



Canadian Nuclear Association
Association nucléaire canadienne

The Role of the Internet in Public Policy Making

By Claudia Lemieux
Director, Communications and Media Relations
March 2004



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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



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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)



Bruce, ON



Gentilly, QC



Pickering, ON



Darlington, ON



Pt. Lepreau, NB



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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





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CANDU Reactors Worldwide

Québec, Canada

Gentilly 2 1 unit

Ontario, Canada

Darlington 4 units

Pickering 8 units

Bruce 8 units

New Brunswick, Canada

Point Lepreau 1 unit

Argentina

Embalse 1 unit

Romania

Cernavoda 1 unit

1 unit under

construction

2 units to come

Republic of Korea

Wolsong 4 units

China

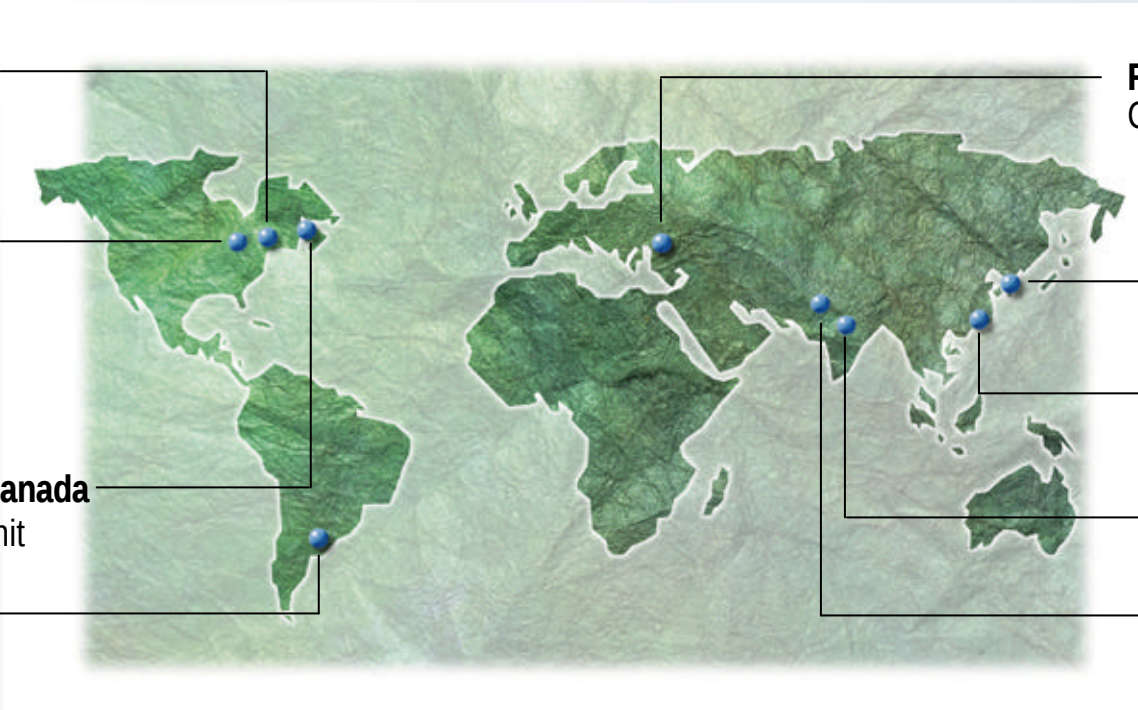
Qinshan 2 units

India

RAPS 2 units

Pakistan

KANUPP 1 unit



Total: 36



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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)



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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



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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



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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



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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



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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.

Source: International Atomic Energy Agency
Statistics Canada (2004)

Nuclear Electricity Generation %

Country	%
Lithuania	80
France	80
Belgium	60
Ukraine	50
Sweden	45
Switzerland	40
Japan	35
South Korea	30
United States	20
Canada	12.8



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Test your Energy IQ

www.globeandmail.com



Energy Matters



How Much Energy Do We Use?

Canadians are the largest consumers of energy in the world. Canadians consume the equivalent of 74 barrels of oil per capita each year. That's over twice as much as those in France, Germany, Japan, the U.K. and 15% more than Americans.

Source: Energy Information Administration (2003)

Per Capita Consumption Barrels of Oil Equivalent

Country	Barrels of Oil Equivalent
Canada	74
US	60
France	30
Germany	28
Japan	25
UK	22
Mexico	15
China	10



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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 Sources



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Canadian Nuclear Association Website (20,000 visitors monthly)

The screenshot shows the homepage of the Canadian Nuclear Association website. At the top, there is a header with the CNA logo and name in both English and French, followed by navigation links: HOME, SEARCH, SITEMAP, MEMBERSHIP REGISTRATION, and FRANÇAIS. A large banner on the left features the text "Nuclear Energy. The power of possibilities." and a list of links: About the CNA, Our Members, Nuclear Facts, Publications, Videos, Events, Annual Seminar, Speeches / Presentations, Media Room, Articles of Interest, Newsletters, and Other Nuclear Organizations. A central "Welcome!" message is followed by a quote: "clean air is important to all of us" and "Nuclear energy is helping to make it happen". Below this, a "What's New" section lists recent news items with dates and links, including the CNA Newsletter (March 1, 2004), CNA Annual Seminar (February 20, 2004), CNA Media Advisory (February 19, 2004), Events (February 04, 2004), and Spotlight (January 29, 2004). A "KIDS' ZONE" section at the bottom left features a cartoon character reading a book and a link to find out more about nuclear energy. A "Test your Energy IQ" graphic is also present on the right side of the "What's New" section.

