

# The Perfect Energy Course? (Pierre Desrochers' "Energy & Society" class about as good as it gets)

by Robert Bradley Jr. March 6, 2010

Dr. Pierre Desrochers, Associate Professor of Geography at the University of Toronto Mississauga, is the scholar's scholar. In an age where few read all important material on all sides of their subject, this professor stands out.

Can President Obama strike a deal with the University of Toronto to make this course available to his top energy and environmental aides, even smartest-guy-in-the-room John Holdren? Energy legislation is currently stalled, and the summer might be a good time for a "time out" to learn the basics of energy and the free society.

Here is the syllabus for GGR 333H5F

The development of new energy sources has had a major impact on the development of both human societies and the environment. This course will provide a broad survey of past and current achievements, along with failures and controversies, regarding the use of various forms of energy. Understanding of technical terms, physical principles, creation of resources and trade-offs will be emphasized as a basis for discussions about energy options. The local and global dimensions of the economics and politics surrounding the world's energy resources will be recurring concerns in this course.

# **COURSE OBJECTIVES**

The course has three main objectives:

- To cover the basic physical, technical and economic issues related to energy use;
- To cover broadly the history of energy development and use;
- To introduce students to past debates and current controversies.

Lecture 1 (September 8): Introduction Lecture 2 (September 15): Concepts and the Big Picture

- Lecture 3 (September 22): Fire and Agriculture
- Lecture 4 (September 29): Fossil-Fueled Civilizations 1
- Lecture 5 (October 6): Fossil-Fueled Civilizations 2
- Lecture 8 (October 27): Electricity (Hydro and Nuclear)
- Lecture 9 (November 3): Renewables and Alternatives
- Lecture 10 (November 10): The Perennial Energy Debate
- Lecture 11 (November 17): The Curse of Natural Resources
- Lecture 12 (November 24): The Future of the Automobile
- Lecture 13 (December 1st): Current Issues

# **LECTURE 1: INTRODUCTION**

Bailey, Ronald. 2009. "How Green Is Your Crystal Ball? The National Academy of Sciences tries to predict America's energy future. Again." ReasonOnline.com, August 4.

Odell, Peter. 2010. "Our long-term energy future: a reality check." European Energy Review, January 4. Pizer, William A. "Setting Energy Policy in the Modern Era: Tough Challenges Lie Ahead." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 8-10. Vaclav Smil. "U.S. Energy Policy The Need for Radical Departures." Issues in Science and Technology, Summer 2009.

# **LECTURE 2: CONCEPTS AND THE BIG PICTURE**

"Highlights" of International Energy Outlook 2007 (Energy Information Agency) Ausubel, Jesse. 2000. "Where is Energy Going?," The Industrial Physicist 6(1): 16-19. Bradley, Robert L and Richard W. Fulmer. Energy: The Master Resource, Kendall Hunt Publishing Company, 2004, Chapter 1: The Basics and Chapter 3: Efficiency – Technical and Economic. Grimes, William. 2008. "Heard the One About the Farmer's Ethanol?" The New York Times, March 7. Huber, Peter. 2004. "The Virtue Of Waste." Forbes, December 13. Smil, Vaclav. 2002. "Energy Resources and Uses: A Global Primer for the Twenty-First Century," Current History 101(653):126-132.

# **LECTURE 3: FIRE AND AGRICULTURE**

• Fire

Cowen, Richard. Essays on Geology, History and People. (Under contract with Johns Hopkins University Press), Ch. 3 ("Fire and Metals").

Williams, Gerald W. 2001. References on the American Indian Use of Fire in Ecosystems.

• Agriculture

# > Historical Perspective

Cowen, Richard. Essays on Geology, History and People. (Under contract with Johns Hopkins University Press), Ch. 16 ("Guano," "Nitrates") and 17 ("Ancient Irrigation").

Morrison, Phylis. 2001. "From Fertile Minds." American Scientist, Volume 89, Number 4.

Prakash, C. S. 2001. "The Genetically Modified Crop Debate in the Context of Agricultural Evolution." Plant Physiology 126: 8-15. "Agricultural Mechanization." Greatest Engineering Achievements of the 20th Century. National Academy of Engineering. 2000.

