Station in Mississauga by April 30, 2005.

In 2007 the Government of Ontario issued a legally binding regulation requiring the cessation of coal-burning at Ontario's four remaining coal-fired power plants by December 31, 2014.¹

Ontario's coal phase-out is the single largest greenhouse gas emission reduction initiative in North America – equivalent to taking almost seven million cars off the road.² Bringing the coal phase out to a successful conclusion as soon as possible will position Ontario as a global leader in addressing climate change and compliment the province's efforts to reposition itself as a green energy and economy leader.

2009 in Review

- Ontario's coal-fired electricity generation fell by 73% between 2003 and 2009 – from 36.3 billion kWh in 2003 to 9.8 billion kWh in 2009.³
- Coal-fired generation was responsible for only 6.6% of Ontario's total electricity production in 2009.⁴
- In 2009 Ontario's coal-fired electricity output was at its lowest level in 45 years.⁵
- However, according to a study prepared for the Government of Ontario, Ontario's coal-fired electricity generation in 2009 still caused 246 deaths, 342 hospital admissions, 406 emergency room visits and almost 123,000 minor illnesses (e.g., asthma attacks) in Ontario.⁶
- Coal-fired electricity generation is no longer profitable for Ontario Power Generation (OPG). In 2009, OPG received a \$412 million subsidy from Ontario's electricity consumers to compensate it for the operating losses of its Nanticoke and Lambton coal-fired power plants.⁷
- In 2009 Ontario's net electricity exports (10.3 billion kWh) exceeded its total coal-fired electricity generation (9.8 billion kWh).⁸

We Can Phase-Out Coal Now

As of May 2010, Ontario's coal-free generation capacity was 17% greater than our peak demand to-date during the summer of 2010 and 28% greater than our forecast peak day demand in 2014.⁹

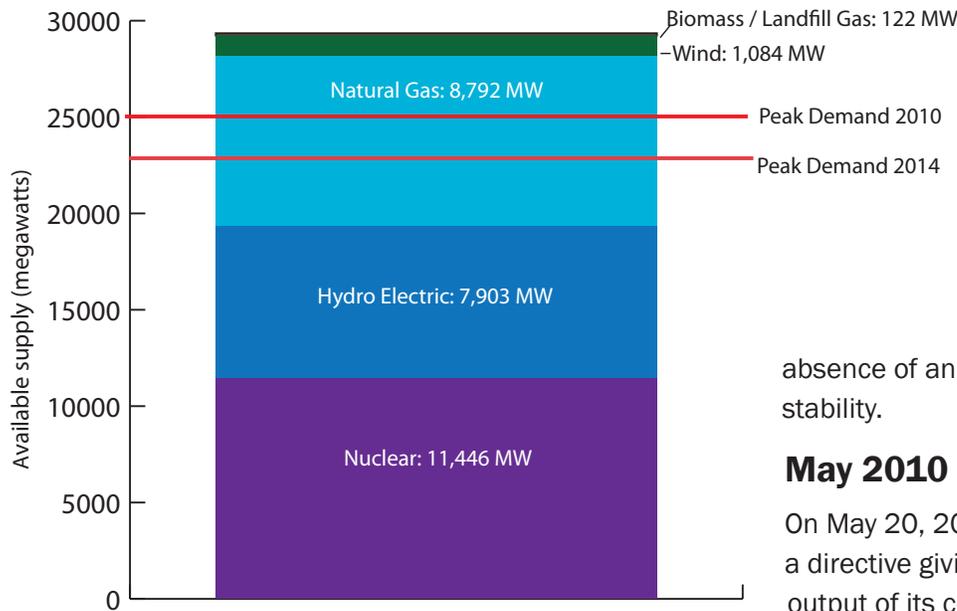
Given that Ontario's coal-free generation capacity now exceeds our peak day demand by 17%, under normal conditions, our need for coal-fired electricity is negligible. Nev-

In 2009, Ontario's coal-fired electricity output was at its lowest level in 45 years. The province now has a significant surplus of coal-free generating capacity and can finish the coal phase out in 2010.

ertheless, according to the Ontario Power Authority, we need to retain some of our coal capacity on **standby reserve** until December 31, 2014 because the “Pickering nuclear units could reach the end of their operating lives sooner than expected.”¹⁰

Furthermore, according to the Independent Electricity System Operator, one or more of

Ontario’s Coal-Free Generation Capacity and Projected Peak Demand



the Nanticoke units may need to be operated at minimum output from time-to-time to provide grid stability.¹¹

The need to maintain some of our coal plants on **standby reserve** until the legally binding date for a complete coal phase-out (December 31, 2014), however, does not mean that we need to continue to use them to produce dirty electricity in the

absence of an emergency or a need to support grid stability.

May 2010 Directive

On May 20, 2010 the Government of Ontario issued a directive giving OPG permission to increase the output of its coal-fired power plants by 13.6% in each year from 2011 to 2014 inclusive relative to their actual level of output in 2009.¹²

This directive may lead to up to 1,100 needless deaths and up to 550,000 needless minor illnesses between 2011 and 2014.¹³

Conclusions

By achieving a virtually complete coal phase-out now we can protect public health and provide climate change leadership to Canada, the United States, China and the World.