Canadian Nuclear Association
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HOME | SEARCH | SITEMAP | MEMBERSHIP REGISTRATION | FRANÇAIS |

Nuclear Energy.
The power of possibilities.

- About the CNA
- Our Members
- Nuclear Facts
- Publications
- Videos
- Events
- Annual Seminar
- Speeches / Presentations
- Media Room
- Articles of Interest
- Newsletters
- Other Nuclear Organizations

Welcome!

clean air is important to all of us
Nuclear energy is helping to make it happen

What's New

CNA Newsletter - March 1, 2004
Natural Resources Canada Minister John Efford said he expects the \$910 million planned refurbishing of the Point Lepreau nuclear reactor will proceed. [Click here](#)

CNA Annual Seminar - February 20, 2004
Seminar Presentations 2004 Now Available! [Click here](#)

CNA Media Advisory - February 19, 2004
"Nuclear Energy - A Hard Look at the Future"
Nuclear Industry Leaders Speak On Worldwide Energy Policy and Where the Nuclear Industry is Heading Now and in the Future. [Click here](#)

Events - February 04, 2004
The Canadian Nuclear Safety Commission is holding a safety culture symposium for the Canadian nuclear industry. When: March 30 & 31, 2004. [Click here](#)

Spotlight - January 29, 2004
World Nuclear Association AutoEssay on the role of nuclear power. Why Tomorrow's World Needs Nuclear Energy. [Click here](#)

Study: Economic Impact of the Nuclear Industry in Canada
The Canadian Energy Research Institute presents the first economic analysis of the Canadian nuclear industry in over a decade. [Click here](#)

KIDS' ZONE

Find out more about nuclear energy, electricity and how energy interacts with our environment. [Click here](#)

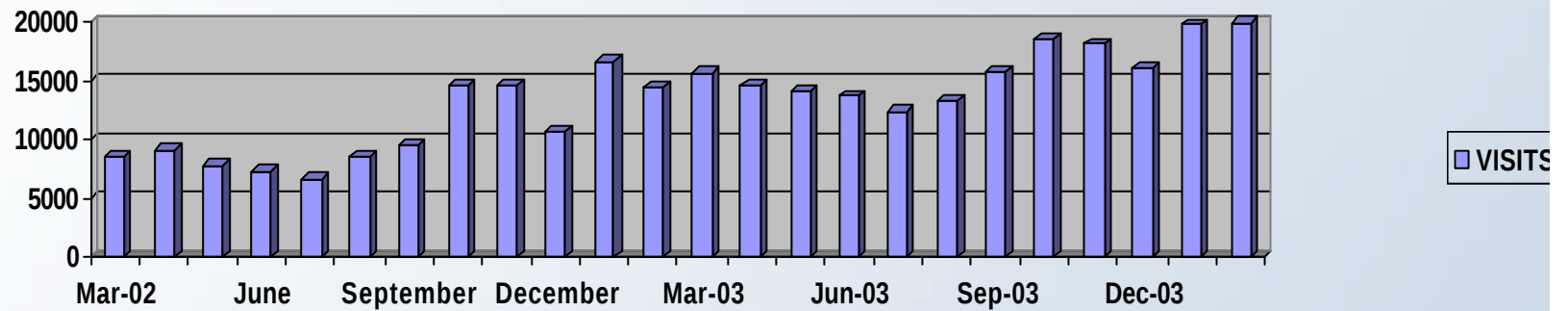
Test your Energy IQ
[Click here](#)



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CNA Website Results

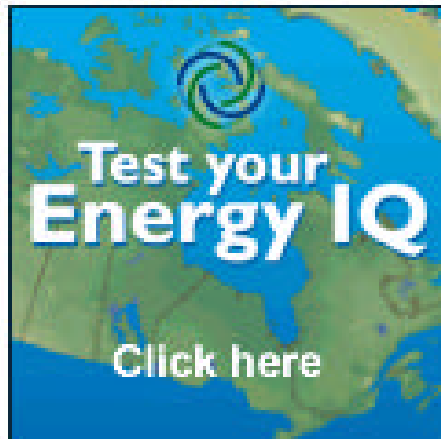
Over 20,000 visitors monthly seek out information on nuclear energy.





