Nuclear Energy

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Nuclear energy is a failed 20th century technology: unaffordable, unreliable, an infinite hazard to human health and the environment, **not** clean and "green." It is also unnecessary, given the huge, real potential in efficiency and conservation measures. Ontario must implement massive education and multiple incentives for conservation, and choose 21st century "green" alternatives – wind, solar, geothermal, and biomass.

- **Nuclear technology is unaffordable:** The debt we pay on our hydro bill proves it. We can't afford more provincial fiscal irresponsibility -- huge capital costs for reactors – always higher than the estimates (Darlington cost more than five times the estimate -- $14 billion, not the estimated $2.5), which don't count the cost of decommissioning. CANDUs in Ontario have been a financial catastrophe. (Reportedly, the initial capital cost drained the capital market and contributed to inflation in the late 1970s and 1980s.) The reactors are unreliable. Seven were shut down in Ontario in 1997 for safety-related reasons. Reactor reliability should be expected to follow the path we have already experienced. Breakdowns mean repairs with huge cost overruns. (Darlington's repairs estimated at $4 billion actually cost $14.3 billion; Pickering A, Unit 4, cost $1.2 billion to restart, not the estimated $300 million.) I challenge Minister Cansfield: look realistically at purchase, installation, running and maintenance, loans and interest, reliability of electricity output, decommissioning, and the cost of waste burial, and then tell us we can and should afford new reactors.

- **Nuclear power is an infinite health hazard**: Consider the health impacts and costs of radionuclides routinely emitted from nuclear power plants, in particular ionizing radiation such as tritium – a carcinogen, mutagen, and teratogen – which Ontario Hydro now admits has contaminated ground water on the Pickering site for 20 years. We need research and study on health costs, especially since scientists agree that there is no safe dose of radiation (cf. The US National Academy of Sciences 700-page study *The biological effects of ionizing radiation Report VII*. Then there are the risks of a catastrophic incident (Chernobyl, Three Mile Island) and of transport of nuclear wastes to the proposed storage deep underground, and the irresponsible commitment to saddle all future generations with this toxic waste hazardous for all time.

- **Nuclear power is not clean and "green":** Besides the 20-30 tonnes of depleted nuclear fuel annually produced by the average nuclear power plant, the production of nuclear power -- uranium mining, plant construction, generation, and decommissioning -- produces four times as much CO2 as wind power does (Greater Manchester and District Campaign for Nuclear Disarmament pamphlet, 2005; *see* also "Nuclear is the new black," *New Internationalist*, September 2005, p.5, which discusses studies of this issue and further notes that "nuclear power plants themselves release unknown quantities of greenhouse gases more powerful than carbon dioxide – such as the ozone-depleting chloro-and hydro-

fluorocarbons as well as sulphur hexafluoride"). Moreover, studies show that each dollar invested in energy efficiency will, on average, displace seven times as much greenhouse gas than if that same dollar were invested in nuclear power" (Gordon Edwards, "Following the path backward," September 2005, p.21).

- **We need efficiency and conservation measures:** Ontarians are energy hogs. We can learn to do with far less -- are Californians smarter than us? Better the government put $1 billion into researching and providing for public education on conservation of energy and into helping Ontario achieve efficiency in the use of electricity. Learn from the computer modelled study initiated by the Pembina Institute and the Canadian Environmental Law Association in 2003 how to reduce electricity demand by 50% by 2020 through adoption of available efficiency technologies and practices (See *Towards a sustainable electricity system for Ontario*, at www.pembina.org. and www.cela.ca). Government can provide for: interest-free loans, grants for building retrofits, direct and indirect subsidies for equipment and appliance purchases, financial incentives for cogeneration of heat and power, payment for energy fed back into the grid. Conservation will produce far more accessible electricity – through freeing up existing resources – than much more money poured into nuclear. Productivity would improve with efficiency measures in industry. Energy consumers could recover nearly all their costs through energy cost savings.

- **Choose green alternatives:** The 21st century forward-looking energy sources are: solar and wind power, geothermal heat pumps, cogeneration, and biomass digesters. If Germany can heavily rely on wind power, why won't Ontario? Wind energy creates new jobs, stimulates economic development – especially in rural areas – and provides security in electricity supply and price (David Suzuki Foundation report *Smart generation: powering Ontario with renewable energy*, p.20). Take seriously the Suzuki Foundation's claim that the technically achievable wind resource in Southern Ontario is about 58% of current provincial consumption (86 terrawatt-hours annually). Why doesn't Ontario aim to install the 8,000 megawatts of wind-generating capacity the foundation says would generate about 10% of current consumption, $14 billion in economic activity, and 97,000 person-years of employment?

- **Message to the Government of Ontario: Don't foist on us new nuclear power plants – a sinkhole for the provincial budget and for our hopes. Invest in conservation and the 21st century green alternatives.**

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