Carleton University
School of Public Policy and Administration

PADM5615
Politics and Policy of Energy in Canada

(Monday 2.35-5.25; Room 3224 River Building)

Professor: James Meadowcroft Fall 2012
Office: 5139 River Building
Office Hours: Monday 13.00-14.00; Thursday 13.00-14.00
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This course focuses on energy politics and policy in the Canadian context. It starts by considering what is meant by 'the energy system' and 'sustainable energy policy' and moves on to explore a series of important themes in current energy policy. These address the global energy outlook, continental energy markets, de-regulation, jurisdictional fragmentation, environmental problems and climate change. The second part of the course examines Canada's regional energy economies and a variety of policy problems associated with energy sources, sectors, and options. The course will pay attention to current controversies relating to energy policy including arguments over pipelines and shale gas, and discussion of a Canadian energy strategy.

Course Objectives

This course aims to provide students with an understanding of the challenge to Canadian decision-makers presented by sustainable energy policy. By the end of the semester students will be able to:

- demonstrate an understanding of the range and substance of political and policy issues related to energy politics and policy in Canada;
- demonstrate appropriate cognitive, communicative and transferable skills, including understanding complex concepts and theories, exercising critical judgement, making effective oral and written presentations, utilising specialist primary and secondary sources, and deepening the capacity for independent learning.

Organisation

3 hour seminars to be held on Monday: 2.35-5.25.

Assessment

Assessment is based on the following:
20% Class participation over the whole semester.
40% Special topic: presentation and briefing note (equal weighting)
40% 4,500-5,000 word Research paper, due Friday 7 December 2010.

Class participation: The class participation mark reflects the contributions made over the semester as a whole. This includes presentation of readings and participation in class discussion. Attendance, keeping up with the readings, and the quality and consistency of participation are all relevant

Special topic: Students will work in pairs on a 'special topic' selected from the list below. This will involve i) a joint presentation to class on the selected topic and ii) preparation of a briefing note of about 1500 words to be submitted by 5pm on the Thursday following the class presentation. Students will also be required to identify two readings for the class on the selected topic, and to make the details available two weeks before the presentation is to be discussed. The goal of the presentation is to structure class learning in relation to the particular topic.

List of special topics:

1. A national energy strategy for Canada
2. Ontario's nuclear strategy
3. The sustainable development of the oil sands.
4. Ontario's Green Energy and Economy Act.
5. Natural gas as a decarbonisation pathway in North America.
6. The transformation of the built environment and climate change.
7. The electric car as the future of green transportation.
8. The sustainable deployment of biofuels.
9. The disappointment of 'energy efficiency'.
10. Obstacles to the deployment of new renewables.
11. 'Smart grids' and the transformation of electricity production, use and distribution.
12, 13, 14, 15. The political economy of energy in major regions: British Columbia, Quebec, Ontario, Alberta.
16. Class suggestions

Research paper: This is to be an original piece of work that examines some dimension of sustainable energy policy. The paper should be on a topic that is substantially different from the 'Special topic' on which the student works. Essay topics must be approved by the instructor by 5 November 2012.

Reading

The reading under each session is intended to provide an introduction to the issues involved, an anchor for the class discussion, and a basis from which students can extend their investigations.

The readings form the basis for seminar discussion and students are expected to take preparing for class seriously. Responsibility for introducing the discussion on each of the assigned readings will be shared around the class.

There is no single textbook for this course, but two works provide background to many of the themes that will be explored.

Sustainable Energy – Without the Hot Air, David MacKay, UIT, Cambridge, 2009, available at: www.withouthotair.com

Primer on Energy Systems in Canada, Pollution Probe, Pollution Probe, Toronto, 2011, available at http://www.pollutionprobe.org/energy/energyliteracy/energy_primer.asp

Students may also find the following of general use:

Canadian Energy Policy and the Struggle for Sustainable Development, Bruce Doern (ed.), University of Toronto Press, 2005.

Energy Systems and Sustainability: Power for a Sustainable Future, Godfrey Boyle, Bob Everett and Janet Ramage, Oxford University Press and the Open University, 2003.

Power Switch: Energy Regulatory Governance in the Twenty-First Century, Bruce Doern and Monica Gattinger, University of Toronto Press, 2004.

Avoiding Dangerous Climate Change, Joachim Schellnhuber (ed.), Cambridge University Press, 2006.

Climate Change: Biological and Human Aspects, Jonathan Cowie, Cambridge University Press, 2007.