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11 million impressions
and 7,000 visitors monthly



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Click here

Special Reports

- Budget 2004
- Science & Health
- Photo Desk
- Small Business
- Business Travel
- Air-India
- Golf Guide

BMW presents the ultimateSIX Vineyards

Microsoft Business Solutions
Delivering insight for smarter business decisions.
CASE STUDIES BUYERS' GUIDE eNEWSLETTER WHITE PAPERS
Microsoft Business Solutions
Go to the Business Solutions Hub

BREAKING NEWS UPDATED AT 2:40 PM EST Friday, Mar. 12, 2004

Latest News: ISPs should name uploaders, lawyers say

Spain pays tribute to dead
Officials gathering evidence from trains as 'no line of investigation...to be ruled out'; toll rises to 199
1:57 PM | [FULL STORY](#)

Canadian economy sheds jobs
Part-time hiring sinks, full-time employment up; jobless rate steady at 7.4 per cent
1:32 PM | [FULL STORY](#)

South Korean parliament impeaches President Roh
Unprecedented move fans uncertainty amid nuclear standoff
11:26 AM | [FULL STORY](#)

Woman charged with murder after stillbirth
Prosecutors say that Utah woman refused to have C-section because she didn't want scars
12:13 PM | [FULL STORY](#)

Global pulls plug on Bullard show
Canada's late-night talk show was drawing meagre ratings. *CanWest news*

Globe Poll
During the course of the Conservative leadership race, your opinion of the new party has:
☐ Risen
☐ Fallen
☐ Stayed the same
[Vote](#)
[Results & Past Polls](#)

SHOW US YOUR CANADA PHOTO CONTEST

EDC
Protect your export business
Realize a World of Opportunity

2004 TORONTO AUTO SHOW

REPORT ON BUSINESS

Photo: Javier Soriano/AFP

People gather at Colon square Friday in a protest against the bombings.

- Tears, silence at station
- 'Mass murder in Madrid'
- A call in vain for husband

Troops leave for Haiti
Soldiers leave from N.B., Ontario
8:48 AM | [FULL STORY](#)



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Over 100
links to key
nuclear
organizations

Links to over 100 national and international websites

The screenshot shows the Canadian Nuclear Association website. At the top, the logo and name are displayed in both English and French. A navigation bar includes links for HOME, SEARCH, SITEMAP, MEMBERSHIP REGISTRATION, and FRANÇAIS. A sidebar on the left lists various resources: About the CNA, Our Members, Nuclear Facts, Publications, Videos, Events, Annual Seminar, Speeches / Presentations, Media Room, Articles of Interest, Newsletters, and Other Nuclear Organizations. The main content area is titled "Other Nuclear Organizations" and is divided into two sections: "CANADA" and "WORLDWIDE". Under the "CANADA" section, there are six categories with corresponding images: Federal Government (Parliament Hill), Provincial Organizations (a provincial legislature building), Associations (a modern skyscraper), University/Education (a classical building with columns), Nuclear Power Plant Operators (a nuclear reactor control room), and National Organizations (a map of Canada). The "WORLDWIDE" section is currently empty.

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| HOME | SEARCH | SITEMAP | MEMBERSHIP REGISTRATION | FRANÇAIS |

- ▶ About the CNA
- ▶ Our Members
- ▶ Nuclear Facts
- ▶ Publications
- ▶ Videos
- ▶ Events
- ▶ Annual Seminar
- ▶ Speeches / Presentations
- ▶ Media Room
- ▶ Articles of Interest
- ▶ Newsletters
- ▶ Other Nuclear Organizations

Other Nuclear Organizations

CANADA

Federal Government

Provincial Organizations

Associations

University/Education

Nuclear Power Plant Operators

National Organizations

WORLDWIDE



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Interactive Internet Communications



Energy Matters

Energy Poll

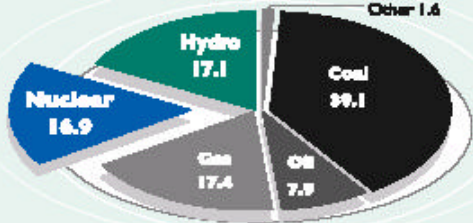
Is nuclear energy vital to Canada's energy future?

☐ Yes ☐ No

[Nuclear Facts](#) [Resources](#) [Archive](#)

Did You Know?

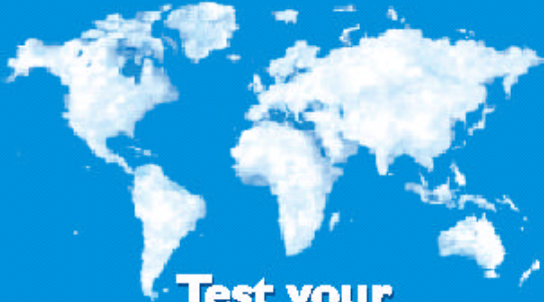
- Nuclear energy has grown continuously since its inception demonstrating increased performance and efficiency, and today is a major source of clean air energy, supplying about 17% of the world electricity.



Source	Percentage
Coal	39.1
Gas	17.4
Oil	7.9
Other	1.6
Hydro	17.1
Nuclear	16.9

Source: International Energy Agency

[more](#)



Test your Energy IQ

Click here to see how much you know!