#### > The Green Revolution and Modern Farming

Conko, Greg. 2009. "The Man Who Fed the World." OpenMarket.org, September 13.

Goklany, Indur M. 2001. "The Pros and Cons of Modern Farming." PERC Reports. March: 12-14.

Hecht, Susanna B., & Charles C. Mann. 2008. "How Brazil outfarmed the American farmer." CNN Money.com, January 19.

Potrykus, Ingo. 2005. "Missing a Golden Rice opportunity." The Economic Times, December 26.

Singh. Salil. "Norman Borlaug: A Billion Lives Saved." A World Connected.

Taverne, Dick. 2007. "'The Real GM Food Scandal." Prospect Magazine, November.

# > Organic Farming, the Food Mile Debate and the World Food Crisis

Garrett, Laurie. 2008. "Food Failures and Futures." Center for Geoeconomic Studies Working Paper, May.

Sanderson, Allen R. 2007. "De Minimis." The Library of Economics and Liberty, September 3.

"The Future of Food: How Science Will Solve the Next Global Crises." Wired, November 20, 2008.

"Voting with your trolley – Can you really change the world just by buying certain foods?" The Economist, December 7th 2006.

#### **LECTURE 4: FOSSIL-FUELLED CIVILIZATIONS 1 LECTURE 5: FOSSIL-FUELLED CIVILIZATIONS 2**

# Deforestation

Cowen, Richard. Essays on Geology, History and People. (Under contract with Johns Hopkins University Press), Ch. 4 ("The Bronze Age") and Ch. 11 ("Timber Crisis").

"Survey of Energy Resources 2007 – Wood Fuels." World Energy Council.

• Whale Oil and the Tragedy of the Commons

"Common Sense." The Economist, July 31, 2008.

"Whale Oil" on the Oil History Website by Samuel T. Pees.

-, "Tragedy of the Commons," Wikipedia.

• Fossil Fuels (General Interest)

"Fossil Fuels." Environmental Literacy Council.

Cowen, Richard. Essays on Geology, History and People. (Under contract with Johns Hopkins University Press), Ch. 11, 13.

• Coal

"Coal." International Energy Agency

"Coal." Environmental Literacy Council

"How Coal is Formed" and "Coal Terms Glossary." American Coal Foundation.

"Survey of Energy Resources 2007 - Coal." World Energy Council.

Anderson, J. W. "Coal: Dirty Cheap Energy." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 31-34.

-, 2004. "Clean Coal." Progressive Policy Institute (PPI), December 2.

"Coal Tar." The City of Kingston's Website.

Lewin, David. 2008. "A Cleaner Future." Fraser Forum, March, p. 10-12. • Oil "New CO2 Enhanced Recovery Technology Could Greatly Boost U.S. Oil." U.S. Department of Energy, March 3, 2006. "Petroleum and Petrochemical Technologies." Greatest Engineering Achievements of the 20th Century. National Academy of Engineering. 2000. "Crude Oil." and "Petroleum Products." International Energy Agency. "Petroleum." Environmental Literacy Council. "Survey of Energy Resources 2007 - Crude Oil and Natural Gas Liquids." World Energy Council. "Sweet and Sour Crude." Econbrowser, August 21, 2005. Casselman, Ben. 2010. "Oil Industry Booms - in North Dakota." The Wall Street Journal, January 26. Featherstone, Charles H. 2005. "Peak Oil?." LewRockwell.com, January 6. Green, Kenneth P. 2006. "Bringing Down Gasoline and Oil Prices." Brief Analysis No. 557, National Center for Policy Analysis, June Henderson, David R. 2008. "Let's Not Be Energy Independent." The Freeman: Ideas on Liberty, Vol. 58 No. 8 (October). Huber, Peter, & Mark Mills. 2005. "Oil, Oil, Everywhere..." The Wall Street Journal, January 27. Parry, Ian W.H., and J.W. Anderson. "Petroleum: Energy independence is Unrealistic." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 11-15. Reynolds, Alan. 2005. "Oil Prices: Cause and Effect." Cato Institute, June 27. Vargas Llosa, Alvaro. 2008. "Oil Prices-Who Are the Culprits?" The Independent Institute, June 11. •Natural Gas "Gas." International Energy Agency. "Natural Gas." Environmental Literacy Council. "Survey of Energy Resources 2007 – Natural Gas." World Energy Council. Kopp, Raymond J. "Natural Gas: Supply Problems are Key." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 16-19. Krauss, Clifford. 2008. "Drilling Boom Revives Hopes for Natural Gas." NYTimes.com, August 24. "Frequently Asked Questions About LNG." California Energy Commission. •Others "Survey of Energy Resources 2007 - Oil Shale." World Energy Council. "Oil shale retort." Econbrowser.com, September 27, 2005. "Survey of Energy Resources 2007 - Natural Bitumen and Extra-Heavy Oil." World Energy Council. "Abiotic Theory of Oil Formation." Environmental Literacy Council. Bailey, Ronald. 2010. "Oil Without Dinos? New energy sources." Reason, January Issue. **LECTURE 8: ELECTRICITY (HYDRO AND NUCLEAR)** "Chernobyl Death Toll Grossly Underestimated." Greenpeace, April 18, 2006. "Electrification." Greatest Engineering Achievements of the 20th Century. National Academy of Engineering. 2000. Environmental Literacy Council Website.

