

Discussion: Commit to Terminate All Coal Burning at Ontario's Power Plants by 2012 and cancel plans to build new nuclear plants.

DIRTY COAL

Pollution from generating electricity using dirty coal caused over 300 deaths in Ontario in 2010, 440 hospital admissions, 522 emergency room visits and 158,000 minor illnesses such as asthma attacks.ⁱ Ministry numbers put the health and environmental costs of coal at three billion dollars annually.ⁱⁱ Coal plants release harmful particulate matter, lead and mercury into the air we breathe and are responsible for thousands of tonnes of climate change-causing greenhouse gases. It is crucial that clean, green alternatives be found to end Ontario's dependence on dirty coal.

Ending coal is the equivalent of taking seven million cars off the road.^{iii iv}

Eight coal units have already closed since 2003 and the government has committed to Ontario being coal-free by December 2014.^v By 2010, Ontario only produced a third as much power from coal as it did in 2003, but the year 2010 saw a 29 per cent increase in coal power over 2009, which was a significant retreat from the previous trend.^{vi} Measures to phase out dirty coal are very encouraging and will save lives and reduce illness, but Ontario has more than enough generation available to close the coal-powered plants **now**, and not wait for 2014. According to the Ontario Clean Air Alliance (OCAA), Ontario's coal-free generation capacity is currently about 28 per cent higher than the forecasted peak demand during the summer of 2011 and 33 per cent greater than the peak demand that is forecast in 2014. Even if it is found necessary to keep some of the coal capacity on "standby reserve" until the permanent closure of the coal plants, the OCAA points out that there is no reason for the coal plants to be operated at even a minimal level in the interim.^{vii}

While Ontario has more than adequate coal-free generation today, Ontario continues to operate its large Nanticoke coal plant to export power to the United States. Of course the air knows no borders and the coal-generated power that is sold to the US kills and injures people here in Ontario. There is no justification to put Ontarians' health at risk to make a quick profit selling power south of the border. It must end and it must end **now!**

NUCLEAR

Nuclear power may not emit air pollutants during "production"^{viii} of electricity, but in fact nuclear power is neither emissions-free nor clean. As a recent study points out, there is no safe level of radiation exposure – any amount of exposure to ionizing radiation is too much and is harmful.^{ix} Further, the health risks associated with nuclear power arise at all stages of the nuclear fuel chain, from uranium mining and refining, to the fission process in nuclear reactors and radioactive releases in to the air and water, to the legacy of radioactive waste that we leave for our grandchildren and future generations.^x

While there are relatively few Canadian studies on the deleterious effects of low levels of radiation on health, there is evidence linking increased prevalence of leukemia in children and living near nuclear facilities. Higher rates of congenital abnormalities have also been documented. A 2008 German study showed a statistically significant

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relationship between risk of leukemia and living within ten kilometres of a nuclear plant with consistent results across all 16 nuclear power plants in Germany.^{xi}

Ontario now has safe and clean alternatives to the unacceptable health risks of nuclear power. It is time to invoke the precautionary principle and phase out Ontario's dependence on nuclear power.

There are other reasons to phase out nuclear power in Ontario. Nuclear power is prohibitively expensive. While the government itself is budgeting \$33 billion for its nuclear plans, which alone would elbow out other more cost-efficient investments, the track record of nuclear projects is not impressive. Every nuclear project in Ontario has gone considerably over-budget, on average about 2.5 times.^{xii} Ontarians concerned about their rising hydro bills are still paying for the huge cost overruns from reactors built decades ago. Compare nuclear plants, where there is no protection for consumers, with renewable energy where Ontario's feed-in tariff guarantees that only the cost of electricity generated is passed along to Ontarians and the cost of overruns and unforeseen liabilities is borne by the developer.^{xiii}

RNAO'S CLEAN ALTERNATIVES TO COAL AND NUCLEAR ENERGY

Renewable is Doable: Ontario's Green Energy Plan 2.0, a detailed study released in August 2010, concludes that we have the opportunity to replace Ontario's aging nuclear plants not with new nuclear stations, but with the range of green energy options that are increasingly available to us.^{xiv} With demand having fallen each of the last four years (part of which undoubtedly has been due to the recession), coal being phased out by 2014, renewable energy sources producing more than originally expected, and the natural gas capacity that ensures the lights stay on during the transition already in place, now is the time to develop a 21st century clean energy plan, not one that is rooted in the practices of the past century.^{xv} It is this visionary, yet achievable, approach that the RNAO strongly recommends. In fact, failure to move in this direction would make Ontario an outlier jurisdiction. As the United Nations reported in 2008, for the first time global investment in clean, renewable energy exceeded new nuclear, coal and natural gas combined, a trend that was even more pronounced in 2009.^{xvi}

Wind, in particular, when properly sited, has huge potential to deliver clean, plentiful and relatively affordable power; it is estimated that wind will meet at least 20 per cent of Canada's power needs by 2025, up from the current one per cent.^{xvii} Aggressive targets must be adopted for conservation and energy efficiency. Combined heat and power, in addition to renewable solar, geothermal, tidal and bio energy, must be priorities in planning, regulation, procurement and operation.^{xviii}

There is tremendous potential to create new jobs by expanding clean, green sources of energy such as wind, water, solar, biomass and biogas as well as investing in conservation. In fact, implementation of the *Green Energy and Green Economy Act, 2009* is credited by some for attracting more than \$16 billion in private sector investment to Ontario and creating more than 50,000 clean energy jobs over three years.^{xix}

Without disclosing any identifying information, we would like to share with you a few illustrations from our practice about the impact of dirty coal and air pollution on health.