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www.cna.ca



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Advertising Messages

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



 **Energy Matters**

Test your Energy IQ

How much energy will 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

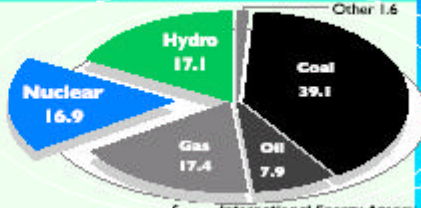
Answer: **Energy demand will increase by 100% by 2050.**
Source: International Energy Agency

www.globeandmail.com

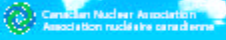
 **Energy Matters**

Did You Know

- Nuclear energy has grown continuously since its inception demonstrating increased performance and efficiency and today is a major source of clean air energy, supplying about 17% of the world electricity.



Source: International Energy Agency

 **Test your Energy IQ**
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Globe and Mail Homepage Microsite

CNA -- ENERGY MATTERS - Microsoft Internet Explorer

Energy Matters



Energy Poll

Do you support Nuclear Power as a source to produce electricity in Canada?
[Click Here for results](#)

[Home](#) [Nuclear Facts](#) [Resources](#) [Archive](#)

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.

[more](#)

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



Test your Energy IQ

Click here to see how much you know!

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Population Growth= Increase in Energy Demand