The website of ONSEP (the Ontario Network for Sustainable Energy Policy) contains may presentations and papers related to sustainable energy, especially the electricity system in Ontario.

School activities around sustainable energy

There are a variety of activities around sustainable energy currently going on around the School of Public Policy and Administration at Carleton. Several faculty members conduct research in the area, and a number of PhD students are pursuing energy related research. The School runs a Masters programme in sustainable energy in conjunction with the Faculty of Engineering. A Sustainable Energy Research Centre is located in the School (Executive Director: Dr. Graham Campbell). Over the course of the year there will be a series of energy related seminars organised in the School. Students are strongly advised to attend these events which can broaden intellectual horizons and provide opportunities to meet other students and faculty involved with this area.

Seminar Program

Week 1 (September 10): Introduction
Week 2 (September 17): The energy system and energy policy
Week 3 (September 24): Sustainable energy policy
Week 4 (October 1): The evolution of Canadian energy policy
Week 5 (October 8): *Thanksgiving, no class*
Week 6 (October 15): Energy policy in a global context
Week 7 (October 22): Policy goals, policy instruments
Week 8 (October 29): *Reading week: no class*
Week 9 (November 5): Special topics 1 and 2:
Week 10 (November 12): Carbon capture and storage and Special topic 3:
Week 11 (November 19): Special topics 4 and 5
Week 12 (November 26): Special topics 6 and 7
Week 13 (December 3): Special topic 8 and Energy transitions

Seminar Sessions

Week 1: Introduction (September 10)

The focus of this session is to consider the basic structure of the course, organise seminar presentations and assignments, and initiate preliminary reflection on energy policy. Question to think about: Why is the policy and politics of energy so critical and so conflicted in modern society?

Week 2: The energy system and energy policy (September 17)

This session is concerned with the contours of the energy system and the way energy issues present themselves to policy-makers. The discussion will review energy supply and energy usage. And it will explore the development of Canadian energy policy. Questions to think about: What are the critical features of the current energy system? What are the characteristics of Canada's energy situation?

Readings:

- Chapters: 1, 2, 3, 7, 9, 11, 13, and 15 in D. MacKay, *Sustainable Energy – Without the Hot Air*.

- Chapters 1, 2, 3, and Glossary of Pollution Probe, *Primer on Energy Systems in Canada.*

- 'Canadian energy policy and regulation in historical context', in Bruce Doern and Monica Gattinger, *Power Switch: Energy Regulatory Governance in the Twenty-First Century*, University of Toronto Press, 2004.

- 'Chapter 2: Primary energy', in *Energy Systems and Sustainability: Power for a Sustainable Future*, Godfrey Boyle, Bob Everett and Janet Ramage, Oxford University Press and the Open University, 2003.

Week 3: Sustainable energy policy (September 24)

This seminar will explore the idea of sustainable energy policy. It will consider why this issue has come to the fore today and consider the economic, social and environmental dimensions of sustainable energy policy. Questions for reflection: What is 'sustainable energy policy? What are the key economic, social and environmental concerns facing Canadian energy policy makers? How has climate change transformed energy debates?

Readings:

- 'Chapter 1- Canadian Energy Policy and the Struggle for Sustainable Development: Key Macro Issues' by B. Doern in *Canadian Energy Policy and the Struggle for Sustainable Development*, Bruce Doern (ed.), University of Toronto Press, 2005.

- W. M. Lafferty, 'The politics of sustainable development: global norms for national implementation'. *Environmental Politics*, Vol.5, 1996, pp. 185-208.

- Glen Toner and James Meadowcroft, "The Struggle of the Canadian Federal Government to Institutionalize Sustainable Development," in Debora L. VanNijnatten and Robert Boardman (eds.), *Canadian Environmental Policy and Politics* (Toronto: Oxford University Press, 2009), 77-90.

- Chapters: 18, 19, 27, 28 in D. MacKay, *Sustainable Energy – Without the Hot Air*.

- Banff Dialogue, *Towards a Canadian Clean Energy Strategy* (April 2010). http://www.nrtee-trnee.com/eng/news-media/events/other/banff-clean-energy-dialogue/final-report-national-clean-energy-strategy-eng.pdf

- Doug MacDonald, "Harper Energy and Climate Change Policy: Failing to Address the Key Challenges, in Christopher Stoney and G. Bruce Doern (eds.), *How Ottawa Spends 2011-2012: Under the Knife (Again!)*, (Montreal: McGill-Queen's University Press, 2011), 127-143.

