

BE IT RESOLVED THAT the Canadian Nurses Association (CNA) in collaboration with member associations

- Reaffirm support for the principles of the *Canadian Environmental Protection Act 1999* specifically the precautionary principle in respect to fuels, air and water pollution
- Promote a moratorium on construction of new nuclear power plants and the phasing out of present nuclear reactors
- Lobby provincial/territorial and federal governments for funding to identify best practices for conserving and reducing energy consumption and for safer alternative energy resources.

Background

The World Health Organization's definition of environmental health includes "preventing those factors in the environment that can potentially affect adversely the health of present and future generations (2007)."¹

In recognition of the above statement, Resolution #5 was voted for by Canadian Nurses Association voting delegates on June 7th, 2010 to provide a *Canadian Environmental Bill of Rights* that includes: the right to free public access to environmental information, the duty of the federal government to protect present and future generations and the right to appeal, investigate and bring legal actions against all those who harm the environment in violation of laws, regulations or permits ².

The catastrophic events at the Fukushima Daiichi plant, a Level 7 nuclear event on par with the Chernobyl disaster have reminded us of the fragility of the nuclear power system. On April 26th, 1986, the nuclear plant in Chernobyl, blew off the reactor's lid, releasing highly radioactive material into the atmosphere and affecting 400 million people from Russia to Eastern Europe.³

More recently, on March 11, 2011, twin natural disasters of an earthquake and tsunami struck Japan. Water could not be provided quickly enough to cool the spent fuel rods housed in the reactors of the Fukushima Daiichi Plant, which then began to dangerously overheat. This resulted in nuclear explosions and leakage of contaminated radioactive water potentially contaminating vast areas of ocean, soil and air for decades to come. The health impacts of this contamination to nearby populations include possible thyroid, bone marrow and gastro-intestinal effects.⁴ Chemical oceanographer Ken Buesseler warns that oceans have already been markedly affected more than post Chernobyl⁵.

In addition, Dr. Gordon Edwards, an accredited expert on nuclear energy recently claimed that nuclear meltdowns are anticipated every four years, that most nuclear plants are currently decrepit and that radioactivity cannot be turned off.⁶

Senior Fellow, Dr. Findlay, concurs with the Ontario Clean Air Alliance Coalition, encompassing health and environmental organizations, faith communities, municipalities, utilities, unions and corporations and distinct concerned Canadians who are uneasy about potential detrimental health outcomes, the immense cost and uneconomical slowness of getting a

nuclear plant built and running, and ongoing safety and security dilemmas. Jointly, they advocate for investigating and investing in alternative safer, cheaper alternative energy sources.^{7,8,9,10,11} Greenpeace and the Registered Nurses Association of Ontario cite the precautionary principle in consideration of nuclear energy:

"When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically,"⁸.

No one yet has found a safe way of disposing of nuclear wastes and the levels of acceptable exposure continue to be reduced as evidence has mounted of more deleterious health effects.^{9,10}

A wide range of studies have demonstrated multiple, serious human and ecosystem health consequences as a result of nuclear disasters over the last century. Dr. Yamazaki & Dr. Schul's research of Hiroshima and Nagasaki survivors identified significant increases in perinatal losses. Their study pinpointed that radiation exposure 8 to 15 weeks post-conception increased the risks of mental retardation, small head size, seizures, together with other neurological and cognitive effects.¹² The Chernobyl event affected vast numbers of people from the Ukraine, Sweden and Great Britain.^{13,14} The human health effects include hereditary anomalies, endocrine system dysfunction, thyroid cancers and the increased virulence of bacteria and viruses.^{13,14} Recent studies established a significant positive association between the risk of a baby being stillborn and the father's total exposure to external ionizing radiation before conception¹⁵ and increases in cancer rates in children living around nuclear plants six to ten years after the plant's start-up.¹⁶

We currently do not know our future energy requirements since there is insufficient attention devoted to energy conservation and efficiency. However, we do know that nuclear power is a costly form of energy beginning with processing from uranium mining to its disposal as nuclear waste. In addition, radioactivity and greenhouse gas emissions occur at each stage of the nuclear energy process.