Energy Matters

Growing Need for Electricity

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

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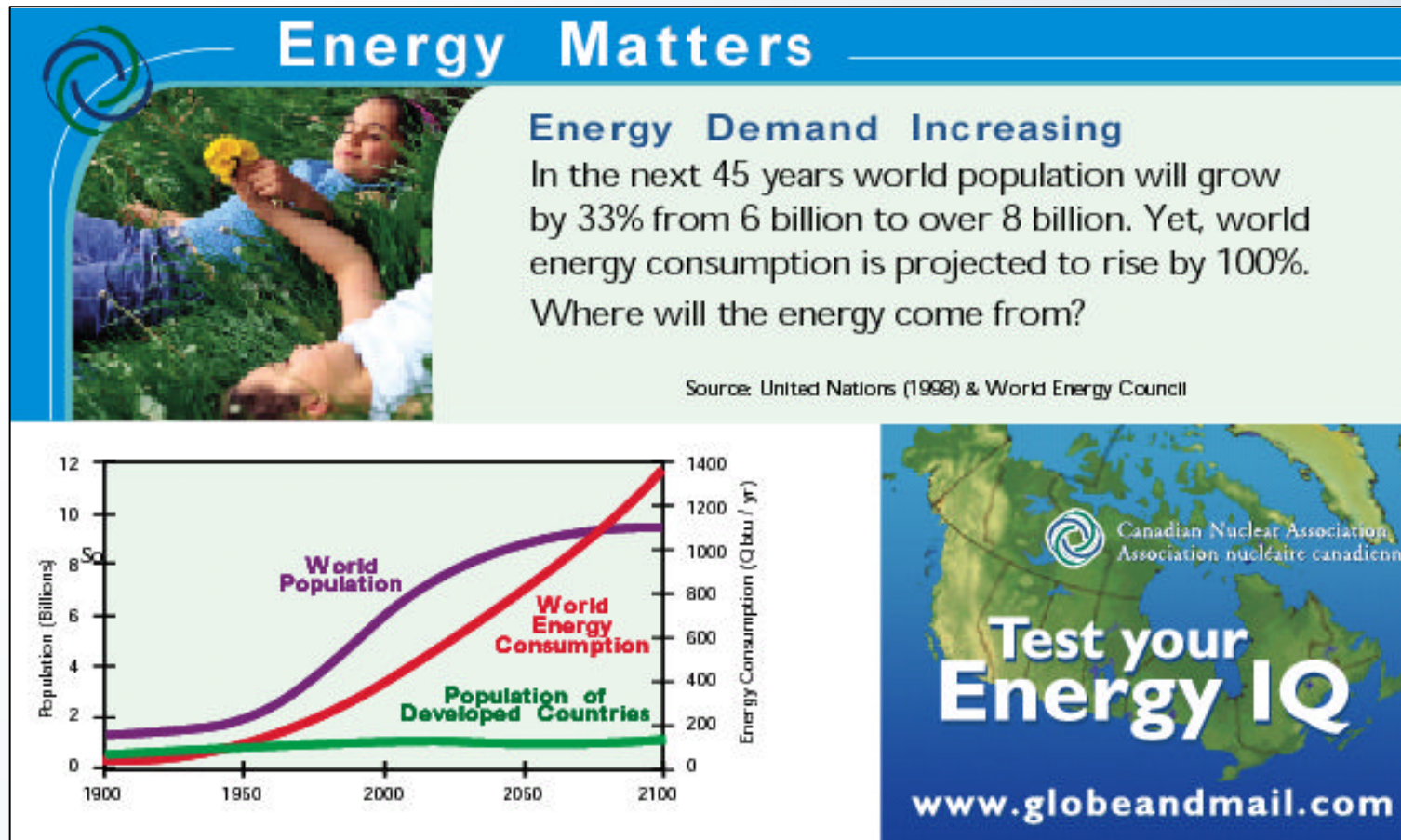
**Test your
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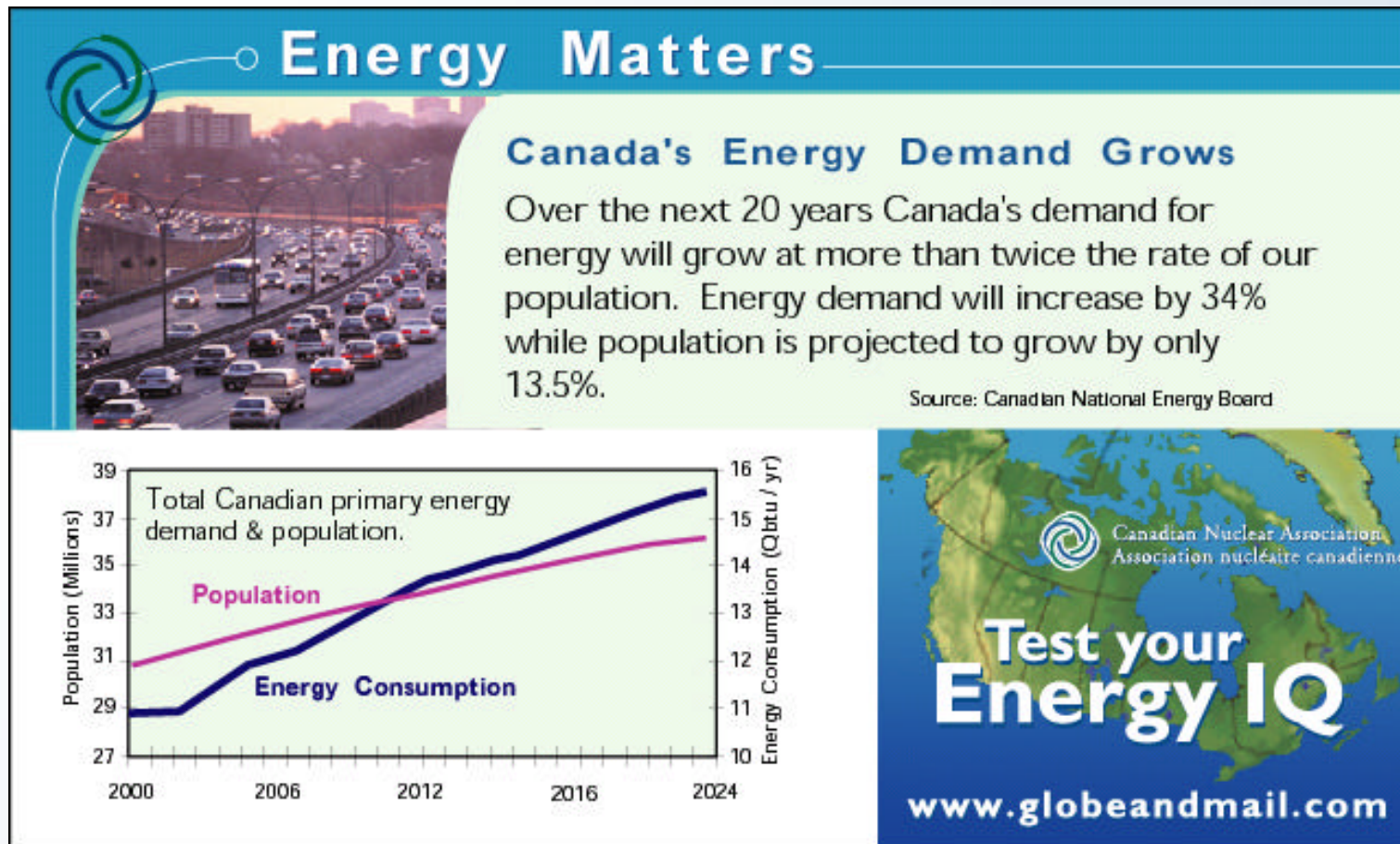
Worldwide Energy consumption to rise by 100% by 2050