"Electricity."

"Electric Current and Power Transmission."

"Electric Power Grids and Blackouts."

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"Survey of Energy Resources 2007 – Nuclear and Hydropower." World Energy Council.

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Bailey, Ronald. 2005. "Nuclear Explosion at Montreal." Tech Central Station, December 9.

Bradley, Robert L. and Richard W. Fulmer. Energy: The Master Resource, Kendall Hunt Publishing Company, 2004, Chapter 2: Using Energy, pp. 19-20, 25-29, 30-31, 45-48.

Fumento, Michael. 2005. "So What Really Happened After Chernobyl?" Tech Central Station, September 19.

Portney, Paul R. "Nuclear Power: Clean, Costly, and Controversial." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 28-30.

Smil, Vaclav. 2003. "Beyond the Blackout," Tech Central Station, August 18.

Taylor, Jerry, and Peter Van Doren. 2007. "Hooked on Subsidies." Forbes, November 26.

# **LECTURE 9: RENEWABLES AND ALTERNATIVES**

"Renewable and Alternative Fuels Basics 101." Energy Information Administration (read only the general definition). "Energy Fact Sheet - Appropriate Technology." State the Essence! Ball, Jeffrey. 2010. "Clean Energy Sources: Sun, Wind and Subsidies." The Wall Street Journal, January 8. Katz, Diane. "Environmental Politics Distorts Renewable Energy Discussion." Fraser Forum, July/August 2007, p. 13-16. Mandel, Charles. 2007. "U.S. Prof Says Canada Should Forget Renewable Energy." Canada.com, July 27. Mouawad, Jad. 2009. "Oil Giants Loath to Follow Obama's Green Lead." NYTimes.com, April 7. Sallie Baliunas on alternative energy sources (on *Tech Central Station*) "Renewable Realities." April 23, 2002 "Solar Delusions." May 21, 2002 "Let the Sun Shine In." July 11, 2002 "Gone with the Wind." Sept. 25, 2002 "Wind Magic." Oct. 17, 2002 "Hydrogen Hopes." January 28, 2003 Shurtleff, Sean. 2008. "Energy Independence in Brazil: Lessons for the United States." NCPA Brief Analysis (614), April 7. Biomass Auld, Douglas. 2008. "The Ethanol Trap: Why Policies to Promote Ethanol as Fuel Need Rethinking," C.D. Howe Institute Commentary, No. 268, July. Bailey, Ronald. 2008. "The Biggest Green Mistake - Biofuels and the Global Food Crisis." Reason Magazine, April 8. Bailey, Ronald. 2007. "Bioethanol Boondoggle - Political Viability is More Important than Commercial Viability." Reason Magazine, December 4. Brabeck-Letmathe, Peter. 2008. "Another inconvenient truth." International Herald Tribune, October 5. Chakrabortty, Aditya. 2008. "Secret Report: Biofuel Caused Food Crisis - Internal World Bank Study Delivers Blow to Plant Energy Drive." The Guardian, July 4. Gattuso, Dana Joel. 2007. "Corn Prices High as an Elephant's Eye." Townhall.com, November 29. Kiesling, Lynne. 2007. "Proprietary, Sweeter Tomates: Another Unintended Consequence of Ethanol Subsidies." Knowledge Problem. October 2. Rohrlich, Justin. 