- Chapter 13: 'Penalties: assessing the environmental and health impacts of energy use' in *Energy Systems and Sustainability: Power for a Sustainable Future*, Godfrey Boyle, Bob Everett and Janet Ramage, Oxford University Press and the Open University, 2003.

Also for reference:

Energy Policy Institute of Canada, *A Strategy for Canada's Global Energy Leadership: Framework Document*, January 2011,

http://www.canadasenergy.ca/wp-content/uploads/2011/01/Framework_Document_JAN_14.pdf

'Energy and the environment in the EU 2008', Executive Summary, European Environment Agency, Copenhagen, 2008. Avalable at: http://www.eea.europa.eu/publications/eea_report_2008_6/Executive_summary

'Section 3.3: Air Pollution' in *Unnatural Law: Rethinking Canadian Environmental Law and Policy*', by David Boyd, UBC Press 2003.

'Chapter 4: Acid Rain in Europe and North America', by D. Muton, M. Soroos, E. Nikitina, and N. Mirvitskaya, in *The Effectiveness of International Environmental Regimes*, Oran Young (ed.), MIT Press, 1999.

Nathan Lemphers and Dan Woynillowicz, *In the Shadow of the Boom: How Oilsands Development is Reshaping Canada's Economy*, The Pembina Institute, (May, 2012) http://www.pembina.org/pub/2345

Climate change and fuel poverty, Simon Dresner and Paul Eakins, Policy Research Institute, 2005, available at: http://www.psi.org.uk/docs/rdp/rdp24-climateChangeFuelPoverty.pdf

Week 4: The evolution of Canadian energy policy (October 1)

This session examines the shifts in energy policy from the 1990s, particularly the turn away from state involvement in energy production and the de-regulation of markets. It also considers the jurisdictional tangles surrounding energy issues in the Canadian context and the integration of Canadian policy within the North American market. Questions for reflection: How is energy policy shaped by constitutional and jurisdictional issues? How has government intervention in the energy sector changed? What has deregulation achieved? What conflicts underlie current discussion of a national energy strategy? How did energy debates feature in the 2011 Ontario provincial election?

Readings

- 'Electricity restructuring in the provinces: pricing, politics, starting points and neighbours', D. Dewees, in *Governing the Energy Challenge*, B. Eberlein and B. Doern (eds.), University of Toronto Press, 2009.

- 'Chapter 2: The Changing Nature of Canadian and Continental Energy Markets' by Andre Plourde, in *Energy Policy and the Struggle for Sustainable Development*, Bruce Doern (ed.), University of Toronto Press, 2005.

- 'Multi-level regulatory governance in the Canadian federation: institutions, regimes and coordination, Monica Gattinger, in *Governing the Energy Challenge*, B. Eberlein and B. Doern (eds.), University of Toronto Press, 2009.

- Marlo Raynolds, *Setting the Stage for a Sustainable Energy Strategy: Canada's Necessary Opportunity*, The Trottier Energy Futures Project, September 2010
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- Energy Policy Institute of Canada, *A Strategy for Canada's Global Energy Leadership: Framework Document*, January 2011, http://www.canadasenergy.ca/wp-content/uploads/2011/01/Framework_Document_JAN_14.pdf

- Government of Canada, Responsible Resource Development: Jobs, Growth and Long-Term Prosperity (2012) **http://actionplan.gc.ca/grfx/R2D/R2D_in_brief_ENG.pdf**

- Tim Weiss and P.J. Partington, *Behind the Switch: Pricing Ontario Electricity Options* (Pembina Institute, July 2011) **http://**pubs**.pembina.org/reports/behind-the-**switch-**final.pdf**

- Benjamin Dachis and Jan Carr, *Zapped: The High Cost of Ontario's Renewable Electricity Subsidies*, C.D. Howe Institute, 2011. http://cdhowe.org/pdf/ebrief_117.pdf

Also for reference:

NRTEE, *Parallel Paths: Canada-U.S. Climate Policy Choices, National Round Table on the Environment and Economy*, 2011 http://www.climateprosperity.ca/eng/studies/canada-us/report/canada-us-report-eng.pdf

Canada West Foundation and the Calgary Chamber of Commerce, *Changing Climate: A Policy Framework for Canada's New Energy Environment*, June 2011.
http://cwf.ca/pdf-docs/publications/Changing_Climate_June_2011.pdf

'Chapter 13: Canadian Smog policy in a Continental Context: Looking South for Stringency', by D. VanNijatten and W. Lambright, in *Canadian Environmental Policy: Context and Cases*, D. VanNijatten and R. Boardman (eds.) Oxford University Press, 2nd edition, 2002.