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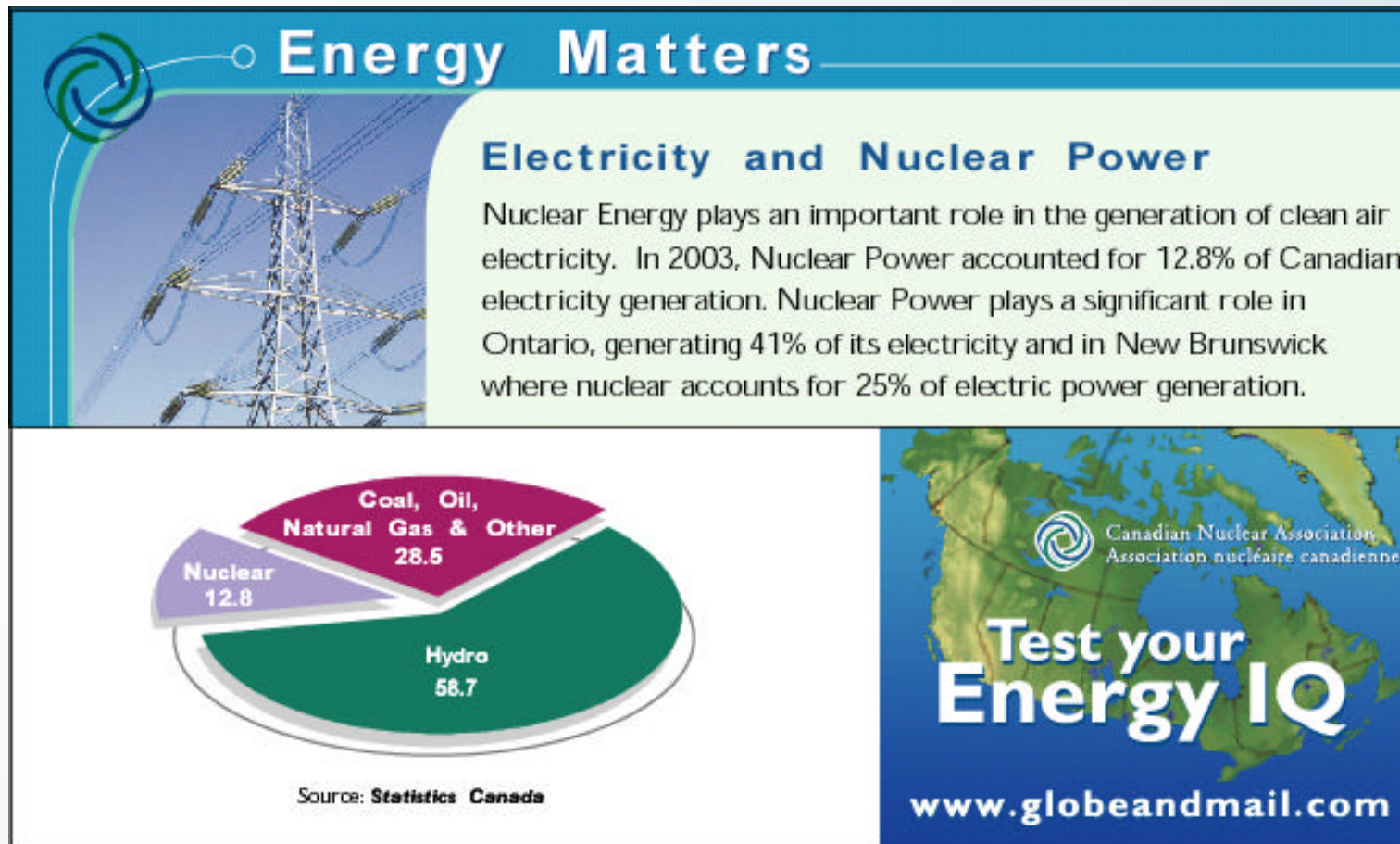
Canada's Energy Demand to Exceeds Population Growth





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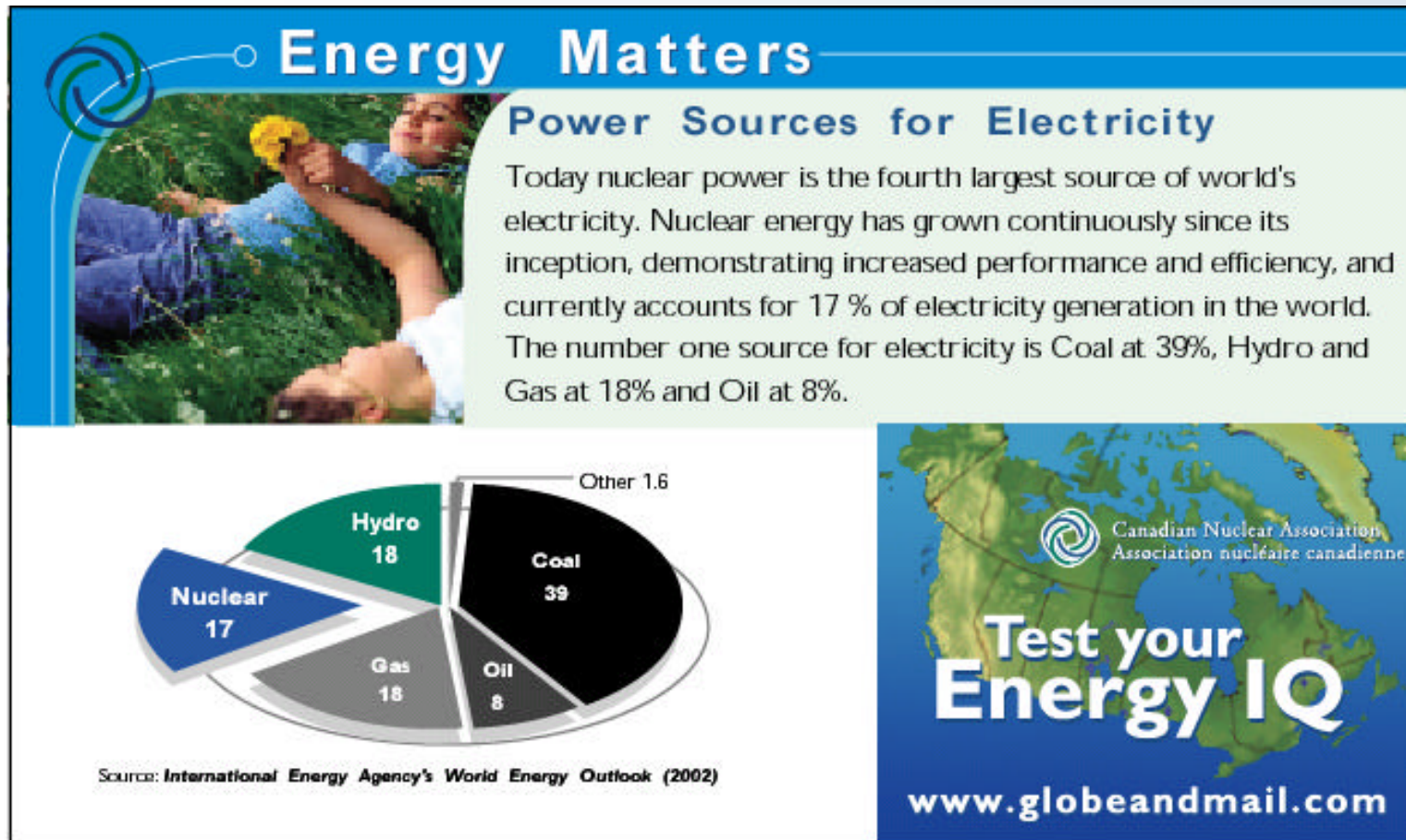
Nuclear Energy is Part of Canada's Energy Mix