2009. "American's Crazed Corn Habit." Mises Institute, December 22. Runge, C. Ford, and Benjamin Senauer. "How Ethanol Fuels the Food Crisis." Foreign Affairs, May 28. • Wind Bryce, Robert. 2009. "Windmills Are Killing Our Birds." The Wall Street Journal, September 7. "Executive summary" of "Study of the effects on employment of public aid to renewable energy sources" by Gabriel Calzada Álvarez PhD., Raquel Merino Jara, Juan Ramón Rallo Julián Technical & José Ignacio García Bielsa. Universidad Rey Juan Carlos, March 2009. "Wind Energy - The Case of Denmark" Executive summary, Center for Politiske Studier, September 2009. **LECTURE 10: THE PERENNIAL ENERGY DEBATE** • Survey of the issue Anonymous. 1998. "Reserves Growth: What Does it Mean for Oil Supply?" International Petroleum Encyclopedia. Deffeyes, Kenneth, & Peter Huber. 2005. "It's the End of Oil / Oil Is Here to Stay." Time, October 23. Geddes, Pete. 2007. "Running Out of Resources?" Tech Central Station, August 9. "Jevons Paradox." Encyclopedia of Earth. Stott, Philip. 2008. "The Jevons' Paradox." Global Warming Politics, February 12. • Pessimists Campbell, Colin C. and Jean Laherrère. 1998. "The End of Cheap Oil." Scientific American (March): 78-83. Goodstein, David. 2004. "The End of the Age of Oil." CalTech News, Vol. 38, no.2 "Hubbert Peak" on Wikipedia. • Optimists Adelman, M. A. 2004. "The Real Oil Problem." Regulation (Spring): 16-21. Ausubel, Jesse. 1999/2000. "Resources are Elastic," Earth Matters (Winter): 46-47. Baumol, William J. and Sue Anne Batey Blackman. "Natural Resources," The Concise Encyclopedia of Economics. Bailey, Ronald. 2004. "Are We Out of Gas Yet? The Continuing 'Oil Crisis' Crisis." ReasonOnline, March 18. Smil, Vaclav. 2007. "Peak performance." Tech Central Station, February 23 Smil, Vaclav. 2006. "Peak Oil: A Catastrophist Cult and Complex Realities." World Watch 19: 22-24. Smil, Vaclav. 2005. "Peak Curiosity." Tech Central Station, December 2. Solomon, Lawrence. 2008. "Abundant Energy Will Power Future Growth." National Post, July 12. Utley, Jon Basil. 2008. "The Coming Energy Abundance – How new technology can lower prices and reshape the global economy." Reason Magazine, September 22. • Recent News Agence France-Presse. 2007. "Brazil Discovers Huge Oil Reserves." News.com.au, November 09. Connor, Steve. 2008. "Oil Shortage a Myth, Says Industry Insider." The Independent, June 9. Effinger, Anthony. 2008. "An elusive ocean of crude." Chron.com – Houston Chronicle, June 6. Hargreaves, Steve. 2007. "Still Waiting to Cash in on Iraq's Oil." CNNMoney.com, November 9. Mouawad, Jad. 2007. "Oil Innovations Pump New Life Into Old Wells." The New York Times, March 5. **LECTURE 11: THE CURSE OF NATURAL RESOURCES** 

We will watch *The Devil's Footpath*, written and presented by June Arunga. More background and a talk by the author on her documentary.

"A Kremlin Cassandra." The Boston Globe, January 1, 2006.

