

The Role of the Internet in Public Policy Making

By Claudia Lemieux Director, Communications and Media Relations March 2004

Nuclear Energy Agency (NEA) publication 2003

Nuclear Energy Today

The Future of Nuclear Energy

"The future of nuclear energy depends on the interplay between four factors – growth in energy demand, cost-competitiveness with other fuel sources, environmental considerations, and questions of **public attitude and perception.** Depending on the satisfactory resolution of these factors and on technical advances, many new and enlarged applications of nuclear energy can be envisaged."



Luis E. Echavarri NEA Director-General



Overview of Canada's Nuclear Industry

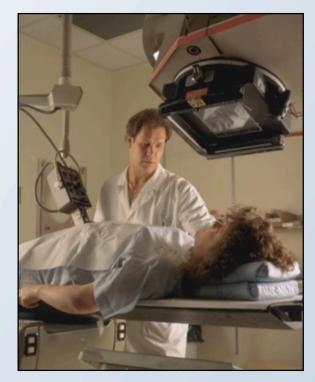
- Canada: 60 years in nuclear; Nobel Prize 1994: Dr. Bert Brockhouse
- Nuclear is \$5B/year industry; 21,000 direct jobs, 10,000 indirect jobs, 150 firms, \$1.2 billion in exports
- 22 CANDU reactors 17 in service generating ~16% of Canada's electricity, cleanly and safely in Ontario, Québec and New Brunswick
- Ontario: 20 reactors 15 in service provide over 45% of province's electricity (10,750 MW)





Canadian Nuclear Industry Messages

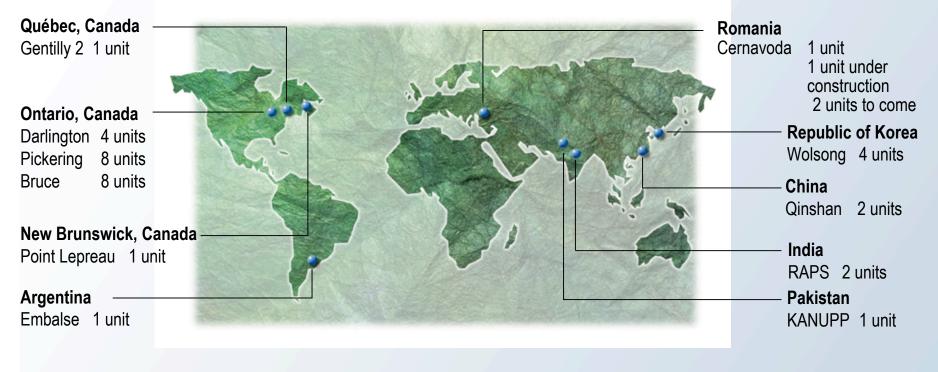
- Industry safety record second to none
- Nuclear energy = zero air pollution
- Waste well managed, small in volume
- World's largest uranium exporter
- Invented Cobalt-60 cancer therapy
- Largest exporter of radioisotopes
- 7 CANDU reactors sold/ completed in 10 years



Ø

Canadian Nuclear Association Association nucléaire canadienne

CANDU Reactors Worldwide



Total: 36



Number of Operating Reactors in Canada (2004)

There are 17 reactors operating and they are:

- Pickering A (Ontario): 1 reactor 540MW
- Pickering B (Ontario): 4 reactors 540 MW each
- Darlington (Ontario): 4 reactors 935 MW each
- Bruce A (Ontario): 2 reactors 635 MW each
- Bruce B (Ontario): 4 reactors 840 MW each
- Gentilly 2 (Québec): 1 reactor 675 MW
- Point Lepreau (New Brunswick): 1 reactor 685 MW

Number of Canadian Reactors (5) (Potentially Returning to Service)

- Pickering A (Ontario): 3 reactors 540 MW each
- Bruce A (Ontario): 2 reactors 635 MW each (feasibility study)



Nuclear Public Policy Issues in Canada

- Plant performance and efficiency
- Economics/ Costs
- Security of electricity supply (Ontario needs to replace over 15,000 MW of electricity power generation by 2020)
- Energy demand will increase in Canada by 34% by 2025
- Resolve long-term nuclear fuel waste disposal (Nuclear Waste Management Organization Report to Government 2005)
- Safety/ Security
- Public Acceptance



Canadian Government Survey November 2003

- Internationally, the nuclear industry is enjoying a renaissance
- Emerging economies need power (U.S. moving toward construction of new nuclear reactors)
- Government is moving ahead on climate change solutions and greenhouse gas
 reduction
- Federal officials understand nuclear's clean air credentials
- Policy-makers understand the need to be less reliant on fossil fuels