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Nuclear Energy is Part of the World's Energy Mix





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Nuclear Energy is Needed to Reduce Greenhouse Gases



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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



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Nuclear Energy Helps Keep the Air Clean



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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.

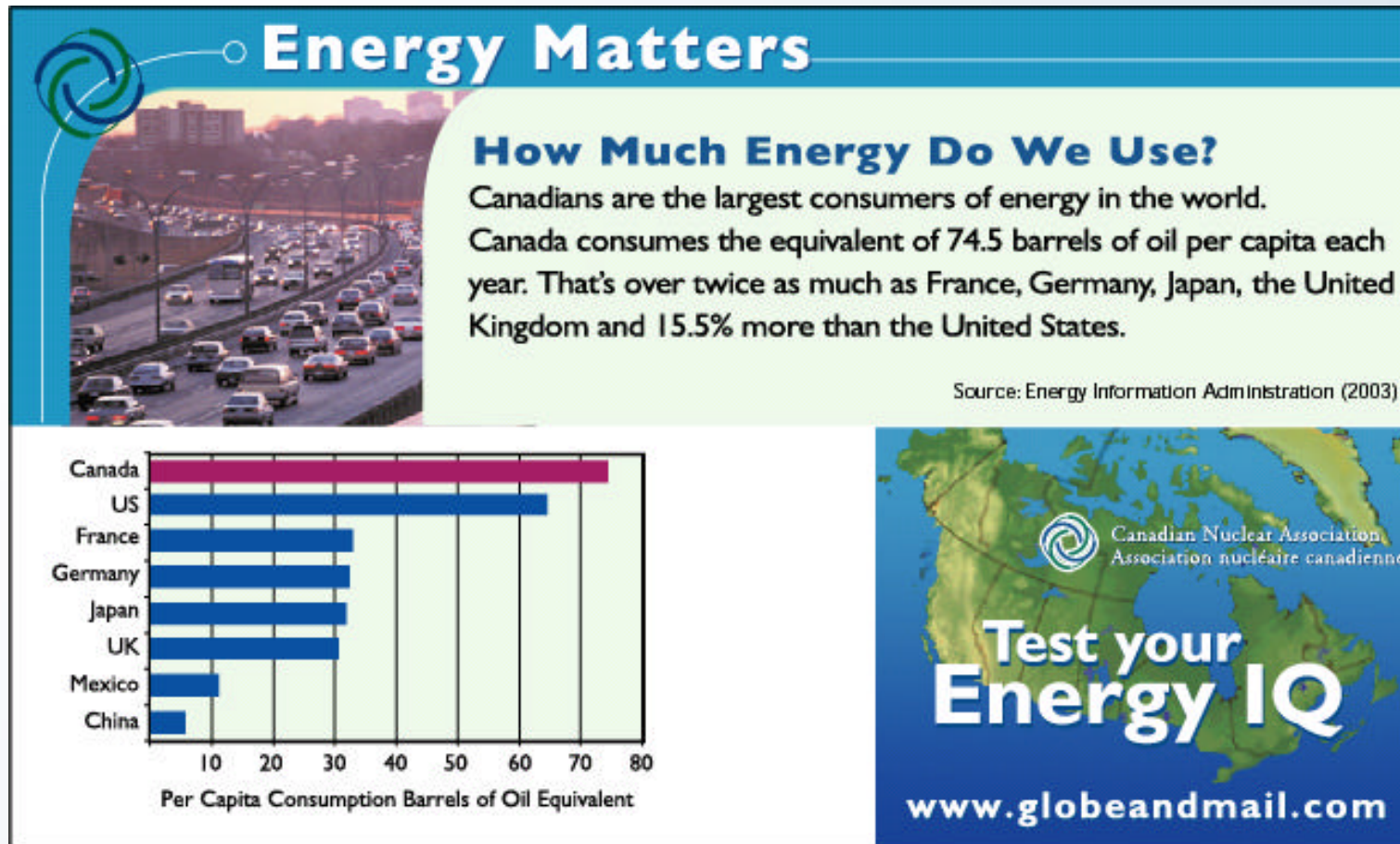
Visit Energy Matters @ www.globeandmail.com