Adams, Patricia. 2002. "The Doctrine of Odious Debts: Using the Law to Cancel Illegitimate Debts." Probe International, June 21. Bailey, Ronald. 2007. "Political Peak Oil - One Thing Stands in the Way of Secure and Abundant Supplies of Oil: Government." ReasonOnline, January 5.

Bergevin, Philippe. 2006. "Energy Resources: Boon or Curse for the Canadian Economy?" Economics Division, Parliamentary Information and Research Service (PIRS) of the Library of Parliament 31 March.

Birdsall, Nancy and Arvind Subramanian. 2004. "Saving Iraq from its Oil," Foreign Affairs, July, pp. 77-89.

Llosa, Alvaro Vargas. 2006. "A Natural Fit." Tech Central Station, March 17.

Martinez, Ibsen. 2005. "The Curse of the Petro-State: The Example of Venezuela." The Library of Economics and Liberty, September 5.

Mitchell, Paul. 2003. "The 'Resource Curse' is Overstated (PDF document)." Financial Times, Nov. 18.

Palda, Filip. 2003. "The High Price of Natural Wealth." Fraser Forum, January, 30-31.

Palley, Thomas I. 2003. "Lifting the Natural Resource Curse." Foreign Service Journal, December.

Stevens, Paul J. 2002. "'Resource Curse' and Investment in Oil and Gas Projects: The New Challenge." Internet Journal (The Centre for Energy, Petroleum and Mineral Law and Policy) June. (later published as "Resource Impact: curse or blessing? A literature survey." Journal of Energy Literature Vol IX No 1 June 2003 Pp. 3-42)

Tupy, Marian L. 2006. "Sir John Cowperthwaite: A Personal Tribute." The Cato Institute, February 3.

# **LECTURE 12: THE FUTURE OF THE AUTOMOBILE**

We will watch "Nova: Car of the Future." (The program can be watched online here)

#### • Before the Car

"The Horse and the Urban Environment" on the Environmental Literacy Council's Webpage. Avery, Dennis T. 2000. "Earth Day celebrate the gas-powered tractor." The Des Moines Register, April 2. Gordon, Peter. 2007 "Horse Manure." Peter Gordon's Blog, August 27.

#### • Historical Perspective

Bradley, Robert L and Richard W. Fulmer. Energy: The Master Resource, Kendall Hunt Publishing Company, 2004, Chapter 2: Using Energy, pp. 48-55.

Kinney Bennett, Ralph. 2006. "Bertha's Muscle Car." Tech Central Station, January 31.

Reynold, Alan. 2004. "Energy Disinformation." Washington Times, June 27.

#### • Electric Car

Jenkins, Holman W. 2008. "What Is GM Thinking?" The Wall Street Journal, July 2.

Kinney Bennett, Ralph. 2006. "Who Killed the Electric Car?" Tech Central Station, June 29.

Rauch, Jonathan. 2008. "Electro-Shock Therapy." The Atlantic Monthly, July-August.

Wickstrom, Doug. 2006. "Who Killed the Electric Car?" rec.arts.sf.fandom Google Group, July 14.

# • Hybrids

-, "Toyota Prius proves a gas guzzler in a race with the BMW 520d." The Sunday Times, March 16, 2008.

-, "Most Hybrid Vehicles Not as Cost-Effective as They Seem, Reports Edmunds.com." Edmunds.com, June 1, 2005.

Baukus Mello, Tara. 2004. "The Real Costs of Owning a Hybrid." www.edmunds.com, November 18.

Elton, Robert. 2004. "The Truth About Hybrids." The Truth about Cars. November 12.

Friedman, Sasha. 2009. "High Voltage Danger: Emergency Responders and Hybrid Cars." Hybrid-electric EVs, January 25.

Smith, Lewis. 2008. "Eco-friendly Claims for 'Hybrid' Cars Dismissed as Gimmickry." Times Online, May 19.

Smith, Rebecca. 2008. "Utilities, Plug-In Cars: Near Collision? Electric Firms Say Daytime Charges May Raise Costs." The Wall Street Journal, May 2.

# Hydrogen

Bullis, Kevin. 2006. "The Methanol Economy." Technology Review, March 02.