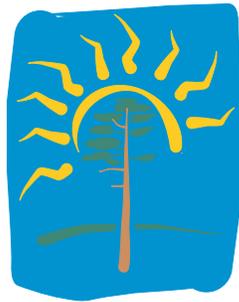
Recommendations

1. Premier McGuinty should direct Ontario Power Generation to put its dirty coal plants on **standby reserve** immediately and **only operate them if they are absolutely needed to keep the lights on in Ontario.**
2. To protect the climate and air quality gains created by Ontario’s coal phase out, Premier McGuinty should direct the Independent Electricity System Operator to import coal-fired electricity from the U.S. only if there is no other option to keep the lights on in Ontario.*

* The IESO has a policy of importing coal-fired electricity whenever its “financial” cost (excluding public health and environmental costs) is less than the “financial” cost of the next unit of domestic electricity generation. This undermines the whole purpose of the coal phase-out. We should only import coal-fired electricity if there is no other option to keep the lights on in Ontario.

Endnotes

1. Ontario Regulation 496/07, *Ontario Regulation made under the Environmental Protection Act: Cessation of Coal Use – Atikokan, Lambton, Nanticoke and Thunder Bay Generating Stations*.
2. Independent Electricity System Operator (IESO), *The Ontario Reliability Outlook*, (December 2008), p. 5. Available online at: http://www.ieso.ca/imoweb/siteshared/pubs_library.asp?sid=ic
3. Ontario Power Generation, *Sustainable Development 2005 Report*, p. 36; and IESO, *News Release*, “Wind Power in Ontario Generates a New Record in 2009”, (January 8, 2010). Available online at: <http://www.opg.com/news/reports/?path=Sustainable%20Development%20Reports> and http://www.ieso.ca/imoweb/media/md_newsitem.asp?newsID=5019
4. “Wind Power in Ontario Generates a New Record in 2009”, (January 8, 2010).
5. “Wind Power in Ontario Generates a New Record in 2009”, (January 8, 2010).
6. Each billion kWh of coal-fired electricity generation in Ontario: a) kills 25.1 people in Ontario; b) causes 34.9 hospital admissions in Ontario; c) causes 41.4 emergency room visits in Ontario; and d) causes 12,543.6 minor illnesses in Ontario. See DSS Management Consultants Inc. & RWDI Air Inc., *Cost Benefit Analysis: Replacing Ontario’s Coal-Fired Electricity Generation*, Prepared for Ontario Ministry of Energy, (April, 2005), pp. 4, 5 & 26. In 2009, Ontario’s coal-fired electricity generation equaled 9.8 billion kWh. See “Wind Power in Ontario Generates a New Record in 2009”, (January 8, 2010).
7. Ontario Power Generation, *2009 Year End Report*, p. 6. Available online at: http://www.opg.com/investor/pdf/2009_Q4_FullRpt.pdf.
8. “Wind Power in Ontario Generates a New Record in 2009”, (January 8, 2010).
9. As of May 2010, Ontario’s coal-free generation capacity equaled 29,347 MW; to-date, Ontario’s peak demand during the summer of 2010 was 25,075 MW. See IESO, *18-Month Outlook: From December 2009 to May 2011*, (November 17, 2009), pp. 5 & 7. Ontario’s forecast peak demand in 2014 is 22,931 MW. See IESO, *Ontario Reserve Margin Requirements 2010-2014*, (October 1, 2009), p. A-2. Available online at: <http://www.ieso.ca/imoweb/monthsYears/monthsAhead.asp> and <http://www.ieso.ca/imoweb/pubs/marketReports/Ontario-Reserve-Margin-Requirements-2010-2014.pdf>
10. Ontario Power Authority, *Integrated Power System Plan*, Exhibit D, Tab 2, Schedule 1, Page 3; Corrected May 5, 2008. Available online at: www.powerauthority.on.ca/Page.asp?PageID=924&SiteNodeID=320
11. Telephone conversation with Terry Young and Kim Warren, IESO, Feb. 12, 2010.
12. Specifically the directive gives OPG’s coal plants permission to emit 11,500,000 tonnes of CO₂ per year between 2011 and 2014 inclusive. In 2009, the coal plants’ CO₂ emissions equaled 10,124,000 tonnes. Ontario Power Generation, *Resolution of the Sole Shareholder: Addressing Carbon Dioxide (CO₂) Emissions Arising From the Use of Coal at its Coal-Fired Generation Stations*, (May 20, 2010); and 2009 *Sustainable Development Report*, p. 47. Available online at www.opg.com/pdf/directive_co2_2010.pdf; and www.opg.com/safety/.
13. According to *Cost Benefit Analysis: Replacing Ontario’s Coal-Fired Electricity Generation*, a 13.6% increase in coal generation will lead to a 13.6% increase in deaths and minor illnesses.



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