Challenges

Long-term energy policy in Canada is unclear



Public Profile Information Gap

- The Canadian Nuclear Association had little to no public profile between 1993 – 2001
- Federal politicians and officials requested that the Canadian nuclear industry do more to improve public support for nuclear technology

2002-2003-2004

- Target audience: politicians, policy-makers, media (influential public)
- No industry recognition that public acceptance is a requirement for political support
- No broad base public education program in place in 2004



Communicating Nuclear Issues

- CNA Website
- Advertising (print, moderate television, radio)
- Advertising Website (Globe and Mail) Homepage
 Publications/ Fact Sheets/ Newsletter
- Economic Studies & Analysis
- Bi-annual public opinion polling
- Political and government surveys
- Media Relations
- Speeches, events, conferences
- Third Party Endorsement
- Energy Sector partnerships and sponsorships
- Budget \$ 1.3 million annually



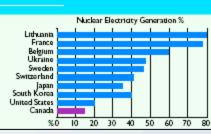
Globe and Mail Print Advertising Drives Traffic to CNA Website

Energy Matters -



Nuclear Around the World

France and Lithuania get about 80% of their power from Nuclear Energy. While Belgium, Japan, Sweden, Switzerland, get a third or more of their electricity from Nuclear. In Canada 12.8% of our electricity is generated from Nuclear Power.







Energy Matters

Clean Air Energy

Using Nuclear Power to produce electricity in Canada, we avoid the emission of 85 million tonnes of greenhouse gases per year – about 12% of Canada's total greenhouse gas emissions. That's the amount of greenhouse gases produced by the fossil fuels burned by 17 million cars and trucks. In addition, Canada's nuclear reactors emit virtually no sulphur dioxide or nitrous oxides, the gases that cause smog and acid rain.

Visit Energy Matters @ www.globeandmail.com

Source: Need Source

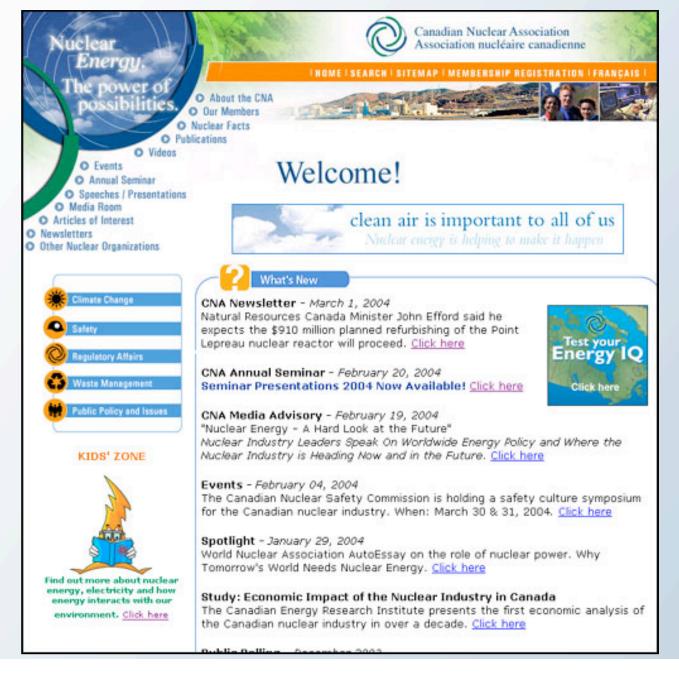
Canadian Nuclear Association

Association nucl aire canadien n

Canadian Nuclear Association Website (20,000 visitors monthly)



Canadian Nuclear Association Association nucléaire canadienne



CNA Website Results

Over 20,000 visitors monthly seek out information on nuclear energy.