TidesCanada, *A New Energy Vision for Canada*, April 2011
http://tidescanada.org/energy/newenergy/

Canadian Council of Chief Executives , Framing an Energy Strategy for Canada: Submission to the Council of the Federation. (July, 2012).
http://www.ceocouncil.ca/publication/framing-an-energy-strategy-for-canada-submission-to-the-council-of-the-federation

Week 5: Thanksgiving, no class (October 8)

Week 6: Energy policy in a global context (October 15)

This seminar examines international energy issues, exploring how they shape the context within which policy decisions in Canada are made. It deals with the geopolitics of energy, the different energy situation of countries of the North and South, the evolution of future energy demand and supply, and implications for Canada.

Readings

- *World Energy Outlook 2011* (summary), International Energy Agency, 2010, available at: http://www.iea.org/Textbase/npsum/weo2011sum.pdf

- Chapters: 25 and 30 in D. MacKay, *Sustainable Energy – Without the Hot Air*.

- 'The Century Ahead: Searching for Sustainability', P. Raskin, C. Electris and R. Rosen, *Sustainability* **2010**, 2, 2626-2651.

- D. Lesage, T. Van de Graaf and K. Westphal, *Global Energy Governance in a Multipolar World*, Chapter 9 (Prospects for Energy Cooperation in a Multipolar World).

- Joseph A. Stanislaw, 'A new green deal and the future of global energy: a policy perspective' in A. Goldthau and J. Witte (eds.), *Global Energy Governance : the New Rules of the Game.*

- C. Pascual and E. Zambetakis, 'Geopolitics -- The geopolitics of energy: from security to survival' in C. Pascual, and J. Elkind (eds), *Energy security : economics, politics, strategies, and implications***.**

- *Energy Services for the Millenium Development Goals*, The International Bank for Reconstruction and Development/The World Bank and the United Nations Development Programme, 2005.

See also:

- Etcheverry, J. 'Local and global energy needs: towards a renewable future', in C. Gore and P. Stoett, *Environmental Challenges and Opportunities: Local-Global Perspectives on Canadian Issues* (Emond Montgomery, 2009), Chapter 10.

Week 7: Policy goals and policy instruments (October 22)

This class is concerned with energy policy instruments, especially those related to controlling climate emissions including carbon taxes, cap and trade and feed-in tariffs. Questions for reflection: what are the advantages and disadvantages of different policy instruments? What are the obstacles to accelerating technological innovation in the energy sphere?

Readings

- Chapter 29 in D. MacKay, *Sustainable Energy – Without the Hot Air*.

- 'European low-carbon strategies in liberalised electricity industries: some lessons on the efficiency of the market paradign', D. Finon, in D. Reeve, D. Dewees and B. Karney Current Affairs: Perspectives on Electricity Policy for Ontario, University of Toronto Press, 2010.

- Sustainable Prosperity, *Carbon Pricing, Social Equity and Poverty Reduction*, Sustainable Prosperity Policy Brief, May 2011. http://www.sustainableprosperity.ca/article1398

- Matt Horne et al (2012), British Columbia's Carbon Tax: exploring perspectives and seeking common ground, Pembina Institute. Available at: http://www.pembina.org/pub/2352

- Ontario Ministry of Energy, (2012) Ontario's Feed-in Tarrif Program: two year review report. Available at: http://www.energy.gov.on.ca/docs/en/FIT-Review-Report.pdf

See also:

'The UK low carbon transition plan: national strategy for climate and energy', HM government, 2009. Available at:
http://www.decc.gov.uk/assets/decc/white%20papers/uk%20low%20carbon%20transition%20plan%20wp09/1_20090724153238_e_@@_lowcarbontransitionplan.pdf

Week 8: Reading week: no class (October 29)

Week 9: Special topics 1 and 2 (November 5)

From this point in the semester the seminars will focus on special topics in energy policy. Each class will deal with two issues. Most will be introduced by students (working in pairs). The specific topics to be covered will de decided by the class and instructor collectively at the beginning of the semester.

Week 10: Carbon capture and storage and Special topic 3 (November 12)

On CCS.....

- Chapters 22 and 31 in D. MacKay, *Sustainable Energy – Without the Hot Air*.

