



Chalk Talk

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PLEASE SHARE CHALK TALK WITH YOUR COLLEAGUES!!!**Letter from the Editor**

Dear Subscribers,

In recent years, I've noted an interesting trend which replaces referring to 'people' as 'citizens', 'residents', or 'Canadians' with the term "consumers". Previously used almost exclusively by advertisers and marketers, the reference to *consumers* is now prevalent across all media — 'consumers say this; consumers want that; the needs of consumers must be understood and satisfied'. In our society, the consumer is king, and, to be sure, nothing can create more economic havoc or evoke more trepidation among the powers that be than a so-called "consumer backlash". If there is even a hint of consumer unrest — Heads will role! Action must be taken! Changes must be made!

I have to admit that I don't like the term, but it does signify two things — first, that our economy hinges upon our spending behaviour, and secondly, that the decisions made by us, as consumers, have an enormous potential impact on the environment. It is puzzling that the force of this influence remains largely untapped, when everyday we make



choices about the kind of world we want by what we buy, what we eat, how we travel and how we play.

Like Spiderman, we, as consumers, have come to realize that 'with great power, comes great responsibility'. Consumers'

ability to make good environmental choices are dependant on the availability of a wide-range of eco-friendly options. Anyone who has ever purchased a toy or electronic item that is encased in indestructible plastic packaging or ordered a take-out pizza that comes in a cardboard box sturdy enough to build a tree fort, knows that making good choices can be challenging at the best of times. Achieving the right balance between environmental protection and economic stability requires vision, innovation and cooperation by both the private and public sectors. Polls show that Canadians are willing to do their part to conserve energy in order to preserve our natural resources and make our world sustainable for the future.

This week's *Chalk Talk* is the second of three issues dedicated to the environment as we mark Earth Day, 2007. This edition features a variety of free educational resources for students of all



Canadian Centre for Energy Information

Try to imagine a situation in your daily life that doesn't involve the use of an energy source. For example, you might think of sitting on a park bench to read a good book, strolling a beach on a sunny day, or riding a bicycle.

In fact, these are not energy-free activities. A variety of energy resources were used in the production of the bench, the book, the sunglasses, the sandals, and the environmentally friendly mode of transportation. Even when we're sleeping, furnaces warm our homes and refrigerators keep our food cold. The role that renewable and non-renewable energy resources play in our daily lives is significant.



[The Canadian Centre for Energy Information](http://www.centreforenergy.com) provides extensive information about Canada's energy system. Visit this site to learn why stable and sustainable energy development is crucial to our way of life. These stakeholder-reviewed, fact-based educational resources assist teachers in the areas of science, technology, society, the environment and the economy.

Oil and Gas Learning Resource Series

FREE to teachers, these curriculum-linked learning resources were created by teachers for teachers. Go to www.centreforenergy.com/k-12.

Energy Literacy Series

The Energy Literacy Series examines 10 energy sources through the use of interactive and technology-based teaching materials, and will be correlated with curricula from all provinces. For more information check out www.centreforenergy.com/els.

Careers in Energy

Visit www.centreforenergy.com/careers for a searchable database of energy-related occupational descriptions and corresponding educational requirements.

To learn more about the essentials of energy, go to www.centreforenergy.com.



Earth Day, 2007. This edition features a variety of free educational resources, for students of all ages, which provide valuable information on renewable and non-renewable energy resources.

CoEd Communications is dedicated to supporting the important work of teachers by providing classroom resources on a range of topics. We invite you to visit our website at 4edu.ca to view the many free teachers' resources on offer.

[As always, we welcome your thoughts.](#)



Mary Kovack

**All about energy.
All in one place.**

[Source: [Canadian Centre for Energy Information](#)]



“Everyday is Earth Day.”

— Author Unknown

Did you know ...?

Some 37 years ago, Canada moved from being a net consumer to a net producer of energy. Canada produced 45% more energy than it consumed in 2002, though our energy consumption per capita reached a record high. In 2001 alone, Canada's energy exports (worth \$55.1 billion) represented 14% of all exports. We're among the top ten energy producers in the world of all energy sources except coal. With access to nearly 7% of the world's total renewable water flow, Canada has become the world leader in hydro-electric power production.

Today, Canada's energy policy tries to balance three important, and at times conflicting, objectives: security, prosperity and the environment. Total energy consumption rose by 18% between 1990 and 2002. Without increased energy efficiency practices, the rise would have been 31%.

Greenhouse gas emissions rose by more than 18% between 1990 and 2001 due mostly to energy-related emissions (burning fossil fuels). The cleanest alternative energy sources are wind and solar.