11 million impressions and 7,000 visitors monthly

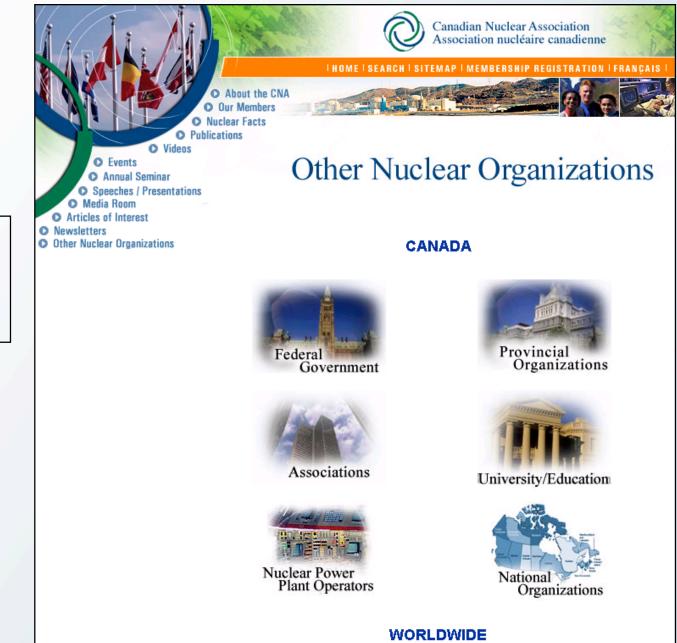






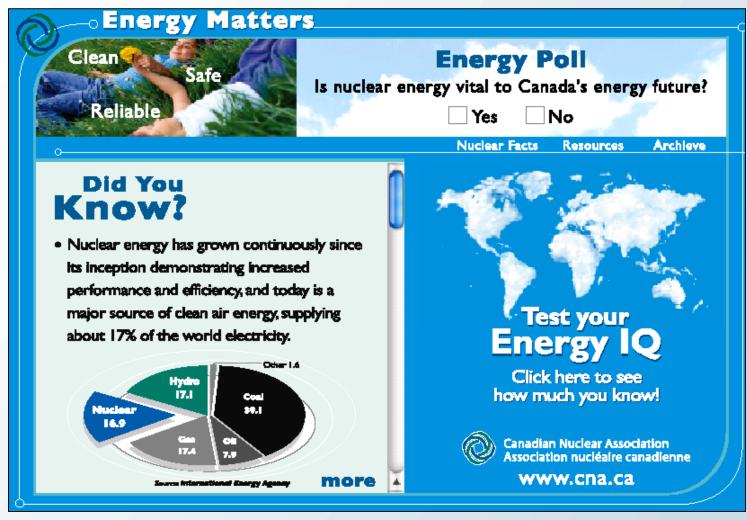
> Over 100 links to key nuclear organizations

Links to over 100 national and international websites





Interactive Internet Communications



Advertising Messages

- To position nuclear as part of the world energy mix
- Nuclear is part of the solution for energy supply and ٠ security
- Nuclear is part of the Kyoto solution and clean air •



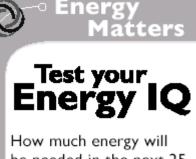


Radiation is part of our everyday life. www.cna.ca

Other 1.6

Coal

39.I



be needed in the next 25 years to satisfy world population growth from 6 to 8 billion?

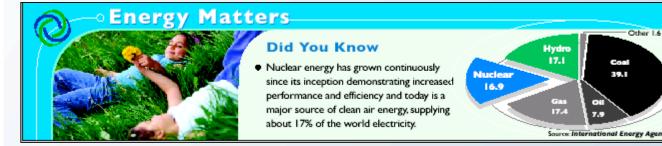
What Canadians said: 20% more energy will be required.

Source: Ipsos-Reid

Answer: Energy demand will increase by 100% by 2050.

Source: International Energy Agency

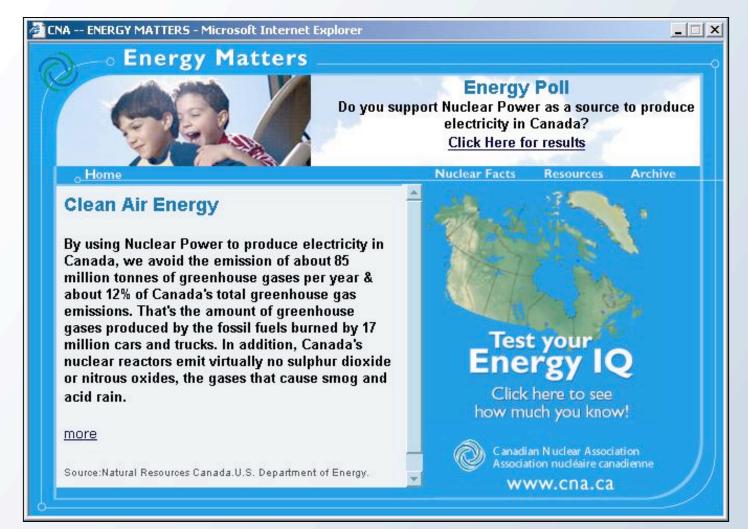
www.globeandmail.com







Globe and Mail Homepage Microsite





Population Growth= Increase in Energy Demand

• Energy Matters



One-third of humanity has no access to electricity. Over 1 billion people are without safe water, and 2.4 billion lack adequate sanitation. Developing countries will represent the largest group needing electricity to provide basic necessities.