Friedemann, Alice. 2005. "The Hydrogen Economy – Energy and Economic Black Hole." Energy Pulse, February 25.

Newel, Richard G. "The Hydrogen Economy: Laying out the Groundwork." Resources (Navigating Energy Choices in the 21st Century), Winter 2005, Issue 156, pp. 20-23.

Smil, Vaclav. 2003. "No Alternative to Reality," Tech Central Station, June 30.

Zubrin, Robert. "The Hydrogen Hoax." The New Atlantis, Number 15, Winter 2007, pp. 9-20.

Zubrin, Robert. "The Methanol Alternative." The New Atlantis, Number 13, Summer 2006, pp. 85-88.

# • Related topics

Baden John. 2008. "Third World's Realities." Tech Central Station, February 6.

Taylor, Jerry, and Peter Van Doren. 2007. "Don't Raise CAFE Standards." CATO Institute, August 2.

Trent, Dan. 2008. "Top 10: Europe's best selling cars." MSN Cars UK, January 29.

"Mazda Develops New Catalyst Material Structure for Autos That Reduces Precious Metal Requirements." Green Car Congress, October 1st, 2007.

# **LECTURE 13: CURRENT ISSUES**

#### •Air Pollution

Brown, Jeremy & Milagros Palacios. 2005. "The State of Urban Air in Canada." The Fraser Institute, pp. 1-15 (November). Bruce, Nigel, Rogelio Perez-Padilla & Rachel Albalak. 2000. "Indoor Air Pollution in Developing Countries: A Major Environmental and Public Health Challenge." Bulletin of the World Health Organization, WHO, 78 (9): 1078-1092. Burnett, H. Sterling, Ph.D. 2007. "Breathe Easy on Air Quality." Brief Analysis No. 577, National Center for Policy Analysis, January 29.

Chandler, David. 2008. "MIT report debunks China energy myth – The problem isn't in the technology, it's the operations." MIT News, October 6.

Cowen, Richard. Essays on Geology, History and People. (Under contract with Johns Hopkins University Press), Ch. 12 ("The Burden of Coal").

E. Duflo, M. Greenstone, and R. Hanna. "Indoor Air Pollution, Health and Economic Well-Being." Surv. Perspect. Integr. Environ. Soc., 1, 1–9, 2008.

Driessen, Paul. 2009. "Saving Lives with Coal." Townhall.com, January 3.

Urbinato, David. 1994. "London's Historic 'Pea-Soupers'," EPA Journal.

Schwartz, Joel. 2006. "Getting Real on Air Pollution and Health." Washington Post, June 14.

Schwartz, Joel. 2005. "Asthma and Air Pollution." Tech Central Station, September 26.

Schwartz, Joel and Steven F. Hayward. 2004. "Emissions Down, Smog Up. Say What?" Environmental Policy Outlook. American Enterprise Institute for Policy Research. January-February.

The World Health Organization on Indoor Air Pollution

Climate Change and the Kyoto Protocol

#### Survey of the issues

#### **Climate Change**

Lindzen, Richard. 2007. "Why so Gloomy?" Newsweek, April 16.

Lindzen, Richard. 2006. "Don't Believe the Hype - Al Gore is wrong. There's no 'consensus' on global warming." The Wall Street Journal(Opinion Journal), July 2.

Lomborg, Björn. 2007. "Paint it White." The Guardian, November 18.

Michaels. Patrick J. 2007. "Global Warming: No Urgent Danger; No Quick Fix." Cato Institute, August 21.

Murphy, Robert P. 2009. "The Economics of Climate Change." Library of Economics and Liberty, July 6.

Pielke, Jr., R. A. and D. Sarewitz, 2005. "Bringing Society back into the Climate Debate," Population and Environment Volume 26, Number 3, pp. 255-268.

Rosenthal, Elisabeth. 2008. "Europe Turns Back to Coal, Raising Climate Fears." New York Times, April 23.

Schmidt, Gavin, and Michael Mann. 2007. "Lindzen in Newsweek." RealClimate, April 17.

Stott, Philip. 2006. "BBC's 'Climate Chaos': mark the Series out of 50....." EnviroSpin Watch, May 21.