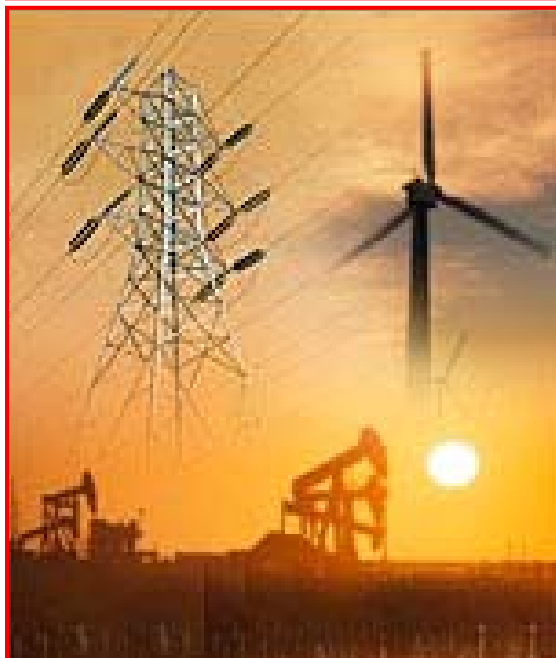
Industry provided 70% of the total R&D expenditures on energy in 2001, with a 300% increase in spending on renewable energy R&D. In 2002, 40% of businesses reported using at least one form of energy conservation, such as waste-to-energy systems, cogeneration, and fuel substitution.



[Human Activity and the Environment](#)

[Source: [Statistics Canada](#)]

Facts & Figures — Earth, Wind, Fire and Water



[Source: [The Centre for Energy Information](#)]

"The diligent farmer plants trees, of which he himself will never see the fruit."

- Canada has many types of energy resources, both renewable and non-renewable. From coal, oil and gas, to uranium and the water that produces hydro electricity, no single energy source is dominant today.
- Canada has one of the world's largest deposits of oil – the Alberta oil sands– estimated to contain more than the conventional oil deposits of the Middle East!
- In Canada, most primary fuels (oil, gas, coal and uranium) are found in the western provinces and off the east coast (oil and gas). Oil, gas, coal and uranium are mined or extracted; supplies of these are finite (non-renewable).
- Hydro electricity, Canada's major source of renewable energy, is produced in varying amounts by every province and territory except for Prince Edward Island.
- Nuclear power generation is concentrated mainly in Ontario and to a far lesser extent in both New Brunswick and Quebec. Secondary energy sources, such as thermal-electric power plants, can be found across the country.
- In 2002, renewable energy sources accounted for 17% of Canada's energy supply. Hydro electricity is Canada's principal source of renewable energy. Other alternative, low-impact sources are wind, solar, biomass, earth and geothermal energy, small scale hydro, and tidal.
- Hydro electricity: Canada is the world's top producer of hydro-electric power, providing us with 59% of our electricity supply in 2002.
- Wind energy: The fastest growing form of renewable

the fruit.”

— Cicero

- Wind energy: The fastest-growing form of renewable energy in Canada: Harnessing the wind to generate electrical or mechanical energy uses no fuel and produces no greenhouse gases.

[Source: Statistics Canada, *Human Activity and the Environment 2006*]

In the News

[Electric car with buzz](#) – Steve Mertl, Canadian Press, TheStar.com, April 10, 2007

“The debate surrounding General Motors' Chevrolet Volt has been highly charged, to say the least. The buzz around the electric car concept has hardly diminished since GM unveiled it four months ago at the North American International Auto Show in Detroit. It's been passionate, and not all of it good. Critics have accused GM of capitalizing on concerns over global warming to give the financially troubled auto giant a much-needed public relations boost. GM has promised mass-produced electric cars were just around the corner since the first oil crises in the 1970s, some suggest.”

[570 km/h train breaks record](#) – Ingrid Rousseau, Associated Press, TheStar.com – April 3, 2007

“A high-speed French train with a souped-up engine broke the world speed record Tuesday for conventional rail trains, reaching 574.8 kilometres an hour. The black-and-chrome train with three double-decker cars, named the V150, bettered the previous record of 515.3 km/h, set in 1990 by the French fast train. However, it fell short of the ultimate record set by Japan's non-conventional magnetically levitated train, which sped to 581 km/h in 2003. The endeavour, some 200 kilometres east of the capital on a new track linking Paris with Strasbourg, showcased technology France is trying to sell to overseas markets like China.”

[The coming green industrial revolution](#) – David Crane, 'Global Issues', TheStar.com, February 05, 2007

“There's no doubt that over the next decade, the market for clean energy, energy efficiency and remediation will run into many trillions of dollars worldwide. But the real question for Canada is whether we can create the industry base to gain a sizable share of this looming massive market, and the good jobs that should go with it. And here the real problem in Canada may be the same as we have with biotechnology and the life sciences. We do not have an industry base to take up the discoveries our scientists are making and convert them into jobs and wealth in Canada.”

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