Source: United Nations from various reports and news releases





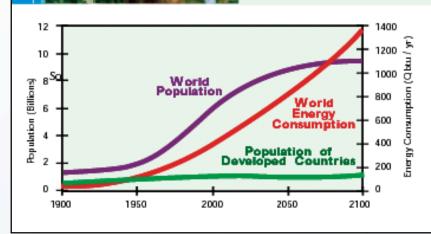
Worldwide Energy consumption to rise by 100% by 2050

Energy Matters

Energy Demand Increasing

In the next 45 years world population will grow by 33% from 6 billion to over 8 billion. Yet, world energy consumption is projected to rise by 100%. Where will the energy come from?

Source: United Nations (1998) & World Energy Council

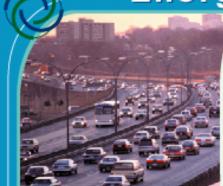






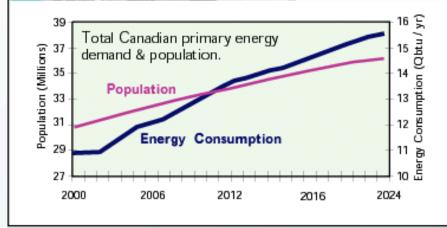
Canada's Energy Demand to Exceeds Population Growth

Energy Matters



Canada's Energy Demand Grows

Over the next 20 years Canada's demand for energy will grow at more than twice the rate of our population. Energy demand will increase by 34% while population is projected to grow by only 13.5%.





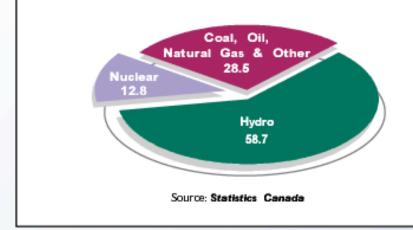


Nuclear Energy is Part of Canada's Energy Mix

Energy Matters

Electricity and Nuclear Power

Nuclear Energy plays an important role in the generation of clean air electricity. In 2003, Nuclear Power accounted for 12.8% of Canadian electricity generation. Nuclear Power plays a significant role in Ontario, generating 41% of its electricity and in New Brunswick where nuclear accounts for 25% of electric power generation.







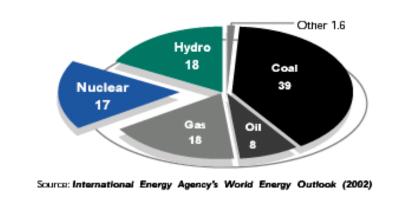
Nuclear Energy is Part of the World's Energy Mix

Energy Matters



Power Sources for Electricity

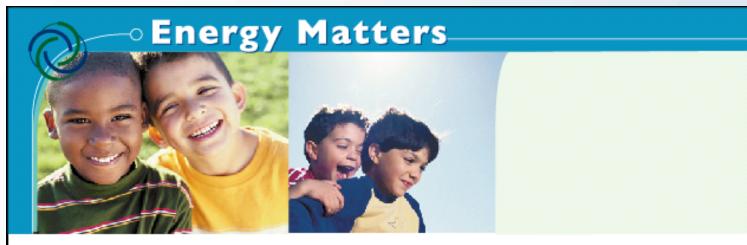
Today nuclear power is the fourth largest source of world's electricity. Nuclear energy has grown continuously since its inception, demonstrating increased performance and efficiency, and currently accounts for 17 % of electricity generation in the world. The number one source for electricity is Coal at 39%, Hydro and Gas at 18% and Oil at 8%.







Nuclear Energy is Needed to Reduce Greenhouse Gases



Help For Kyoto

Canada's energy demand is projected to increase by 34% by 2025 This means there will be a growing demand for reliable, clean, electricity. Canada's nuclear power plants have provided clean electricity safely for over forty years. Nuclear produces virtually no emissions of carbon dioxide, the major greenhouse gas that contributes to global warming, nor does it produce any sulphur dioxide or nitrous oxides – the emissions that pollute the air, cause smog and acid rain.

Visit Energy Matters @ www.globeandmail.com

Source: Canadian National Energy Board



Nuclear Energy Helps Keep the Air Clean



Clean Air Energy

By using Nuclear Power to produce electricity in Canada, we avoid the emission of about 85 million tonnes of greenhouse gases per year – about 12% of Canada's total greenhouse gas emissions. That's the amount of greenhouse gases produced by the fossil fuels burned by 17 million cars and trucks. In addition, Canada's nuclear reactors emit virtually no sulphur dioxide or nitrous oxides, the gases that cause smog and acid rain.