Stott, Philip. 2005. "Our Christmas Message: The Sin of Presentism and the State of Fear...." EnviroSpin Watch, December 23.

Whitehouse, David. 2007. "Has global warming stopped?" New Stateman, 19 December.

The climate change position of the American Geophysical Union

"U.S. Greenhouse Gas Emissions Declined 1.5 Percent in 2006." National Energy Information Center, November 28, 2007.

#### **Kyoto Protocol**

Du Pont, Pete. 2006. "Kyoto? No Go. How to Combat 'Global Warming' Without Destroying the Economy." The Wall Street Journal (Opinion Journal), March 28.

Madrigal, Alexis. 2008. "China's 2030 CO2 Emissions Could Equal the Entire World's Today." Wired, February 08.

Wolf, Martin. 2007. "Welcome to a world of runaway energy demand." Financial Times, November 13.

"Global warming: First, choose your discount rate." Economist.com, December 4, 2006.

"Kyoto and Beyond: The Low Emission Path to Innovation and Efficiency." Summary, David Suzuki Foundation, 2002.

#### Ontario's Energy Dilemma

We will watch a *Studio 2* documentary on Ontario's energy crisis originally aired on December 1st, 2005. Caplan, Milton. 2005. "Powering Canada's Economic Heartland - Is there Life After Coal?" The World Nuclear Association's Annual Symposium.

-, "Supply Overview." Independent Electricity System Operator (IESO).

Green, Kenneth P. "Ontario's Coal Shut-down is Good Politics, but Bad Policy." Fraser Forum, July/August 2007, p. 9-10. Ontario Power Authority, "Supply Mix Advice Report and Recommendations: Supply Mix Summary," December 9, 2005. Purchase, Bryne. 2008. "CANDU or no CANDU? The Future of Nuclear Power in Ontario." Fraser Forum, March, p. 25-27. Purchase, Bryne. 2007. "Energy and Environmental Policy: A Need for Reason over Rhetoric." The Globe and Mail, January 31. Purchase, Bryne. 2007. "The Future of Coal in Ontario? Towards a Clean, Secure and Competitive Energy Portfolio." The Queen's Institute for Energy and Environmental Policy.

Spicer, Jonathan. 2007. "Ontario Walks Tightrope on Plan to End Coal Use." Planet Ark, August 10.

Struck, Doug. 2006. "In Ontario, Making 'Clean Energy' Pay." Washington Post, October 12. Tal, Benjamin. 2007. "Can Ontario Shutdown Coal and Keep the Lights On?" StrategEcon, July 18. White, Adam. 2006. "Coal's Big Chance." Association of Major Power Consumers in Ontario, April 11.

4 comments

1 Tom Tanton { 03.06.10 at 8:20 am }

It'd be grand were the White House to read such an impressive syllabus. In fact I'd be happy if they read "The Big Little Book of Energy Things"

2 The Elephant's Child { 03.06.10 at 4:40 pm }

What an impressive syllabus! Such a wide-ranging selection of essays from all over demands some real thinking and analysis from the student. A demanding class that should produce a well-informed student. And I'm with Tom Tanton! Send a copy of "The Big Little Book" to Barbara Boxer, Lindsey Graham - gosh, it would be a long list, wouldn't it? If we could just keep them busy studying, they wouldn't have so much free time to...

3 Robert Hargraves { 03.06.10 at 6:21 pm }

I'll add the list of references to my course website.

Energy Policy and Environmental Choices: Rethinking Nuclear Power will be given again this spring at Dartmouth ILEAD. The several hundred graphic PowerPoint slides are all available online at the course website http://rethinkingnuclearpower.googlepages.com

If you live near Hanover NH and would like to sign up, there are a handful of empty seats still available. Visit http://www.dartmouth.edu/~ilead for registration data.

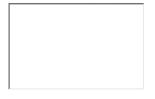
#### 4 Robert Bradley Jr. { 03.07.10 at 6:28 pm }

Professor Desrochers also has an extensive list of recommended energy readings and websites: http://geog.utm.utoronto.ca/desrochers/ggr333recommandations.htm#scholarlysources

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