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



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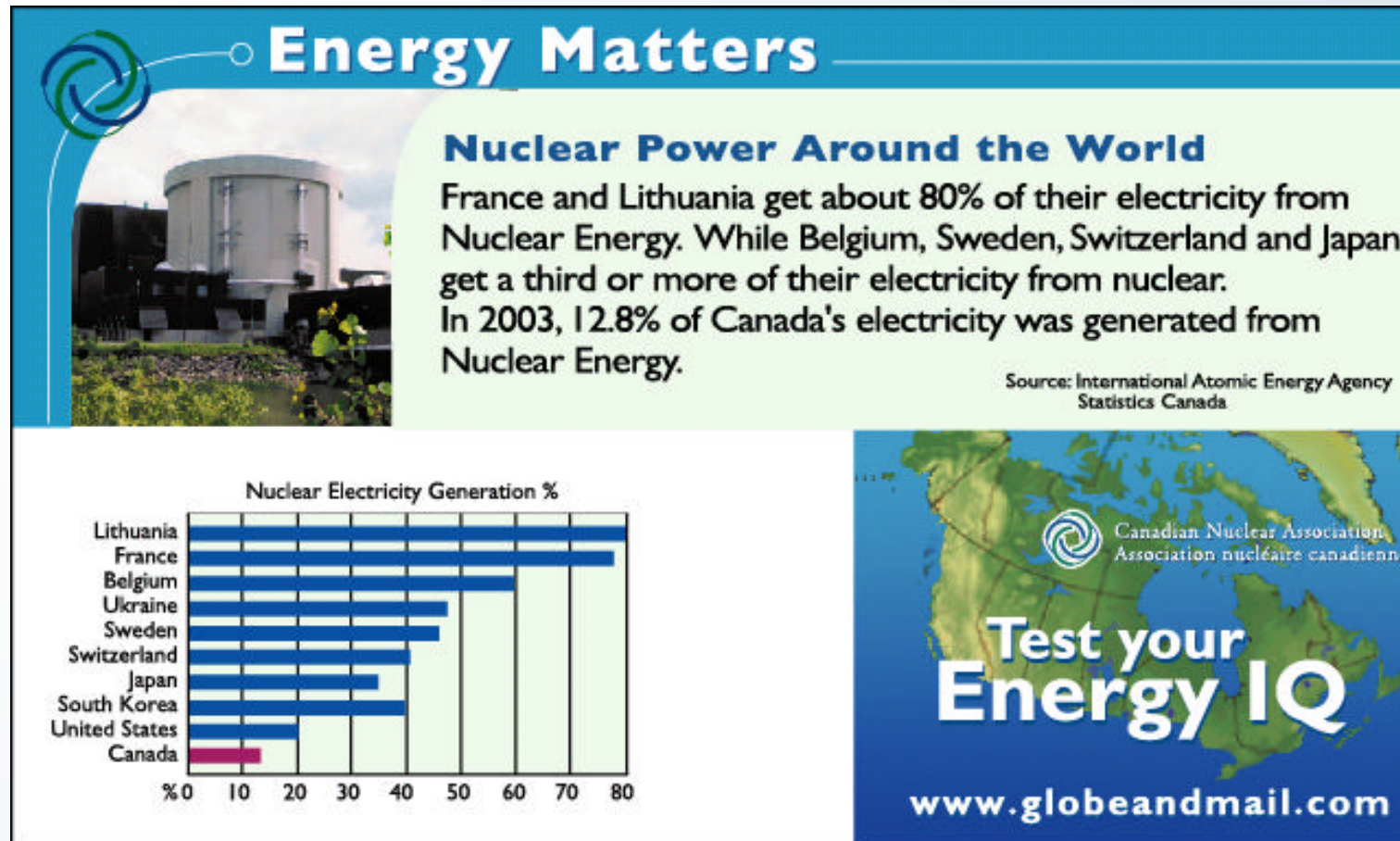
Canadians Consume More Energy Per Capita in the World





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Nuclear Energy is a Major Electricity Supplier in OECD Countries





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Canadian Public Opinion is Improving

Support for Nuclear Energy (%)								
	Oct 1987	Nov 1988	April 1989	Feb 1994	Jan 2001	April 2002	Nov 2002	July 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.
(Ipsos-Reid 2003)**
- **41% support building new nuclear power plants.
(Ipsos-Reid 2003)**



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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.



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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



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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



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Thank you!

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