Both Germany and Switzerland have recently voted in favour of phasing out their nuclear plants. Consistently research validates the necessity for activism by doctors, nurses, allied health care practitioners and committed Canadian citizens to phase out nuclear energy plants, to promote energy reduction and conservation and to fund research for safer, alternative renewable energy sources ensuring an optimistic sustainable environment now and for generations to come.

Submitted by Hilda Swirsky, President, Canadian Nurses for Health and the Environment

References

1. Canadian Nurses Association. (Dec. 2007). *The Environment and Health. An Introduction for Nurses*. Author: Ottawa. retrieved June 5, 2011 from www.cna-nurse.ca/CNA/issues/environment/default_e.aspx
2. Canadian Nurses Association. (June 7, 2010). *Resolution #5: A Canadian Environmental Bill of Rights*. retrieved June 5, 2011 from www.cna-nurse.ca/
3. Brenner AV, Tronko MD, Hatch M, Bogdanova TI, Oliynik VA, Lubin JH, et al. (2011). I-131 Dose-Response for Incident Thyroid Cancers in Ukraine Related to the Chornobyl Accident.

Environ Health Perspect: retrieved June 5, 2011 from:
ehp03.niehs.nih.gov/article/info.doi/10.1289/ehp.1002674

4. Edwards, Dr. Gordon (May 14, 2011). Keynote talk. at International Conference on Nuclear Threats to the Great Lakes & Transition to Clean Safe Energy: *Radioactivity and the Great Lakes Clean Energy Roundtable* retrieved June 5, 2011 from www.ccnr.org
5. Buessler, Ken, (May 27, 2011) Your Guide to Global Economic Conditions: *Fukushima Unit 3-Plutonium-MOX Nuclear Reactor Fuel* retrieved June 5, 2011 from jeffhuber.ca/tag/ken-buesseler/
6. Edwards, Dr. Gordon (May 14, 2011). Keynote talk. at International Conference on Nuclear Threats to the Great Lakes & Transition to Clean Safe Energy *Radioactivity and the Great Lakes Clean Energy Roundtable* retrieved June 5, 2011 from www.ccnr.org
7. Findlay, Trevor. (2010). The Centre for International Governance Innovation. *The Future of Nuclear Energy to 2030 and its Implications for Safety, Security and Nonproliferation. Part 1-4* retrieved June 5,2011 from www.cigionline.org/publications/future-nuclear-energy.2030.
8. Registered Nurses Association of Ontario. (March 16, 2011). Greenpeace/RNAO Media Conference: *Safety of Nuclear Technology*
9. Vakil, Dr. Cathy, Harvey, Dr. Linda. (July 2009). Canadian Association of Physicians for the Environment. Position Paper. *Human Health Implications of the Nuclear Energy Industry*. Retrieved June 5, 2011 from www.ceaa.gc.ca/050/documents/47953/47953E.pdf
10. Registered Nurses Association of Ontario. (2010). *Creating Vibrant Communities: RNAO's Challenge to Ontario Political Parties: Technical Backgrounder*
11. Ontario Clean Air Alliance retrieved June 5, 2010 from www.cleanairalliance.org/
12. Yamazaki, James. N., Schull, William J. (1990). Perinatal Loss & Neurological Abnormalities Among Children of the Atomic Bomb. *The Journal of the American Medical Association*.264(5).605-609 retrieved June 1/11 from jama.ama-assn.org/content/264/5/605.refs
13. Yablokow, Alexey V., Nesterenko, Vassily B., Nesterenko, Alexey. (2009). Chernobyl. Consequences of the Catastrophe for People and the Environment. Blackwell,Boston retrieved June 5, 2011 from: <http://www.scribd.com/doc/52859883/Chernobyl-Consequences-of-the-Catastrophe-for-People-and-the-Environment>
14. Wertelecki, Wladimir, (March 2011). *Pediatrics*. Malformations in a Chornobyl-Impacted Region
15. Parker L, Pearce, MS, Dickson, HO, Ailkin, M, Craft, AW.(October 23, 1999) *Lancet*. Stillbirths among offspring of male radiation workers at Sellafield nuclear reprocessing plant. 354(9188):1407-14.
16. Mangano, Joseph J. (2006). *International Journal of Health Services*. A Short Latency Between Radiation Exposure From Nuclear Plants and Cancer in Young Children. 36 (1). 113-135