- K. Backstrand, J. Meadowcroft and M. Oppenheimer, 'The Politics and Policy of Carbon Capture and Storage: Framing an Emergent Technology', *Global Environmental Change* 21 (2) (2011) 275-281.

- Christoph von Stechow, Jim Watson and Barbara Praetorius, 'Policy incentives for carbon capture and storage technologies in Europe: A qualitative multi-criteria analysis', *Global Environmental Change* 21 (2) (2011) 326-357.

Also see:

Dina O'Meara, "Shell Canada seeks approval for $1.35B carbon capture project: regulatory approval a first for Alberta," *Calgary Herald*, August 3, 2011
http://www.calgaryherald.com/technology/Shell+Canada+files+paperwork+carbon+capture+project/5195446/story.html#ixzz1TyUvGDsm

Material on the CCS 101 website: http://www.ccs101.ca/about-us

Week 11: Special topics 4 and 5 (November 19)

Week 12: Special topics 6 and 7 (November 26)

Week 13: Special topic 8 and Energy transitions (December 3)

On transitions……..

- Kemp, R., J. Rotmans, and D. Loorbach 2007. "Assessing the Dutch Energy Transition Policy: How Does It Deal With Dilemmas of Managing Transitions?", *Journal of Environmental Policy and Planning* 9: 315-331.

- J. Meadowcroft, 'Engaging with the *politics* of sustainability transitions', *Environmental Innovation and Societal Transitions* 1 (2011): 70-75.

Additional Notes

The following explanation of grades is the agreed policy of the School of Public Policy and Administration.

In graduate school, expectations about analytical abilities and performance are higher than in undergraduate work, and what is an acceptable grade is also different. Whereas a C+ is a passing grade in undergraduate studies, it is not in graduate school. We have expanded upon the grading system outlined in the Graduate Calendar in order to give you a fuller description of standards. This explanation is intended to provide clarification of the Graduate Calendar, and in no way overrides it.

Carleton University uses a 12 point grading scale from A+ (12, or 90-100%) to D- (1, or 50-52%). Normally, students do not get credit for courses with a grade less than B-. The School of Public Administration has adopted the following point equivalencies and interpretation for letter grades definitions of letter grades.

A+	12	Outstanding. For written work, virtually publishable. Demonstrates evaluative judgement and mastery of technical as well as literary aspects of writing.

A	11	Excellent. Demonstrates superior grasp of material and capacity to understand and extend underlying patterns.
A-	10	Very good. Demonstrates clear grasp of material, its component parts, and capacity to analyze their relationships to each other.
B+	9	Good. Demonstrates basic understanding of material and ability to apply concepts. Written work is competent.
B	8	Satisfactory, but below average. Demonstrates comprehension of material with some limited ability to apply concepts.
B-	7	Adequate, but less than average. Demonstrates comprehension and understanding, with limited capacity for application.
C+	6	Less than adequate. A final grade of C+ is not normally sufficient for credit.
C to D-		Grades in this range indicate work that is passable in some respects but that does not meet the standards of graduate work. An example would be an assignment completed to the expectations of a senior undergraduate course.
F		Failure. Did not meet minimal requirements.

Grades of A- or B+ should be considered as good, solid performances that hover around the average for graduate work. In any given class, most of the grades are likely to be A- or B+. There are usually fewer grades of A, and an A means you have done excellent work; grades of A+ are quite rare (but we do give them). A grade of B- is a strong signal that things did not go well in the course, and you were considerably below average. Normally, graduate students do not get credit for courses with a grade less than B-. Grades will be awarded as letter grades, but I will calculate your final grades as the weighted mean of the grade point equivalencies. Example: A- on an exam worth 30%; A on participation worth 20%, and B+ on a paper worth 50%;

A- 10 x .30 = 3.00
A 11 x .20 = 2.20
B+ 9 x .50 = 4.50

Final 9.70 or B+

The letter grade corresponds to the interval in which the numerical grade falls (ie. anything between 9.0 and 9.9 = B+)

ACADEMIC ACCOMMODATION

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details visit the Equity Services website: http://www2.carleton.ca/equity/

Academic Accommodations for Students with Disabilities: The **Paul Menton Centre** for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your ***Letter of Accommodation*** at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (*if applicable*) at http://www2.carleton.ca/pmc/new-and-current-students/dates-and-deadlines/

You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at http://www2.carleton.ca/equity/

For additional information on university regulations please visit:
http://www.gs.carleton.ca/calendars/current/general/general_regulations.html