QUESTION: Will your party commit to close the remaining coal-fired generators by 2012, while keeping them on standby reserve to be operated only in event of an emergency?

QUESTION: Will your party commit to ending exports of dirty coal-generated electricity to the United States?

QUESTION: Will your party commit to cancelling plans for the construction of expensive and risky new nuclear plants and phase out Ontario's dependence on nuclear power?

QUESTION: Will your party invest to support clean green alternatives to dirty coal and nuclear power?

ⁱ Ontario Clean Air Alliance. (January 2011). Finishing the coal phase out: An historic opportunity for climate leadership. 1. Retrieved January 13, 2011 from <http://www.cleanairalliance.org/files/active/0/coalphaseout2011.pdf>.

ⁱⁱ Government of Ontario. (2010). *Building Our Clean Energy Future: Ontario's Long-Term Energy Plan*. Author. 19.

ⁱⁱⁱ Independent Electricity System Operator (IESO), *The Ontario Reliability Outlook*, (December 2008), p. 5. Retrieved January 14, 2011 from http://www.ieso.ca/imoweb/siteshared/pubs_library.asp?sid=ic

^{iv} Government of Ontario. (2010). *Building Our Clean Energy Future: Ontario's Long-Term Energy Plan*. Author. 19.

^v Ontario Regulation 496/07.

^{vi} Independent Electricity System Operator. (2011). *Diverse Supply Mix Provides Flexibility in Operating Ontario's Power System - Integration of Renewable Resources Well Underway*. January 7. RNAO calculation of percent figure.

^{vii} Ontario Clean Air Alliance. (January 2011). Finishing the coal phase out: An historic opportunity for climate leadership. 2. Retrieved January 13, 2011 from www.cleanairalliance.org.

^{viii} Government of Ontario. (2010). *Building Our Clean Energy Future: Ontario's Long-Term Energy Plan*. Author.9.

^{ix} Vakil, C. and Harvey L. (2009) *Human Health Implications of the Nuclear Energy Industry*. Retrieved January 13, 2011 from: [http://www.cape.ca/res_cardfile.shtml?cmd\[227\]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd\[252\]=i-252-7b058e61798aba73c3b5247c1a196e81](http://www.cape.ca/res_cardfile.shtml?cmd[227]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd[252]=i-252-7b058e61798aba73c3b5247c1a196e81)

^x Vakil, C. and Harvey L. (2009) *Human Health Implications of the Nuclear Energy Industry*. Retrieved January 13, 2011 from: [http://www.cape.ca/res_cardfile.shtml?cmd\[227\]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd\[252\]=i-252-7b058e61798aba73c3b5247c1a196e81](http://www.cape.ca/res_cardfile.shtml?cmd[227]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd[252]=i-252-7b058e61798aba73c3b5247c1a196e81). 5.

^{xi} Vakil, C. and Harvey L. (2009) *Human Health Implications of the Nuclear Energy Industry*. Retrieved January 13, 2011 from: [http://www.cape.ca/res_cardfile.shtml?cmd\[227\]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd\[252\]=i-252-7b058e61798aba73c3b5247c1a196e81](http://www.cape.ca/res_cardfile.shtml?cmd[227]=i-227-7b058e61798aba73c3b5247c1a196e81&cmd[252]=i-252-7b058e61798aba73c3b5247c1a196e81). 26-27.

^{xii} T. Weis, S. Stensil and K. Stewart. (2010), *Renewable is Doable: Ontario's Green Energy Plan 2.0*. Pembina Institute and Greenpeace Canada. Retrieved January 9, 2011 from <http://pubs.pembina.org/reports/ontario-green-energy-report-august-web.pdf>

^{xiii} T. Weis, S. Stensil and K. Stewart. (2010), *Renewable is Doable: Ontario's Green Energy Plan 2.0*. Pembina Institute and Greenpeace Canada. Retrieved January 9, 2011 from <http://pubs.pembina.org/reports/ontario-green-energy-report-august-web.pdf>

^{xiv} T. Weis, S. Stensil and K. Stewart. (2010), *Renewable is Doable: Ontario's Green Energy Plan 2.0*. Pembina Institute and Greenpeace Canada. Retrieved January 9, 2011 from <http://pubs.pembina.org/reports/ontario-green-energy-report-august-web.pdf>.

^{xv} T. Weis, S. Stensil and K. Stewart. (2010), *Renewable is Doable: Ontario's Green Energy Plan 2.0*. Pembina Institute and Greenpeace Canada. Retrieved January 9, 2011 from <http://pubs.pembina.org/reports/ontario-green-energy-report-august-web.pdf>.

^{xvi} T. Weis, S. Stensil and K. Stewart. (2010), *Renewable is Doable: Ontario's Green Energy Plan 2.0*. Pembina Institute and Greenpeace Canada. Retrieved January 9, 2011 from <http://pubs.pembina.org/reports/ontario-green-energy-report-august-web.pdf>.

^{xvii} Pembina Institute. (2010). *Wind Power Realities: Putting Wind Power Myths into Perspective*. Author.

^{xviii} Green Energy Act Alliance. (2009). *Analysis of Bill 150 – The Green Energy and Green Economy Act, 2009*. Toronto: Author, 3. Retrieved January 13, 2010 from http://www.greenenergyact.ca/Storage/25/1680_GEAABRFinalWord.pdf

^{xix} Government of Ontario. (2010). *Building Our Clean Energy Future: Ontario's Long-Term Energy Plan*. Author. 7.