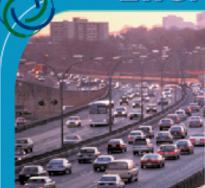
Visit Energy Matters @ www.globeandmail.com

Source: Natural Resources Canada U.S. Department of Energy



Canadians Consume More Energy Per Capita in the World

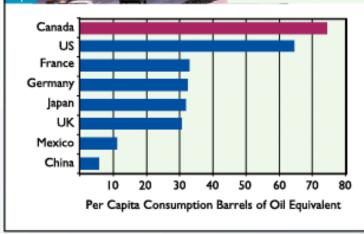
Energy Matters



How Much Energy Do We Use?

Canadians are the largest consumers of energy in the world. Canada consumes the equivalent of 74.5 barrels of oil per capita each year. That's over twice as much as France, Germany, Japan, the United Kingdom and 15.5% more than the United States.

Source: Energy Information Administration (2003)







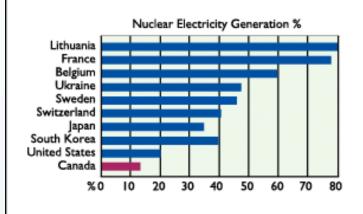
Nuclear Energy is a Major Electricity Supplier in OECD Countries

--> Energy Matters



France and Lithuania get about 80% of their electricity from Nuclear Energy. While Belgium, Sweden, Switzerland and Japan get a third or more of their electricity from nuclear. In 2003, 12.8% of Canada's electricity was generated from Nuclear Energy.

Statistics Canada







Canadian Public Opinion is Improving

Support for Nuclear Energy (%)								
	Oct	Nov	April	Feb	Jan	April	Nov	July
	1987	1988	1989	1994	2001	2002	2002	2003
Strongly support	12	17	14	10	10	13	12	17
Somewhat support	39	45	36	24	27	36	30	33
Somewhat oppose	25	22	25	22	20	22	18	17
Strongly oppose	24	15	24	26	27	22	33	23
Neither	-	-	-	12	14	-	-	-
DK/NA	-	4	2	6	2	7	7	10

Poll Analysis

- From a regional perspective, support for nuclear energy remains highest in Ontario at 64%. (*Environics 2003*)
- 77% believe nuclear energy will be put in Canada's energy mix in the future. (*Ipsos-Reid 2003*)
- **68% of Canadians support upgrading and refurbishing nuclear power plants.** (*lpsos-Reid 2003*)
- **41% support building new nuclear power plants.** (*lpsos-Reid 2003*)



Summary

- The internet is the primary communications tool for the CNA
- Its value lies in its flexibility, instantaneous news reporting and outreach
- The CNA Website is growing in demand as an information tool and has resulted in higher volumes of media inquiries and coverage
- Print and Website advertising drive visitors to the CNA Website
- The CNA Website is transparent in its content and posts both sides of the nuclear story including unedited economic analysis and public opinion polling
- It is a major investment for the CNA, with a full-time Webmaster and a \$200,000 investment in the Globe and Mail newspaper on-line microsite = \$350,000 Cdn
- The internet alone is not sufficient to reach all policy-makers, opinion leaders and politicians but it does reach a % and does reach staff, advisors and researchers to policy-makers, the media and a select segment of the general public.



Conclusion (cont'd)

- Canada needs political support to move forward on nuclear refurbishment and new build
- Ontario will need to replace about 15,000 MGW on electricity power generation by 2020
- Canada's population growth from 31.8 to 36 million by 2020 requires 34% more electricity generation above 2004 levels
- Canada needs to ensure a reasonable regulatory environment exists for industry cost-competitiveness and private sector investment
- Public acceptance and support for nuclear energy in Canada supports a nuclear growth strategy
- The Nuclear Industry in Canada is committed to investing in communications with decision-makers, opinion-leaders and media
- The Nuclear Industry in Canada has not committed to investing in broad based general public communications in 2004

Ø

Canadian Nuclear Association Association nucléaire canadienne

Nuclear Energy Today

"If a case cannot be satisfactorily made that nuclear energy is economically competitive, safe and that there are acceptable solutions for its waste, then nuclear energy is likely to decline, at first slowly, in importance. Yet, if it can be demonstrated to the **satisfaction of the public** that nuclear energy does address these concerns, it is likely that there will be strong new growth in nuclear power."

> Luis E. Echavarri NEA Director-General



Thank you! Canadian Nuclear Association www.cna.ca